

MAPFRE OPEN INNOVATION

From A to Z

January 2022

WHAT DYNAMICS ARE CHANGING OUR WORLD? HOW IS THE INSURANCE INDUSTRY INNOVATING?

This simple and intuitive dictionary of terms related to the insurtech phenomenon contains a definition of the main terms used in the ecosystem and an explanation, in MAPFRE's own voice, of these transformational trends.



Aa

ACCELERATOR

An organization that promotes startups through programs based on calls for proposals with stipulated deadlines. These initiatives usually include aspects such as mentoring, intensive training, digital education or tutoring.

With a genuine model, MAPFRE Open Innovation has its own proposal: *insur_space* (see entry under “I”).



AGILE

A methodology for project management based on the division of projects into small parts to be completed and delivered in short periods of time (sprints).

Agile is part of the methodologies included in MAPFRE's Innovation Process.



ALMA MUNDI INSURTECH

Venture capital fund managed by Mundi Ventures (**see entry in “M”**) that seeks out companies that can transform the insurance industry with technology and innovations in product, business models, operations or distribution. It supports both experienced professionals and new entrepreneurs, companies that are gaining traction in the market and contemplating international expansion.

MAPFRE is taking part as an anchor investor, with 200 million euros in the second fund. Since it started operating, it has already invested in more than 30 startups, including some of the most promising in the insurtech universe, such as Omocon, Koa Health, Wefox and Kovrr.

AUTOMATION

(Machine learning, Robotic Process Automation)

A process applied to various elements of insurance, such as pricing and underwriting management. With machine learning, fast learning chatbots help managers, agents, suppliers and customers with basic tasks and can identify in which cases, by way of exception, the customer requires interaction with human experts.

MAPFRE automates many of its processes through Robotic Process Automation (RPA) to achieve greater operational efficiency from employees, distributors or suppliers, with an impact on improving customer experience.



ARTIFICIAL INTELLIGENCE

A branch of computer science that studies models capable of performing human-like activities based on two essential characteristics: reasoning and behavior.

The insurance field is transferring to this technology much of the complexity that until now has fallen to the user. Artificial intelligence provides endless opportunities for transforming the customer experience, for reading and analyzing documentation, images and other forms of data, both structured and unstructured. This makes it possible to automatically extract all data and information, make the right decision at each point in the process and provide an instant, satisfactory and transparent experience based on objective criteria.

MAPFRE is currently working with initiatives that make use of this technology to transform the customer experience, such as the automatic assessment of automobile damage using photographs, end-to-end claims automation or improvements in driving safety through non-intrusive alerts. To do so, it uses tools and systems such as machine learning (**see entry under “M”**) or the IoT (**see entry under “I”**).

 Further information

Bb

BIG DATA

A discipline that concerns all activities related to the manipulation and analysis of large bodies of data. It allows companies to explore patterns, trends and correlations, an activity that until recently would have taken years. Together with artificial intelligence (**see entry in “A”**), it helps to significantly transform processes to make them more efficient, thus reducing customer service times and offering a more personalized experience. They can be applied to almost all of the company's processes, such as customer acquisition, issuing, fraud detection, claims management, etc.

MAPFRE is working on the potential of data in all aspects, from data governance and data quality to data exploitation through predictive models.



Bb

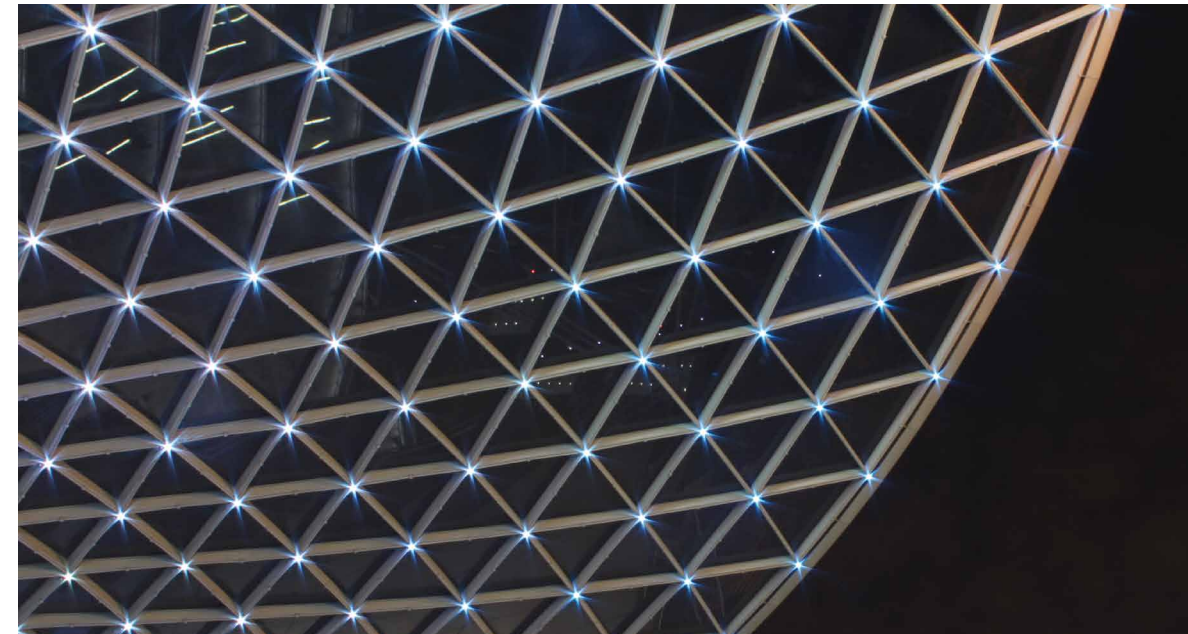
BLOCKCHAIN

Blockchain-based technology with a permanent, tamper-proof record of transactional data. Functions as a decentralized database administered by computers belonging to a peer-to-peer network. Each of the computers in the network maintains a copy of the ledger, and all the copies are updated and validated simultaneously.

Blockchain streamlines the administrative processes and formalities of insurance operations, allowing the use of smart contracts, which are automatically executed under a series of predetermined conditions (**see entry under “S”**). All participants in the contract can have unlimited access to the stored data, which is immutable. Transparency provides fairness and trust, which benefits the public's perception of the insurance industry.

MAPFRE Spain participates in three initiatives related to the research and promotion of Blockchain solutions:

Alastria, a multi-ecotrial association that promotes the digital economy through the development of decentralized registration technologies with Blockchain. It is based on the methodology of the virtuous spiral of innovation, growing through the collaboration of the private sector, public administrations and academia.



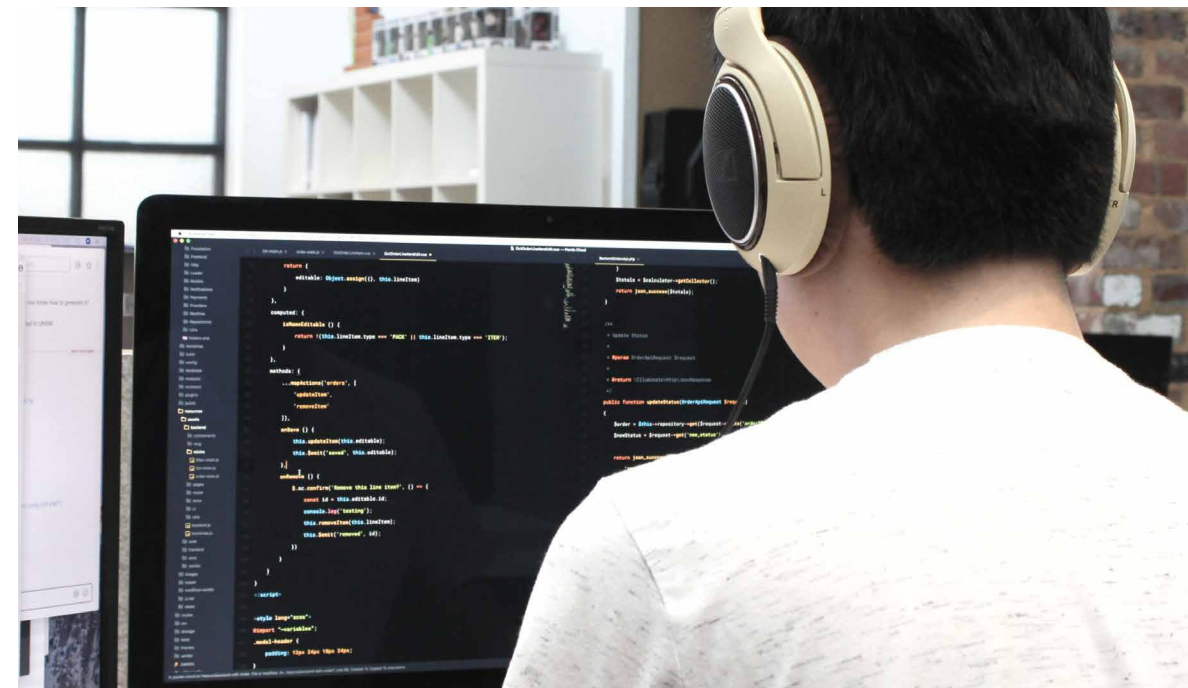
Bb

Digitalis, a platform involving large Spanish companies that applies blockchain technology to verify supplier documentation. The objective is to make the relationship between corporations and their providers more agile, efficient and secure. The aim is to create a unique digital identity for these companies.

Tirea CYGNUS, a pioneering initiative that seeks to become the benchmark in our sector and lay the future foundations of blockchain applications for insurance companies. It is organized through an open ecosystem of industry collaboration in which the aim is to accommodate all insurance companies interested in this technology. The first initiative for the management of coinsurance with blockchain has as its main benefit the improvement in the efficiency of the processes associated with this complex product.

MAPFRE RE is participating in a global blockchain initiative along with other insurance and reinsurance companies.

B3i. A global initiative that brings together major insurers and reinsurers worldwide and explores the potential of distributed registration blockchain technology in our industry. The companies are building a platform to address the critical needs of the industry by growing their network and developing partnerships with other initiatives around the world.





CASE BUILDER

Tool for the design and development of solutions and services in the field of insurtech that combines both an organizational model and a methodology for the development of initiatives.

Conceived as an internal MAPFRE factory for innovation projects, it allows the company to incorporate the capabilities and innovative vision of its teams and collaborators into its day-to-day operations in order to test solutions that can be put into production and become part of the service portfolio.

CESVIMAP

MAPFRE's Road Safety and Experimentation and Center, whose mission is to contribute with a global scope to mobility and, on a mainly technological basis, to the ideation, development, experimentation and implementation of practical and innovative solutions that help lead the transformation of the insurance industry.

Established as MAPFRE's R&D center, this "Mobility Lab" is the part of MOi that enables the company to anticipate the way that changes in the mobility world will impact the insurance industry.

CESVIMAP is currently working on projects such as an analysis of electric vehicle chargers to develop a specific insurance product, damage to people and property caused by new personal mobility vehicles and the inclusion of advanced driving assistance systems (ADAS) in automobile insurance.

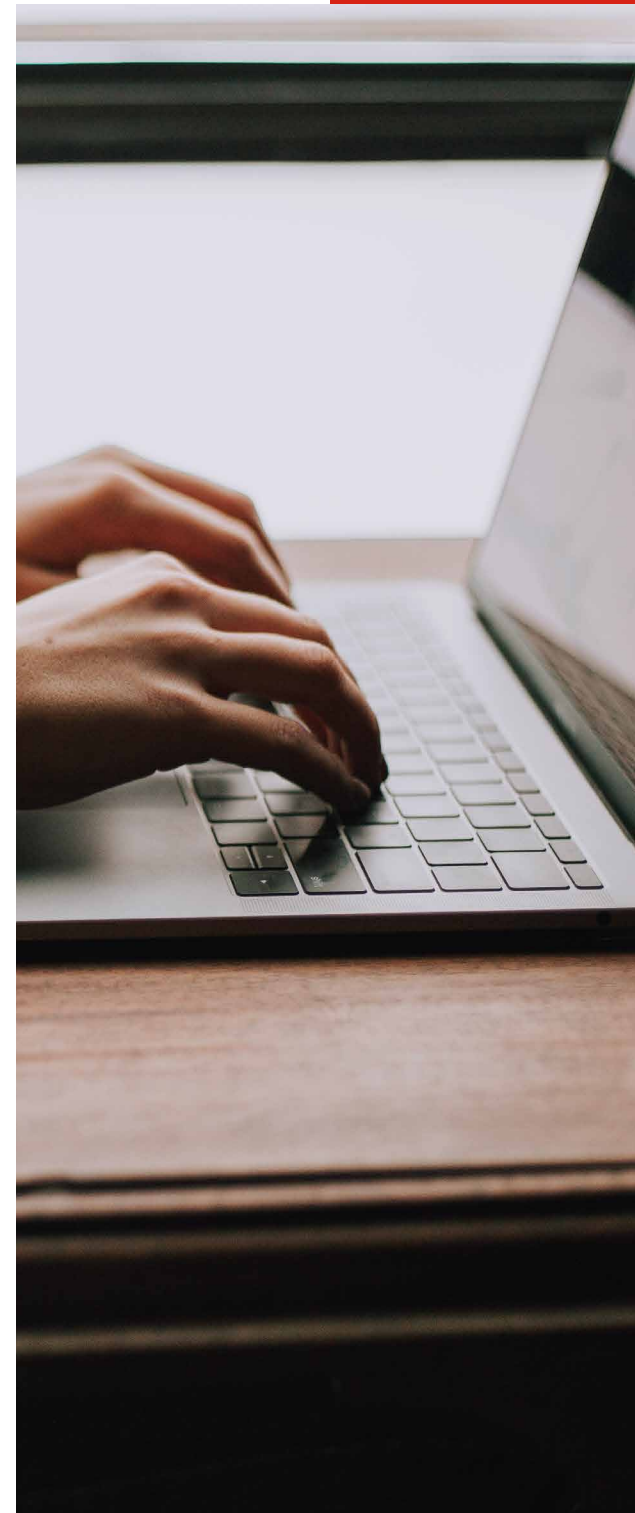
i Further information



CYBER RISKS

Risk derived from the use of new technologies, both at a personal and professional level. Technological advances have improved communication, speed and organization in the way companies work. However, they also facilitate the spread of any virus or general access to information. The SARS-CoV-2 (COVID-19) coronavirus pandemic exponentially increased the use of digital channels, providing greater scope for cybercriminals.

In recent times there have been numerous attacks on digital security in the business environment. MAPFRE is currently collaborating with Kovrr, a startup that develops cyber risk modeling to enhance companies' ability to assess their exposure to cyber risk accumulated in their contracts.





DESIGN THINKING

Agile methodology (**see Agile**) to generate innovative ideas to understand and provide solutions to real customer needs. It facilitates the introduction of the voice of the customer from the early stages of project development, so that the solutions will address their problems, thus providing value and facilitating natural adoption (and demand).

MAPFRE applies this methodology for the development of MOi projects, both in the exploration and definition of challenges and in the construction and validation of solutions.

DIGITALIZATION

Action and effect of digitalizing. In business, digitization is associated with the digital transformation of businesses, understood as the creation or evolution of processes, management models, etc., taking advantage of digital technologies.

The transformation of distribution channels to incorporate technologies in the interaction with customers is substantially changing the insurance industry in recent years.

Digitalization goes beyond enhancing the customer experience by also impacting the perception of intermediaries, agents and brokers within insurance companies' distribution channels.

At MAPFRE, digital business already accounts for 7% of premiums, reaching 1.13 billion euros in recent years. More than 4.8 million clients around the world now use digital self-service solutions on a regular basis.

Dd

DIGITAL HEALTH

A concept that incorporates information and communication technologies (ICT) into healthcare products, services and processes, as well as into organizations or institutions that work to improve people's health and well-being. Its best-known application is telemedicine, which makes it possible to offer medical care, exchange information needed for a diagnosis or provide treatment or prevent illness and injury, with the application of the aforementioned ICTs or the use of wearables, which monitor key patient health indicators. In this way, data is collected much more quickly and easily and real-time monitoring is conducted.



In Spain, MAPFRE operates Savia, its platform for digital health services (**see entry under “S”**). When speaking about health our focus should not only be on physical health: it should also encompass mental health. MAPFRE demonstrates its commitment to the latter through its collaborations with companies like Koa Health, offering therapeutic and digital wellness solutions that facilitate access to personalized mental health solutions.

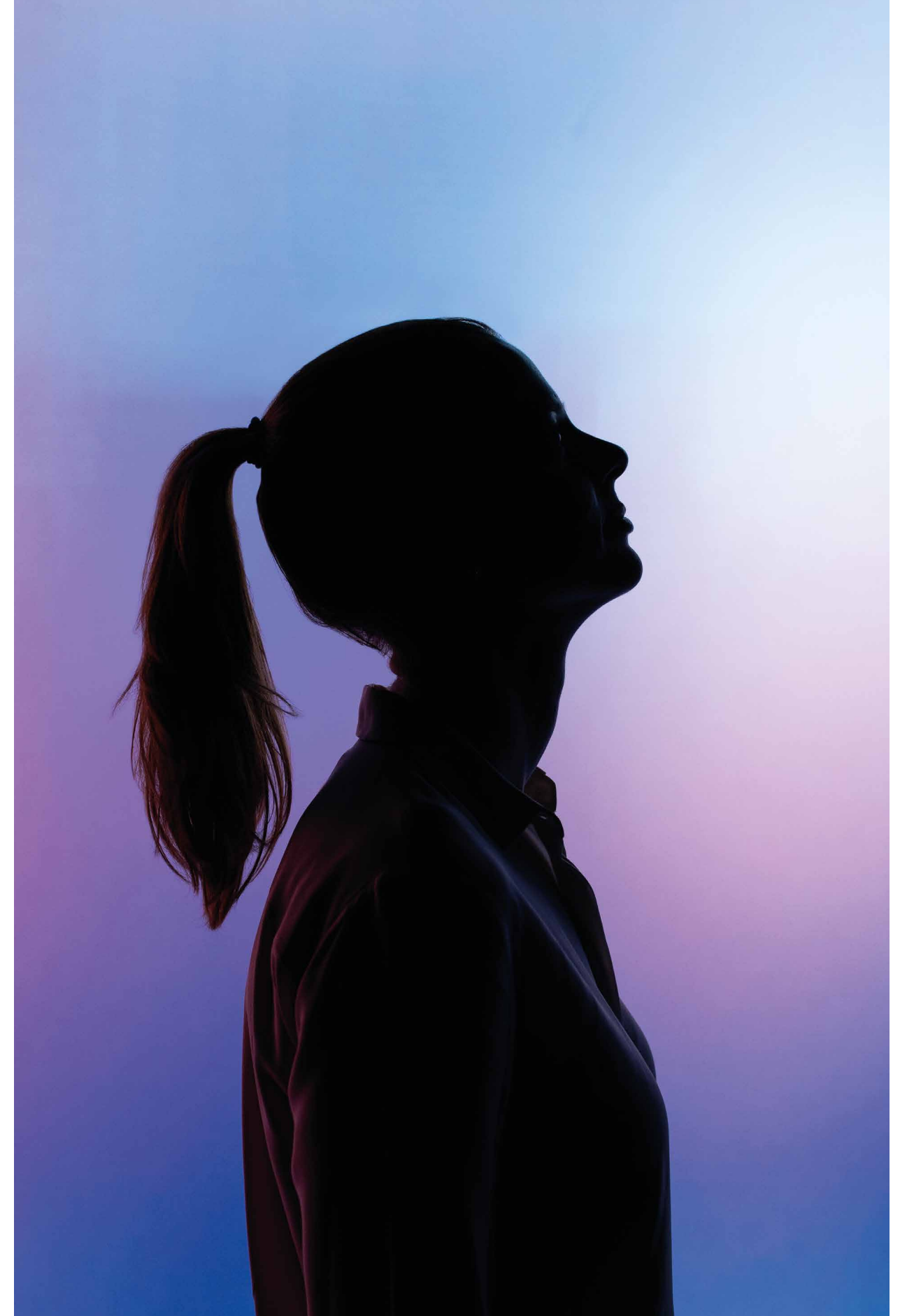
Ff

FEMTECH

A term that refers to the creation of technological solutions focused on the health and well-being of the female population, especially with regard to fertility. These solutions are provided by new startups that are generally led by women.

MAPFRE supports the femtech trend through insur-space, its fast-track-to-market program for startups (**see entry under “I”**). It includes Woom, a company created in 2016 with a novel value proposition, through which an app accompanies women throughout all stages of their reproductive lives.

i Further information





GENETICS

An area of study in biology that seeks to understand and explain how biological inheritance is transmitted from generation to generation through DNA. In the long term, its application in health insurance through biotechnology (an interdisciplinary branch of life sciences) will enable insurers to detect clients with a high probability of developing or suffering from certain diseases. Genetic testing, which has become cheaper and more accessible to the general population, is the gateway to personalized medicine. Using genetic information and data-driven predictive algorithms, accurate and individualized responses can be predicted for each patient. The areas in which this personalized focus is proving itself particularly promising include oncology, cardiovascular and neuro-degenerative diseases, psychiatric troubles, diabetes and obesity, arthritis, pain and Alzheimer's disease.

For MAPFRE, the main achievement of biotechnology as applied to health insurance will be in terms of the prevention of illnesses (early detection of the probability of illness) which for the company will result in a decrease in costs, market differentiation and which can be leveraged to enhance customer loyalty in the portfolio. In the European Union and the USA, the use of genetic data and its application in underwriting is prohibited. The same is not true for the use of genetic data and information to develop services for early detection and prevention of diseases.



INNOVA

MAPFRE's global intrapreneurship program.

The company uses open innovation methodologies aimed at its employees to encourage their involvement in the search for ideas that address the company's current challenges. The winning proposals are offered the necessary funding for the practical implementation of the project and have an opportunity to join MAPFRE's innovation portfolio.

INNOVATION

Action and effect of innovating (changing or altering something, introducing novelties); creation or modification of a product and its introduction in a market.

Innovation has always been one of MAPFRE's greatest strengths. Driven by that momentum, the company has always been able to offer its customers a service that satisfies their needs and which competitors do not offer. MAPFRE anticipates users' needs, integrates solutions and creates efficient processes that raise the perception of quality; therefore, innovation is part of the Group's DNA. In 2018, the company presented MAPFRE Open Innovation (**see entry under "M"**), the company's strategic commitment to drive client-centric transformation through associations and by using emerging technologies that have a positive impact on business and society.



INSUR_SPACE

MAPFRE's fast-track-to-market program for startups.

Insur_space is designed as a shortcut to the market for startups and a direct manifestation of the Group's relationship with the entrepreneurial ecosystem (**see entry under “S”: startup**). For startups this means access to the full potential (knowledge and positioning) of MAPFRE and its digital brands (Savia and Verti), and for MAPFRE, being able to participate in the freshness and agility of their approaches and ideas. Since its inception, the program has supported nearly 40 projects worldwide.

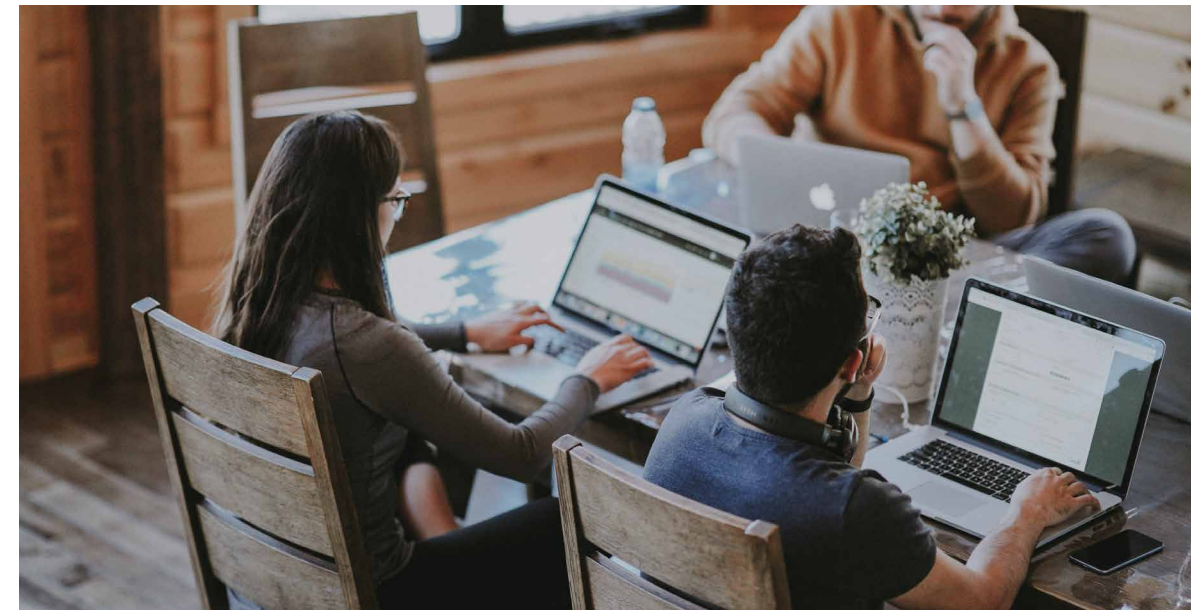
The program offers startups the possibility of launching a pilot in less than six months with up to 100,000 euros of funding without MAPFRE becoming a shareholder.

i Further information

INSURTECH

A term used to refer to the application of new technology capabilities to the insurance industry. The insurtech ecosystem includes insurance companies, technology giants, startups, professional insurance agents and brokers, and networks of customer service providers.

MAPFRE considers this broad spectrum when developing its new innovative proposals.





IOT

The Internet of Things (IoT) is the digital interconnection of objects such as sensors or household appliances via the Internet. In the insurance industry, it allows us to understand how the customer uses the risks to be covered and what the customer's specific needs are. As a result, it makes it easier to offer specific coverages when the user needs them, as well as more personalized services. In order to fully exploit these capabilities, it is necessary to have an open, modular and flexible technology and data platform that allows for simple integration between company and third-party systems.

In this field, MAPFRE can leverage its experience with companies like LeakBot, a solution designed specifically for the insurance industry that participated in one of the insur_space calls for proposals. It is an intelligent technology for detecting water leaks in the home.

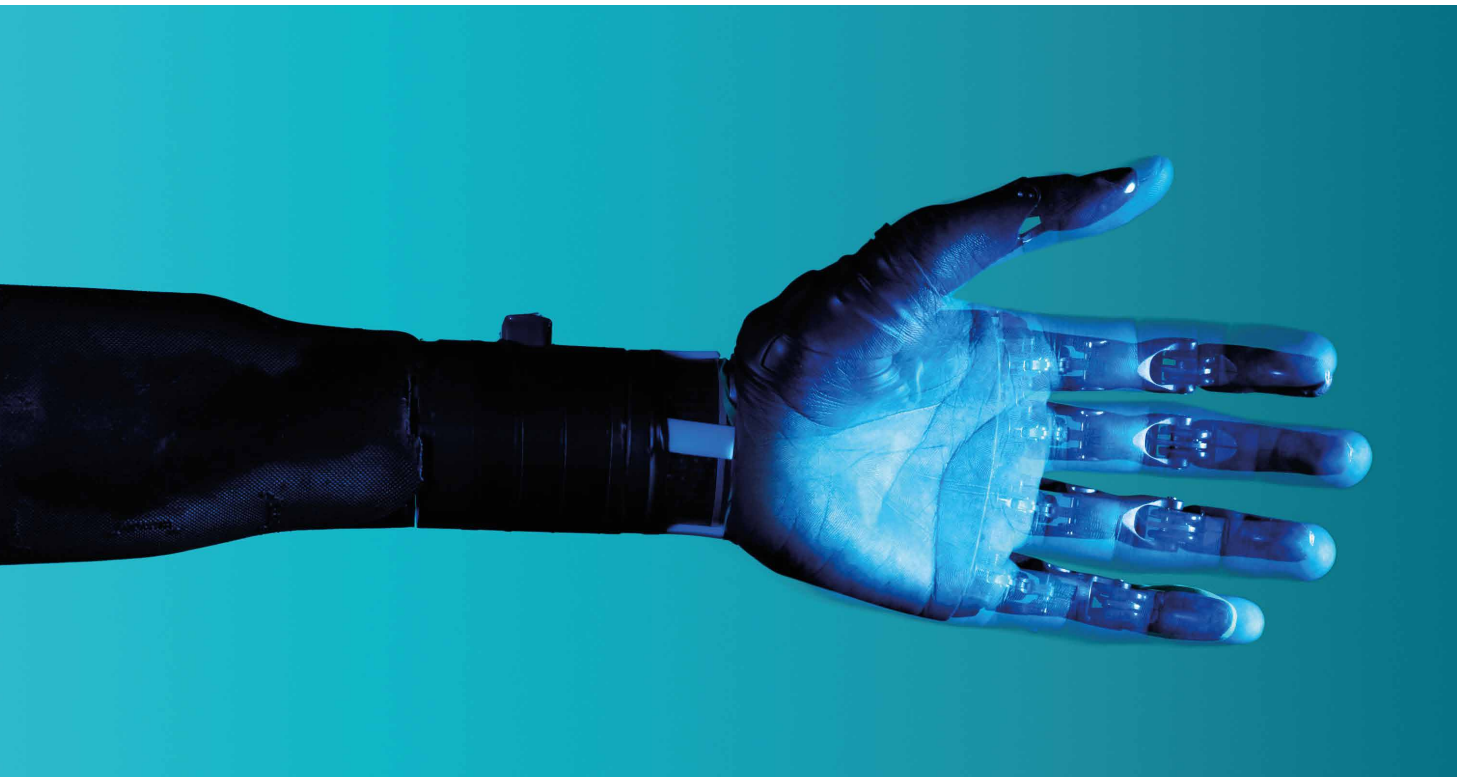
Further information



Mm

MACHINE LEARNING

A sub-field of computer science and a branch of artificial intelligence whose objective is to develop techniques that allow computers to learn from information supplied in the form of examples.



In this field, MAPFRE has developed a tool capable of automatically processing the information contained in emails, slashing the time taken for some processes from 23 days to under 2 minutes. By applying machine learning techniques for categorizing and cataloging files and neuro-linguistic programming for processing text and searching for references, processes such as identifying the case file number, cataloguing attachments received by type and extracting relevant information were all streamlined. These new techniques have been linked to other AI techniques that MAPFRE had been working on for years, such as Robotic Process Automation (RPA).

i Further information



MOBILITY LAB

For a number of years now, the automotive industry has been committed - with increasing conviction - to a new way of conceiving mobility. This means a greater focus on the needs, concerns and expectations of individuals and less on the private and exclusive ownership of vehicles. In this vision, cars are no longer the sole focus of attention and the sector is embracing new trends such as electrification, connectivity, autonomous driving, on-demand mobility, the reinvention of urban transport and sustainability.

At MAPFRE, the Mobility Lab is integrated into CESVIMAP, which is a key part of MOi to anticipate the impact that changes in the world of mobility have on the insurance industry. For more information, **see entry under “C”** (CESVIMAP).





MOi

(MAPFRE Open Innovation). MAPFRE's open innovation platform conceived from its strategic commitment to drive a customer-centric transformation through alliances with different partners and the use of emerging technologies.

MOi's purpose is to collaborate with startups, universities and other stakeholders to develop disruptive solutions that generate a positive impact on MAPFRE's business and society. All MOi initiatives operate under a single indicator: how many customers benefit from its innovations?

MUNDI VENTURES

Venture Capital firm (**see entry under “V”**) focused on technology-based companies, particularly in the B2B environment, that are raising Series A or B rounds. Invests between 500,000 and 5 million euros in each company through its funds.

MAPFRE is an anchor investor in its Alma Mundi Insurtech fund (**see entry under “A”**).



ON/OFF INSURANCE

A type of insurance that makes it possible to insure a product or service solely for the period of time set by the customer. These new generation insurance solutions are tailored to the needs of customers and the cost they are willing to pay. Although on-demand insurance currently represents less than 1% of the global market, it is beginning to gain momentum, attracting both significant investment and the attention of traditional players such as Trov. On/off solutions also match perfectly with the millennial profile: it is simple, immediate, and provides flexibility and freedom.



MAPFRE is developing on/off insurance projects in the auto and homeowners insurance lines. The objective is to provide a new generation of insurance policies where customers have full control to customize their policy and activate or deactivate coverage when necessary, and pay the premium only when coverage is active.

The SARS-CoV-2 coronavirus pandemic brought about significant changes in mobility and economics that reflected the need for this type of insurance. The context of uncertainty and economic recession had an impact on consumers' expectations, who began demanding to pay only for what they used. In addition, the latent economic and climate crisis has once again put the sharing economy and the circular economy, where on/off insurance features heavily, at the center of the conversation.

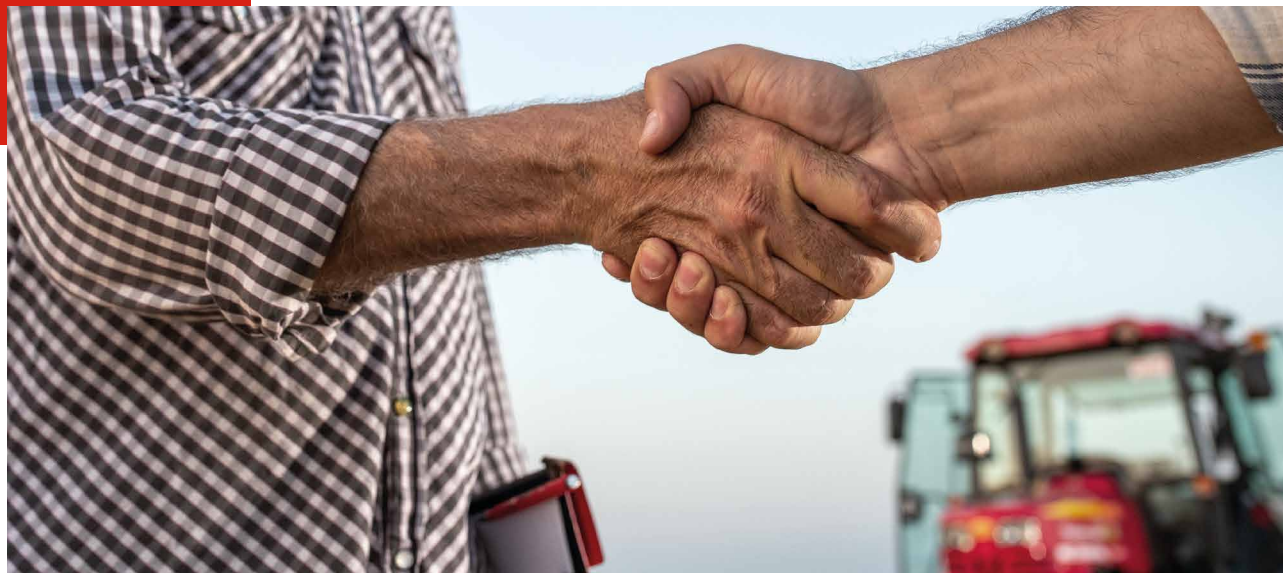
Pp

PARAMETRIC INSURANCE

A form of insurance in which payments are made based on the intensity of an event and the amount of loss calculated within a model and with previously agreed data.

Weather-related events, such as hurricanes, earthquakes or floods, are among the risks that can be parameterized in this manner. Nowadays, access to more data and its massive analysis (**see big data entry under “B”**) leads us to foresee great development potential for this type of insurance for companies and individuals. Smart contracts are used in parametric insurance (**see entry under “S”**).

MAPFRE RE, the MAPFRE Group's reinsurance company, has developed the “Parametric Index Agro Insurance” project. It has been successfully implemented in India, which will help its implementation in other countries where the company operates in the AGROI (agricultural insurance) line of business. The Index Insurance Analysis Tool (HASI) evaluates and scores - using objective criteria - reinsurance programs based on a predetermined index (e.g., rainfall, seismic activity, livestock mortality rates, etc.). The services of traditional claims adjusters are not required in the event of asset losses due to weather or catastrophic events. This makes the process faster and more effective.



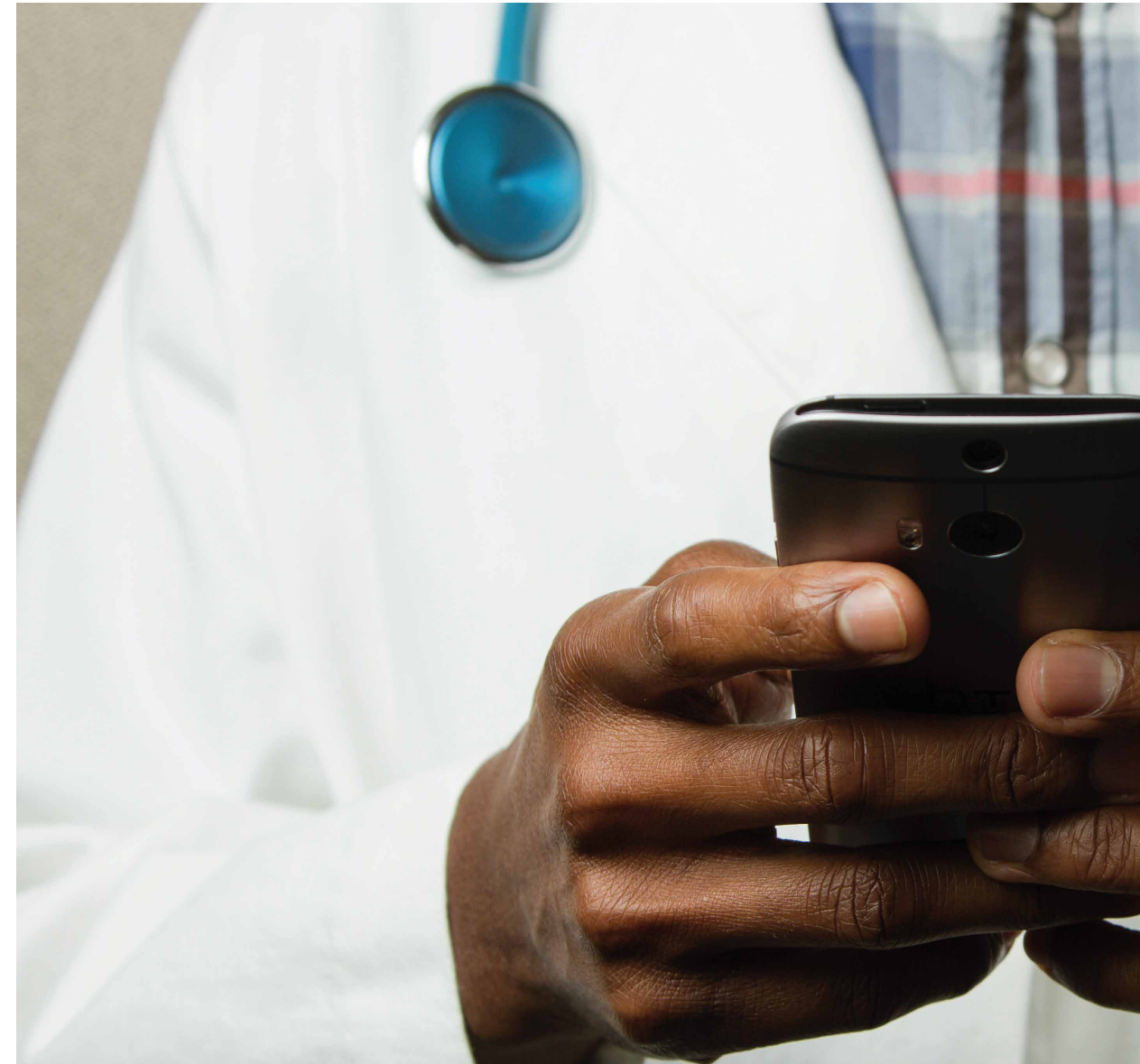
Ss

SAVIA

MAPFRE's digital platform for health services in Spain.

Savia offers a range of services and provides access to professionals from nearly 50 medical specialties who can be consulted directly through a mobile chat in Spain. Users can purchase Savia products and services directly from their mobile device, choosing the payment plan that suits them best. Savia is available to anyone, whether or not they have health insurance. Its advantages include immediacy, availability, prevention and control of personal health through user-centered care plans that are accessible through any device.

[i](#) Further information



Ss

SCOUTING

Process of exploration and collection of useful information based on set objectives for subsequent analysis.

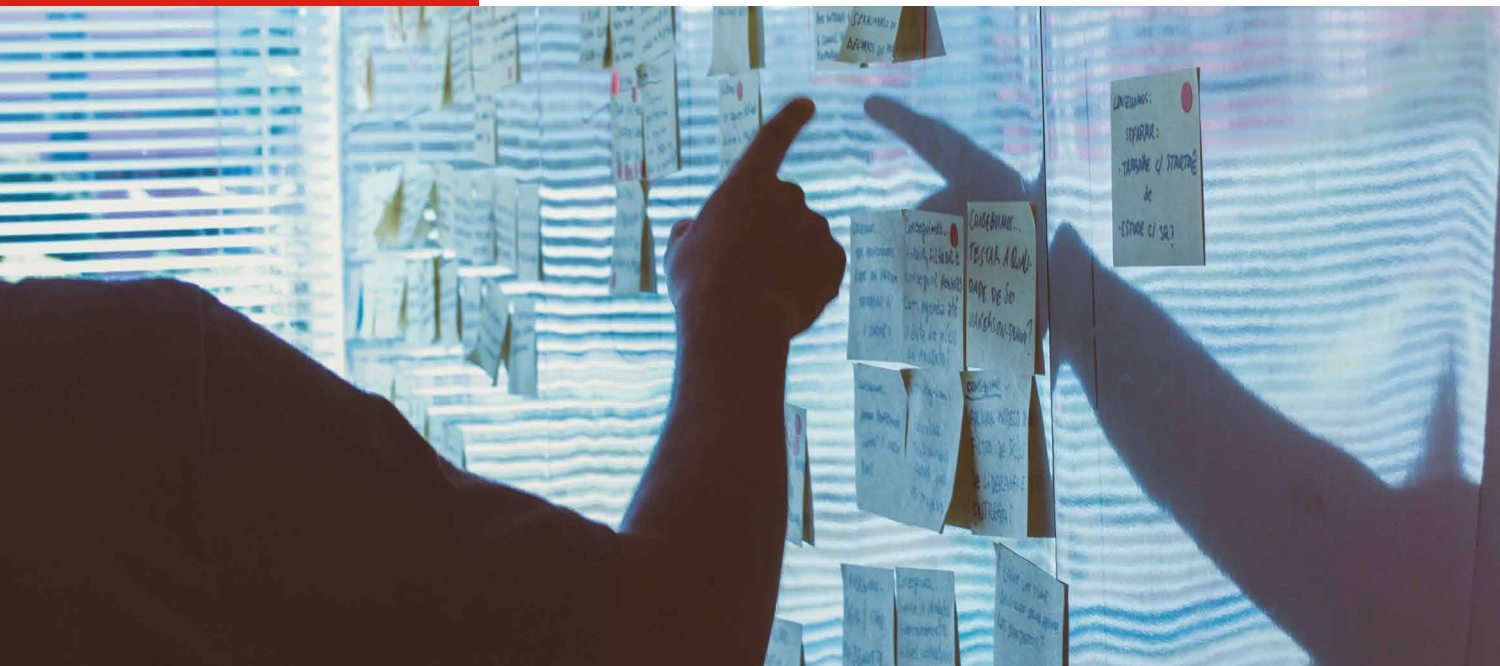
MAPFRE Open Innovation applies this dynamic to keep abreast of innovations in the insurtech ecosystem. For more information, **see entry under “S”** (Startup radar).

SCRUM

One of the agile innovation methodologies (**see Agile**).

Scrum envisages partial and regular deliveries of the final product prioritized by the benefit they bring to the recipient of the project. The technique is mainly designed for projects that require immediate results and are implemented in complex and changing environments, where innovation, flexibility and productivity are essential.

MAPFRE has decided to adopt this methodology for the development of its own innovation process, together with others such as design thinking or lean startup.





SHARING ECONOMY

A group of exchanges or transactions conducted on a person-to-person, rather than business-to-business, basis. The development of online platforms has simplified relationships and exponentially increased consumers' ability to operate on their own. Sometimes there is no money involved, but rather an exchange of labor or other material goods.

Based on this scheme (see image), MAPFRE seeks to develop new business models based on technological platforms that allow the large-scale use of resources controlled by users, resources that would otherwise be underutilized and not considered by the market.

Examples of a sharing economy applied to different business lines of the insurance industry.

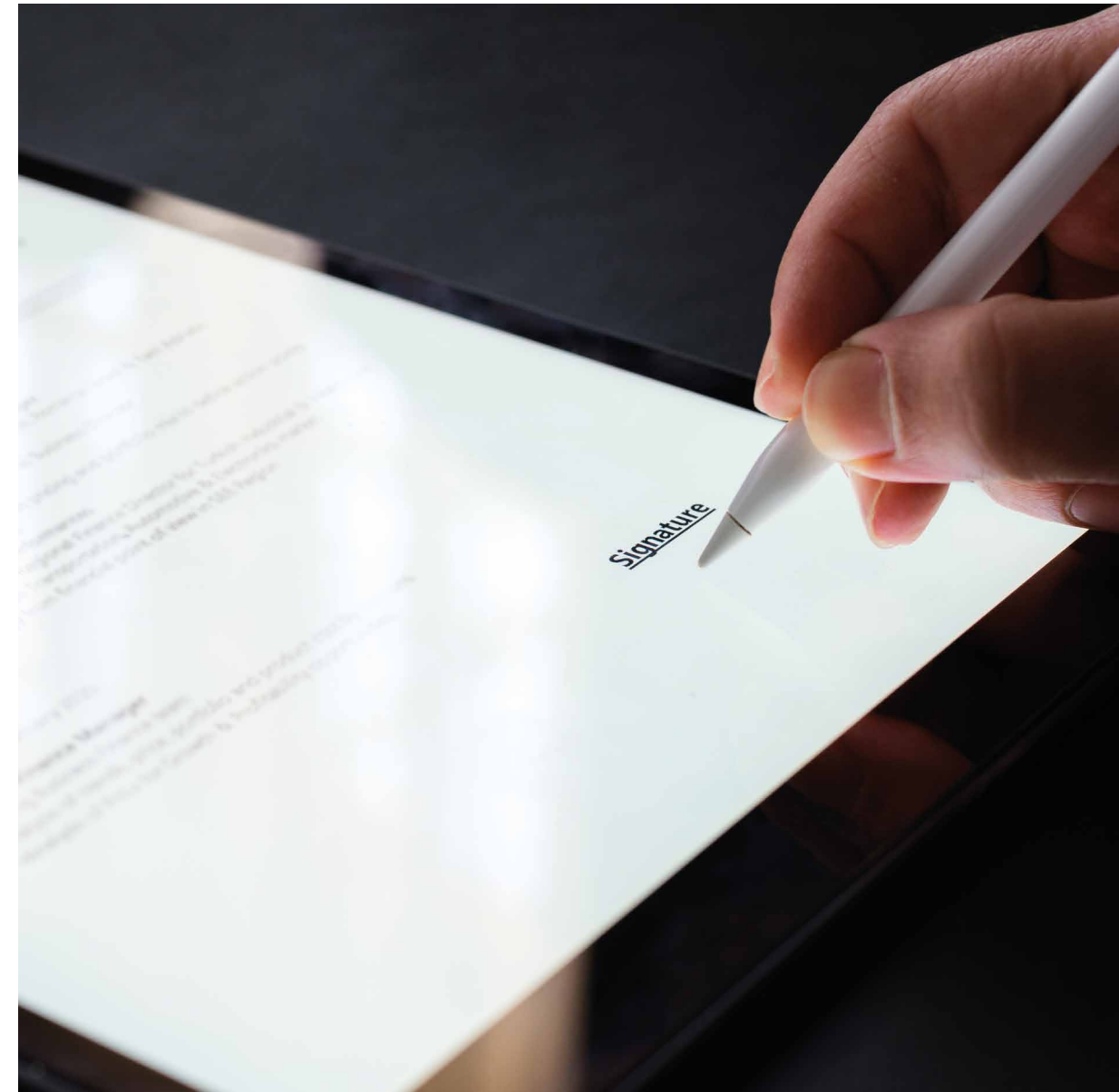
	BUSINESS MODEL	DESCRIPTION		BUSINESS MODEL	DESCRIPTION
AUTOMOBILE	Professional shuttle services	Professionals provide a transportation service to individuals	HOMEOWNERS	Home sharing	Private individual rents space to another private individual
	Car sharing	Private drivers provide a transportation service to individuals		Real estate crowdfunding	Individuals in a community invest in real estate
	Fleet rental services	Companies with a fleet of cars offer hourly rentals to individuals	HEALTH	Diagnostic platforms	Medical professionals provide care and follow-up to individuals
	Private vehicle rental	Private individual rents their car by the hour to another private individual	LIFE	Financial product platforms	Individuals finance the risks submitted by other individuals

Ss

SMART CONTRACTS

A computer code or protocol that facilitates automatic verification and enforcement of a contract. Applied to insurance, smart contracts enable the transfer of the value-added elements of blockchain to the customer, thereby saving time and effort all round: users can collect their compensation faster and with higher guarantees, due to the link with external data sources that verify the truthfulness of their claims. Smart contracts are particularly suitable for parametric insurance (**see entry under “P”**).

MAPFRE is firmly convinced of the importance of this technology, which will make it possible to bring financial services or insurance to new consumers who cannot currently access insurance solutions.



Ss

STARTUP

A company seeking to start, undertake or set up a new business. Refers to business ideas that are starting or under construction. Generally, these are emerging projects supported by technology and associated with innovation.

MAPFRE Open Innovation believes that working on a fast track and with an entrepreneurial spirit is not exclusive to startups, but it sees them as good allies on the journey. This dynamic facilitates the combination of MOi's global experience and strength and the startups' agile nature.



Ss

STARTUP RADAR

Methodological tool implemented in MAPFRE for the detection of a large part of the innovation that happens in the entrepreneurial ecosystem and that can impact the insurance industry.

Through the startup radar, MAPFRE builds bridges with this ecosystem to benefit from the innovation that is taking place there and impacting all phases of the value chain. The radar explores, identifies, filters, refines, selects, makes contact with and follows up on the startups that offer the most value to MAPFRE, all supported by a unique scouting plan for all of MOi, with a dedicated team and the best tools in the industry.

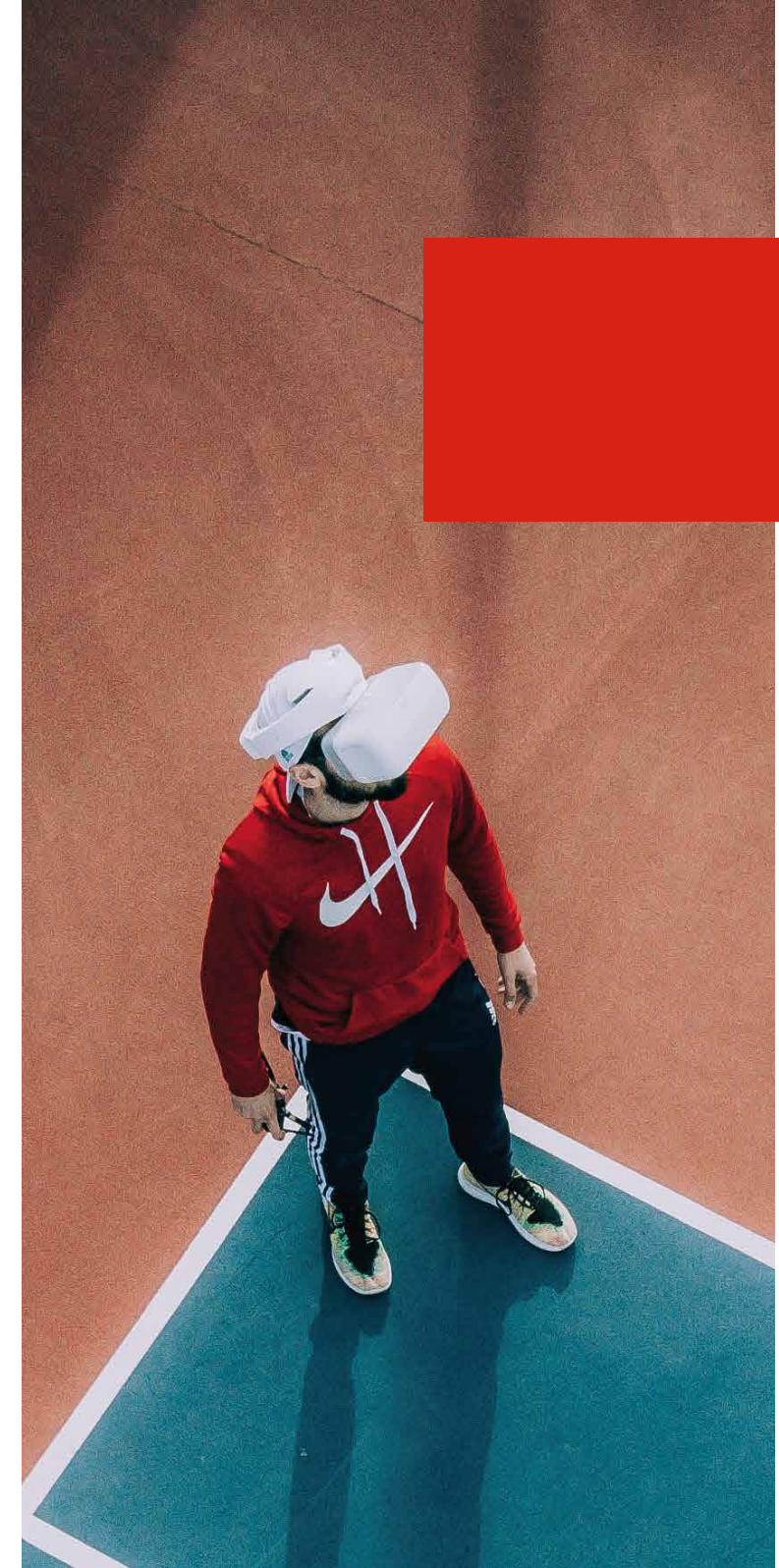


Tt

TECHNOLOGY

A set of techniques and knowledge that, when applied in a specific order, can satisfy human needs and create useful solutions to specific problems.

At MAPFRE, technology is a great enabler and, in addition to helping to meet the requirements of all insured parties efficiently, quickly and with resolution, it also allows us to better serve clients with value-added services in a wide range of areas such as chronic patient monitoring, remote care for the elderly, automatic advice for investors, access to health consultations on mobile devices and so on.





UBI

(Usage-Based Insurance). Form of insurance in which the price is estimated according to the time, level and manner of usage of the insured item.

Within life and health insurance, UBI has evolved into “Pay As You Live” concept, with pricing set in accordance with the client’s profile and lifestyle. Extensive use of information enables managing the user’s needs, treatment and services in a much more personalized way and increases communication and interaction between doctors and patients.

In the field of auto insurance, the application of UBI to the connected car also enables cheaper and more efficient service. Here, MAPFRE has had a pioneering role in telematic solutions for the automotive sector since 2007, with the objective of enhancing customer loyalty through discounts and special offers (in Spain), and with discounts on policy renewal (in the USA).

UX

(User Experience or UX). This is the body of factors and elements relating to the user's interaction with a particular environment or device. The result is the generation of a positive or negative perception of the service, product or device concerned.

MAPFRE shows its constant commitment to innovation in order to provide its clients with more practical options that provide them with a better experience of the service.



VENTURE CAPITAL

Venture capital (VC) refers to funds specializing in financing startups in the growth phase with high potential and risk.

MAPFRE is working with Alma Mundi Insurtech (**see entry under “A”**), a venture capital fund established three years ago and operating under the management company Mundi Ventures (**see entry under “M”**). This fund finances companies that seek to transform the insurance sector without losing focus on people and society.





WIFI SENSING

A field that seeks to reuse existing WiFi capabilities to enable next-generation sensing applications in areas such as security or telemedicine.

MAPFRE is developing, together with Aerial Technologies, an ambient technology solution based on AI (**see entry under “A”**) and intended for elderly people that infers human movement through the distortion of WiFi signals. In this way, and as an invisible care assistant, the movements of the elderly can be monitored without invading their privacy.

i Further information

