THE FUTURE OF INTERACTION

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The role of interaction in a world configured by virtual assistants

MAPFRE

CONTEXT

This document explores the different scenarios describing **how interaction could evolve in the coming years**. From a world where AI is unable to keep its promises to a society where digital assistants become the central players in everyday life, each scenario offers a vision of possible futures.

The document also examines **the implications of these changes in key sectors such as the insurance, which is facing a radical transformation driven by digitalization**. Each scenario outlines the challenges and opportunities insurers will need to address, depending on the degree of automation, service personalization, and availability of real-time data.

Ultimately, this document seeks to provide a **structured and grounded view** of the potential future of interaction and its impact on daily life, companies, and the economy. Understanding these possibilities will make it possible to anticipate changes and prepare strategies that guarantee effective and balanced technological integration.

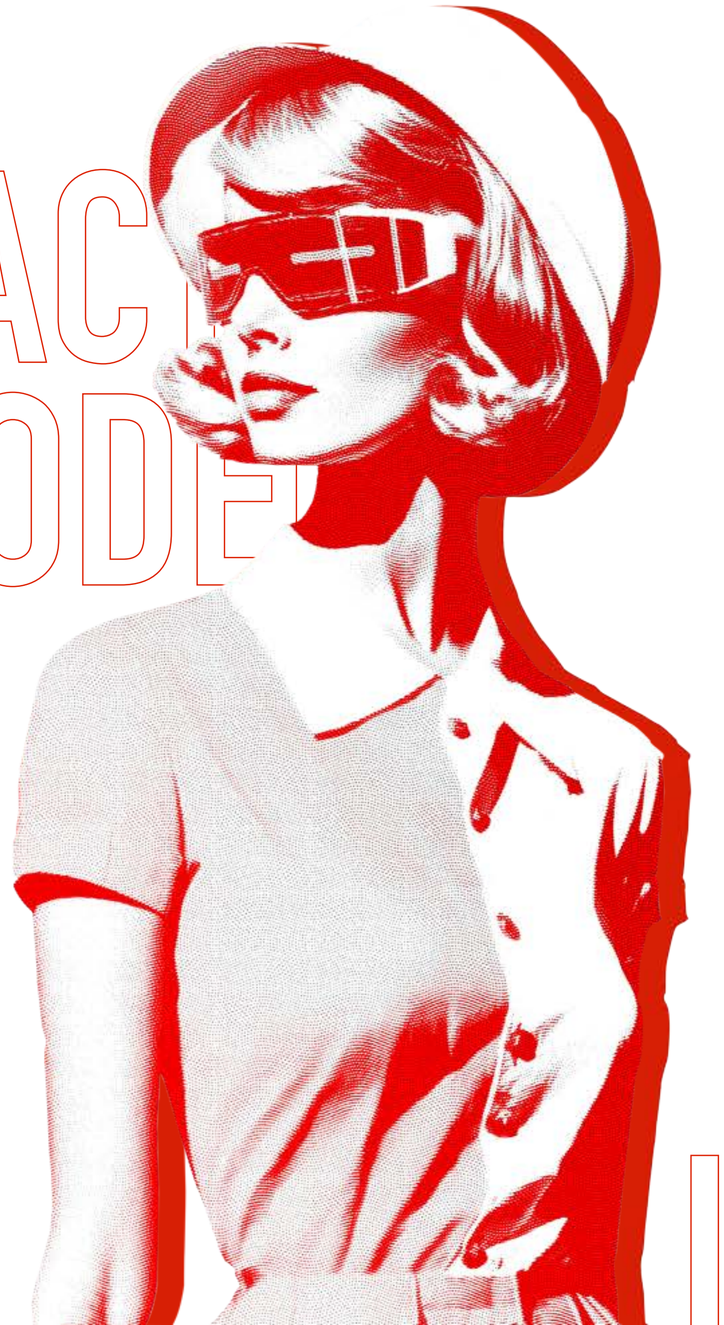
STRUCTURED VISION OF THE FUTURE

NEW INTERACTION MODELS AND INTERFACES

Will our interaction models change in the coming years?

The way in which humans interact with each other and with technology is in the midst of transformation. The evolution of artificial intelligence (AI), the expansion of virtual assistants, and the integration of smart devices are redefining how we communicate, work, and make decisions. **The line between human interaction and automation becomes increasingly diffuse**, with systems that not only respond to our needs, but also anticipate them.

> AI and digitalization have transformed interaction, more personalization, less effort... but also new challenges in privacy, control, and autonomy.



Will we continue using the same interfaces?

The development of new interfaces and interaction methods, such as augmented reality, holograms, and brain-computer interfaces, opens up **new possibilities for communication and information management**. The integration of these advances with generative artificial intelligence and environmental computing will allow for more fluid, natural, and efficient experiences. However, **the pace of adoption of these technologies, their accessibility, and the regulations surrounding them will define whether they actually represent a structural transformation or simply incremental improvements**.

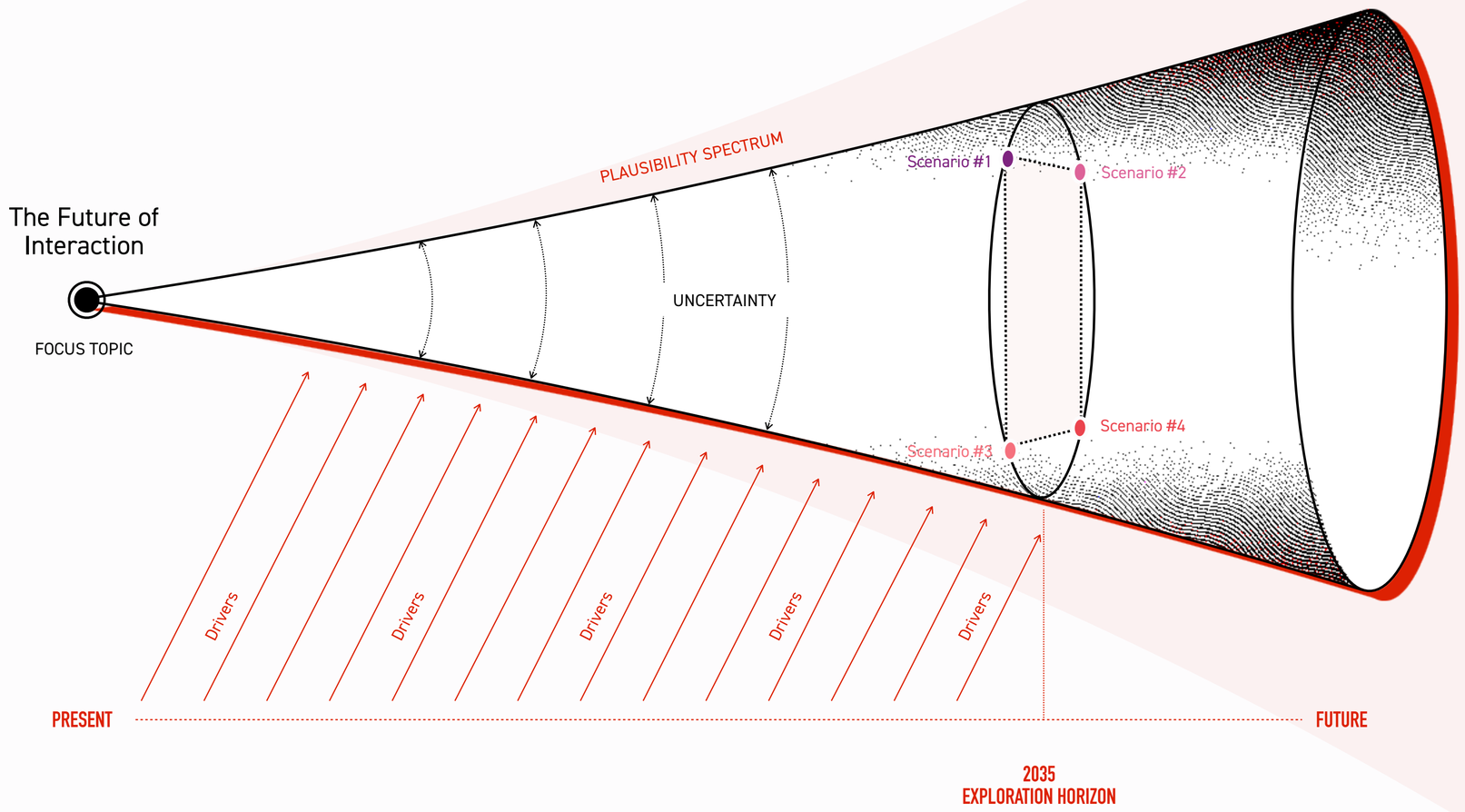
As we move toward a more complex and interconnected digital environment, the **interaction between humans and technology will continue to evolve**. The challenge is not only to take advantage of these advances to improve user efficiency and experience, but also to ensure that the balance between automation and authenticity is maintained, allowing technology to expand our capabilities without replacing what makes us human.

METHODOLOGY

In this study, we used the **"Futurecasting" methodology to anticipate scenarios derived from "Future of Interaction," both in the personal and corporate sphere (focus topic)**. The four scenarios aim to define the playing field in which reality will materialize around the central topic. Therefore, **the defined scenarios represent extremes within the realm of plausibility—rather than probability—**and are designed to encompass the full spectrum resulting from the evolution of human-machine interaction. **Reality should be somewhere between these four scenarios**.

This methodology allows participants to be placed in the four alternative futures, helping to explain how this situation is arrived at, what implications it has, and what opportunities could arise.

The scenarios were generated using knowledge captured through primary and secondary research methods. For the primary research, experts in interaction, technology, industry, sociology, psychology, and behavior have been interviewed at a global level. Based on the understanding reached, we identified the factors that will determine how reality will take shape around the central topic. **These factors were grouped together under fourteen drivers that construct the scenarios for GenAI's evolution.**



CONSUMERS AND CORPORATIONS

IN AN ADVANCED TECHNOLOGICAL ENVIRONMENT

PERSONALIZATION
IMMEDIACY

The power of personalization and immediacy

In the future of interaction, **consumers will play a more active role in their experiences with brands and products, demanding quality, sophistication, and customization as standard.** The adoption of AI assistants and advanced devices will allow consumers to interact more efficiently with companies, consolidating consumption patterns focused on immediacy and a growing appreciation for physical products and experiences in real environments.

> “Interaction will be multi-modal, intuitive, and delegated to AI, while consumption evolves toward immediacy, subscription-based models, and full integration into our digital environment.

Consumption as an expression of values and social awareness

Beyond convenience and personalization, **consumers will adopt an activist and responsible approach, demanding greater transparency and an ethical commitment from companies**. Sustainability will be a key factor in purchasing decisions, prioritizing products and services that minimize the environmental impact. Likewise, they will prefer brands that align with their values, those that demonstrate concrete actions to reduce their ecological footprint and generate a positive social impact.

Data privacy will become a nonnegotiable priority. Consumers will be more aware of the value of their personal information and will demand greater control over the use of their data. In this regard, many people could opt to renounce certain digital services if they perceive that they compromise their privacy.

At the same time, **health and well-being will become more prominent, driving demand for products and services that promote physical, mental, and emotional balance.** This trend will reflect a change in consumer mentality, which will not only seek convenience and quality, but will also assess the impact of its decisions on its own life and on society.

SOCIAL AWARENESS

The challenge of innovation with trust

> Only companies that combine technology, transparency, and trust will achieve customer loyalty.

For companies, the future of interaction represents both an opportunity and a challenge. The adoption of emerging capabilities such as generative artificial intelligence (GenAI), smart assistants, and new interaction models will be essential to stay competitive. However, digital transformation will not only involve integrating technological layers into existing models, **but also redefining business strategies to respond to market expectations in an agile, efficient, and secure way.**

Companies must balance innovation with consumer confidence, ensuring data privacy and security in a context of increasingly strict regulations. Transparency and ethics will be key to differentiating companies in an environment where customers demand greater clarity in internal processes and in the handling of their personal information.

To achieve this, it will be essential for companies to adopt **flexible business models that are capable of evolving along with consumer demands**. The customer experience will not only depend on the quality of the product or service, but also on the trust that the brand inspires in its interaction with users.

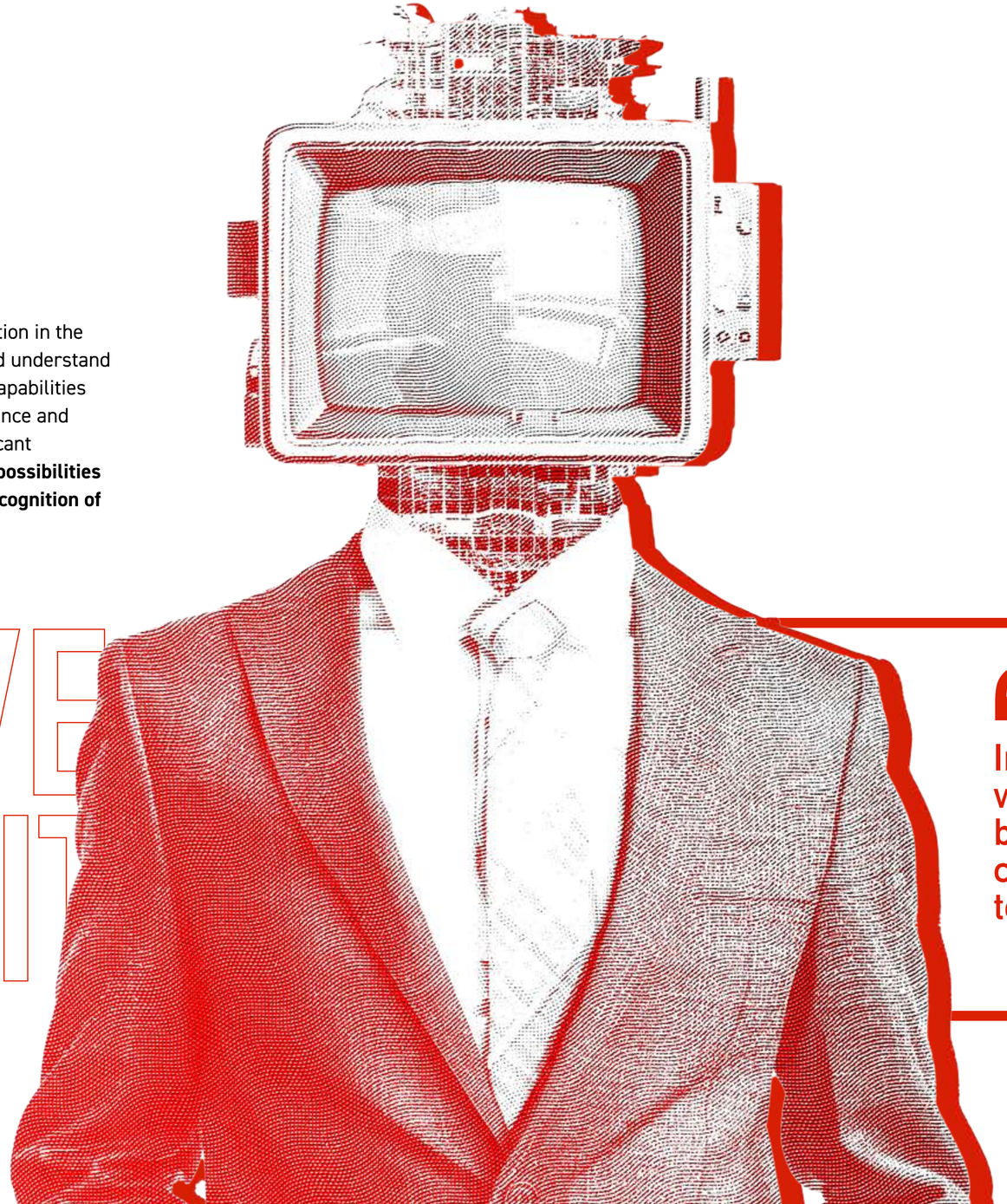
TRUST

TOWARD AN AUGMENTED HUMAN OR A STAGNANT ONE?

Where are we headed?

Technological evolution involves a radical transformation in the way humans process information, make decisions, and understand their environment. The combination of natural brain capabilities with advanced technologies, such as artificial intelligence and brain-computer interfaces (BCIs), will enable a significant expansion of human cognition. This will open up **new possibilities in decision-making, context interpretation, and the recognition of complex patterns**.

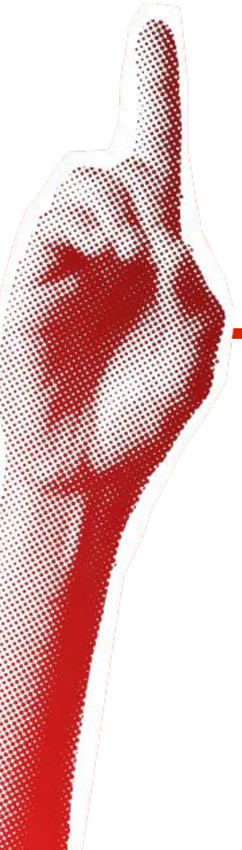
COGNITIVE
DIVERSIT



> Immediate access to information will boost our decisions, but only a balance with autonomy and cognitive diversity will prevent technology from thinking for us.

COGNITIVE PROCESSING

Advances in AI will improve cognitive processing in several dimensions



Understanding the context

With the support of technologies that provide real-time information, the human brain will be able to process **more dynamic and complex contexts.** AI-based systems will offer personalized insights to reduce cognitive bias and expand the field of perception.

Cognitive recognition

By using advanced devices, such as BCI implants or machine learning tools, **humans can interpret patterns and recognize stimuli more quickly and precisely**. This will facilitate, for example, learning new languages, understanding complex codes, and identifying real-time visual or auditory elements.

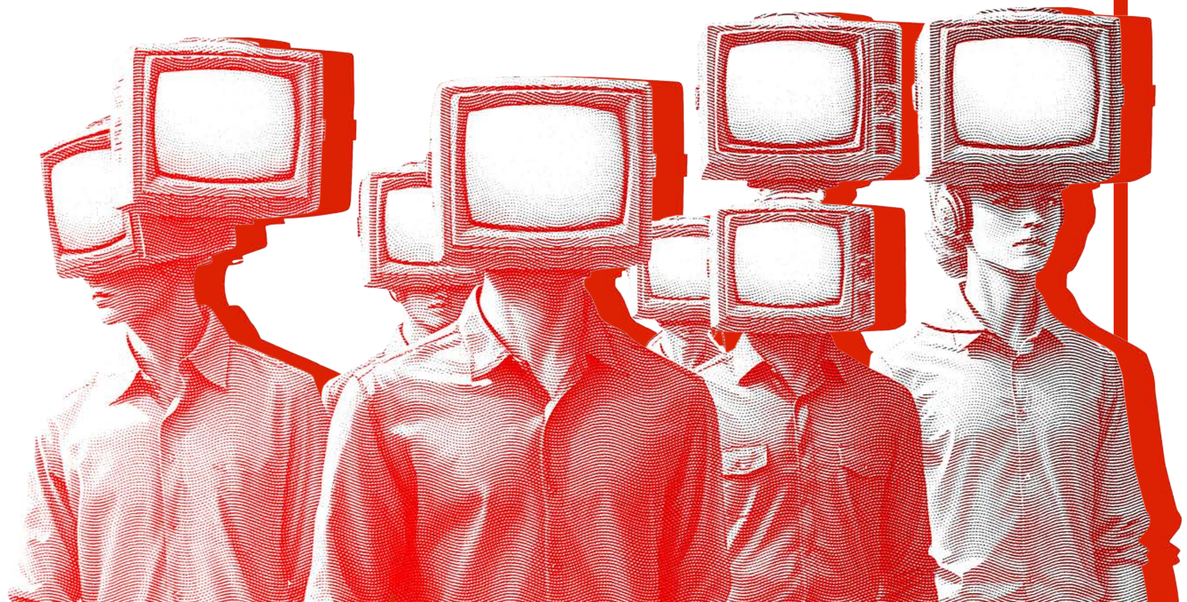
Increased decision-making

Thanks to advanced predictive models and simulations, users can evaluate **multiple scenarios before making a decision**. The intuitive presentation of these options will optimize results in real time and reduce uncertainty in key processes, both personally and professionally.

Keys for most relevant and personalized interactions

The future of interaction will be marked by an advanced understanding of the user context, driven by the integration of multiple data sources and the development of capabilities such as the GenAI. Sensors, personal assistants, and external databases will make it possible to create digital profiles—known as digital twins—to accurately reflect each user's status, preferences, and needs at any stage of their journey.

This level of personalization will bring **more fluid and relevant interactions, improving the user experience and boosting *engagement* with products and services**. However, users will also face significant challenges in terms of privacy, security, and ethics in data collection and use.



Technological advances that will transform understanding of the context

- **Sensor generalization**
  The combination of text, images, audio, and biometrics will enable AI systems to interpret context more accurately and in greater detail. The information collected in real time will adjust the responses and recommendations according to the user's situation.

- **IoT integration**
  The expansion of the Internet of Things (IoT) will enhance the recognition capacity of the environment, allowing interactions to be more intuitive and adapted to the social, cultural, and personal context of each individual.

- **Multi-modal Processing**
  smart devices and assistants can capture not only a user's location, but also environmental factors that influence their experience, from the state of the climate to the level of noise in their environment, thus optimizing responses and recommendations in real time.

- **Personalized learning**
  through continuous learning, AI systems will gradually adapt to the individual needs of the user. Progressive adaptation will allow for more fluid and natural experiences that are aligned with each person's habits and preferences.

- **Semantic and ontological AI**
  by using specific ontologies, the systems will be able to interpret complex relationships between concepts and situations, giving a deeper meaning to the user's interactions and actions. This will enable a greater understanding of their intentions and a better adjustment of the responses offered by the technology.

A FRAMEWORK OF FLUID AND CONNECTED INTERACTIONS

INTERACTION FRAMEWORK

A framework of fluid and connected interactions

The future of interaction will be marked by **more immersive, dynamic hybrid models with a high degree of contextualization**. The connection between humans and machines will evolve toward goal-oriented interactions, moving beyond the need to define detailed processes (prompting). As technology assumes control over most transactional and operational processes, **exclusively human interactions will focus on creative, social, and reflective activities**.

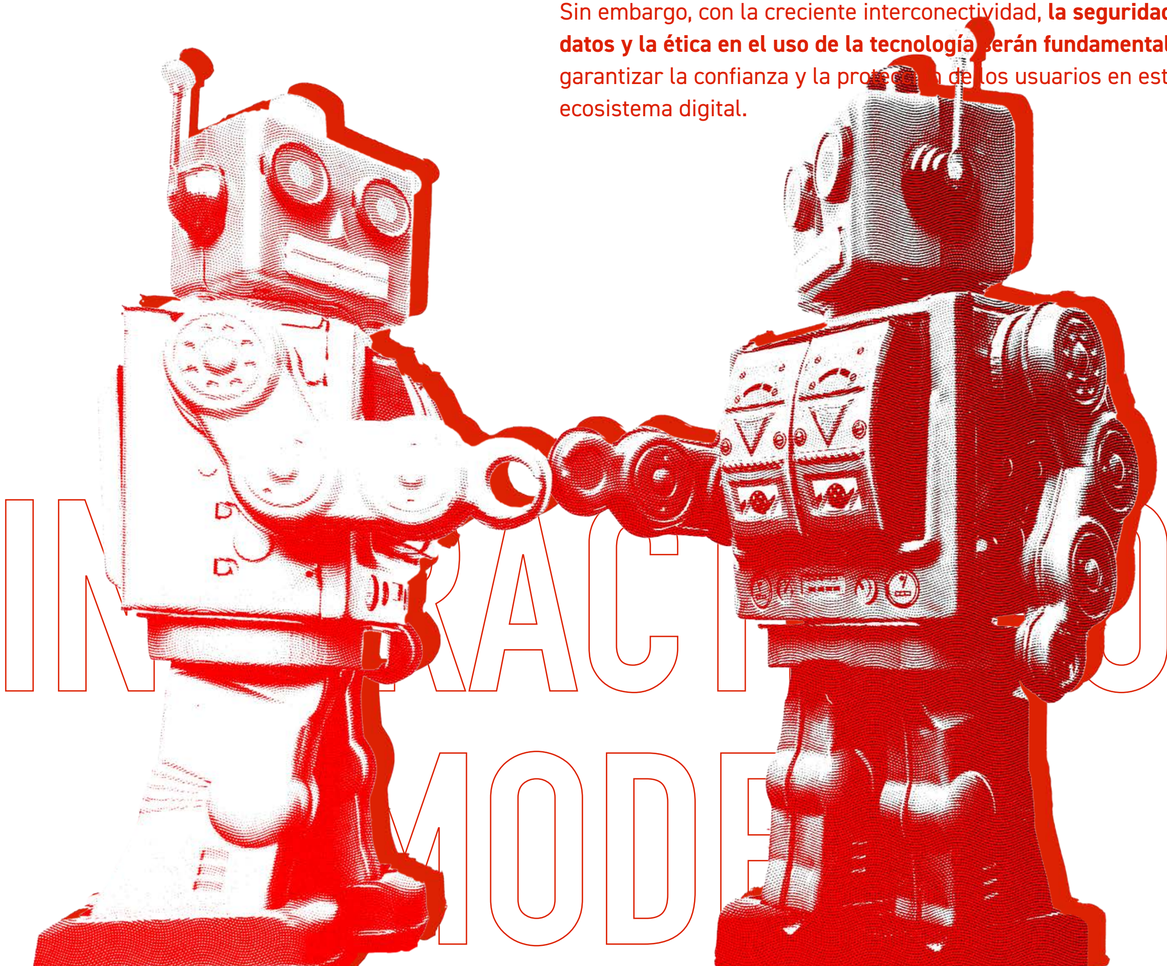
In this new ecosystem, **regulation will play a key role** in guaranteeing the privacy, ethics, and sustainability of interactions, protecting user autonomy and avoiding the abuse of automated systems.

INTERACTION FRAMEWORK

Evolution of interaction models

La comunicación entre dispositivos y sistemas autónomos impulsará un **entorno digital más eficiente y adaptable**. La IA facilitará la colaboración entre asistentes virtuales, sistemas de tráfico y dispositivos del hogar, **optimizando el tiempo y los recursos sin intervención humana**. Las tareas repetitivas serán automatizadas, permitiendo que las personas se enfoquen en actividades de mayor valor.

Sin embargo, con la creciente interconectividad, **la seguridad de los datos y la ética en el uso de la tecnología serán fundamentales** para garantizar la confianza y la protección de los usuarios en este ecosistema digital.



INTERACTION MODEL

HUMAN RELATIONSHIPS

Technology at the service of interpersonal connection

Despite automation and technological advances, **human interaction will remain essential in society**. Technology will reduce transactional interactions by taking care of routine tasks, allowing people to focus on creativity, learning, and emotional connection.

In an increasingly digitalized world, **human relationships will gain more value, driving the importance of collaborative work, in-person education, and physical meetings**. In addition, integration between the physical and digital world will evolve with hyper-realistic avatars that will reflect the identity and emotions of users, facilitating immersive experiences and eliminating geographical barriers.

RELATIONSHIPS BETWEEN HUMANS AND MACHINES

Natural and personalized interactions

The future of interaction between humans and machines will be marked by **fluidity, accessibility, and privacy**. Artificial intelligence will better understand natural language, allowing intuitive experiences and accurate responses in real time.

Thanks to the expansion of sensors and IoT devices, digital environments will autonomously adapt to users' needs, optimizing everything from the home to the workplace. In addition, **AI assistants will play a key role in organizing everyday life,** facilitating tasks, and improving productivity while always focusing on privacy and responsible use of data.

RELATIONSHIPS BETWEEN MACHINES

Interconnected and automated ecosystems

Communication between autonomous devices and systems will drive a **more efficient and adaptable digital environment**. Artificial intelligence will facilitate collaboration between virtual assistants, traffic systems, and home devices, **optimizing time and resources without human intervention**. Repetitive tasks will be automated, allowing people to focus on activities of greater value.

However, with growing interconnectivity, **data security and ethics in the use of technology will be essential** to ensure user confidence and protection in this digital ecosystem.

Tools for advanced interaction

The device ecosystem will evolve toward more natural and integrated solutions, optimizing the relationship between humans and technology.

INTERACTION TOOLS

Augmented reality and virtual reality glasses

AR will enrich the perception of the physical world with digital information in real time, while VR will offer fully digital immersive experiences.

Smartphones and *wearables*

Although smartphones will continue to be essential tools, wearables will gain prominence by integrating advanced functionalities into compact and accessible devices.

Dynamic and adaptive interfaces

Touch screens, holograms, and space computing will allow for more intuitive and efficient interactions. Customization will be key to guaranteeing fluid and contextual experiences.

Brain-Computer Interfaces (BCI)

The ability to interact with devices through thought will open new opportunities in accessibility, communication, and productivity. These technologies will be developed to be discreetly and safely integrated into everyday life.

Haptic systems and sensory feedback

The incorporation of touch into digital interaction will enhance the user experience, allowing users to feel textures, temperatures, and resistance in virtual environments.

SCENARIOS

SCENARIOS

The future of interaction in the year 2035 unfolds across four divergent scenarios, each shaped by the evolution of artificial intelligence, the adoption of advanced devices, and the regulatory framework governing their implementation. From a world where technology has failed to deliver on its promise of radical transformation to a society where interaction with intelligent agents is ubiquitous, **these scenarios explore varying levels of integration, autonomy, and technological accessibility.**

In some cases, AI is as a useful yet limited tool; in others, it becomes a fundamental pillar of daily life, completely transforming how people interact with their environment. **Each scenario presents unique opportunities and challenges, impacting not only how we work and socialize but also key sectors such as insurance, where adapting to these changes will be crucial to remain relevant in the future.**

SCENARIO #1

WHERE THE WALL STOPPED US

SCENARIO #2

THE ART OF MAXIMIZING

SCENARIO #3

THE ERA OF DIGITAL LUXURY

SCENARIO #4

TOWARD UXTOPIA

SCENARIOS

Materialization of potential

Cost of technology & regulatory permissiveness

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SCENARIO #1

WHERE THE WALL STOPPED US

- Artificial intelligence enables **very effective assistants in repetitive and low-complexity tasks**, but not decisive in the rest.
- **Mobile phones** remain the **main interaction platform**, without new emerging devices having replaced them.
- The **interoperability of applications and devices is not fluid**, generating frictions in the digital experience and limitations in functionalities.

SCENARIO #2

THE ART OF MAXIMIZING

- **AI assistants** have become an **omnipresent tool** in everyday life, optimizing the **management of simpler and more repetitive everyday tasks**.
- The use of **augmented reality glasses, wearables, and other smart devices** has increased significantly, thanks to their greater ergonomics, autonomy, and **functionalities enabled by highly interoperable ecosystems.**

SCENARIO #3

THE ERA OF DIGITAL LUXURY

- **“Premium” users** and corporations have access to more **advanced AI assistants**, capable of managing tasks of a certain complexity autonomously, while users, **companies, or less buoyant economies have limited functionalities**.
- **High-end devices** offer highly sophisticated interactions, while the **most affordable options are limited** in functionality. **The lack of general interoperability** limits the fluidity of experiences.
- **Experiences are fragmented** and demonstrate high disparity between segments.

SCENARIO #4

TOWARD UXTOPIA

- **Smart assistants operate with high autonomy,** requiring limited human intervention even in tasks of a certain complexity, **taking a central role in the life of users**.
- Connectivity between devices and systems allows for **barrier-free integration of interactions and experiences**.
- Technological sophistication has reached such a level that **technology sometimes becomes almost imperceptible** in everyday life

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Potential of technology

Technological development of AI & devices

SCENARIO #1

WHERE THE WALL STOPPED US

ABSTRACT

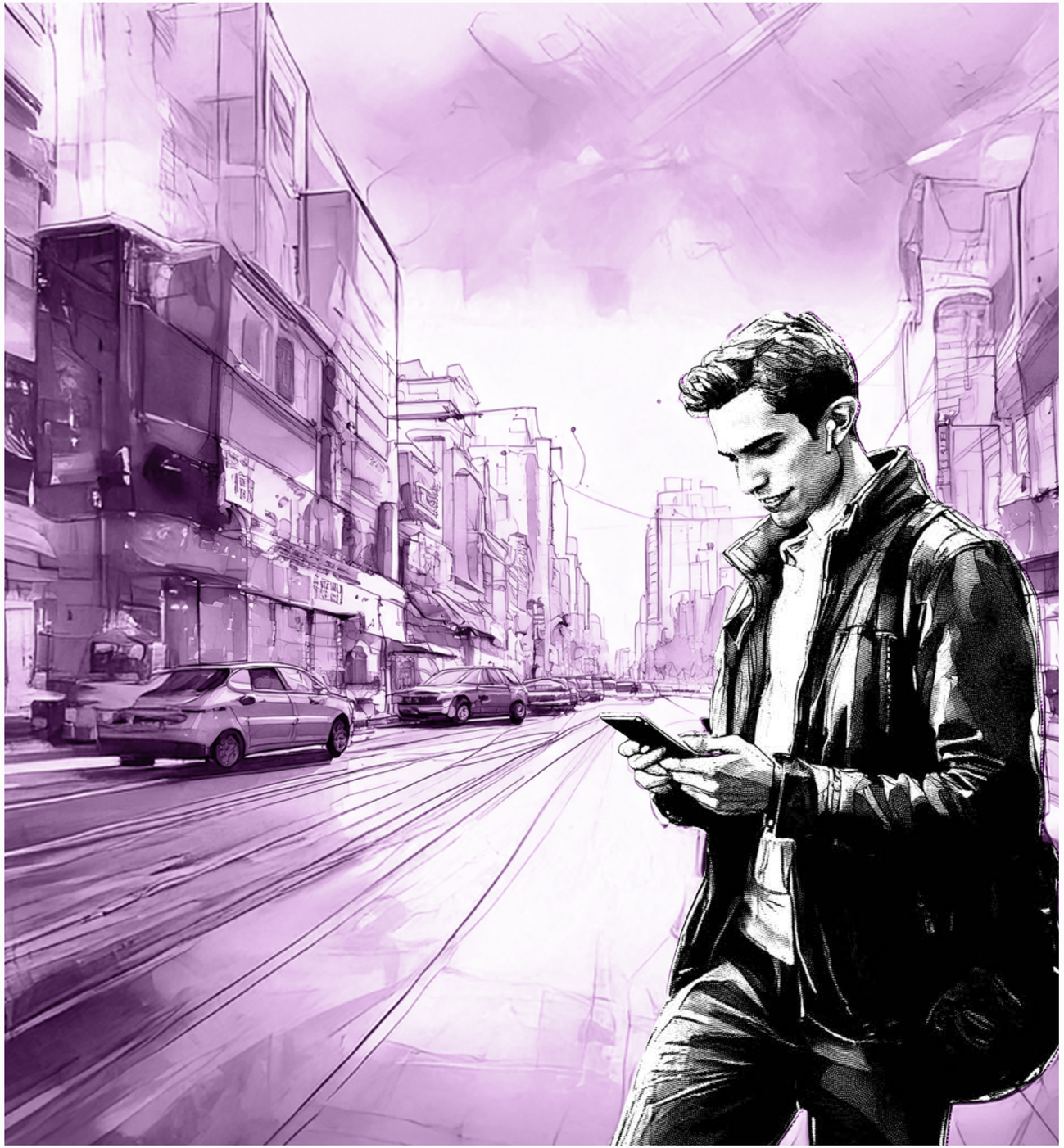
Year 2035. **AI has not reached all initial expectations, and interaction between people has barely changed in 10 years**. These solutions are effective in controlled environments, offering high-quality, multi-format content generation and optimizing specific tasks with solid results. However, they fall short of the transformation many had envisioned and rely heavily on human supervision for most applications. Three factors clearly demonstrate the lack of transformative impact.

First, interaction devices such as augmented and virtual reality glasses, robots, or wearables are highly limited in terms of design, functionality, and adoption. They work, but still have a long way to go before becoming truly useful gadgets for the average user beyond very specific applications. Although technological costs are not a significant barrier, implementation decisions require careful evaluation due to their limited impact. In practice, adoption is concentrated in specific personal and professional contexts. Their relevance in daily life remains marginal, far from becoming essential or widely used tools—unlike smartwatches a decade ago.

The second factor is the lack of interoperability between systems, applications, and devices, which hinders the full potential of technology. Within closed ecosystems, experiences are functional, but never fluid or fully integrated with the context. Integration is inefficient between different ecosystems, which generates a fragmentation of experiences.

In addition to the above factors, **adoption is limited by restrictive regulations that curb innovation and hinder the adoption of new technologies**. Compliance with regulations is a heavy and costly process and, as we have seen before, is of little use, which discourages both companies and users.

In this context, the net impact of technology on the labor market and society is discrete. While progress has been made in productivity and training, structural change is minimal, and the promises of technology as a driver of radical transformation have become distant.



SCENARIO #1

WHERE THE WALL STOPPED US

In this scenario, the progress of artificial intelligence and technology in general has been much more modest than expected. Digital transformation has had a limited impact, with incremental improvements in productivity and efficiency, but without a revolution in the way we interact with systems and devices. The lack of interoperability between technologies, restrictive regulation, and the absence of significant hardware advances have resulted in a society where interactions remain largely similar to those of a decade ago. AI has not reached disruptive levels of autonomy and remains dependent on human supervision for most tasks.

Interactions continue to be dominated by traditional devices, with smartphones at the center of the digital experience. Although voice interfaces have improved and some emerging technologies have attempted to gain ground, touchscreens and manual controls remain the predominant interaction methods. Customization and adaptation to the context are minimal, as technology lacks the ability to understand the environment deeply. In this context, digitization has alleviated certain burdens, but has not generated significant structural changes in society.

WHERE THE WALL STOPPED US

Key

- **Low autonomy of AI**

  Artificial intelligence continues to function as a passive assistant, limited to performing repetitive and low-impact tasks. Human supervision is still necessary in most processes, reducing the capacity of AI to act independently.

- **Smartphone predominance**

  Mobile phones remain the main interaction platform, without the emerging devices having succeeded in replacing them. Centralization of technology in smartphones limits the evolution of new interfaces and control methods.

- **Fragmented interaction and lack of interoperability**

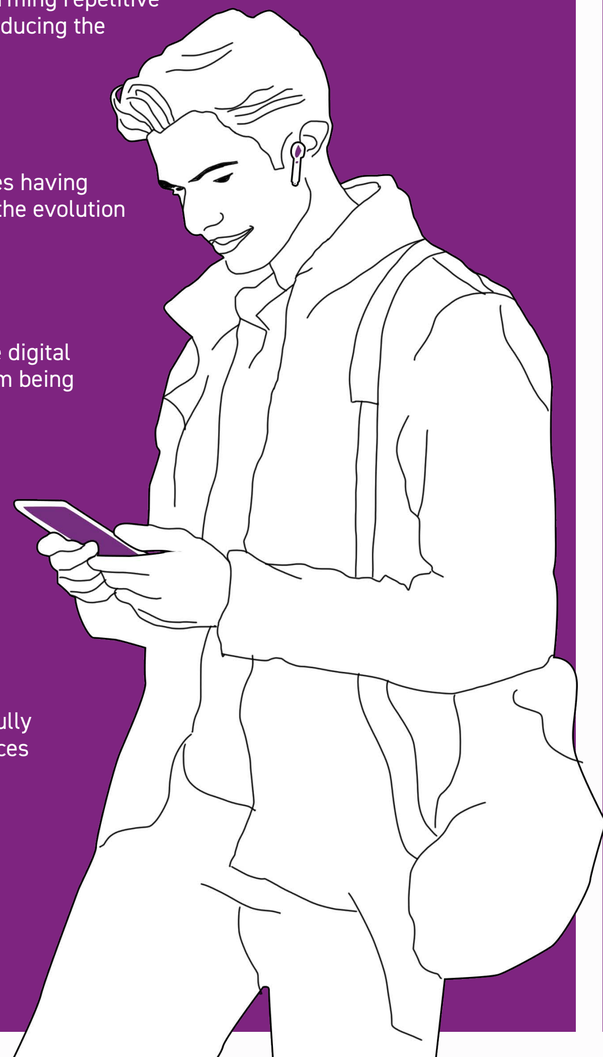
  Applications and devices cannot communicate smoothly, generating friction in the digital experience. Technological ecosystems remain closed, preventing experiences from being integrated and personalized.

- **Traditional and low-impact interfaces**

  Touchscreen displays remain the standard for interaction, with incremental improvements in quality, but without disruption to experience. Voice control has improved, but its use is still limited to simple commands and low-complexity tasks.

- **Customization and adaptation limited to context**

  The lack of advanced data processing prevents interactions from being meaningfully personalized. AI fails to effectively anticipate user needs, leaving digital experiences poorly optimized.



SCENARIO #1

WHERE THE WALL STOPPED US

Customization and adaptation limited to context

In this scenario, **technological evolution has not met expectations and the digitalization of the insurance industry follows a path of incremental improvements rather than a radical transformation**. Lack of interoperability, low autonomy of AI, and poor adoption of advanced devices have resulted in an ecosystem where insurance processes continue to depend largely on traditional models.

While some digital tools have optimized operational efficiency, **automation remains limited and product customization is not yet a tangible reality**. Insurance continues to operate under standardized models, without the ability to adapt in real time to the behavior of the insured party. The customer experience remains slow and bureaucratic, as human interactions are necessary in most processes. Furthermore, the scarcity of processable data prevents the evolution toward more advanced predictive models. In a context of low technological adoption and restrictive regulation, innovation in the insurance industry is stagnant, making it difficult to differentiate between companies and limiting the ability to offer personalized insurance tailored to individual risks.

Implications

1.

Traditional insurance models without significant customization

The lack of technological advances has prevented the evolution toward hyper-personalized insurance. Most policies remain static, with fixed rates based on traditional risk profiles and not real time data. Customers continue to select predefined packages without the insurer being able to dynamically adjust coverage according to their behavior or context.

2.

Minimum automation in underwriting and claims processes

Although some operations have been digitalized, the absence of advanced AI and the lack of interoperability between systems have limited the automation of key processes. Subscriptions continue to depend on manual forms and long validation times, while claims management still requires human review to verify claims.

3.

Bureaucratic customer experience dependent on human agents

Interactions with insurance companies remain, for the most part, traditional, with many customers requiring human assistance to complete processes. This makes response times long and the experience perceived as inefficient compared to other more digitalized sectors.

4.

Lack of data integration for accurate risk assessment

Due to the scarcity of data generated by customers in real time, risk assessment continues to depend on historical actuarial models. This limits the ability to offer more precise and fair prices, affecting both low-risk customers who pay high premiums and high-risk customers who are not detected on time.

5.

Limited capacity for innovation due to regulatory restrictions

The restrictive regulatory framework has hindered experimentation with new insurance models based on AI and predictive analysis. Insurance companies face barriers to developing innovative products, which prevents them from differentiating themselves and adapting to the changing needs of the market.

SCENARIO #2

THE ART OF MAXIMIZING

ABSTRACT

Year 2035. Looking back, **AI has not reached its expected potential, and yet its impact is astounding**. It would be an overstatement to call it revolutionary technology, but it is fair to say that AI has transformed our interactions and our social and professional dynamics. Three key factors explain this situation.

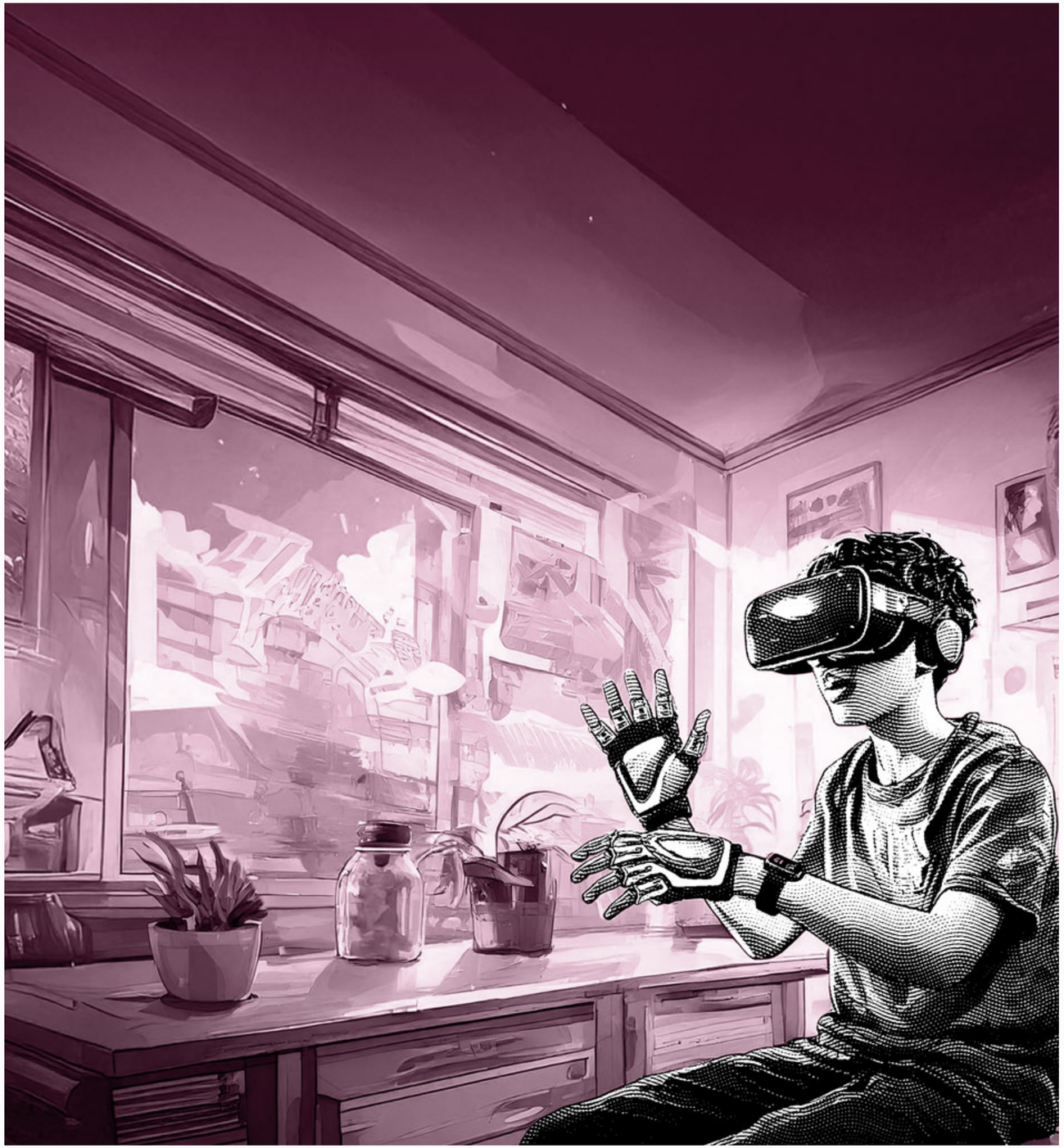
First, the focus on mass adoption. As developers encounter insurmountable barriers in the evolution of AI, they dedicated their efforts to driving its mass adoption. They prioritized affordability and usability, enabling access to devices that combine fidelity, ergonomics, and convenience. Devices have evolved as natural extensions of smartphones, which continue to resist obsolescence. In this way, AI systems, with their limited but functional capabilities, have found an omnipresent place in both domestic and professional environments.

The second key factor is improving interoperability within the three major technological ecosystems, which offers fluid and multi-modal experiences. These integrations enable use cases that maximize the practical applicability of technology, which continues to await the long-promised technological breakthroughs.

The third key is a permissive regulatory framework designed to prioritize competitiveness and innovation against potential risks. The gradual evolution of automation and technological advances have avoided igniting significant social alarms and, therefore, have allowed for social and corporate adoption without excessive restrictions.

It should be noted that automation has increased productivity and reduced tedious tasks, but has also displaced a considerable part of the workforce. In many sectors, new job opportunities fail to offset the roles that have been lost, creating pockets of unemployment with limited prospects for improvement.

A decade ago, techno-optimistic people dreamed of a society transformed by unprecedented technological progress. Today, although progress has not been so spectacular, AI has shown that it can offer tangible benefits and reshape our way of living and working if it is further adopted.



SCENARIO #2

THE ART OF MAXIMIZING

In this scenario, **artificial intelligence has proven to be useful and functional, but not revolutionary.** Although it has not reached the expected potential, its mass adoption has allowed for a significant transformation in the way we interact with technology. Affordability and ease of use have been key factors in integrating AI systems into everyday life, consolidating them as essential tools for productivity and efficiency.

Interoperability within large technological ecosystems has improved, allowing for more fluid and multi-modal experiences. However, there are still limitations outside these environments, which prevents complete integration. Interactions have become more dynamic and multi-modal, combining voice, gestures, and tactile control. Despite these advances, human supervision remains predominant in complex tasks, and the personalization of experiences continues to be conditioned by the capacity of each ecosystem.

THE ART OF MAXIMIZING

Key

- **Functional AI and mass adoption**

  AI assistants have become an omnipresent tool in everyday life, optimizing daily task management. Human supervision remains necessary, but automation has significantly reduced the workload in repetitive processes.

- **Greater interoperability within closed ecosystems**

  Connectivity between devices and applications within large ecosystems has improved, facilitating more fluid experiences. The lack of universal standards still generates friction in the integration between platforms of different providers.

- **Rise of smart devices**

  The use of augmented reality glasses, wearables, and personal assistants has increased, enhancing the digital experience. The miniaturization and optimization of these devices have made them more accessible and comfortable for users.

- **Advanced multi-modal interaction**

  The use of combined voice, gesture, and touchscreen interfaces has been consolidated, improving accessibility and efficiency. The nature of the interaction has improved, although it still depends on the capabilities of the ecosystem in which it operates.

- **Moderate customization**

  Within technological ecosystems, AI is able to deliver personalized experiences, but its effectiveness remains limited. Outside of controlled environments, personalization remains basic due to a lack of data integration.

SCENARIO #2

THE ART OF MAXIMIZING

Moderate customization

In this scenario, **artificial intelligence has become a widely adopted capability, optimizing processes and improving operational efficiency,** yet without reaching disruptive levels of autonomy.

For the insurance industry, this represents an environment where automation has significantly reduced the workload in policy management, underwriting, and claims processing, but still requires human intervention for complex tasks. Interoperability within technological ecosystems has enabled insurers to integrate their services with third-party platforms, which improves personalization and dynamic premium adjustment. However, outside these ecosystems, the experience remains fragmented. The increased availability of data has facilitated the implementation of behavioral insurance, although with certain limitations in real time. The customer interacts with insurers mainly through AI assistants, which has reduced direct contact with human agents. However, the challenges in integrating systems between different platforms and the need for human validation in critical situations have prevented total automation.

Implications

1.

Operational optimization using AI in underwriting, claims, and customer service

Insurance companies have incorporated AI assistants to improve efficiency in key processes. This has reduced customer service waiting time, automated simple claims, and facilitated policy underwriting through integration with third-party platforms.

2.

Greater personalization of insurance within closed technological ecosystems

Within large technological ecosystems, insurers have managed to offer personalized insurance based on customer behavior. However, outside these environments, customization remains limited due to the lack of interoperability between systems.

3.

Dynamic premium adjustment based on behavioral data

Customers operating within technological ecosystems can benefit from adjustments in their premiums based on their lifestyle. For example, a cautious driver may see their insurance premium reduced in real time, while a person with healthy habits could receive discounts on health insurance.

4.

Reduction of human interaction in basic processes, but with supervision in complex cases

Automation has shifted many routine tasks, but human intervention remains necessary in more complex cases, such as claims with disputes or personalized coverage assessments.

5.

Competence based on the capacity to integrate with large technological platforms

Insurance companies that have successfully integrated with ecosystems such as major marketplaces, social networks, or virtual assistants dominate the market. Those that have failed to adapt are left behind, unable to access the contextual data needed to enhance their offerings.

SCENARIO #3

THE ERA OF DIGITAL LUXURY

ABSTRACT

Year 2035. **Many of our daily interactions have become frustrating**. We know that technology is ready to provide us with a much better experience, but this potential is not materializing for different reasons.

The most obvious is the cost of access to the most advanced technologies, which require large computing capabilities and technological sophistication. AI is able to adapt to different environments with considerable levels of autonomy in simple tasks, and devices have evolved thanks to miniaturization, advanced computing, next-generation batteries, and embedded sensory. However, the most cutting-edge technology is expensive to acquire and operate, so only corporations and more powerful users have access to them. This creates a clear division between those who can afford these advances and those who need to settle for more affordable, but less capable options. This divergence affects both the corporate and personal spheres, with an uneven adoption of state-of-art technology according to financial capacity.

The second reason that prevents interaction through AI systems from reaching its full potential is the lack of interoperability. This reduces fluidity, generating fragmented experiences with little personalization. Only in highly advanced environments do devices such as AR/VR glasses, wearables, robots, and other smart technologies fully leverage the potential of AI, creating multi-modal, immersive, and interactive experiences.

Finally, **the restrictive regulatory environment remains an obstacle.** Regulations limit certain economically viable use cases, impose additional costs, and restrict the full use of the available data and its transmission between AI systems. According to experts, this regulation, in addition to curbing adoption, has slowed the development of AI, which would have reached larger borders if private data were allowed to be freely used for training.

SCENARIO #3

THE ERA OF DIGITAL LUXURY

In this scenario, **technology is within the reach of an elite with advanced capabilities**, while the masses must conform to much more modest solutions.

Furthermore, technology has advanced significantly, but its access is restricted to those who can pay for it. Artificial intelligence has reached remarkable levels of autonomy and capacity, but only within exclusive environments where costs are not an impediment. This has created a significant digital divide, where an elite enjoys seamless, hyper-personalized interactions, while the majority of the population continues to rely on basic tools with limited capabilities.

Interactions are highly fragmented due to the lack of interoperability between devices and platforms, which prevents technology from reaching its maximum potential. Restrictive regulation has further slowed the evolution of AI, limiting its development and restricting the use of data for training and personalization.

THE ERA OF DIGITAL LUXURY

Key

- **Inequality in access to AI**

  Premium users have access to advanced AI assistants, while most have basic versions. Automation and customization capabilities vary depending on the economic level of the user.

- **Fragmentation and limited interoperability**

  High-end technologies operate within closed ecosystems, without effective communication with more basic devices. The lack of integration prevents a fluid experience for most users.

- **Experiences differentiated by economic level**

  High-end devices offer more sophisticated interactions, while the most affordable options are limited in functionality. Digital experience is segmented, replicating economic inequalities in access to technology.

- **Control differentiated by economic level**

  Users with access to premium technology enjoy advanced voice control, gestural interfaces, and even integration with brain-computer interfaces. For most users, interactions continue to depend on touchscreens and basic commands, which limits their ability to optimize their digital experience.

- **Limited evolution of AI due to regulatory restrictions**

  Despite technological potential, the development of artificial intelligence has been slowed by regulations that limit the use of private data for training.This has generated an ecosystem where AI is powerful only in closed and exclusive environments, while accessible versions lack advanced learning and deep customization.

SCENARIO #3

THE ERA OF DIGITAL LUXURY

Limited evolution of AI due to regulatory restrictions

In this scenario, **the digital divide has generated extreme segmentation in society, where only users with high purchasing power can access advanced and personalized technological experiences.** For the insurance industry, this means that hyper-personalized insurance is reserved for an elite with access to advanced data, while most of the population still depends on more traditional policy models. The lack of interoperability and fragmentation of the technological ecosystem have made it difficult to collect data in real time, limiting the ability to adjust coverage more dynamically.

This has also generated inequalities in risk management, as those with access to smart systems can better prevent claims, while other users face greater uncertainties.

Insurance companies operating in the premium segment offer exclusive products with advanced predictive analysis, while companies focused on the mass market continue with conventional models, with less differentiation and a higher risk of obsolescence.

Implicaciones

1.

Extreme market segmentation between personalized premium insurance and standard insurance

Customers with greater purchasing power can access hyper-personalized insurance, while most of the population only have access to standard products with few adaptation options.

2.

Greater differentiation in insurance services based on exclusive data

Insurance companies focused on the premium segment can take advantage of advanced data from smart devices and AI assistants, allowing custom coverage. However, all other customers receive less optimized insurance.

3.

Difficulty in integrating data for more precise risk assessment models

The lack of interoperability between devices and platforms means that insurance companies can only take advantage of data within their own ecosystem, limiting accuracy in risk assessment.

4.

Technological insurance companies dominate the high-end market, displacing the traditional

Insurance companies that have succeeded in developing their own ecosystems and securing exclusive access to premium customer data dominate the market. Traditional insurance companies that have not innovated are outside the most profitable segment.

5.

Customers without access to advanced AI have less efficient and costlier insurance

Inequality in access to technology creates a gap in insurance costs. Those without access to smart devices or AI systems must pay higher premiums due to the lack of data to support an accurate assessment of their risk.

SCENARIO #4

TOWARD UXTOPIA

ABSTRACT

Year 2035. We interact with smart agents in all areas of life. Technological developments used to provide new means of interaction; now, not only have these means proliferated, with increasingly immersive realities, but technology itself has become a central participant in these interactions. There are three keys that have led us to this situation.

First, adaptability: as soon as you deploy an agent, it adapts immediately to the context. The immense learning and reasoning capacity of AI models is perfectly complemented by the devices' ability to observe the environment thanks to powerful embedded sensors and remain active thanks to long-lasting batteries. In this context, agents are capable of adapting to users by personalizing both their activity and their interaction with other agents, enabling seamless connectivity. This interoperability has been driven by collaboration among market players and growing user demands.

Once adapted to the context, **the second key is autonomy. Agents understand their objectives, explain with which social and corporate systems they must interact, and operate naturally, fluently, and precisely.** Some human supervision is still needed, especially when the objective conveyed requires a very large succession of decisions, when the development of the action entails unpredictable consequences, and when the context is ever-changing.

Finally, **the regulatory framework: restrictions have been minimal in the use of AI and data privacy. Innovation has been prioritized, boosting GDP and fostering a wide and competitive diversity of startups, Big Tech companies, and open-source communities.** Social tension has increased due to structural unemployment and, in response, governments explore wealth redistribution models, such as universal basic income financed by taxes on autonomous systems.

Ultimately, anyone who doesn't have augmented or virtual reality glasses, robots, or wearables at home simply doesn't want them. Today, wearing AI-powered devices has become as common as wearing earrings or a scarf. As in any field, there are more expensive and more affordable brands, but nearly everyone can afford and use increasingly capable AI devices and systems.

SCENARIO #4

TOWARD UXTOPIA

This scenario represents the **full integration of artificial intelligence into daily life**, with intelligent agents acting autonomously in most interactions. Technology has reached a high level of adaptability, enabling experiences that are seamless, personalized, and efficient.

Advanced devices have become ubiquitous and accessible, with invisible, multi-modal interfaces that integrate into the environment effortlessly. Regulation has been permissive, driving innovation while ensuring that automation benefits the entire population.

TOWARD UXTOPIA

Key

- **Autonomous and ubiquitous AI**

  Smart agents operate with minimal human intervention to manage tasks and optimize processes. Total automation has redefined interaction, eliminating friction in the digital experience.

- **Total and fluid interoperability**

  Connectivity between devices and systems allows for barrier-free integration. Users experience natural interactions without interruptions.

- **Ultra-personalized experience**

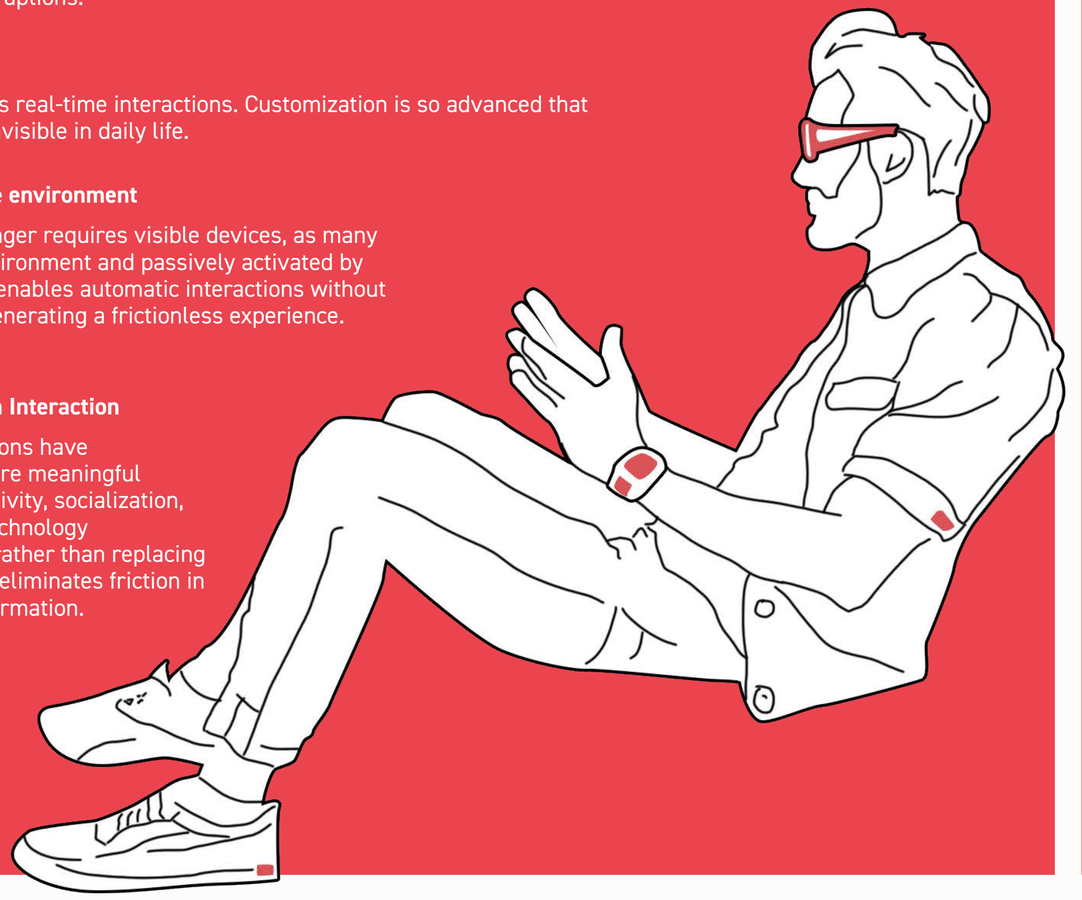
  AI anticipates needs and optimizes real-time interactions. Customization is so advanced that technology becomes practically invisible in daily life.

- **Invisible devices connected to the environment**

  Interaction with technology no longer requires visible devices, as many systems are embedded in the environment and passively activated by users. Environmental computing enables automatic interactions without the need for manual activation, generating a frictionless experience.

- **Changing the Dynamics of Human Interaction**

  Banality or transactional interactions have disappeared, leaving room for more meaningful human interactions, such as creativity, socialization, and strategic decision-making. Technology complements human interaction rather than replacing it, functioning as a facilitator that eliminates friction in communication and access to information.



SCENARIO #4

TOWARD UXTOPIA

Change in the dynamics of human interaction

This scenario represents **the highest level of artificial intelligence integration into everyday life**, with highly autonomous intelligent agents managing the majority of interactions.

In this context, **the insurance industry has evolved radically toward models of prevention and absolute personalization.** Real-time data allows insurance premiums to be adjusted dynamically according to user behavior and context. Total automation has eliminated the need for human agents in most processes, with AI assistants managing the procurement, claims, and customer service efficiently. Complete interoperability between devices and services has facilitated the collection of contextual data, allowing insurers to prevent risks before they occur. However, this hyper-connectivity also poses regulatory and ethical challenges, especially in data privacy and the possible bias in the assignment of coverage. In this scenario, insurance companies that have managed to adapt to the new digital era dominate the market, while those that have maintained traditional models have disappeared.

Implicaciones

1.

Evolution toward real-time, data-driven, preventive insurance models

Insurance companies have gone from reactive models to predictive models, using advanced AI to prevent incidents before they occur. This has reduced the number of claims and allowed premiums to be offered that are more adjusted to the actual behavior of the insured parties.

2.

Dynamic premiums that are adjusted automatically according to the behavior of the insured party

Thanks to the full integration of health, mobility, and lifestyle data, premiums can be adjusted in real time based on each user's risk level. This creates a much fairer and more adaptable model.

3.

Total automation of processes, almost completely eliminating human intervention

AI agents manage subscriptions, claims, and queries without the need for human intervention in most cases. This reduces operating costs and improves response speed.

4.

Use of smart agents for comprehensive insurance management

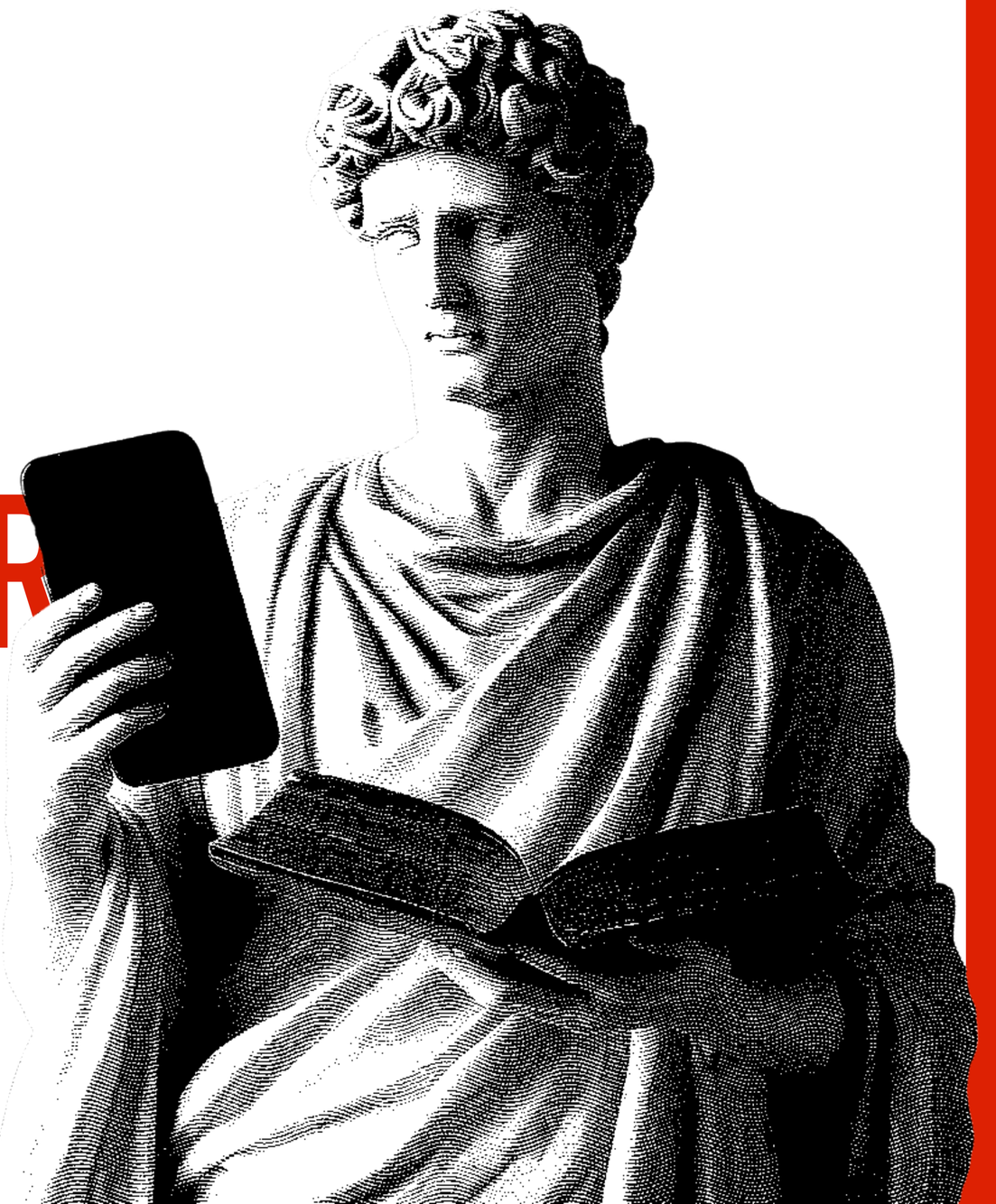
Customers interact with insurers through intelligent assistants capable of managing multiple aspects of their policies, from purchasing to updating coverage based on life changes.

5.

Challenges in privacy and regulation due to hyper-connectivity and mass use of data

The mass use of personal data in real time poses ethical and regulatory challenges. The need to guarantee the privacy and security of insured party information becomes a priority to avoid abuse in setting premiums and coverage.

IMPLICATIONS FOR THE INSURANCE INDUSTRY



INSURANCE INDUSTRY

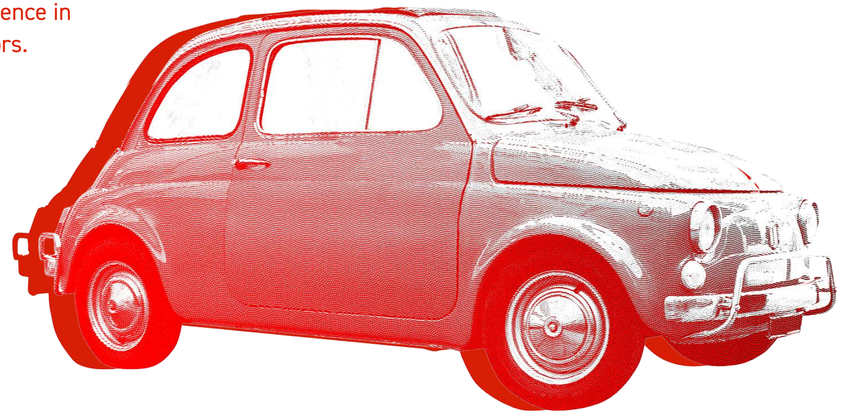
IMPLICATIONS (I/II)

For each scenario, implications have been individually analyzed, and common elements across all of them have been identified. **This has helped reduce the uncertainty we face, and may continue to face, in the future.**

From this analysis, **it is concluded that the insurance sector** is confronting a context shaped by certain elements that will intensify over time:

More demanding customers than ever with interaction

Customers accustomed to receiving curated information, delegating tedious tasks, interacting across multiple devices, and obtaining instant responses will raise their expectations toward insurers, demanding convenient, seamless, multi-modal, and multi-device interactions, mirroring the standards they experience in other sectors.



Increase in automation in all things transactional

Customers will demand a reduction in human interactions in purely transactional processes of medium or low value within the insurance industry. Anything that can be done automatically —and even transparently and frictionlessly—for the customer will be expected to be delivered that way.

Human interactions at key moments

In a world dominated by machine interaction (and machine-to-machine interaction) and automated transactions, human-to-human interaction will become limited, yet highly valued, at key moments in the customer journey.

These moments will likely involve complex explanations or emotionally and psychologically charged situations. It will be essential to identify these key moments and redefine the most appropriate mechanisms to engage with each person in each context.

Redefinition of Physical and digital spaces

Insurance companies must remain visible, accessible, and relevant in both digital and physical environments. To achieve this, it is necessary to understand when, where, and how to create these interaction spaces, and what to offer within them, based on customers' consumption preferences, while considering the coexistence of all generations.

IMPLICATIONS (II/II)

For each scenario, implications have been individually analyzed, and common elements across all of them have been identified. **This has helped reduce the uncertainty we face, and may continue to face, in the future.**

From this analysis, **it is concluded that the insurance sector** is confronting a context shaped by certain elements that will intensify over time:

Interaction with smart assistants

Both personal and corporate AI agents have already burst into our lives. Generative AI tools are being adopted naturally and rapidly by individuals and businesses alike, and subtle changes are beginning to emerge.

For example, they are already changing the way we search for information and how this information is presented to us. These search engines will continue to evolve until they become a dominant channel, overtaking websites and apps. As their autonomy increases, users will be able to delegate actions to them, such as renewing or canceling an insurance policy, potentially leading to scenarios where companies are interacting with a machine that represents and acts on behalf of the customer.

Reconfiguration of the value chain

The impact of smart assistants on the customer relationship, together with the boom in insurance embedded in orchestration platforms [1], will generate changes in the value chain. This aspect directly impacts who interacts with whom.

Customer hyperknowledge

The growing availability of data generated by assistants and advanced devices, and the ability to integrate, interpret, and contextualize them, will enable us to have an unprecedented view of the customer. To this end, access to this appropriately processed data and advanced analysis capabilities are essential.

The players who will be in a position to obtain customer information are, and will likely continue to be, those who interact directly with them. It becomes essential to establish a strong ecosystem of players who can manage data appropriately and safeguard the interests of customers.

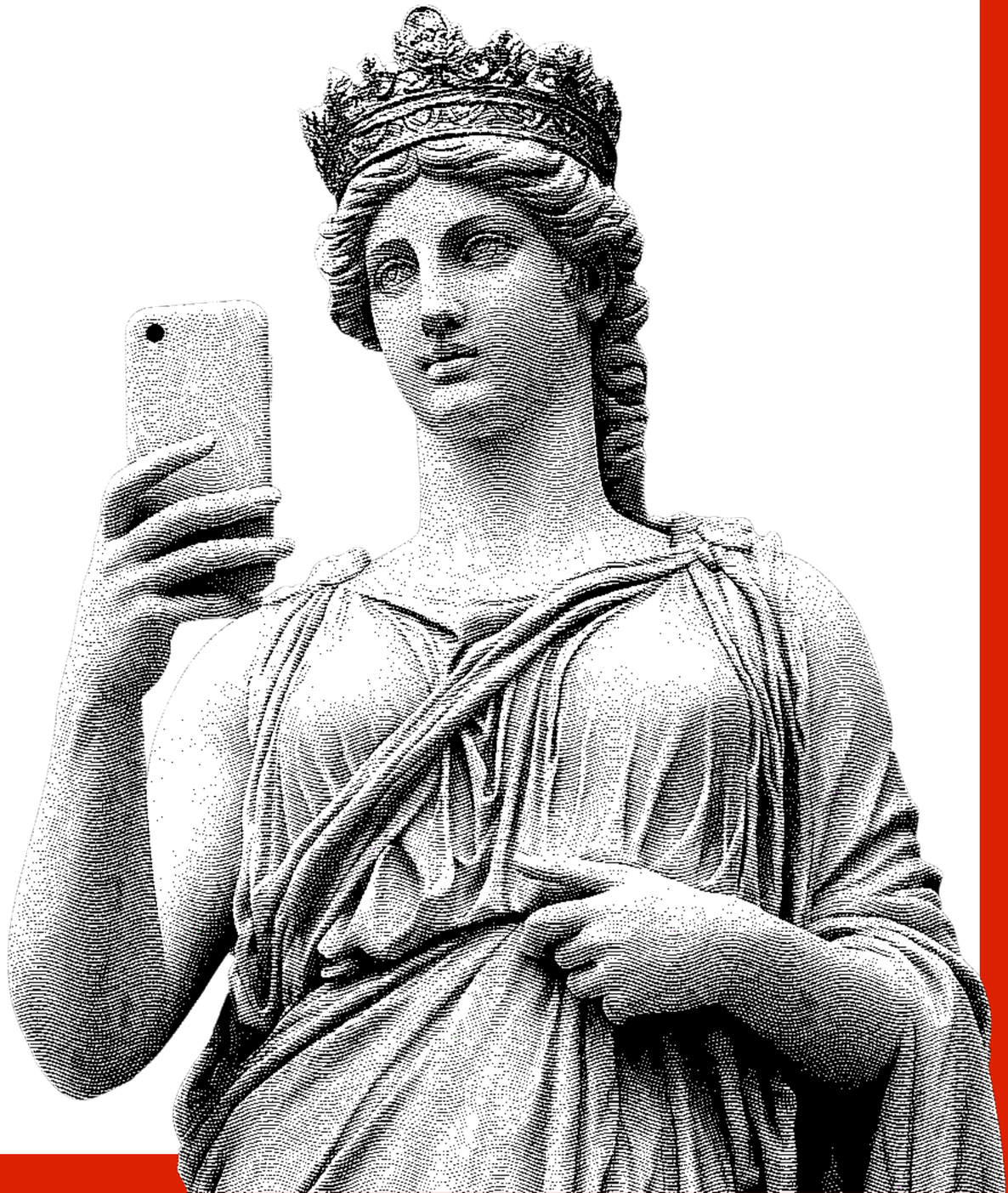
Greater security awareness

The increase in data usage and automated interactions will raise user awareness of the risks associated with sharing their data, creating tension between the desire to personalize and the need to protect privacy.

This growing awareness of security and privacy among customers (both businesses and individuals), along with the rise in fraud and cyberattacks, is accompanied by a general increase in consumer distrust. Insurance companies must work with a focus on providing that trust and security to customers.

[1] Integrated insurance technology platform that normally connects front-end distribution partners with back-end insurance companies.

CONCLUSIONS



CONCLUSIONS

The future of interaction and how all the changes analyzed here affect us will largely depend on **the capacity of insurance companies to adapt to technological trends and the expectations of customers of all generations.**

We must implement strategies that improve the customer experience, bringing it closer to what individuals are accustomed to in other sectors and segments.

To this end, insurance companies must intensify their efforts in:

CONCLUSIONS

1. Understanding the needs and preferences of customers by adapting to new channels, enabling multi-modality, and ensuring a convenient and seamless experience that integrates the physical and digital worlds in an accessible way for everyone.

2. Redefining all necessary processes and adapting our operational models to provide our policyholders with the best service, experience, and interaction.

3. Establishing appropriate partnerships with technological partners to adapt to new trends quickly and safely.

4. Strengthening essential technological fundamentals, such as data capabilities, cybersecurity and fraud, and interoperability, which are enablers for transforming interaction.

5. Increasing the skills of our employees to always offer excellent interaction. This will be supported by technology when necessary, but the focus is and will be on designing and offering products and services that are increasingly adapted to each person's needs.

MAPFRE

This document was prepared by MAPFRE for the sole purpose of fostering debate and providing a plausible snapshot of how the future of interaction could unfold and its impact on daily life, businesses, and the economy. All information, references, and examples are presented in good faith and without commercial purposes. The images included in this report have been prepared with Generative AI tools.