10 technologies that will define the future

In 2019, 1,682 trillion dollars will be invested at the global level in digital transformation while 50% of global GDP will come from businesses affected by this change, according to the consulting firm IDC. The development of this process will revolve around technologies without which doing business in the future will be inconceivable. Their broad development and implementation will enable increasing productivity, improving product design and services and capitalizing on investments, thanks to deep customer knowledge and streamlining of process.

BLOCKCHAIN

“Without a doubt, this is one of the technologies that is going to have the most influence. Not just because it could lead to new ways of contracting between companies and customers but due to information exchanges between organizations,” Germán Cueva, assistant director of Business Development at Tira, points out.

Blockchain technology has the added component that the massive transfer of information between thousands of computers connected throughout the world takes place securely and reliably and is verified, through a cryptography-based security consensus, by the members of the community.

This will enable sharing information with any type of stakeholder or making money transfers directly and securely in a matter of seconds and at a low cost. This will be of special importance in the spread of smart contracts capable of implementing themselves without any intermediaries, ensuring that certain clauses or limitations are activated when a series of specific conditions are met.

As Rodrigo García de la Cruz, CEO of Finnovating and president of the Spanish Association of Fintech and Insurtech, notes, some of the advantages in the insurance sector thanks to this technology will be: *“optimal identity management (eliminates identity theft, impersonations and errors in claims management); elimination of fraud; increased confidence in peer-to-peer insurance (P2P); mitigation of errors (through cross-checking) and risks (allows for diversifying risks with other insurers, as well as sharpening the customer’s profile).”*

INTERNET OF THINGS (IoT)

The IoT inundates reality with myriad devices interconnected with each other and the cloud, providing all kinds of data relevant to the environment (home, car, office) that can be managed later, through advanced analytics, with a countless number of uses.

Its possibilities become infinite if we transfer it to a business environment, where it will enable measuring productivity, improving task management and facilitating industrial processes. In short, it allows for developing more efficient and secure operating models, creating products that better meet customer needs given that their habits and the risks to which they are exposed will be known in real time.

Its growth is immense. As the consulting firm Gartner anticipates, while in 2016 there were 6 billion devices and sensors connected to the Internet, by 2020 this number is expected to increase to 26 billion. Also, turnover will increase from 638 billion euros in 2015 to 1.8 trillion in 2019, according to IDC. When regulations for the devices are standardized and data protection and security guarantees have improved, this technology is going to expand greatly.

In the insurance sector alone, the IoT already has had telematics in car insurance, wearables in health and home automation and sensors in multi-risk policies, as Tirea states. "It facilitates compiling data that refer to the customer's behavior, thus allowing for the customization and adaptability of insurance premiums and the minimization of risk", according to Finnovating, which emphasizes its help in controlling and managing claims.

BIG DATA

"The use of data analysis technology, under the Big Data model, is not something that's going to happen in the next few years. It is already on the agenda in technology and business areas," Cueva notes. In fact, many infrastructures, tools and services already operate to process big and complex data, the growth potential of which is incalculable.

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Advanced data analysis from all kinds of sources, whether messages on social networks, mobile signals, audio files, sensors, digital images or emails, will provide companies with in-depth knowledge of consumers and their needs, adapting and personalizing their services and products, and creating new digital business models.

However, the processing of such a large amount of information is the main obstacle, as it requires a minimum investment by companies to optimize their strategy and complete the development of a powerful storage system. In addition, a large amount of information, much of without any business interest, is obtained. As a result, it will be necessary to invest in a system that processes specific and useful data.

García de la Cruz stresses the fact that compiling data from different sources will allow, for example, insurance companies to calculate more accurately the premium and coverages they need to charge. It will also enable knowing the customer's history regarding past false claims, which will help to mitigate fraud.

ARTIFICIAL INTELLIGENCE

Ever more part of our daily lives, robots can now perform tasks that people would normally carry out, as they require human intelligence to distinguish things visually, recognize faces and speak, translate languages and resolve minor issues. In fact, chatbots, a customer support service capable of answering simple questions, are already present in a large number of companies.Meanwhile, many financial institutions use AI to organize operations, invest in shares and manage properties.

In the report"Current reality and prospects for artificial intelligence in Spain in 2018", published by PwC, it was found that more than half of large Spanish companies are already applying some type of AI-related solution, 10% of which have been able to make a profit thanks to its implementation.

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While lack of talent, excessive implementation time and generation of ROI are delaying its application, its 24/7/365 availability, objectivity, versatility, storage capacity, analysis and data learning will enable, according to Finnovating's CEO, customizing the user experience and reducing operating costs. For Tirea's assistant manager of business development, AI will be very useful in assessing risks, as well as in identifying fraud, although he believes that, given its complexity, its impact will be felt more over the long term.

MACHINE LEARNING

As a further step towards artificial intelligence, analysis using algorithms of the largest amount of data possible will enable machines to learn on their own based on this information and predict behaviors or future trends, in addition to improving their capacity to function autonomously.

Until now business intelligence was limited to compiling data from the past and classifying them to analyze the current situation and design future strategies through general guidelines of behavior. Through machine learning, it will be possible to anticipate the behavior of each consumer separately, which will allow designing marketing campaigns and providing each one with a customized product or service.

Its impact will be such that in 2021, 15% of customer service experience decisions will be made completely by algorithms, according to IDC Research España.The main goal for the future is obtaining maximum data precision. For this to happen, programmers will need to guarantee the correct analysis of data, even though smart algorithms already exist that enable automating the storage of data from different documents and analyzing them.

Sectors as important as tourism, e-commerce and marketing already rely on this technology to optimize profits and use the information they have available intelligently to make better decisions. In the insurance field, according to Finnovating, the automatic machine learning will enable generating more intelligence in the algorithms used to train Insurance Artificial Intelligence.

VIRTUAL AND AUGMENTED REALITY

While augmented reality preserves the existing tangible environment, incorporating technologically created elements, in virtual reality, the entire environment is generated in a computerized fashion. Both are used very frequently in the entertainment business. However, for some years now, they are beginning to have more and more of an impact on business sectors, thanks to the digital reconstruction of contexts and situations.

Still, these technologies, so common in video games, have already extended into such fields as medicine, art, architecture and engineering. In fact, according to Digi-Capital, a consulting firm, in 2020, the augmented and virtual reality businesses could reach a total amount of 90 billion and 30 billion dollars, respectively.

Their areas of business application will be numerous, from training and security to production and marketing. It will be possible to implement new procedures, simulate critical environments, be present at incidents remotely and perform maintenance on certain equipment from a distance. All this will reduce mistakes made in processes, streamline tasks and optimize production designs.

These will not be their only practical applications. The overlay of real images onto virtual ones will be helpful in the work of an automotive expert, in the same way that use is currently made of these technologies in training, as Cueva points out. It will also facilitate the best claim management for experts making visits, as García de la Cruz stresses.

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AUTONOMOUS VEHICLES

These vehicles incorporate technology capable of analyzing the environment through which one is moving using a series of sensors that recognize all sorts of data. After this information is processed, these cars will be safer and more efficient and will achieve higher performance than traditional vehicles, thereby reducing accident rates. According to a report by McKinsey & Co, autonomous vehicles could reduce accidents in the United States by 90%, saving 190 billion dollars in damages and expenses each year.

Without a doubt, it is one of the technologies that has attracted the most attention in recent years.

Unquestionably, it will revolutionize operating methods in a number of sectors, from construction to logistics, not to mention telecommunications and travel agency services.

BIOTECHNOLOGY

Biotechnology has been around for decades. Yet its potential for innovation is so high that despite the fact that it has been evolving for some time, it is considered one of the technologies that will have the most impact in the future.

Until now, technological applications that used biological systems and organisms to create and modify products or processes with specific uses have enabled curing diseases through genetic manipulation, producing more suitable drugs and sustainable fuels, and even creating smart fabrics and enzymes for detergents and cosmetics to replace other more environmentally damaging components.

But it wasn't until the last five years that scientists all over the world made the most important advances in this field, particularly in the food, agriculture and medical industries. Their enormous innovative capacity provides a glimpse of the transformation of many sectors and daily uses that we know, such as building sustainable infrastructure and regeneration of all kinds of tissues (natural and artificial).

In the insurance sector, García de la Cruz believes that above all, it will have an impact on health and life insurance, in conjunction with advanced wearables and improvement of life expectancy techniques through the control of crucial variables. However, the lengthy duration of periods of profitability and the high cost of innovation make it one of the technologies whose impact will not be recognized for some time.

WEAREABLES AND MONITORING TOOLS

While lovers of gadgets get the most excited about the release of each new device, many companies are already exploring the advantages that wearables could provide to improve processes and increase efficiency and productivity.

In fact, many industrial sectors are already frequently adopting smart devices in their production centers. Glasses or watches, joined to technologies such as augmented reality, provide all kinds of information and resources needed for the work to be carried out. Documents are accessed and remote support is provided in real time, without at any time having to take one's eyes off the task at hand or risk being distracted.

All of this will lead to important savings in costs by reducing response times with expert remote support. It will also decrease occupational accident rates through step-by-step guided assistance with tasks involving risks. Also, the rate of mistakes in the performance of complex tasks will be reduced, improving, in addition, customer service in maintenance tasks, reviews and incident resolution. With the most important challenge ahead:guaranteeing security in business data management on corporate networks and other equipment.

Given its relation to IoT, it enables storing consumer behavior in real time mainly in the areas of health and driving. "Its accessibility, dynamism through gamification, bonus for good behavior and customization of premiums and coverages stand out in the user's experience," the CEO of Finnovating highlights.

DRONES

> ***The speed of flight and load capacity are going to revolutionize businesses in the logistics sector.***

The global market for solutions involving the use of drones for different industries was, in 2017, worth 127 billion dollars worldwide, according to the report “Clarity from above: Leveraging drone technologies to secure utilities systems”, by PwC. The report highlights the fact that the use of these kinds of drones, which for years has been directed more at recreational purposes, is now beginning to transform the way many companies build, operate and perform maintenance tasks on their networks. In addition, regulatory changes regarding the use of drones in urban spaces recently announced by the Spanish government will dramatically increase their use in our country.

The speed of flight and load capacity are going to revolutionize businesses in the logistics sector. But their advantages are not limited to this. They will also allow obtaining high quality information in real time profitably, geospatial elevation in planning prior to investments, performance of tasks involving risk as a replacement for people, and monitoring of construction processes and asset management.

“Their application in the insurance sector is based mainly on optimizing expert reports and reducing time and costs. This improvement makes possible a complementary reduction in the price of the premium, providing the policyholder with higher quality of service.