

RESPONSIBLE ARTIFICIAL INTELLIGENCE

Reliable, safe and sustainable technology to drive the economy of the future

 **MAPFRE**

The background of the page is a dynamic, abstract composition of falling confetti. The confetti consists of numerous small, irregular pieces in vibrant shades of red, orange, and blue, scattered across a solid black background. The pieces appear to be falling from the top right towards the bottom left, creating a sense of movement and depth. The overall effect is a colorful, textured backdrop that contrasts sharply with the white text.

FOREWORD

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At MAPFRE we use Artificial Intelligence (AI) in many of our business processes, achieving improvements in efficiency that have a direct impact on customer experience. It follows that we are acutely aware of the risks that AI models may entail and we are working to manage them appropriately.

We started our research with the aim of gaining a clear understanding of these risks, and we were looking for insights to help us assess, monitor and mitigate them in order to be able to deploy AI in a responsible manner.

We wanted to understand the ecosystem in depth and learn about the needs and concerns regarding the deployment of AI within the corporate environment. We also wanted to explore the role insurers can play in this uncertain and expectant situation.

In addition to an exhaustive analysis of the existing literature, we complemented the research with the perspectives gathered in a field study that included interviews with industry experts, large companies in various sectors and geographies, and startups specializing in specific services in the field of **Responsible Artificial Intelligence** (RAI).

This document contains our conclusions and our call to action: Artificial Intelligence can and must be deployed responsibly, safely, and reliably to generate a positive impact. All the agents directly or tangentially involved in the field must pull together to achieve this.





INTRODUCTION

What does the current AI risk management landscape look like? How will it evolve? What is the role of insurers?

Artificial Intelligence is one of the emerging technologies with **the most potential for disruption**. It has aroused interest in all sectors for its ability to improve process efficiency, increase profits and even enable new business models.

However, **its use entails complex risks** (bias, ethics, performance, reliability of information, intellectual property, etc.) **that must be adequately managed in order to apply it in a safe, reliable and, ultimately, sustainable manner**.

Most companies are learning to use this technology, applying it to use cases in test environments or with very controlled impacts, which is why there is a certain perception of control over the risks associated with AI in the business environment. Almost everyone is in agreement that **frameworks, tools, guidelines and regulations are necessary to help in this deployment**.

The launch of generative Artificial Intelligence tools, accessible to everyone, and with unprecedented adoption in record time, has helped to drastically increase the use of this technology among all types of profiles, which has in turn added another layer of complexity to the debate on the risks of AI.

Regulatory bodies are focusing their efforts on enacting regulation and legislation that protect individuals and society from possible misuse of this technology, but **uncertainty** - especially regarding the assignment of responsibilities - **remains enormous**.

As use cases escalate in companies and the regulatory horizon becomes clearer, awareness of proper AI risk management will increase, and with it, demand for services associated with proper management of those risks. Insurers can act as a catalyst in that process and help their clients in the responsible and sustainable deployment of Artificial Intelligence



CONTEXT AND MATURITY OF AI AND RAI

AI: an evolving reality laden with uncertainty and **complex latent risks**

It's clear that the use of Artificial Intelligence to generate savings and boost earnings will grow exponentially. In parallel, exposure to its associated risks will also rise.



Despite the **huge potential of AI**, organizations still have a long way to go in adopting it.

- Although the potential benefits of AI are high, its **degree of adoption** (especially in non-digital native companies) **is still low and the impact on business is limited**. Many companies are running proofs of concept, pilots, or production cases on a small scale and within restricted environments.
- Organizations from various sectors are trying to identify relevant use cases and overcome the barriers, limitations and difficulties in their deployment.

13%

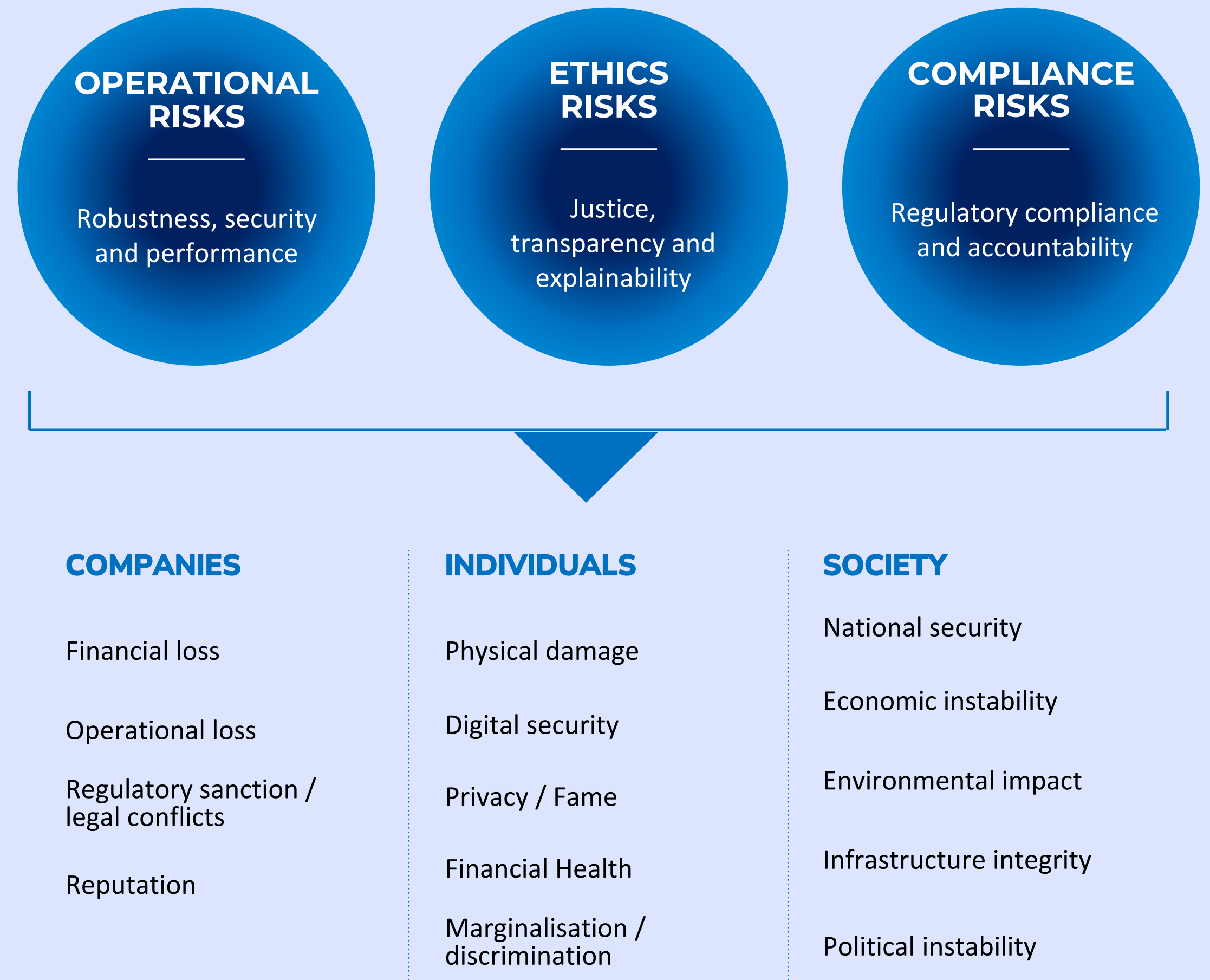
Companies with AI deployed at scale¹

Retail, pharma and health sectors, organizations with use cases in production (on a considerable scale) exceeded **20%¹**.

AI risk management, management **support** and the **ability to integrate technology into daily operations stand out as major challenges** for organizations.

AI can carry **operational, ethical and regulatory risks** (with personal, social and corporate impact)

MAIN RISKS AND IMPACTS ARISING FROM AI²



Even considering the risks involved, the perception of **AI** as a **growth lever** for organizations will continue to drive its adoption

Heavy investments by tech giants in research and development are fueling advances in the field of AI.

In turn, the trust of organizations in AI and their perception of technology as a fundamental growth driver are driving the increase in their investments.

The Technology, Automotive, Aerospace and Pharma sectors are expected to see a higher degree of AI maturity in 2024.

60% of companies expect to increase their investment in AI in the next few years.³

The AI market will grow at a compound annual growth rate of 38.1% from 2022, reaching **1,591 billion dollars** in 2030.⁴

Generative AI has achieved unprecedented adoption, intensifying concerns about its **ethical and legal impact**

- ChatGPT surpassed 100 million users in just two months, setting a new record for rapid adoption, which was held by TikTok up to now.
- The **debate on the implications of generative AI focuses on its impact on the labor framework, the creation of fake content and the management of intellectual property**, as well as data protection.
- In March 2023, the Future of Life Institute (with the participation of Elon Musk) called for a freeze in the development of AI until regulations were put in place to ensure it would be deployed ethically.
- Following Italy's ban on the use of ChatGPT due to how it may breach the GDPR, the UK and other European regulators (Ireland, France, Spain and Portugal) have also begun studying the implications.
- In the corporate world, the concern of companies regarding the responsible use of AI and its possible risks is growing.

121 billion dollars

Estimated size of the **Generative AI market** in 2027, with a **CAGR of 68%** (2022 - 2027)⁵

The concept of RAI arose on the back of the need to ensure **the proper use of AI and mitigate related risks**

Most organizations already consider that the responsible use of AI should be a priority for senior management.

Responsible Artificial Intelligence refers to the management of the life cycle of AI models following the necessary principles, processes and policies to guarantee that the technology is developed and operates in such a way that it has a positive impact on and adequately protects individuals and society. This implies knowing and managing the risks associated with the models and generating the mechanisms that allow them to be controlled and mitigated from an operational, ethical and regulatory standpoint.

Although it is still an incipient concept, some sectors are notable in

terms of their maturity in adoption. The Technology, Media and Telecoms sector leads the pack (where 92% of companies with AI deployed at scale have RAI systems at an advanced stage or under development), followed by the Pharma sector and, in third place, Health.

Significant growth is expected in this area in the coming years. According to Gartner, RAI technologies and systems could reach maturity in terms of adoption and scale in a period of approximately 6 years.⁶

Main objectives of RAI

- Mitigation of bias in data and algorithm
- AI transparency
- Privacy protection and data security
- Ethical impact on clients and society
- Compliance with current regulations
- Achieving business impact

84%

84% of organizations already believe that RAI should be a strategic priority for senior management.⁷

52%

52% of companies are implementing specific programs that address the deployment of AI by controlling its risks in a holistic manner.⁸

49,5%

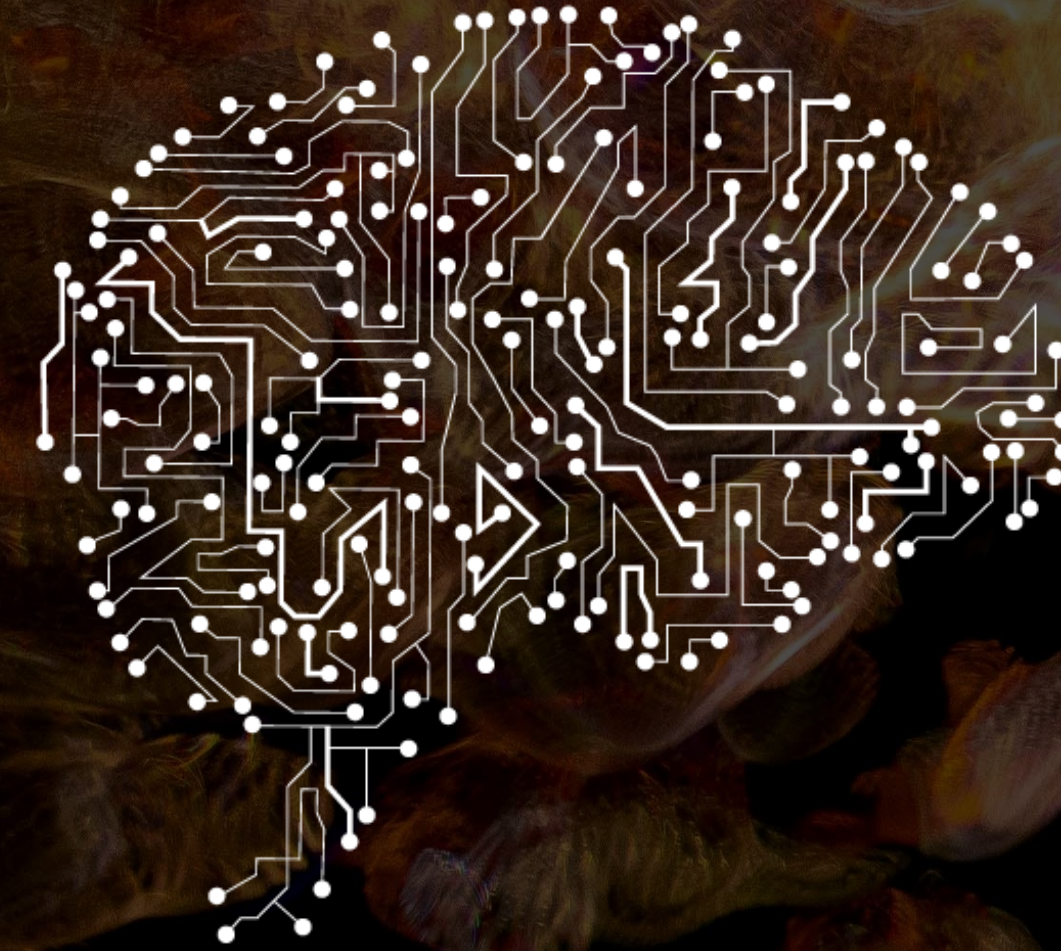
The market for AI Governance is expected to grow by a compound annual growth rate of 49.5% between 2021 and 2030, from 54 to 819 million dollars.⁹





RISKS ASSOCIATED WITH ARTIFICIAL INTELLIGENCE

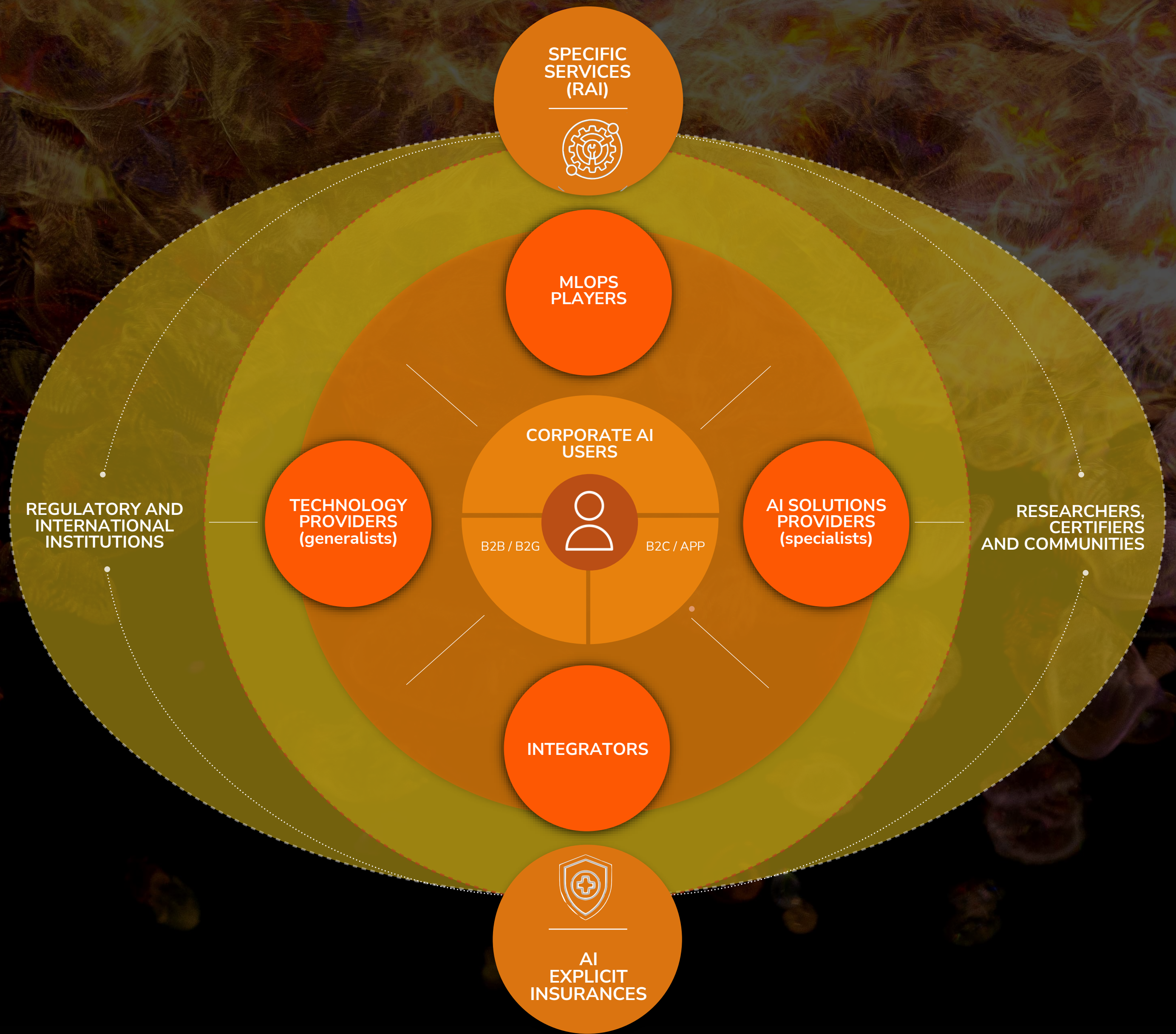
The emerging ecosystem around RAI brings together and coordinates the contribution of various agents with the common goal of promoting ethical and responsible adoption of AI.



Multiple communities and organizations are focusing on promoting collaboration and debate among various agents, including companies, universities or institutions, with the goal of creating common frameworks of best practices or AI certification mechanisms in terms of responsibility.

UNESCO has recently sent a request to countries for the application of its '**Recommendation on the Ethics of AI**', a global regulatory framework that could provide the necessary guarantees in its use.

Large companies that use AI are anticipating regulation and promoting RAI policies internally, hiring specialist teams in ethics and data, establishing collaborations with research centers and drawing up ethical codes of conduct for the use of AI.



AI deployment solution and service providers, aware of the need for its responsible use, are reinforcing their capacities to guarantee same

SOME EXAMPLES

Technology Providers - Generalists

Large AI technology manufacturers are beginning to adopt RAI policies and capabilities, both in the development and monitoring phase of AI solutions. However, while these agents make the responsible deployment of AI a priority, the recent wave of layoffs has led Big Tech to trim their ethics teams.

MLOps Players

Large MLOps vendors are complementing their in-run monitoring capabilities with additional explainability, fairness, and bias identification capabilities in AI models.

Integrators / Developers

Consultants that offer AI integration services and/or build their own specific solutions are beginning to complement such services with RAI-specific capabilities that accompany the AI model throughout its lifecycle.

The **RAI scene** is dominated by startups, but incumbents in legal, auditing and risk are beginning to position themselves too

RAI SERVICE PROVIDERS

Incumbents in Audit / Legal / Risks

Incumbent players in legal, advisory or risk assessment services (large professional services firms such as consultancies or law firms) are complementing their traditional approach with specific capabilities focused on AI risks. Large law firms are advising their clients, keeping them up to date regarding the regulation associated with disruptive technologies, including AI.

RAI

Startups specializing in RAI supply

Specialist startups are increasingly emerging in the RAI arena, and their popularity is expected to grow as regulation is created and refined. These startups are better prepared to manage regulatory compliance in an automated fashion and have greater and faster adaptation capacity than large companies.

RAI startups can be classified into three types of services, in line with their focus and contribution throughout the AI life cycle and the type of risks addressed:

1. Startups focused on the selection and processing of data that are dedicated to ensuring that the collection and processing of data is done responsibly, as well as the generation of synthetic data that allows guaranteeing the privacy of the original data.
2. Startups that offer automated model observability and explainability capabilities, facilitating the identification of potential biases and failures in their decision-making, thereby maximizing AI ROI and enabling better preparation for ethical decision-making and dealing with future regulation. (These startups have the largest presence in the market today.)
3. Startups specializing in AI governance and compliance, with mechanisms that allow for risk assessment, mainly of an ethical and regulatory nature, or of standards, best practices or internal policies.

Also noteworthy are startups combining observability and explainability capabilities with those of governance and compliance, in that they offer more comprehensive risk management at a technical, ethical, and regulatory level.

Highly regulated sectors are those that demand more **governance and compliance services**

The identified clients of this type of services are mainly concentrated in two differentiated segments:

- Companies whose core business is highly technological/digital, in sectors not subject to strict regulation (e.g. software, technology, platforms or marketplaces);
- Companies belonging to specially regulated sectors, whose core business is not technological/digital (e.g., banking, public administration or insurance).

In both cases, the most sought after services are **observability** and **explainability**, and these are also the ones with the greatest presence in the market, thus reinforcing the fact that the main motivation for adopting the RAI concept is related to business objectives.

Efforts to regulate AI intensify globally, though regulation is only in place in China, New York, and Colorado




SPECIFIC REGULATION OF AI¹⁰

In recent years, regulatory frameworks and legal proposals have emerged around the world with the aim of **avoiding discrimination, generating risk management and mitigation mechanisms, and enhancing the transparency of AI.**

Although heavy sanctions are expected for regulatory non-compliance (the AI Act envisages fines of up to €30 million or 6% of revenues), there is **still no consensus on the assignment of responsibilities** for the potential damages caused by AI.

There is also great uncertainty surrounding the impact of generative algorithms on AI regulation, intellectual property and data protection.



Regulatory pressure and the increase in AI maturity will be key drivers of a greater perception of the risks of the technology

As of today, there is a certain perception of control of AI risks on the part of companies, although the absence of regulation and practical guides for the proper use of AI worries the majority of people.

Special caution in its adoption, limited scope to non-critical uses, human supervision of decision-making or strict risk control are some of the factors that contribute to companies having a certain perception of AI risk control. Some believe that Artificial Intelligence doesn't seem to generate new risks, but rather accentuates existing risks.

In many companies, **the application of** AI is currently limited to use cases considered non-critical, with no direct impact on customers and aimed at the internal search for operational efficiencies. In addition, AI is generally used to support decision making, always maintaining the need for human supervision.

Companies that do apply AI in more critical use cases (those with a direct impact on the client) assume the supervision and strict control of their models as an indivisible part of said adoption. AI risk management is part of the current mechanisms of business management and its usual risks: the need to maximize ROI, protect its reputation and regulatory compliance and/or alignment with internal, security or data protection policies.

Although there is no specific AI regulation in force in all countries, **AI**

solutions are subject to compliance with existing regulations (industry or GDPR) and the internal policies of companies regarding security and protection of information. Said compliance, as well as the existing uncertainty around the future specific regulation of AI (the EU AI Act – was approved on June 14, 2023 in the European Parliament and is expected to enter into force at the end of the year) justify the special caution with which some companies consider their adoption of AI, a caution that must coexist with the expectations placed on the potential value that technology can bring to business.

In some cases, **concern around ensuring the responsible use of AI** (and to prepare for future regulation) leads companies to collaborate with other agents (researchers, certifiers, AI companies), to define best practices, with the objective of creating their own ethical codes for the use of AI.

Companies are currently requesting clarification on the **definition of best practices, standards and services** for the evaluation, monitoring and mitigation of AI risks.

As adoption increases and regulation comes into force, demand for this clarification will increase, including the need to ensure regulatory compliance.

This need will be linked to an opportunity for third-party services capable of providing the necessary support and guaranteeing said compliance.

What are the concerns of companies?

SOME EXAMPLES BY SECTOR

MEDIA:

Fear of the possible generation of content that is not verifiable or not sufficiently rigorous is a decisive factor when rejecting the mass adoption of generative AI solutions, except in very limited use cases and in non-critical areas.

The reputational risk and conflicts with workers at the possibility of losing their job are of great concern.

PHARMA AND HEALTH:

The value that advice from third parties would provide in the identification and management of potential risks deriving from the adoption of AI in medical situations and in R&D processes for the development of new medicines and treatments is perceived, with special focus on ethical and regulatory risks.

TELCO:

Companies will need legal advice to ensure compliance with future AI regulation, as was the case at the time with the GDPR.

OIL&GAS:

Oil and gas companies will need help ensuring compliance with the new regulation, as well as with future AI policies and internal codes of best practice.

RESOURCE MANAGEMENT:

The entry into force of the regulation will result in a need to have assistance in guaranteeing the necessary certification that accredits regulatory compliance.

Some companies don't share the concern about the entry into force of the new regulation with the same intensity. Such is the case, for example, with some companies in the fintech sector (e.g. a fintech with embedded AI in its business core) or others in industrial sectors (e.g. those with current or planned adoption mainly in B2B environments, which do consider, however, that greater adoption of AI could require greater monitoring and control capabilities of their models).

In the future there will be a need to insure **systems that are wholly managed by AI**

Automation of *end-to-end* processes and specific regulation on AI will determine the demand for AI insurance

Currently, **the insurance offering that covers the risks associated with the use of Artificial Intelligence is practically non-existent.**

Autonomous vehicles or systems used in industrial processes are the first examples in which specific insurance for AI is beginning to appear. It is precisely in these areas where demand is expected to increase in the medium/long term, extending to insuring any system that is managed entirely by AI algorithms. In other words, systems that are automated from start to finish, in which the decision is made by Artificial Intelligence without human intervention (the Oil & Gas, Manufacturing and Health industries confirm that they see the value of this type of insurance. Healthcare actors also mention the importance of insuring physicians who are using these systems.)

However, it is important that the assignment of responsibilities be clarified through **regulation.**

In addition, it is necessary to evaluate current insurance products to determine the impact of the use of AI by customers on their coverage. In some cases, it will not be necessary to create specific products – adapting or refining existing ones will suffice. Be that as it may, it is indisputable that we must all learn to use AI correctly, to understand its risks and control them. In the case of insurers, we must deploy it internally in a secure manner. In addition, we must help customers in their journey toward the deployment of Responsible Artificial Intelligence. We must work to prevent and avoid any unwanted behavior and protect individuals and society from harm.



CONCLUSIONS

Conclusions

The potential of AI has aroused interest from all sectors, but few companies are exploiting it to the full.

- Organizations are identifying relevant use cases and facing **barriers, internal limitations and difficulties** in their deployment. The risks associated with its use are one of the concerns when deploying.
- The **forecast for investment and growth** in the implementation of AI is maintained.
- **Generative AI** (e.g. ChatGPT, GPT4, DALL-E) **has made the power of this technology available to everyone**, opening a **new debate on the associated risks** (bias, privacy, intellectual property, veracity/authenticity etc.)

Regulatory pressure, the increase in maturity and the democratization of AI are fundamental drivers of the perception of the risks assumed with the use of AI.

- The risks of AI are considered from the **operational** (it works with adequate performance and is safe), **ethical** (it's fair and doesn't discriminate) **and regulatory** (it complies with regulations) level, and can have an impact on a personal, corporate or social.
- The regulation focuses on avoiding **discrimination, generating risk management and mitigation** mechanisms, and promoting **transparency**. **There is no consensus** on the assignment of responsibilities.
- All the agents of the AI ecosystem seek to create standards and best practices in the adoption of AI.

Conclusions

Responsible Artificial Intelligence (RAI) policies is becoming more evident for organizations.

- The concept includes designing, developing and implementing an Artificial Intelligence system under a framework that guarantees the mitigation of risks and negative impacts on clients and on society.
- **Regulators, certifiers and researchers** are intensifying efforts to generate laws, regulations, standards and best practices.
- **Large companies, users of AI, are anticipating regulation** and internally promoting RAI policies, hiring specialist teams in ethics and data, establishing collaborations with research centers and drawing up codes of ethics for the use of AI. The Technology, Media and Telecommunications, Pharma, Banking and Automotive industries are leading the charge in terms of RAI maturity.

Automation of end-to-end processes and the specific regulation on AI will determine the demand for AI insurance.

- The **insurance offer** on specific risks associated with the use of AI is practically non-existent today. There are only a few examples of insurance for the autonomous vehicle and some industrial processes.
- The **greatest demand will come from the autonomous vehicle**, from automated industrial end-to-end processes and from protection requirements for those who are using that AI (e.g. doctors).
- Current insurance solutions need to be reviewed taking into account how clients are using AI in their businesses.
- Insurers **must accompany clients in the deployment of responsible AI** in their organizations to protect them, as well as individuals and society. Preventive work will be essential in this context.

Conclusiones

As far as RAI goes, players are beginning to appear with a specific offering focused on assisting in the deployment of Artificial Intelligence, controlling risks on all three levels: operational, ethical and regulatory.

- **AI deployment solutions and service providers**, aware of the need for its responsible use, are reinforcing their capacities to guarantee same. They have gone from controlling only operational risks to considering risks on an ethical level.
- The area of **RAI services**, which address the management of AI models and their risks in a holistic manner, is **dominated by specialist and relatively young startups** (typically less than two years old) that are developing tools to automate the governance, evaluation, mitigation and monitoring of AI models and their associated risks.
- Incumbents in the legal, auditing or risk assessment fields, such as large consultancies, are beginning to position themselves in this field, establishing alliances and investments with these startups.
- Companies that use AI are already demanding services of this type and advice for the deployment of responsible AI. This demand will grow as the adoption of AI increases and there is greater awareness of its risks.





METHODOLOGY AND BIBLIOGRAPHY

Methodology

We conducted interviews with industry experts, large companies and startups specializing in specific RAI services

17

RAI startups interviewed

17

Interviews with large companies

8

Internal MAPFRE interviews

15

Interviews with industrial experts

41

RAI startups evaluated (secondary research)

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