

The Insurance Sector – Transformation toward Comprehensive and Personalized Risk Management

2017 Insurance Sector Trends



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1. Executive Summary

The insurance sector is facing an unprecedented change that must be understood and addressed. The sector's competitive environment is changing under major price and competitive pressure, the change in consumer behavior, technology advances and easily secured financing for enterprises that address the new needs.

Today's consumers are hyperconnected and more informed than ever, which has raised their expectations and modified their behavior. The key to the transformation of the insurance sector will lie in understanding these new behaviors and the way in which customers use technology to satisfy their needs.

The relationship with the consumer varies in the digital environment, enabling the migration from the current transaction-based mindset to a relational mentality that generates more recurrence and offers higher long-term profit margins. Social intelligence combines the monitoring of conversations, social and business information, and the growing amount of sensor-collected data that the Internet of Things (IoT) will provide. In doing so, social intelligence will continue helping insurance companies improve their reputational control processes, customer segmentation, capture, retention and loyalty, and fraud prosecution. More precisely, developments in IoT will set the stage for the appearance of new products with an elevated impact potential in the insurance business, including insurance for connected cars and homes, and health insurance within the Smart Health ecosystem, while digitization of companies favors the emergence of others such as Cybersecurity, in addition to further innovations that may arise from the use of new technologies.

However, while these new products, services and business models become opportunities and catalysts in the digital transformation of the insurance sector, insurance companies are also facing the threat of being pushed aside with the appearance of new service providers who have little knowledge of the insurance business but are nevertheless experts in technology.

While technology has become a key piece for the new customer relationship models, strategy will nevertheless be the main determinant in the success of digital transformation.



The digital giants, Google, Amazon, Facebook and Apple (GAFA), leveraged on their enormous pool of users and massive amounts of data at their fingertips, will take steps to transform data into business intelligence to seize insurance sales and personalize products according to customer needs, becoming systemic financial entities and a therefore likely threat to the insurance sector.

In parallel, the appearance of *insurtech* companies is multiplying, focusing more on innovating in the technologybased optimization of business processes and less on creating disruptive models, which is more opportunity than threat for the insurance sector, since they could ultimately become new profityielding business models driven by the insurance companies themselves.

While technology has become a key piece for the new customer relationship models, strategy will nevertheless drive the success of digital transformation. In this regard, having trusted technology partners will enable us to fix our sights on strategy.

The development of effective social intelligence will afford companies better control over their reputation and optimize their customer capture and management processes.

Today's hyperconnectivity and new technologies such as the Internet of Things set the stage for the emergence of new products with an elevated potential to impact the business



The eruption into the market of new players such as *insurtech* companies or GAFA is bulldozing the insurance sector to reinvent itself by transforming its current business, creating new models and piloting disruptive models.

To manage the change with success, the leading insurance companies must take action in one of these three paths:

- Transform the current business, digitalizing interactions and operations to improve access to customers, and optimize costs.
- Create the business of the future, backed by knowledge of the business and the brand's image to rebuild key processes, expand the catalog and achieve excellence in data management.
- 3. Foray into disruptive business models to secure high rewards, considering medium/long-term monetization to position and entrench the company in the sector.

Insurance companies must transform themselves into the role they want to have in the insurance sector to achieve comprehensive and personalized risk management.



2. Changes in consumer behavior, driving the economy's digital transformation

Consumer behavior has changed radically over the last seven years, which is affecting all economic sectors and even personal relationships The widespread adoption of smartphones in recent years had a detonating effect on consumer behavior in terms of their relationships with others and even brands by letting them:

- Be permanently connected. "Digital" becomes an extension of the physical reality and smartphone affords consumers new possibilities to improve their decisionmaking and shopping (e.g., being able to see and hear at a distance, knowing people's moods or predicting their consumer experience based on the opinion of their peers). The new products and habits sprouting up from the fertility of universal and inexpensive connections (e.g., wearables and the connected home or car) could have a substantial impact on the insurance sector.
- 2. Access data intelligence and processing. Discerning the differences between seemingly similar products is becoming easier; brand pricing policies are understood; multiple free services can be accessed; there are more options and offers, etc. Consumers are better informed and more demanding than ever before.

As a consequence of these augmented capacities, consumers have permanently moved to the digital channel for their purchases. Consumers feel that this channel shifts the balance of power in their favor. Also, the ability to make better shopping decisions fulfills their first human need, Self-esteem.



Additionally, a series of economic and technological circumstances have created the right conditions for the emergence of thousands of companies seeking to satisfy the new consumer needs arising from this new behavior by challenging traditional business models:

- Available capital. Excess liquidity in the investment market has enabled startups to access almost unlimited financing and, as a result, a shadow insurance sector has evolved: Insurtech.
- Regulation. Aimed at promoting competitiveness, fostering the entry of non-traditional players focused on added-value services for the end consumer with lean asset and cost models.
- **Technology development.** Firstly, the value chain has been sliced up (with specialized *insurtech* entities in highly specific areas) and secondly, the scalable, cloud-based storage and processing systems at accessible prices have dissolved the economic barriers to accessing the sector.

Understanding of the new consumer behavior model and the manner of harnessing technology as a response thereto is reconfiguring the sectors with an overwhelming emergence of new competitors amid the disappearance of traditional players.

Technology has increased consumers' level of connection and possibilities of accessing information, enabling them to take better purchasing decisions while ushering their migration to the digital channel

Technology and the changes in consumer behavior have reconfigured the sector and fostered the appearance of new players. Insurance companies will need to adapt quickly to avoid being pushed aside by companies that possess less knowledge of the business but are experts in technology.



3. New products and business models that accelerate the digital transformation of the insurance sector

The hitherto invariable arrangement of the sector's competitive environment is now shifting under major price and competitive pressure, the change in consumer behavior, technology advances and easily secured financing for enterprises that address the new needs.

New technologies entail new ways of consuming and the appearance of new needs and risks, which set the stage for the emergence of new insurance products and business models, in addition to enabling improvements in customer segmentation, capture and relationships, risk assessment and fraud control.

The sector is facing an unprecedented change that must be understood and addressed, since in a few years we will see whether the post-crisis and post-regulation insurance sector operating with disruptive technologies will continue being led by the same brands as currently or, contrariwise, will undergo a shift in power similar what occurred in other sectors with iconic brands such as Nokia, Blockbuster, Borders, BlackBerry, Dell, Kodak, Motorola or Yahoo.

Insurance companies are facing the challenge of taking advantage of the enormous wealth of opportunities and business models popping up in the current juncture, and dealing with the plethora of new threats, processes that should be explored as a matter of priority to be dealt with successfully

New products and services

New technologies enable the appearance of new products, four of which are especially salient in light of their potential impact on insurers' current business model:

1. Car insurance for connected cars

The appearance of disruptive technologies that can make connected cars a reality constitutes a profound transformation of the ecosystem for car manufacturers, consumers and insurance companies.

According to the Spanish Association of Car Manufacturers, one in every five cars sold in Spain is already equipped with a connectivity element; and 66% of Spanish consumers regard connectivity elements as a determining factor when choosing a vehicle. On the international stage, by 2022 there will be over 700 million connected vehicles worldwide. Additionally, the eCall Legislation entering into force in late 2017 will require all new cars be equipped with telematic systems ⁽¹⁾.

OEMs (vehicle manufacturers with proprietary connectivity platforms) are now peering beyond information and entertainment services and into the realm of maintenance or convenience services. Some are taking steps to transform from vehicle sellers to mobility providers by acquiring *Car Sharing* and *Ride Sharing* companies, and public transportation app platforms.

In this context, traditional car insurance, a business that generates €10 billion in Spain alone⁽²⁾, must adapt to the new reality of connected cars by upgrading its products with a clear goal in mind: to reduce the number of accidents by promoting safer, more efficient and greener driving.

According to current calculations there will be 700 million connected vehicles worldwide by 2022 and traditional car insurance will be forced to adapt to this new reality

Pay-per-use insurance

There have been several attempts to incorporate the capabilities of connected cars to pay-per-use insurance. The marketed solutions were based on aftermarket platforms (Octo Telematics, Mobile Devices, Texa, Danlaw, etc.) and offered little integration with the vehicles' systems as well as little added value. Also, there has been resistance to providing personal details, which was not compensated for by a clear benefit to the insured party.

In fact, to date insurance companies been unable to find a formula for mass connected car deployments with profitable models, not even among the young generation, with the sole exceptions occurring in the USA, UK and Italy⁽³⁾.

In this context, insurance companies are facing the challenge of increasing the sophistication of the elements constituting the pay-per-use model to render it viable. The current model must evolve toward a risk-based payment model that should incorporate the following capabilities:

Behavioral Analysis

Until now insurance companies applied bonuses to premiums based on simple elements such as the number of kilometers driven, the percentage of kilometers driven at night and the number of traffic violations. This is a poor analysis that does not please drivers since they have to enter their offenses into a third-party database, among other requirements. For this reason, the industry is trying to find more sophisticated algorithms on the basis of 4 pillars:

- 1. Configure *behavioral risk* based on a wide range of information such as speed, rpm, linear acceleration, angular acceleration, steering wheel turning angle, etc. which is obtained from the on-board computer.
- 2. The analysis must include driving-related considerations and conditions under which the vehicle is driven, e.g., road type, visibility, traffic intensity, weather, etc.
- Calculate an analytical scoring of driving indicators that will help drivers to determine where they are failing and suggest areas for improvement.
- 4. Use a multi-variant analysis of time series to estimate the deviation of actual patterns from optimal patterns.

The insured parties will be attracted to the fact that their information's privacy is guaranteed: their GPS position is only used on board to characterize the route.

(1) Bosch at the 2015 Barcelona motor show (Salón del Automóvil), "Smart and Connected Cars": <u>http://www.bosch-prensa.com/tbwebdb/bosch-es/es-ES/PressText.</u> <u>cfm?Search=0&id=761&SessionID=2534460</u>

(2) ICEA, "2015 statistics on the automobile branch": <u>http://www.icea.es/es-es/informaciondelseguro/visiontiponegocio/automoviles/paginas/home.aspx</u> (3) Roland Berger. "Internet of Things and insurance 2015": <u>https://www.rolandberger.com/en/Publications/pub_iot_and_insurance.html</u>

Driver Authentication

Reliable driver identity authentication capacities must be added using biometric traits such as digital fingerprint, photos and voice recognition – all building from the foundation of geographical information.

Enhancing Responsible Driving

Risk-based payment solutions will include gamification elements, creating a driver experience that renders pay-peruse much more attractive. The goal will be to offer a game with challenges that the driver needs to complete successfully in order to gain rewards; also, drivers will be able to compare their ranking against other drivers in an attempt to align their conduct toward optimal models.

Added-value digital services

In addition to the insurance product, driving-centered services must be added (e.g., parking, maintenance, refueling, etc.) with business models that help to bear the costs of infrastructure.

Launching the new Risk-Based Payment model will involve establishing cluster alliances where OEMs will act as the drivers, and insurance and technology companies will act as the providers and the parties that guarantee the robustness of the underlying IoT platform.

2. Smarthome: Home insurance reinvented

According to Gartner, 20.4 billion devices will be connected worldwide⁽⁴⁾, one third of all European homes will be equipped with smart technology and most things will be connected by 2020.

Also, it is estimated that, on average, 500 smart devices and sensors will be found in the home by 2022. This will include doors and windows, smoke detectors, fire detectors, locks and all electric devices⁽⁵⁾.

With the aid of the Internet of Things (IoT) at home, insurance companies will be able to tap a wealth of valuable information and use it to offer digital services based on the retrieval and analysis of this information.

In 2015, water damage was the leading cause of Home Insurance claims in Spain⁽⁶⁾. Fires were the cause of the claims with the highest average compensation. Installing sensors that warn of these incidents in real time will help prevent and reduce this type of damage.

By relying on real-time information about incidents (e.g., leaks, smoke, flooding, intruders, etc.), the insured party will be able to control the connected devices and act to prevent the incident or minimize its impact.

The current model must evolve toward a risk-based payment model incorporating the new digital possibilities of analysis, acknowledgment and assessment



(4) Gartner Says 8.4 Billion Connected "Things" will be in Use in 2017, Up 31 Percent from 2016: <u>http://www.gartner.com/newsroom/id/3598917</u> (5) Gartner, Inc. "Predicts 2016: Unexpected Implications Arising From the Internet of Things": <u>http://www.gartner.com/newsroom/id/3185623</u> Services with sensors associated with risk prevention and reduction (smoke sensors, flood sensors, intruder detectors, etc.) will generate greater value for the business since they are aimed at preventing risks and reducing the claims ratio. However, since the insured party can rely on sensors associated with consumption control (water, power, gas, etc.) or with comfort (air conditioning, heating, electric blinds, etc.), insurers will be able to provide a more comprehensive home insurance with services that boost customer satisfaction and encourage customer loyalty.

Customer trust will be the true competitive advantage for insurance companies. While sensors are becoming increasingly more common because of the IoT, insurance companies must show their customers that the information obtained from these sensors will be used in the customers' favor. To this end, the end user must feel the benefits first hand – the customer is at the heart of and is the final target of the digital value proposition.

Differential value in home insurance will mean offering services that will reduce the insured party's exposure to risk and reinforce their loyalty to the insurer

Additionally, insurance companies will be able to segment the insured's risk profile by analyzing the information from the sensors. The company will be able to gain knowledge of the customer's daily habits thanks to additional monitoring elements regarding temperature and comfort, energy use, appliance usage. etc. A greater knowledge pool will enable insurance companies to offer more competitive prices and greater personalization in insurance coverage.

For the insurance industry, becoming a player in the Smart Home ecosystem means facing a series of challenges which the sector is already trying to overcome by launching pilot initiatives. The IoT platforms that support Smart Home services demand a level of investment that would increase insurance premiums unsustainably were the investment to be transferred to said premiums. Albeit it tends to go down, the price of home devices and sensors is still double or even triple the average premium of home insurance.

Additionally, consisting of sensorization, connectivity and Big Data elements, these platforms must offer full guarantees in service provision so that they are able to earn the customer's trust and achieve the predefined goals. Providers of IoT platforms will need to possess proven experience in high-performance environments.

- Device and sensor manufacturers do not have a common communication protocol. This adds complexity to connectivity and makes it even possible for users to selfinstall devices.
- Insurance companies will be highly cautious about making investments with an unclear cost/benefit model, which could allow other players entry into the market to compete as providers of these services (energy providers, telecom companies, transportation, etc.) and even cover the role of insurance company.
- The regulations on data protection contain gaps with regard to private information from the home and how to use it. It will be necessary to define the scope of action of each player and, specifically, of insurance companies, when faced with events within the service chain. Furthermore, having data that was obtained from devices and sensors in the customer's home raises questions about privacy. Insurance companies must cultivate trust in their customers that the obtained information will benefit them, e.g., as premium discounts, necessary coverage or security for insured parties, etc.
- It will be necessary to learn how to interpret the information from devices and sensors concerning behavior and usage to yield actual premium savings for the customers derived from reduced claim costs for the insurance company.

Insurance companies are facing the challenge of coming up with a sustainable model for furnishing Smart Home service that must contemplate collaboration and alliances with various players in the IoT ecosystem.

(6) ICEA. "2015 Statistics: Multi-Risk Insurance Technical Analysis": http://www.icea.es/es-es/informaciondelseguro/visiontiponegocio/multirriesgos/paginas/home.aspx



3. The emergence of Cyberinsurance

The digital transformation we are currently witnessing is changing the risk profile of individuals and insurable assets. Phenomena such as cybercrime, BYOD, consumerization of CIT and the boom of the digital economy have brought new threats that require new protection models^{(7)(B)}.

Companies, including SMEs, are so deeply digitized that a computer failure may lead to a break in their activity. And an attack on their systems or data theft may result in major loss of income and damages to third parties.

According to the Allianz risk barometer published in 2015⁽⁹⁾, the annual cost of cybercrime for the world economy was \$445,000 million and the average annual cost due to corporate data violation was \$3.5 million.

Allianz estimates that cybercrime will account for 28% of risk for companies in 2016 vs. 17% in 2015. Also, the annual upward trend of the cybersecurity market is 9.8%.

Additionally, IoT growth, with an increasingly higher number of connected devices, will increase the risk of cyberattacks. The risk of taking control of connected devices in the car or at home and, as such, potentially affecting their security needs to be covered and prevented.

The digital transformation we are currently witnessing will result in a significant decrease in the number of materialized classic risks since preventive action will be easier. Nevertheless, cyber-risk will grow exponentially and, as a consequence, insurance companies will have the chance to develop new cyberinsurance products.

(7) Minsait, Protect the digital footprint. We manage risk by protecting your critical assets and safeguarding the identity of your digital footprint in a hyperconnected world: https:// www.minsait.com/es/what-we-do/protect

(8) Thiber - the Cyber SecurityThink Tank, Cyberinsurance: Transferring cyber-risks in Spain, 2016: http://www.thiber.org/ciberseguros.pdf (9) Allianz, Allianz Risk Barometer Top Business Risks2016: http://www.agcs.allianz.com/assets/PDFs/Reports/AllianzRiskBarometer2016.pdf

Cyberinsurance situation and trend

According to the Allianz risk barometer, cyberinsurance will reach \$20 billion in annual premiums over the next decade.

According to data by Marsh, the US cyberinsurance market generated \$1 billion in 2013 and \$2 billion in 2014. Though much smaller in size, the European market is growing at a steady pace. In any event, cyberinsurance is undoubtedly one of the fastest growing products in the insurance market⁽¹⁰⁾.

Until now, the growth of cyberinsurance was stalled because of a lack of historic data, mostly due to companies' reluctance to report attacks, lack of awareness of the risk level, and the requirements of insurance companies derived from the need to assess threats, systems and vulnerabilities to offer the right coverage.

Drawing up specific legislation on how to handle cyberthreats is the main driver of cyberinsurance development and the recording of cyberincidents. The USA and the UK have already published relevant regulations, whilst the EU is finalizing the new Data Protection Regulation and Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector.

Cybersecurity is one of the most rapidly growing products on the insurance market, with an estimated annual premium figure likely to reach 20 billion in the next decade The collaboration of insurance companies is key to ensuring that this framework of cybersecurity is adopted. Insurers must provide policies that specifically or globally cover the entire range of cyber-risks that affect companies; and their premiums must depend on compliance with the regulatory framework and system development and resilience. As a consequence, insurers play a main role in harmonizing, standardizing and improving cyber-capacities.

The cybersecurity business is a mine rich with opportunities in which regard insurers must partner with companies with expert cybersecurity capabilities to accompany them insofar as protecting the pertinent risk coverage

Governments and insurance companies have decided to employ cyberinsurance as a way of encouraging the prevention, mitigation, management and transfer of corporate risk and as a strategy for standardizing, streamlining and consolidating the emerging cyberinsurance market.

In fact, insurers have started to use and offer policies that bear the costs of gaining approval as per the regulatory framework because of the inherent reduction of risk. In turn, this certification will not only impact the cyberinsurance premium but also inform the rest of players, partners, providers and customers of the maturity of cyber-capacities.

Adding cyberinsurance-specific services to the value offerings of insurers

The growth trend of cyberinsurance represents a business opportunity for insurance companies insofar as they are able to stand out from their competitors in the provision of services associated with their value chain, from the assessment of individual cyber-risks (to offer coverage and premiums adjusted to specific needs and cyber-capacities) to pre-claim or preventive consultancy services and services linked to claim management. To achieve this, insurers must add companies with expert capacity in cybersecurity to their portfolio of providers.

(10) Marsh & McLennan and Cherthoff Group: "A cybersecurity call to action", New York: Marsh & McLennan, 2014: http://docplayer.net/3253336-November-2014-a-cybersecuritycall-to-action-content.html

4. Smarthealth: New Data or All Data?

Over the last 20 years, public and private health operators have stored countless pieces of information about the health of protected individuals.

As regards health insurance companies, access to this information has been especially difficult because of restrictive interpretations of data protection legislation that aims to safeguard against risk selection situations.

The need to gain as much knowledge as possible about the insured has led to a gradual insourcing of critical processes, particularly authorizations. The leading insurance companies have kept developing their authorization centers and incorporated additional functionalities (forwarding, prescriptions, etc.).

Additionally, CRM platforms and web portals are strengthened by adding services to increase traffic either by managing highvolume services (appointments) or by centralizing non-face-toface approaches to case management (preventive or follow-up programs for chronic patients).

Consumers have become active agents with selfmanagement capabilities and expectations of more innovative and personalized services

Some of these experiences had added to the content of the health folders that companies have provided as an additional service. However, the use of these folders by the insured is still not entirely clear, mostly due to the low adoption by users.

Over the last few years, we have seen how several useful healthcare data sources have emerged from two perspectives: Firstly, a deeper understanding of disease from intensive data generating technologies (imaging, genomic and proteomic techniques etc.) and, secondly, the possibility of monitoring many facets of our lives through consumer devices (including wearables and sensors). Additionally, the role of citizens and their needs has changed in recent years, as they have become active agents with selfmanagement capacities and stricter requirements in terms of innovative and customized healthcare services and models.

A new ecosystem of players and solutions, generally referred to as Smart Health, developed around these new sources of information to enable the definition of innovative transformation strategies to face the new challenges for health insurance companies.

As for health insurance, these new technologies have derived in new products or service models with the aim of:

- Improving service quality.
- Reducing operational costs due to a lower number of appointments and face-to-face services.
- Increasing the empowerment of the insured in selfmanaging their health.
- Increasing high-value services for insured parties.
- Improving customer experience at all touchpoints with the insurer.
- Obtaining as much value as possible from the generated information.

For this reason, insurance companies appeared to focus on non face-to-face service such as the pioneering insurtech entity Oscar. Traditional companies are also trying to explore the potential of video consultations; for instance, Sanitas launched its most powerful campaign in 2016 with Blua⁽¹¹⁾.

At the same time, there are still cases of daily-life monitoring as a basis for setting health insurance rates; however, the concept of *pay as you live* has not become common practice and has only been launched among certain groups.

But the largest information volumes are not held by insurance companies; instead, they are held by their providers. The main growth factor for the next few years points to the integration of this new data with classic healthcare data whilst patients are empowered with regard to their clinical information.

Following the example of the *blue button* initiative, insurance companies and healthcare providers are promoting joint interoperability projects with connectivity that even includes the public sector.

Technologies have been or are being deployed and these poses new challenges for the immediate future:

 By transferring the responsibility for the custody of their data to customers it may be possible to aggregate information from different sources and, as such, obtain a valuable overall perspective.

- Organizations will be able to handle big data projects that change classic engagement patterns. Actuaries and data scientists with medical profiles will have to work together to analyze and extract knowledge from these projects.
- To maintain and develop these information workflows investments in systems must be geared toward interoperability platforms that facilitate the constant addition of new sources.
- Adding clinical information will require the reinforcement of the cybersecurity policies and systems of organizations, and the key to implementing the defined strategies will lie in ensuring that the new business models have no legal weaknesses or information vulnerability.
- This entire system can only be maintained and grow if all projects focus on allowing doctors and patients to use the technology and, as a result, see the benefits for themselves.

Non face-to-face service is already a tendency among new and traditional companies



(11) Sanitas, "Blua by Sanitas, la nueva forma de cuidar la salud 2016": http://corporativo.sanitas.es/blua-by-sanitas-la-nueva-forma-de-cuidar-la-salud/

More experimental products

Additionally, new products (usually, from the insurtech sector) are being studied and will aim to respond to the new lifestyle and consumer habits, especially among younger people who are always looking for the best price and the most convenience from the mobile device:

- Products that make it possible to use the cell phone to insure a personal object for a few hours, e.g., a car lent by a sibling for four hours or a bike for a day.
- "To-go insurance" is designed to promote insurance linked to the time the product is sold, for example, insuring consumer objects by scanning QR codes or using a photo that characterizes the element of the object that comprises the risk.
- Smart insurance makes use of the ability to program money using the infrastructure of the Blockchain and Ethereum platforms to insure a flight's punctuality or the loss of baggage and collect compensation at any ATM if applicable, without having to submit a claim.
- Products that address liability in operating new objects such as drones or new illnesses such as the Zika virus or Ebola, etc.
- 3D printers open new and unheard-of doors in health insurance. By way of example, we can thing of an accident policy that covers the reconstruction of an arm in the event that it is lost in an accident or the reconstruction of a vital organ if it is affected by cancer. Bone reconstruction is becoming real and in a few years it will be possible to reconstruct vital organs.

The insurance sector needs to monitor all of these opportunities and enable internal processes for designing products at an unprecedented pace; it also needs to respond to new social trends such as the rise in the number of self-employed individuals and the need for a private unemployment insurance.

The potential peak of the uninsured

Smartphones can also prove to be transformational by reaching large sections of the population for whom the concept of insurance does not exist. To give you an idea of the size of this potential market, for example, 52% of the world population is "unbanked."

Mobile devices are simplifying an extraordinarily capillary access to this population, and the largest and most successful mobile payment network (M-Pesa) is located in Kenya⁽¹²⁾.

But this phenomenon is not restricted to unprivileged regions. In the USA over 33 million people are in this same situation⁽¹³⁾. Other countries such as Spain have large portions of the population which are debankarized and culturally unlikely to subscribe common insurance if it is not mandatory, such as the case of car insurance. Bankarization is boosting insurance acquisition.

With a potential market of over 2 billion people, microinsurance is becoming an interesting business niche in which large insurers are investing⁽¹⁴⁾. Microinsurance raises a series of regulatory and operational challenges that, if navigated successfully, insurers will be able to tap a potential business of \$30 billion in annual premiums.

Shadow Economy as % GDP, 2014



Source: Eurostat

(12) World Bank, "M-PESA: Mobile Payments, Improved Lives for Kenyans": http://econ.worldbank.org/external/default/ main?theSitePK=469382&contentMDK=22594763&menuPK=574960&nagePK=64165401&miPK=64165026

(13) Federal reserve Bulletin, "Use of Financial Services by the Unbanked and Underbanked and the Potential for Mobile Financial Services Adoption": https://www.federalreserve.

gov/pubs/builetin/2012/pdf/mobile_hnancial_services_2012/03.pdf (14) CGAP (the Consultative Group to Assist the Poor)," Microinsurance: the Next Generation of Impact Investments": http://www.cgap.org/blog/microinsurance-next-generationinnact-investments

A new digital customer relationship model

Not unlike other industries (e.g., banking), insurance companies are reacting to the change in customer behavior and digitization by migrating from an operational and business model conceived to move paperwork in a closed circuit (offices and agents) to a model that moves mass quantities of bit data in distributed networks.

The major challenge faced by insurers consists in creating a new digital customer relationship model that includes the following main drivers:

- 1. New way of reaching customers (mobile, social media, context-based insurance, etc.).
- More transparent products (explain policy coverage with a video of a customer's story) that better fit their new lifestyle (insurance by hours or for new technology gadgets) and immediate demands (real time).
- 3. Operations based on neither physical presence nor paperwork (full digital onboarding and claim management).
- 4. Creating a new digital customer relationship model also requires work on the concept of *digital trust*, which is an extremely valuable asset that does not appear on the balance sheet. Fostering digital trust goes beyond gaining a source of opportunities in the digital economy, as it is an essential requirement to having available data about the customers.

These drivers are the basis for migrating from the current transaction-based mindset to a relationship-based mentality that generates more recurrence and offers higher long-term profit margins. This philosophy is similar to *GAFAnomics*, which aims to help the customer improve their lifestyle without looking for shorter-time monetization. This aim, however, is no cakewalk, especially in light of the pressure from investors for returns spurns deferred revenue.

If the insurance sector is unable to generate context-based products, GAFAs will do it, handling sector products as a utility and therefore causing a substantial loss of value



Social intelligence in customer relationships

What is our background?

The insurance business has traditionally proceeded under criteria prudent and control when adopting certain technology advances.

This occurred, for instance, with Social Media, where the Communications, Brand and Corporate Social Responsibility areas failed to consider social media as a digital communication channel based on the expectations and needs of social users. Instead, they considered social media as a duty to have the brand in the most common social profiles to provide corporate information, generate an insurance culture, and address minor concerns about products, services or procedures.

How are we doing?

Insurers have begun to view social media as a channel that will allow them to expand the brand's scope and notoriety (*reach*), initiate the consideration and preference process (*engagement*), experiment with real-time interactions with their customers or initiate the process for requesting or subscribing to a policy (*conversion*).

Marketing and sales managers have become aware of the growing number of users who go online to gather information and communicate with other users, and a larger portion of the budget is being allocated to generating social content and creating social media advertising that is more segmented and contextualized based on the navigation of the target users.

Social listening and big data processing tools are now a fundamental advance for managing the reputation of insurance companies

In turn, quality and customer service areas have realized that social media can be used to provide answers to users' complaints, claims and requests for information and, as a result, reduce the average service costs in other channels.

Cloud tools have made it easier for business users to exploit the consumer advantages of Big Data infrastructures to listen to and monitor social media chats in real time. They have gained popularity and are now being used as a service for creating, scheduling and posting content; and for listening to, comparing and generating dashboards that facilitate reputational monitoring and comparison of references to different brands, chat categories, processing of the feelings in the references, alert generation, etc.



Where are we headed?

One of the main concerns of the leads of digital transformation within insurers consists in translating the combination of the following into business value: social data and other data sources (Google APIs, web analytics tools, weather information, stock markets, etc.), and internal business data (number of customers, premium and insured amounts, level of satisfaction, tendency to abandon or purchase, etc.) and new sensor data (IoT) applied to the connected individual, car or home.

Another concern is the legal treatment of individual information of users with public social profiles. However, there are increasingly common solutions such as Social Login – it resolves the issue of obtaining informed consent and accessing information that identifies the user to cross-check against internal data and confirm whether or not the user is a customer.

Creating social records for customers (lifestyle, relationships, brand preferences, etc.) will represent a qualitative leap in the knowledge of connected customer portfolios.

Processing of natural language is replaced with automated recognition of images, video, audio... and the extensive use of "machine learning algorithms" that explain, predict and simulate behaviors that will vary depending on the content and interaction proposals in social media:

Reputational: Anticipate and identify patterns of reputational risk based on references made by negative influencers (Detractors), with measurable impact on the business, e.g.

- 10%-20% reduction of proactive communication efforts to stop/mitigate the effects of reputational crises (proactive management of dissatisfied customers).
- Early alert (less than one hour of the start of the detractor thread) triggered by an increase in chats among influencers that disseminate negative experiences about the brand.
- Improvement of NPS (Net Promoter Score) > % NPS = % brand defenders (9s and 10s) - % Detractors (0 over 6s).
 Where 0 = negative, 5 = neutral, 10 = extremely positive.

Attracting new customers: Activation of users who are dissatisfied with their current insurance company (monitoring of channels of competitors) with measurable impact on the business, e.g.

- Increase of 10 pp in New Business by attracting digital segments.
- Increase in the number of finished access instances to online rate calculators.
- Increase in the recovery of profitable former customers by means of customized campaigns based on their preferences (social profile) before their policy expires.

Customer retention and loyalty: Anticipate advantage/ discount for customers that make positive references to other brands on social media; carry out controlled promotion of trials for services associated with new lines; and activate advantage for influential users by renewing the portfolio, with measurable impact on the business, e.g.

- Over 2 pp increase in improvement of predictive abandonment models by adding the input from social behavior.
- Up to 10 pp improvement of average cross-selling ratio among customers with positive experiences of services they have not subscribed.
- Accumulation of advantages for high-value customers (LTV) that nominally prescribe new users who are users within their network of influence.

Segmentation of customers with a social profile:

Enrichment of behavioral variables based on social preferences (social login) such as exposure to risk due to activities mentioned on social media or the enrichment of census variables about users with a social profile and georeferenced posts having measurable impacts on the business, e.g.,

- Identification of new "insurance niches" among customers following campaigns/promos (similar to #viviresincreible in GNP Seguros Mexico).
- Identification of users with high-risk behavior (Instagram API, photos of extreme sports).
- Classification of homes by consumer types (e.g., concentration of digital homes for development of services such as Connected Home, Connected Vehicle, etc.).

The role of insurers is being redefined from the access to large volumes of social data combined with business data; this makes it possible to gain knowledge of the customer and their preferences, lifestyle, relationships and locations that would have been impossible to obtain not that long ago. Insurance companies will be capable of developing their customer relationship model by anticipating their preferences and becoming another element in their customers' daily life.

Social intelligence lets companies improve the segmentation of their potential customers and customer capture, retention and loyalty processes

Commercial and operational efficiency

The insurance sector is undergoing a paradigm shift in terms of its distribution model in a context where the strength of the brand is not as important:

- Designing backoffice products and pushing them through different channels and agents have been losing steam in the business. Customer hyperconnectivity and the capacity to manage data gradually provide stimuli about the product to be distributed, to whom it should be distributed and over which channel (the mobile channel is becoming increasingly important).
- Pricing pressures is incapable of supporting heavy agent structures with low productivity. The carrier must use technology that helps increase its network's productivity. In addition to hardware (tablets, etc.) and remote document management software, data management technologies must be used, e.g., commercial agendas that the carrier submits as push proposals or a priori calculations of the likelihood that a lead will become a sale.
- The network of sales agents must become a network of risk managers that provide greater value to the customer and build a relationship that generates greater recurrence in the current product and more knowledge about the customer so as to give rise to cross-selling opportunities.

New technologies open new frontiers in some areas:

- Artificial intelligence makes it possible to interact using natural language through voice or text (bots) and, as such, provides good self-service for simpler insurance products.
- Social technologies make it possible to analyze the consumer's behavior by monitoring open sources (social media, forums, etc.) and, as result, achieve greater customization of the value proposition.
- Gamification as a means of promoting the adoption of behaviors that reduce the exposure to risk or foster the productivity of in-house employees.
- Virtual reality as a tool for long-term treatments or chronic conditions.
- Technologies for managing the customer's digital identity as a way of offering additional services, e.g., becoming an ID gateway for the customer to access the digital world.

Blockchain's transformational power

Blockchain technology is one of the most versatile technologies in terms of its applicability to the insurance sector. Our imagination is the only limit to the number of cases in which it can be useful in the sector. Some uses in which progress is being made include:

- Secure recording of the characteristics of certain insured objects such as diamonds.
- Automation of subscription and claim management via smart contracts (Ethereum platform).
- Use as an infrastructure for public recording of claims for compensation as a fraud control measure.
- Possibilities as an open-source compensation mechanism across insurance companies.

Whether the pilots for these use cases are successful or not, blockchain will play a key role in two aspects that are closely linked to the insurance sector:

- 1. Creating a global digital identity platform.
- 2. Creating digital currencies.

Both aspects are necessary for extending insurance to most of the world's population that has no access to insurance and providing the final push in the development of the Internet of Things. In turn, IoT moves the insurance sector from a compensation-based perspective to a claim-preventive approach. Likewise, technology aids efficiency in claim management.

 Appraisals and repairs. New technologies make it possible to perform appraisals from specialized centers without having to physically go to the location. As a consequence, costs are reduced by up to 50% when this type of appraisal is viable. Recording the damages at the source also enables repair control and results in up to 25% savings⁽¹⁵⁾.

Using drones to appraise damages caused by natural disasters saves up to 30% of costs vs. traditional appraisals. Drones have also started to be used in the USA to obtain better calculations of home premiums based on variables such as construction materials, orientation, etc.⁽¹⁶⁾.

In addition to these cost benefits, the process is expedited thanks to increased customer satisfaction.

• Improvement in the fight against fraud. Digital transformation will incorporate new ways of committing fraud but also enormous data volumes from different sources, internal (including CRM, information on portfolios or claims) and external (social media, censuses and public digital information, etc.) which will be made available to the sector to minimize exposure to the risk of fraud and the resulting economic losses.

Big data and artificial intelligence technologies will become increasingly more common in exploiting this information, providing a flexible tool for analyzing data, even in real time, and revealing hidden connections and relationships between individuals involved in a claim, providing quick action on these connections, triggering additional investigations into possible fraud, and precluding the payment of compensation to fraudulent claimants.

Fraud detection solutions in insurance will evolve by adding new sources of information from the connected world (IoT); these will be geared toward improving new data workflows and information cross-checks between internal and external systems and toward learning by incorporating the findings of previous investigations into their rules. This could lead to the creation of dynamic blacklists that would help detect false positives and could be shared with other companies in the insurance sector and other providers in the IoT ecosystem.

In light of the growing demands of hyperconnected consumers, company brands are weakening and companies should therefore focus their strategy on securing the benefits afforded by technology to improve their commercial and operating efficiency (e.g., customer support), increase network productivity, boost cross-selling, reduce expert costs and improve fraud prosecution.



(15) Minsait, "Development of interactive channels: Digital Appraisal Solutions": https://www.minsait.com/es/what-we-do/engage (16) Francisco Oliveros, CEO at RSA Seguros México, "RSA will employ drones to calculate losses in the field, which will attain savings of up to 30 percent regarding experts": http:// www.elfinanciero.com.mx/empresas/drones-los-nuevos-peritos-de-las-aseguradoras.html

New business models

These extraordinary technology developments allowed us to move away from the traditional competitive theory whereby companies were either the best in terms of costs or the best in terms of product design and functionality:

- **Cost Optimization Strategy.** It is the most common business model in the financial sector (banks and insurance companies), entailing product commoditization.
- Product Differentiation Strategy. Business model followed for instance by Apple with the iPhone. All smartphones have similar functional features, but only Apple customers (aka "fans") will sleep on the street on the eve of the first day a new model hits the market, even when it is the most expensive to date.

Companies from other sectors such as retail are capable of simultaneously leading in terms of costs while offering differentiated products (Zara, Ikea, Mercadona, Amazon, etc.). In the digital era, insurance companies can no longer remain solely as best-in-class based on their expense efficiency ratio since this leads to product commoditization and the company becomes a utility provider with adjusted profitability that is facing the risk of disintermediation.

Collaborative economy

Technology has facilitated the reinvention of existing analog business models (mutual companies); in the digital form, these models take new names such as peer-to-peer insurance (P2P). These are models whereby the parties undertake to support each other based on the votes and scoring assigned by members of a group; their aim is also to achieve cost efficiency and social transparency and efficiency.

This may be the future of an extensive part of the industry if the result entails a greater final price and the remaining decisive elements are not affected. This will be achievable provided that the combined ratio of claims and expenses is lower than the ratio of traditional insurers, which would require beating traditional insurers as regards risk selection and operational efficiency.

Collaborative models will be the future across most of the industry if they are able to beat traditional insurance entities in the selection of risks and operating efficiency



From Insurance to Personalized Advice

The new European payments directive (PSD2, December 2015) ⁽¹⁷⁾ lists threats and opportunities for the insurance sector albeit is not directly aimed at this sector. In practice, it will be possible to gain in-depth knowledge of the customer's personal finance and, as such, foster the business of personalized advice the sector is moving toward.

The directive creates and regulates Third-Party Providers (TPP), which will be the regulated entities, and creates the transformational concept of Access to Account (XS2A), whereby the current banks are required to open up the bank accounts of their customers to TPPs after the customers have given permission to do so. From the analysis of these data, the provider will offer added-value services such as the aggregated vision of insurance payments and suggestion of more convenient alternatives or advice on which personalized savings insurance to subscribe.

In practice, banks lose their exclusive tenancy on their customer data and access to data is becoming democratic enabling courting by countless potential players with added-value services. Insurance companies that fail to understand and address the implications of the new European Payment Directive (PSD2) may begin being undermined by competing value propositions from entities in light of the democratization of access to data.



(17) European Commission, Banking and finance Payment Services Framework 2015, "The European Parliament adopts the revised Directive on Payment Services": http://ec.europa. eu/finance/payments/framework/index_en.htm 4. What is the role of the insurtech phenomenon in transforming the sector?

The current state of the *insurtech* sector is more opportunity than threat for today's insurance sector, since it can be viewed as a test bench for new ideas and working models that can be easily replicated by insurance companies

The number of *insurtech* companies continues to grow exponentially in the context of historically low interest rates equating to virtually unlimited financing. In general, however, no disruptive models are emerging among the re-engineering of obsolete processes through technology unburdened by the legacy and vast workforce, which in the case of the insurance sector in Spain has an average age of 44 and seniority of 14 years. When innovation is centered on process reengineering rather than creating new products from scratch the benefits are quick to obtain. For this reason, the companies involved in this type of initiative are understandably the subject of speculation by investors. There is a clear difference with regard to biotechnology, for instance, where the development cycle takes longer and the results are less certain and, as a consequence, there is less investment.

The current insurtech sector is still squandering its capital and in the medium term companies are insufficient in scale to reach a break even because of a fragile financial situation and a consistent inability to inspire enough confidence to play any role in the financial sector.

For the current insurance sector, they are more of an opportunity and less of a threat since, in practice, they are thousands of qualified professionals that are devising new and more efficient ways of doing business and running internal processes, and they are doing it for free. Additionally, they attract thousands of investors that perform due diligence on these business models for free and, as such, filter the most viable ideas.

All of this results in dozens of new working models that can be easily replicated by insurers and that perhaps only insurance companies can expand enough to render them profitable.

According to Harvard Business, 75% of startups do no survive and, in the case of insurtech, this figure rises to up to $90\%^{(1B)}$.

(18) Harvard Business Review, "Why the lean start up changes everything": https://hbr.org/2013/05/why-the-lean-start-up-changes-everything

Digital giants, an entirely different story

The digital giants Google, Amazon, Facebook and Apple (usually called "GAFAs") were the biggest success stories in the .com era. They are currently natural monopolies and control more than 50% of the digital journey of average users. They are regarded as the creators of their own economic doctrine, *GAFAnomics*, which has a disruptive view of economic relations.

In addition to relying on an enormous user base (it exceeds the

user base of the most widespread insurers), they possess huge technological capacity, investment capacity and prestige among their customers. Furthermore, their businesses grow much more than the insurance business; they are more profitable; and their stock quotes are less volatile that the quotes of insurance companies.



Google, Amazon, Facebook and Apple users across the world

Source: ECB Structural Financial Indicators

	Revenue Growth 2012-2014	Net Profit/Revenue 2012-2014	Beta*
Axa, Zurich, Allianz	-1%	5%	1.22
Google + Apple + Facebook	19%	23%	0.96

* Measures the sensitivity of a share price in relation to its benchmark stock market index.

In this panorama, what is spurring the entry of GAFAs into the insurance business?

GAFAs will fight to win the "last-mile" battle of the value chain, i.e., selling and personalizing insurance by leveraging their large user base and the big volume of data they have about their users. Similar to other sectors such as banking, this "last mile" generates the highest RoE in the insurance business:

The focus of GAFAs on gathering and processing data into business intelligence is evident in their investment in payments (Apple Pay, immediate transfers on Facebook, etc.) and in storage and processing infrastructures (Google and Amazon). GAFAs also have less limitations than insurance companies on their use of data and, as a result, they may become a front layer for marketing products and push insurers to the role of utility companies. An example of such a phenomenon is Google's attempt to go into the car insurance price comparison business in the UK (Google Compare); however, the company ceased operations in March 2016 due to an issue with revenue cannibalization with other Google lines of business.

When the situation stabilizes, insurance companies will be a bit more similar to GAFAs and GAFAs will be a bit more similar to insurance companies. This will also apply to regulations since GAFAs may be regulated on the basis of their financial business if they become systemic financial entities.

RoE by type of business and closeness to customer



GAFAnomics Principles



a) Draw the attention of a mass number of customers, regardless of whether or not they pay you money. This is achieved by offering users an experience that helps make their lives easier.

This large number of customers is the basis for operating:

• If you give them a good service, you will be able to retain them and they will do your marketing for you (word of mouth).

• If you leverage the economies of scale in terms of cost, you will be able to offer more services at better prices.

• Lastly, you will create your best shield against new competitors.

b) Create a stable relationship with your customers. You will have gained their engagement when they provide you with their details (email address, phone number, contacts, etc.). From this point onward, you can generate revenue with "little" effort.

c) Keep innovating so that you can anticipate your customers' needs.

5. How to promote digital transformation in the insurance sector

Transform the current business

Transforming the current business is a low-risk approach that aims to improve customer access and achieve cost efficiency. Its results are no different from what the more "traditional" competitors could be doing. In response to the aforementioned changes, leading insurance companies can choose three courses of action, which are not mutually exclusive but potentially parallel

How to promote digital transformation in the insurance sector?

Working through three courses of action, which are not mutually exclusive but potentially parallel



Transforming the current business

Low-risk approach that aims to improve customer access and achieve cost efficiency.



Creating the business of the future

Medium-risk approach that seeks to express the outlook of the current business, supported on the knowledge thereof



Piloting disruptive business models

High-risk approach that shows high potential for reward; medium-/long-term monetization. This entails piloting and eventually escalating business models.

1. Digitization of customer interaction

Aims to develop a synchronized omnichannel model for sales and service. The cell phone is the main channel for customer interactions while the removal of existing silos may result in advanced customer experiences (up to par with digital giants).

Main work lines:

- Shift from merely transactional interactions with customers to relational interactions whereby contact is constant. This is an opportunity to bring superior value based on personalized advice to customers who will most likely respond with their loyalty (the product is no longer a commodity), and a capability of providing context-based insurance in real time (e.g., theft insurance offered when buying jewelry).
- Shifting from generic, reactive and low value sales networks that, when leveraged on data technology, can increase their value proposition to customers while improving productivity (push proposals of commercial agenda from the carrier, a priori calculation of the likelihood of a lead turning into a sale, etc.).

In both cases, the key lies in the ability to extract value from the business by capturing and processing data (whether structured or not), using specific tools and specialized equipment for analysis and modeling.

2. Digitalization of operations

- Transforming the operation of key processes (in terms of cost and service) through the intensive use of technology with the aim of achieving greater efficiency (e.g., remote appraisal via the customer's mobile device from a centralized or distributed call center).
- Redefinition of the IT model and core architecture to be able to access cheaper and scalable hybrid infrastructures that enable new models for collaboration with third parties (insurtech and customers).

Main work lines:

- Open *innovation strategy*. Connection with ecosystems that use technological resources and help them evolve. This increases the scale and speed (the base technology is shared but use cases are different).
- Design convergence and solution implementation.
 Continuous delivery methodologies (Agile and DevOps, etc.) enable adaptation to the pace of the business.
- Modular architecture. Components are encapsulated but APIs enable agile interconnections. Intensive use of Open Source and cloud infrastructure.

Create the business of the future

This approach seeks to express the path taken by the current business and includes setting up a new business unit and even a new company. Its aim is not to achieve a complete break from the model, but to reduce the time-to-market and expand the "transformation" facet of the value proposition, since it is not impeded by the technology and operational restrictions of the current business.

1. Rebuild core business processes

In other words, processes that affect customer touchpoints. Approach through an unmanned mobile channel (marketing, enrollment and claim management).

2. Expanding the catalog

Offer next-generation products supported by the use of technology. A consumer-centric mentality must allow for non-proprietary products; instead, in the vein of a platform, third-party products may be offered (thanks to open architecture).

3. Excellence in data management

Develop an advanced capacity for gathering and processing information about potential and existing customers. Advanced modeling techniques (machine learning) lead to higher levels of commercial productivity, personalized advice and risk selection, and fewer instances of fraud.

Pilot Disruptive Business Models

High-risk approach that shows an extensive potential for reward and medium-/long-term monetization. It involves running pilots and eventually sizing business models that represent a radical change in the rules of the game (changes to target customer, product, internal processes, partners, competitors, etc.); however, there is still a slight connection with the current model.

1. Decoupling from parent

This refers to avoiding its heavy internal processes so as not to condition the type of work (that may not be linked to the main business) or the management and/or investment model of new emerging businesses.

2. Creating a Portfolio of "Targets"

This is the most diverse model in terms of scope and risk. It must combine minor targets for models that are farther away from the traditional business, and bolder targets with higher potential impact for reinventing key strategic areas.

3. Creating an Ecosystem

In this approach, it is vital to rely on an open architecture that enables associations with non-traditional players who complement and allow us to learn new abilities.



Modern cores are much more efficient in managing and governing data and in exploiting internal and external data. In the latter case, it is critical to rely on a platform architecture that allows the business to connect with third-party companies that can provide products and services more efficiently than us. In the end, this is about being the cornerstone of an ecosystem that promotes financial wellbeing and customer progress.

Organizational Best Practices to Achieve Digital Transformation

According to Indra's extensive experience accumulated in developing digital transformation solutions through Minsait, the most successful organizations in innovation and transformation follow a common operational pattern that can be summarized in 10 best practices:

C-Suite	Strategic reflection that takes the new competitive context into account	Leadership of CEO	Assignment of transformation goals to the entire Management Committee/ C-suite
Resources and method	Drawing up of a closed transformation budget with CapEx perspective	Adoption of a different approach to investment management: portfolio scheme	Setting specific objectives with impact on the transformation initiatives
	Appointment of heads of transformation who are focused and able to act on what is new	Execution based on short, iterative transformation cycles	
Talent	Development of the right cultural environment to attract and develop different profiles	Creation of an innovation ecosystem that is open to outside influences	



The following image shows the investment volume in each category and the number of existing companies. Data as of April 2017.

Venture Investing in Insurance Technology by **Venture Scanner**



The following list contains some of the leading insurtech companies in each category:

Health/Travel insurance

Companies that specialize in health or travel insurance for individuals and companies.



Oscar (https://www.hioscar.com/?loc=es): Oscar is an insurtech that has been cataloged as Unicorn (companies valued at over \$1 billion). One of its main investors is Google. It is trying to bring a revolution to health insurance through data, technology and an optimal customer experience.

https://www.youtube.com/watch?v=4-ehZRFYOfk

Zenefits (https://www.zenefits.com/): Zenefits is an enterprise solution that allows its users to manage all Human Resources aspects from a single panel. Its services include the possibility of handling the addition of new employees to the company insurance with a single click.

https://www.youtube.com/watch?v=E-0EpztLz0c

GoHealth (http://www.gohealthinsurance.com/): GoHealth is an online portal where the user can find the best health cover for their needs by comparing all existing covers and purchasing the preferred option online, if they so wish. https://www.youtube.com/watch?v=VzINDpAEBTI

Sure (https://www.sureapp.com/): Sure allows users to underwrite life insurance one minute before they go on a plane and for the duration of the flight.

Car insurance

These companies offer car insurance and use technology to monitor the number of kilometers driven as well as the driving style. In this way, they are able to personalize the insurance rate.



Metromile (https://www.metromile.com/): Metromile has created special insurance for drivers that do not travel a lot of kilometers per year. To this end, it provides its customers with a free device that can be installed in the car and reports the number of kilometers that have actually been driven. https://www.youtube.com/watch?v=KN8K0IfBqsg

True Motion (http://gotruemotion.com/): Insurance platform solely for mobile devices that uses sensors, big data and analytics to improve driving safety and rewards the most responsible drivers. https://www.youtube.com/watch?v=dAvPrRfkPuE

MobileEye (http://www.mobileye.com/): Tool that monitors driving, warns of dangerous situations, renders visibility to a vehicle's blind spots and can be integrated with "pay-as-you-drive" insurance. https://www.youtube.com/watch?v=HXpiyLUEOOY

Insurance Comparison/Marketplace

These companies act as Marketplace for customers; the latter can access any type of insurance and then purchase it.



Goji (http://www.goji.com/): Goji combines personalized service and the ability to compare insurance companies with the convenience and simple process of taking out car insurance directly from the company. https://www.youtube.com/watch?v=hYLZ7TdOL9I

CoverHound (https://coverhound.com/): CoverHound adds transparency to the industry, offering the best tariffs and a list with the companies that best adapt to the needs of their customers.

https://www.youtube.com/watch?v=OvlwfV1kd8w

Product Insurance

These companies provide insurance for personal effects, ranging from cell phones to diamonds.



Trov (https://www.trov.com/): Trov is a web portal and mobile app that monitors the customer's personal objects during a fully customizable period of time, or in locations where they are most vulnerable. https://vimeo.com/163827886

Upsie (<u>https://upsie.com/</u>): Upsie offers the same guarantees as big department stores at a lower price; wearables, cell phones and other appliances. You need only scan the product's code when you buy it.

Insurance Management Platforms

These companies offer platforms for their customers to manage insurance and claims, including apps for reporting the incident from the place where the traffic accident occurred.



Knip (<u>https://www.knip.de/</u>): Knip is an innovative digital insurance platform that provides its user with a simple tool for analyzing and managing policies, rates and services.

LiveGenic (http://www.livegenic.com/): LiveGenic offers its customers a simple application; and it offers insurers a platform for managing claims live. It uses video streaming to check the incident live. https://www.youtube.com/watch?v=YZ3bXDZIqoU

Snapsheet (http://www.snapsheetapp.com/): Using a mobile application, customers report the claim to the insurance company and send photos of the damages. Snapsheet relies on a team of experts that estimate the repair costs and inform the available workshops.

P2P Insurance

These companies offer peer-to-peer insurance. With the assistance of social media, groups of people with the same type of insurance agree to share their insurance premium to aid each other economically if a member of the group submits a claim. If the claims do not exceed the usual premium, the entire group benefits from savings in their insurance premiums.



Friendsurance (http://www.friendsurance.com/): P2P insurance that combines social media and insurance companies. Customers form groups to benefit from lower premiums. The concept of P2P insurance involves a smaller number of insured with a similar risk profile and, as such, a greater sense of responsibility toward their group. This reduces the cases of fraud.

Additionally, this model entails less costs for the insurance company since small claims are solved with the group premium. Selling insurance is less expensive as a result of the viral growth stemming from the social network. It insures content, personal liability expenses and legal expenses

Guevara (https://heyguevara.com/): P2P insurance whereby users form groups to subscribe car insurance. Unlike Friendsurance, the insured does not take out insurance with a traditional insurer; they take out P2P insurance directly from Guevara. https://www.youtube.com/watch?v=Ff2aq40MXD0

Insurance Intelligence/Data

These companies gather, process and analyze data focusing on the insurance industry.



Tyche (http://www.tycherisk.co/): Tyche provides predictive analysis to identify and reveal the most important factors in solving claims and managing reserves.

InforcePRO (https://inforcepro.com/): InforcePro specializes in aggregate information for life insurance; it monitors thousand of policies from insurance companies, banks and agencies.

https://www.youtube.com/watch?v=7x6iJIFoNK0

Earnix (<u>http://earnix.com/</u>): Earnix predicts how customers will react when prices vary and adjusts the premiums individually to achieve the best price for each customer.

Traity (https://traity.com/): Traity aims to create a reputation standard online that will allow users to check that the person on the other side is who they say they are and to check how reliable they are. This is valuable information for online buyers and sellers that can also be used to create risk profiles and personalized microinsurance. https://www.youtube.com/watch?v=gl_MFyrX5Bs

Insurance customer acquisition

These companies help insurers acquire and manage new customers.



Ping Leads (http://www.pingleads.com/): Ping Leads helps agents and insurance companies attract the type of customer they prefer. This insurtech attracts the customers, filters them and reports the specified customer type to the company. The company only charges for calls of more than 30 seconds. https://www.youtube.com/watch?time_continue=43&v=GiKRLZA2EnU

Life, Home and Goods and Accident Insurance

These companies offer life, home and goods and accident insurance; they use mobile technology for appraisals and assessment.



SquareOne Insurance (https://www.squareoneinsurance.ca/): Offers greater personalization in home insurance; it insures what the customer strictly specifies and, as such, offers the best price possible since the customer is not charged for unnecessary covers. It also pays particular attention to the claim process with full focus on the customer.

https://youtu.be/7dUkYDgvdzw

Enterprise Insurance

These companies are digital insurers or technology providers that offer specialized solutions for companies, startups and selfemployed individuals.



Benefitter (http://www.benefitter.com/): Beneffiter offers employees an analyticsbased web solution for selecting the insurance that is best suited to their needs. The U.S. system is its biggest influence.

Analyze Re (http://analyzere.com/): Analyze Re uses big data analytics and machine learning to help insurers and reinsurers improve their strategic planning, pricing and portfolio.

https://www.youtube.com/watch?v=Egg4HGmlpbE

Insurance Infrastructure/Backend

These companies help insurers in their daily operations, including CRM for agents and lawyers, communication tools, etc.



QuanTemplate (https://www.quantemplate.com/): Risk and data analytics software for insurers and reinsurers. https://www.youtube.com/watch?v=ZwOODYrWAYk

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