BABEL

# TECH FOR GOD

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transformación digital

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This year 2022 is proving to be a time of huge changes for everyone, in social terms and economically, culturally and, in general, in all aspects we observe. **Babel** cannot remain unaffected by these changes and so we must adapt in all areas of action in order to continue to bring the greatest possible value to all our interlocutors.

In the professional field, and with a major impact on the social sphere, one of the major changes has probably been the implementation of remote working in a large part of the professional sectors where the activity does not require a physical presence, no longer as a possibility but as a reality to which all of us (businesses and professionals) have had to adapt, redefining many of our people management procedures and policies. And through this we have achieved something that we have long striven for: a definitive work-life balance that will enable us to strike a higher equilibrium in our dedication to our professional and personal lives.

In my opinion, **hybrid working models**, which combine the possibility of working wherever one prefers, according to flexible timetables, with a degree of physical presence in the office, are the ideal since they allow for optimising work-life balance. This makes it possible to increase productivity for the company as well as the worker's convenience without completely detaching the professionals from their company so as to not depersonalise their work activity. A person's successful and full integration into their company, the pride of belonging, the personal relationships between colleagues, the knowledge and sharing of the company's culture and values are essential elements in their professional life, which I believe should not be lost and are fully compatible with hybrid working models. And this is where we open up another debate: the role played by offices in this new working model.

We have to abandon the idea that they are just workplaces; they are now spaces for professional and personal coexistence. A meeting place where everything should be directed towards interaction and towards generating ideas in a dynamic environment. Finding the right balance between remote work and in-person office work will be the key to successful professional ecosystems. It is based on mutual trust between the two parties, a fundamental pillar in our company culture. At **Babel** we have defined this new working model with a great deal of enthusiasm and courage and have so far obtained some very good results.

Without a doubt, another of the major changes, as important or more as the previous one, is that we are experiencing substantial growth in the use of technology in all sectors, in a massive and unstoppable manner. It is not a matter of merely providing digital support for processes but rather of truly and profoundly transforming them: that is what allows us to design new business models, new ways of supporting industries, maximising and radically optimising the value that technology provides for them, not only as a tool for the process but as an intimate part of it. This evolution means that technology is definitely placed at the service of people, not only from the perspective of economic efficiency but also under a concept of **humanistic technology**, that is, **enabling an increase in people's abilities that allows them to face challenges that would have been unimaginable a few years ago.** To take one example, applying artificial intelligence is multiplying our capacity to increase our effectiveness, boosting to an unimaginable degree our ability to perform tasks of extreme complexity with the utmost efficiency. This capacity, added to hyper-automation processes, means that tedious, repetitive and low-value tasks can be performed automatically without human intervention, thus allowing us to make human talent available for high-value tasks. And all this in a context of almost unlimited computing capacity, but always and - fortunately - increasingly under the highest levels of digital security needed for protecting what is undoubtedly one of the most precious assets of our time for us all: our data, our identity and our privacy. The future is already here and at **Babel** we are fully immersed in all these issues to technologically support our customers on this journey that is taking place at breakneck speed and without an easily predictable horizon.

All these changes, added to those that **Babel** is experiencing due to its own activity, mean that today's company has evolved greatly from the company we were a year ago. To give us an idea, **we finished 2021 with around 1,800 professionals distributed between five countries and will end 2022 with approximately 3,000 people in the group, distributed around the 14 countries where Babel currently operates, of which more than 600 are in Latin America.** To this tremendous growth and expansion, we must add the transformation we are undertaking in our service offering, placing our full focus on boosting technologies such as big data and analytics, cybersecurity, artificial intelligence, cloud architectures and hyper-automation. An investment that, thanks to the huge market demand for these services, is being rewarded with formidable returns.

If the challenge of growing the size of the company by almost 40% in one year, trebling our international presence and business, and adapting ourselves to the new work formats and spaces is already exciting in itself, to do it while steadily maintaining profitability and reviewing and updating our service offering is almost equivalent to changing an aeroplane's engines in full flight over the ocean and makes this an unprecedented adventure for all of us who are fortunate to be part of it. And always with the utmost respect for, above all, preserving the cultural values that have brought us here and that make **Babel** a company with a distinctive identity and a hard-to-imitate corporate model where people are the centre of everything and it is their attitude that makes us different.

Tony Olivo, Babel CEO

# Artificial intelligence for Good, the artificial intelligence of the future.

## Richard Benjamins

Chief AI & Data Strategist at **Telefónica**

**– Besides the metaverse, artificial intelligence always appears as the big talking point when it comes to technological advances. How far do you think we can go in terms of artificial intelligence? What are the challenges and/or opportunities ahead? And which is it, AI for Good or Good AI? What would be the difference between these two concepts?**

The quickest answer would be that there is no clear answer, at this time no one knows, no one has a clear idea of how far artificial intelligence can go. What I can give you is my opinion. A book called "Architects of Intelligence: The truth about AI from the people building it" comes to mind, for example, where more than 30 gurus in this field are interviewed and each one has a different vision. The issue is whether or not artificial intelligence can rise to the level of human intelligence. **In this regard we're talking about a 300-year period, with the most optimistic talking about 2049 and others saying that artificial intelligence will never match human intelligence.**

The big leap forward, and where we are today, is in deep learning, which means more computing, more data, more powerful learning algorithms and network settings. The breakthrough for all this was in 2010-2011 and that's the moment we're at: machine learning that requires a huge amount of data and looks for patterns that are based on the past and allow us to predict, classify, actually allow us to do a lot of things, to the extent that they can do tasks much better than a person, for example with natural language, translations, summaries, interpretations, etc. **There is already parity between a machine and a human, but in very specific tasks; it is narrow AI** and it's called that because it is capable of doing a specific task and there is still a great distance from human intelligence, which is capable of doing thousands of different tasks. Although, on the other hand, there are natural language programs like GPT-3 that are trained with vast amounts of data and are doing things that it was never envisaged that they could ever do.

**– It's hard to imagine the future. When you talk about the narrow AI concept, do you mean that the activities in which artificial intelligence will be most present will be those most likely to be automated?**

No, what is needed **is a direct correlation between input and output,** with a lot of data, because there is no one who can make a program that predicts the stock market, there are not enough events (data) to do it. It could be predicted in normal times, say, but not if there are unforeseen events like a pandemic or a war. Such events (luckily) don't happen frequently enough to be able to train the machine and give it time to learn them. **It is useful for predicting diseases, for example, because there is a pattern there.** At the end of the day it's a machine that interprets mathematics, patterns and statistics, it has no awareness of the type of data it's interpreting.

What has changed in recent years are the major logic learning machine (LLM) natural language models, because they are trained to do a task, but then it turns out they can do a lot more. **Predicting the words that are missing in a text, generating summaries, stories, answering questions,** is no longer so narrow even though it is still so. We have taken a small step, like with transfer learning for example, where the machine learns objects which then serve it to learn faces or also people, it does not have to start from scratch because it follows on from a previously learned base.

Compared to human intelligence, we have common sense, context, sense of reality, whereas the machine has no consciousness, no sense of reality, of physical interaction. Let's compare it to how learning happens in a baby who knows nothing at birth and acquires a physical model within 18 months. In machine learning the machine has no physical model, does not understand if we drop something or are throwing it upwards, has no idea what is really happening.



**"It's important to have the data, but most importantly, when you have them, using them for improvement".**

**Much research is needed going forward. Doing many other things starting from deep learning, such as reinforcement learning. There is still a long way to go in terms of artificial intelligence, we cannot say that it is possible but at least we can already say that it is not impossible.** Human beings, whose origins are in atoms, cells, etc. and who do have consciousness and intelligence, have evolved to where we are now in a process of billions of years and in a random way. So I don't see why this same story can't be repeated again, at worst it can take another few thousand years or it can even be much more targeted, which is what artificial intelligence is trying to do.

**– Are we pursuing a goal? Can we bring together all our experience and ability to go in one sole direction, accelerate the process and make a quantum leap in evolution?**

If, for example, in quantum computing in 20 years everything will be more mature and maybe suddenly things are achieved that we can't even imagine. For example, we know that there is a lot of chemical and electrical activity in our brain, but we can't quite see how a concept like "freedom" or "war" is formed. It's something abstract, almost philosophical.

**Deep Learning, the same artificial intelligence that we have today, if we apply it to more things we can go much further.** In terms of applying it, we can make it far more extensive and in a massive way, but on the other hand there is always artificial intelligence, which can still grow a lot. That's exactly where we are now, in that phase of expanding artificial intelligence to many more sectors, more massively and at the same time doing academic research into new artificial intelligence formulas. And we link this to Good AI, to ethical and responsible use. We already know that algorithms learn from

data, but they never get it 100% right, it can be 90-85% or even less.

What we need to assess is, above all, the model's percentage of error, whether it is acceptable for the application that we need, for example if we use algorithms to make medical diagnoses or facial recognition to identify criminals, an error rate of 15% is very high since we are talking about putting people at risk. For these two examples we would need to reduce that error rate to a minimum. **Algorithms are not infallible because they learn from us and from the data we feed them.**

**Reality has biases, so algorithms learn models that are imperfect and always have a percentage of error, even if it is a small one.** This can be seen clearly in a case that happened to Amazon, which applied artificial intelligence to select and hire profiles. The machine was trained with the CVs from the previous 10 years, where there were many more men than women. Because it had learned to select only men, it dismissed women. This can become a serious problem if vulnerable groups are discriminated against, which could potentially lead to committing discrimination offences.

Data representativeness and biases have a high impact in regard to natural language. For example, for the machine, nurses are always women and engineers are always men, for the simple reason that these models are statistics and the matches between "doctor" and "he" are higher than between "doctor" and "she". The result of this is that, if the model has no other context, the machine associates the word "doctor" with men more than with women. This must be taken into account when understanding the machine's interpretation of natural language.

On the other hand there are the black boxes, **there are many algorithms so complex that they are incomprehensible to humans, but**

**depending on the domain it is important to understand them.** For example in medicine, if an algorithm tells a doctor that a patient has cancer, the doctor must have a very good understanding of the diagnosis the machine has made and of the reasons before stating and communicating it to the patient, since as we said before there is a margin of error. **This is why it is so important to make responsible use of algorithms when we apply them.** You have to ask yourself some questions beforehand, see the representativeness, the impact of false negatives, false positives, to avoid surprises. There are decisions that can be taken explicitly, for example rather than a black box algorithm, using a white box algorithm. It performs a little less well but avoids the problems I mentioned earlier.

**As well as using the technology for the business, it can also be used for social good.** It can be applied throughout the disaster management cycle. For example, during the pandemic we used it to find vaccines, to predict how the virus was spreading, and in a preventive manner. **We have so much data that when taken together are proxies for human activity. These proxies are like Plato's cave, where men only saw a shadow and it had to be interpreted. Big Data is like this, the data are only a shadow of reality and they have to be interpreted, keeping in mind that we can get this interpretation wrong because it is not pure reality.** Another example would be data from insurance companies, which can manage to monitor and predict natural disasters. This information is very useful to better understand the advance of climate change, and because it gives them a very interesting view of the areas of high risk in meteorological phenomena.

Yes, an example of this was during the pandemic, where we used data extracted from the mobile network in an anonymised and aggre-

gated manner to generate mobility matrices. This information was relevant for governments to manage the pandemic in terms of virus spread, monitoring lockdowns and the effect on the economy. A mobility matrix says, for example, that around 10,000 trips were made in one day between Madrid and Barcelona, 50% less than before Covid.
The same data served to **improve predictions about healthcare system saturation and other problems that arose from the pandemic.**

Another project **we have carried out aimed to measure air quality in Madrid.** In many cases, when we see air quality data for a city, we see them divided by districts. These data are obtained through a static sensor that gives information on the street where it is located, but in order to have a comprehensive view we should take into account whether the sensor is next to a park, which will always give an optimal reading, or next to a car park, which will show a red indicator to denote that the air in that area is less clean.

The source of pollution is 30% traffic, another 30% buildings and the rest industries, etc. We focus on the traffic issue because we can make

estimates based on the same mobility data used for managing a pandemic. We cross these data with open data on vegetation, population, climate (temperature, wind), the functions of buildings, and with data from a mobile pollution sensor placed on top of an electric car travelling along different streets around Madrid, which gave us a reading of **the air quality in each street. This serves to take and adapt measurements for air quality according to the context of the specific area, for example for detection and avoidance when there is poor air quality near a school.**

Having the information is key to taking decisions and making changes in regard to what we mentioned. **It's important to have the data, but most importantly, when you have them, using them for improvement.** This requires a cultural, generational and also political transformation, because data do not always come out in line with all ideologies or interests. Having the data comes with responsibilities for taking decisions in a better way.

**Richard Benjamins** is the author of the book A Data-Driven Company: 21 lessons for large organizations to create value from AI, newly translated into Spanish.
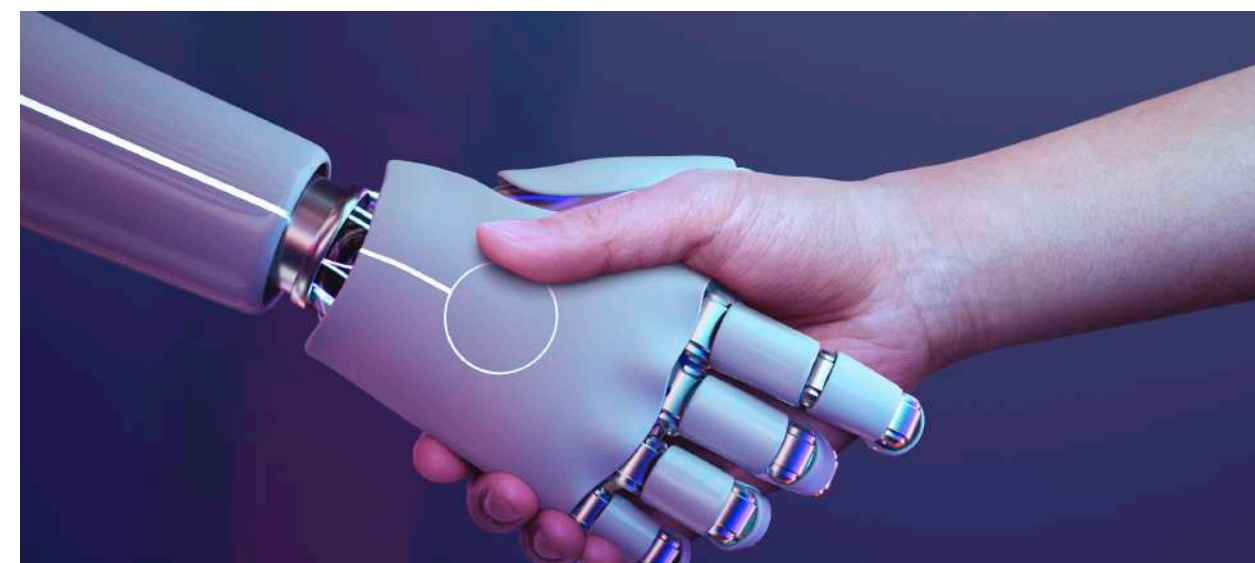
# The humanistic technology of talent

Talent in the tech world is the most sought-after asset for organisations. Attracting, creating and retaining the best professionals is a problem we all want to solve, and it is up to businesses how far we apply humanist technology to achieve it.
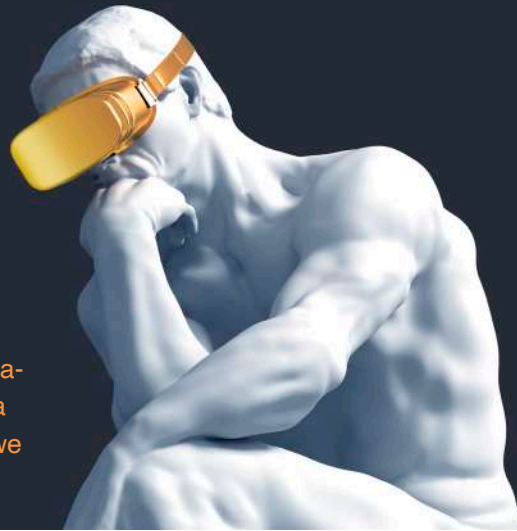
Felipe Pérez
Babel Chief People Officer

Humanist technology is defined as **an ideological philosophy or current focused on the double standards thrown up by ethics and digital innovation.** Back in 1958, in a conference at London's Institute of Metals, Sir Eric Ashby argued that the generators of technical development must be responsible for solving the problems caused by such advances.

Social networks or artificial intelligence are some of the main focuses in humanist technologies. The use of machine learning that generates betting shop advertisements targeting people with compulsive gambling problems would be an example. Organisations such as The Center of Humane Technology (CTH) or Technological Humanism and Artificial Intelligence are pushing for more human technological change. There is even the Vienna Manifesto (May 2019) on digital humanism, signed by more than a thousand leaders from around the world.

How do you apply the concept of humanist technology to talent? **Let's define talent as a person's intellectual capacity or aptitudes to learn or to easily undertake an activity.** In the IT sector it applies from two perspectives: humanist technology in the acquisition of talent and humanist technology in talent creation.

**There is a significant shortage of profiles with technological capabilities, we have much more demand than supply.** We increasingly require more technically specialised services, with the necessary soft skills for the new post-pandemic work paradigms. According to The State of European Tech report, demand has increased by 30%. At the same time, the tools for talent scouting are more powerful, for example, artificial intelligence, machine learning and or reputation algorithms. By applying these concepts we would obtain complete profiles and - even - deduce potential behaviours in certain work situations. Would it be ethical to use technology for these purposes? Just as we can use the internet for purposes that probably wouldn't be approved by most of society. Making decisions on new situations based on background is a risk that could lead to mistakes. It is very difficult to predict behaviour when the situation to be managed has never occurred. At the same time, we can apply it for positive aspects. For example, optimising the match between a position and a candidate, automating certain processes would increase the likelihood of success. Generating greater efficiency for the organisation and less time loss for the professional who has applied.

We would say that we can optimise the acquisition of talent through technology from a humanistic perspective, but **to obtain results we need the existence of such talent.** With the passing of the pandemic, the volume of business requiring technology has increased considerably, but actions to create talent are not progressing at the same pace. According to the National Statistics Institute, more than 25% of students drop out of technical careers in the first year. At the same time, this does not tell us whether they might transfer to a boot camp that will turn them into professionals in the IT sector.

Which actions could be taken? First, **technological education must evolve towards much more practical, motivational and challenging aspects for students.** Organisations must be involved, as the Vienna Manifesto states: "Universities are the place where new knowledge is produced and critical thought is cultivated." We should help link this knowledge to the real needs of organisations and, above all, create professionals with the technological skill and attitude required for the working world in the IT sector.

On the other hand, society is under the bombardment of studying that which motivates and appeals, or that the solution to the scarcity of work is in the world IT. At the same time, students completing engineering careers continue to decrease, **the number of boot camps has grown exponentially in recent years,** often with fully digitised training platforms, making use of gamification, artificial intelligence, virtual and/or augmented reality to attract and deliver the best results.

Boot camps have found a need and are using the necessary technological means to cover it. We in organisations make use of these profiles; **more than 60% of students who complete them enter the workplace.** We have not found any data on how many people drop out of boot camps or leave the IT working world once they know it first-hand. Here we come to the expectations that students receive from these training courses: salaries, type of work, specialisation in areas with lower demand, etc. It is common to apply the "Learning by Doing" concept, which is well-founded but at the same time is often lacking in context, in situations associated with real projects that are very tricky to teach in online training.

**Humanist technology is present in talent, in attracting and creating it.** Technology will increasingly allow us to boost our capabilities to resolve any problem and achieve objectives. It is its use that determines whether it is a real solution or a business above and beyond the solution to generate even more problems in society. The difference lies in being aware and knowing the context in which it is executed. From my perspective, new technologies will help a recruiter find the best professionals, allowing them to spend more time on value-added tasks and make their work more efficient. **The boot camps will improve, but they will not solve the problem of scarcity of talent** with the necessary capabilities and specialisation. At the same time, applied with the right ethics, they can help a great deal in aligning the interests of organisations and society in the digital age that we live in. Remember that transformation is done by people, not technology.

# T
# Treat Intelligence

New challenges and hybrid threats that place any organisation's cybersecurity at risk have resulted from the rise of digitisation. The current situation is marked by the rise of cyberattacks and an increase in their danger and sophistication.

## Mario Casado
Babel Cybersecurity Global Head

According to figures from the National Cryptology Centre (CCN), a total of 82,530 incidents were detected in public bodies in 2020, of which 7,000 were categorised as being "very" dangerous, doubling the previous year's figure. In 2021 the National Cybersecurity Institute (INCIBE), at its Security Incident Response Centre, managed **109,126 incidents affecting citizens, SMEs and businesses in our country.** In Spain, these security incidents have been mainly perpetrated by state figures and cybercriminals, and the health crisis has favoured the increase in campaigns conducted by APT (Advanced Persistent Threat) groups against bodies linked to the health sector.

In recent years we have noticed that the boundaries between **the different threat actors have become more blurred.** The methods and tools that were previously merely a threat for a limited number of large organisations have spread to the market in general. The 'Shadow Brokers' code dump, which meant the availability of advanced exploits to any criminal group, has enabled almost any actor to compromise an organisation's assets through a highly sophisticated code. The sector's professionalisation, the consummation of cybercrime as a profitable activity, the continuation of Malware-as-a-Service (MaaS), the rise of phishing and BEC (Business Email Compromise)

and compromised credentials, triple extortion in ransomware attacks or APT campaigns, not only focused on cyber espionage but also on financial extortion to fund other activities: **the cyber threat landscape changes almost daily.** In recent weeks we have witnessed the emergence of bug bounty programs launched by ransomware groups, asking researchers to send out bug reports in exchange for rewards that could be as high as millions of dollars.

Given this current scenario, **cyber intelligence becomes an increasingly necessary technique to proactively tackle and prevent cyber threats.** This discipline, developed in the military and in defence, is increasingly common in the private sphere, and not only in large multinationals. It is increasingly a cost-effective investment as part of comprehensive cybersecurity services, as it provides greater knowledge of the attack surface, helping to identify the most valuable targets or how detected vulnerabilities can be exploited. It allows one to think like an attacker, which are an organisation's key assets and which set of data and business processes are vital. It also contributes to developing techniques to counter, identify and monitor as well as understanding the motivations, behaviour and profile of groups, actors and campaigns.

The cyber intelligences process consists of a series of phases (cyber intelligence cycle), and typically includes sharing of discoveries in threat modelling in specific technologies or industries: planning, compilation, processing, analysis, integration and evaluation. And in these phases, jointly with technology, the figure of the analyst is decisive.

But **the number and complexity of cyberattacks will continue an upward trend,** taking advantage of existing vulnerabilities and events that favour unpredictability and uncertainty. The increase in the use of social media, both in the working world and in the private sphere, will mean greater exposure for businesses and organisations and, consequently, a challenge for their reputation and image as well as an increase in cases of corporate fraud or corporate branding theft.

At state level, state-sponsored and state-financed actors will continue to carry out their cybercriminal activities with mainly political objectives. Practices such as cyber espionage will continue to adapt and take advantage of technological advances.

Infoxication or information overload is one of the main obstacles in the information collection and filtering phase. The amount of disinformation present, deep fake techniques, the use of bots or the automation of social network interactions will continue to generate an unmanageable volume of information in the coming years. **Where, moreover, the credibility of sources will continue to be affected by bias and incomplete information.** This is why the figure of the analyst with the ability to collect, filter, and analyse information will remain critical.

It is for all these reasons that cyber intelligence also requires the application of new technological advances to address current and future risks. Big data, hyperautomation, artificial intelligence, blockchain analytics, the use of machine learning and risk intelligence give a glimpse of another future in the cyber intelligence landscape **where we are heading towards managed threat intelligence.** All of these disciplines, already incorporated to a

greater or lesser extent, will go a step further in both attributing and detecting cyberattacks, even before they occur. Analysing the vast amount of information, monitoring and correlating it, will allow us to predict behaviours both individual and collective, disinformation campaigns or zero-day detection before they can materialise.

In parallel with the development and evolution of tools, techniques and processes, cyber intelligence continues to face the emergence of new challenges and threats characterised by a VUCA environment: highly volatile, highly uncertain, complex and ambiguous, which favours the sophistication of attacks perpetrated by state figures, cybercriminal organisations, terrorist groups and actors of cyber threats in general.

It is clear that a satisfactory defence of digital assets requires new methods, and organisations need a new, proactive approach to protect themselves by adapting their security controls to a complex and changing cyber threat environment. **It is not enough to react to an incident;** environments are increasingly providing opportunities for attackers. All of this introduces a vast number of variables in possible methods of executing an attack as well as in new variations. The current context and emerging trends lead us to conclude that advanced threat intelligence is becoming, and will become, indispensable in the coming years for any organisation and must be tightly integrated with security governance and management policies as well as with technology teams.

# The construction giant facing the new digitisation era

Francisco Gonzalo (Santander, 1971) is leading the digitisation of Sacyr, a multinational infrastructure and services enterprise that is one of Spain's largest construction companies. Sociedad Anónima de Caminos y Regadíos (Sacyr), was founded in 1986. 36 years later, this Madrid-based construction giant closed its last financial year with a turnover of more than 4.6 billion euros. It has more than 42,000 employees, and since July of this year is listed on the Ibex 35. Gonzalo, a graduate in computational science from Deusto University, has been the company's CIO since 2017 and is one of Spain's most promising executives. A devotee of mountain activities, skiing and trekking are two of his great hobbies. His CV includes an ascent of Mont Blanc, and he has his eye on the Himalayas. Prudent, firmly advancing according to very clear objectives, despite his job he craves coverage-free moments. We talked to him about the present of Sacyr and his projects for the future.

## Francisco Gonzalo

Sacyr CIO

**— You joined Sacyr more than five years ago. Which challenges have you taken on since then and how has the company progressed?**

Sacyr's development over the past five years has certainly been extraordinary. Truly a story of successes, with a focus on improving operating return, on developing the key businesses of concessions, construction and services, on growing our internationalisation and selecting the best talent.

During this period, the function of information technology has faced the challenge of enabling the transformation associated with digitising the processes of the company's different businesses. Important milestones have been achieved, such as the launch of the Bambú project, an internal management system that has led to a significant improvement in the effectiveness of our financial processes by implementing a solution based on SAP HANA. Also the GEOS project, an internal development undertaken in record time which arose with the aim of standardising the management of Sacyr projects through a single system that would ensure integral control and simplify processes through digitisation and automation, already deployed in more than 50 projects in 5 countries. Technological infrastructures have been modernised, jobs have been optimised, the communications network has been transformed, cybersecurity has been strengthened, a new application development framework has been implemented, facilitating the updating and evolution of multiple applications, user support has been transformed and the remote working environment has been deployed to mitigate the impact of the situation arising from Covid-19 and the company's digital talent has been enhanced and improved.

**— Tell us about the Sacyr 2021-2025 Plan and its main focuses.**

Sacyr's strategic plan for 2021-25 reinforces the company's financial strength, with revenue growth exceeding 20%. To this end it focuses on the entire value chain of the concession model, including the activities of the concession businesses, engineering and infrastructures and services. In addition, it considers two aspects of strategic importance: appropriately managing sustainability in the area of people, communities and the environment; and attracting talent, managing diversity and adapting to new realities.

**— Which initiatives are you launching in the technology area to support these goals?**

The strategic technology plan for the 2021-25 period is, of course, fully aligned with the company's strategic plan. It groups all planned initiatives together into six distinct categories:

1. Advanced digitisation of business operations to enable the launch of better applications and technological services. The use of appropriate technologies will be key to improving the sustainability of Sacyr's business activities, which will facilitate the reduction of one third of the carbon emissions required by 2030.

2. Optimising the management of critical data, which are key to the group's decision-making processes.

3. Extended cybersecurity to minimise risks and ensure the continuity of our activities.

4. Optimising the user environment, enabling ever higher levels of use of multiple devices in different locations.

5. Efficient management of technological infrastructures, ensuring contingency and recovery.

6. Improving the internal management model by optimising the efficiency of expenditure and investment in digital technology.

**— An example of a project where technology has been relevant in achieving a strategic company challenge?**

Overall, all the efficiency gains resulting from digitisation have been a strategic challenge that, as the actual strategic plan confirms, has been met in the 2015-20 period.

Specifically, it is important to highlight the contribution to internationalisation by transforming and improving the entire technological infrastructure involving servers, storage, and the communications network and jobs, which has enabled the development of strategic projects for Sacyr in very different and distant places of the world.

Francisco Gonzalo, Sacyr CIO, at the group's headquarters in Madrid.

**"... two aspects of strategic importance: appropriately managing sustainability in the area of people, communities and the environment; and attracting talent, managing diversity and adapting to new realities".**

# 5 CONTINENTS 20 COUNTRIES

Sacyr operates in nearly 20 countries around the world: Algeria, Australia, Brazil, Canada, Chile, Colombia, Ireland, Italy, Mexico, Oman, Paraguay, Peru, Portugal, Qatar, Spain, Sweden, UK, USA and Uruguay.



**"Sacyr's development over the past five years has certainly been extraordinary."**

**— Sacyr is a company that uses technology to innovate. What is it like to innovate in a company of these characteristics? What is the investment allocated to innovation?**

Sacyr understands innovation as a generator of competitive advantages that helps in dealing with the challenges of today's business while exploring and preparing the organisation to leverage the opportunities that the future will bring.

In this regard, collaboration with business is essential and technology is the great ally in meeting those challenges. Our innovation strategy is based on an open model that allows us to collabora-

te with the best talent from inside and outside the organisation (start-ups, technology centres, universities, other corporations…). The aim is to implement pilot projects in real-world environments that allow us to develop or adapt and test the validity of the technology, scaling it up if it is successful. Initiatives incorporating IoT, big data, artificial intelligence… into projects that Sacyr is executing in Colombia, Chile or Portugal.
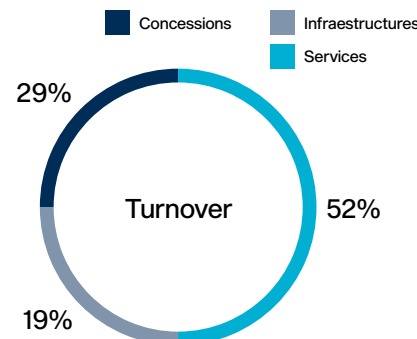
During the period of the strategic plan (2021-2025) we are committed to doubling investment in innovation and to contributing a significant percentage to improving our sustainability performance, another of the company's priorities.

**— Keeping yourselves in a state of constant evolution is one of your maxims, a point in which the team, the people and change management are essential. How are you dealing with this challenge?**

We have established a plan to strengthen and acquire digital competencies, focusing on technical versatility, collaboration and willingness to innovate. We also enhanced the PMO area in the sphere of Digital Technology Governance, with additional resources to coordinate and optimise project development and all associated change management activities.

**— The construction sector has not ceased to reinvent itself in recent years.**

**Which are the challenges facing the industry? What will be Sacyr's role on this journey?**

Sacyr will undoubtedly continue in the group of industry leaders and respond to the challenges of ongoing optimisation of operational efficiency; of recovering from risks and unforeseen events, as demonstrated in the response to the situation arising from Covid-19; speeding up our response to customer demand and the complexity of projects; and differentiating between customers by providing a greater degree of value to customer needs.

| GROUP TURNOVER | PORTFOLIO OF REVENUE | EBITDA |
| --- | --- | --- |
| **4,675** | **45,938** | **923** |
| Millions of euros | Millions of euros | Millions of euros |
| +3% | +17% | +28% |

**Turnover**

- Concessions
- Infraestructures
- Services

29%
52%
19%

| VALUE CHAIN | EMPLOYMENT |
| --- | --- |
| Environmental impact assessment of a total of | Direct and indirect |
| **2,360** | **43,467** |
| Suppliers | Employees |

| INNOVATION | SUSTAINABILITY | INVESTMENTS | |
| --- | --- | --- | --- |
| Investment in R&D & Innovation | Emissions reduction for 4th consecutive year | Environment | Training |
| **+8** | **+57%** | **+26** | **+284** |
| Millions of euros | of the material used is recycled | Millions of euros | Thousands of hours |

# Towards sustainable finance: there will have to be a path

There are realities beyond our control that have a high impact on our lives and therefore on society. Climate change is one of those consequences, which we have been dealing with through sustainability from a financial perspective.

**David Ramos**
Babel Head of Digital Banking

## Customer experience

At the BBVA Fundación Microfinanza we use technology to support the progress the entrepreneurs with scant resources whom we serve. Thanks to the Gestor Documental omnichannel project, we have digitised the documents of the business processes. They are stored in the cloud, reducing back office management and paper consumption and storage. Additionally, entrepreneurs avoid trips to branches by sending and checking their paperwork from anywhere. And our banks' credit advisers work with that information virtually. It is implemented in 4 of the Foundation's 5 entities and will shortly be in all of them.

**Rosa Latorre**
Innovation for Inclusive Growth - BBVA Fundación Microfinanza
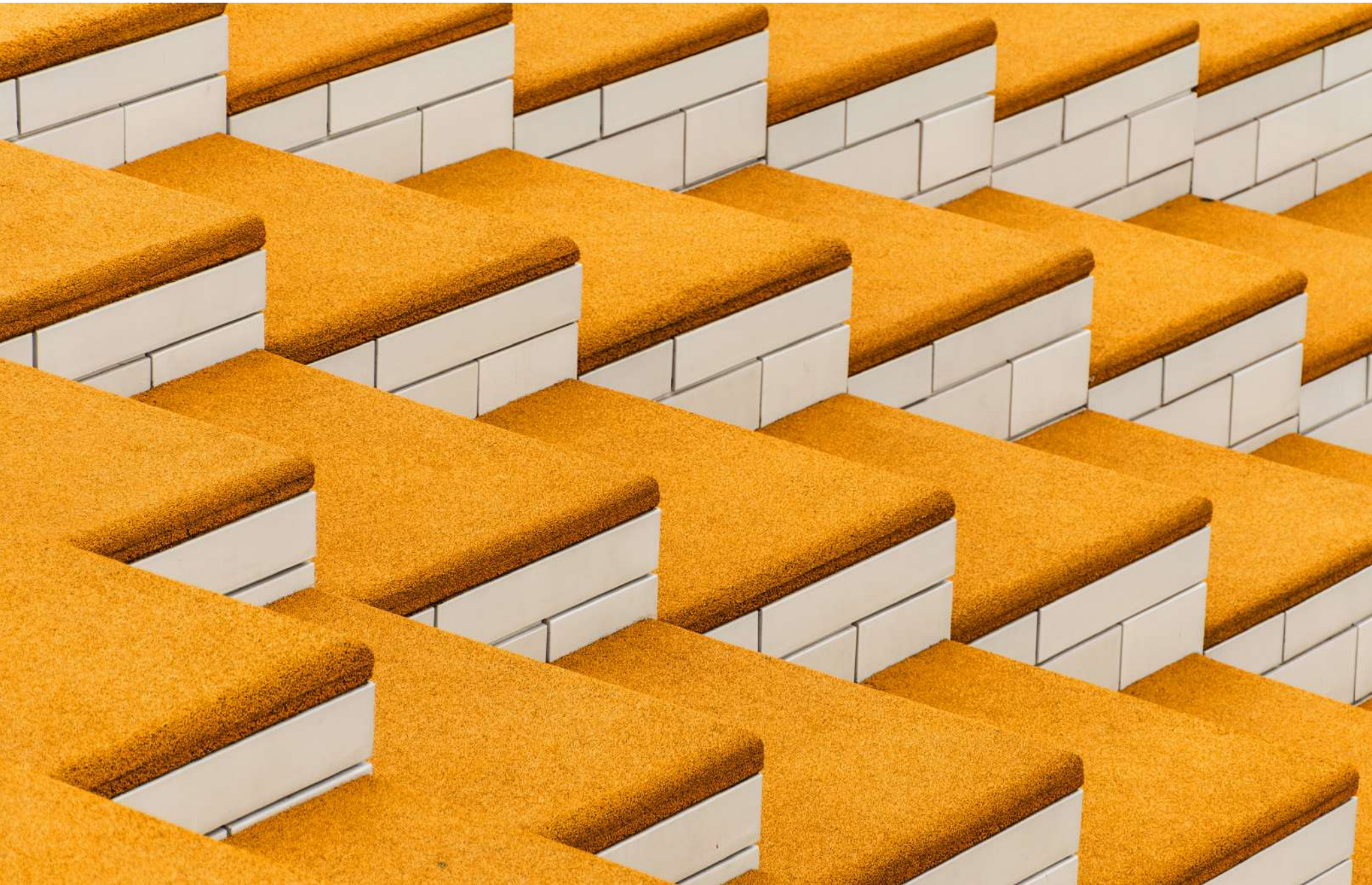


If we review a bit of history, **the origin of ethical investment** is in the United States, where after the Vietnam war students demanded - for the first time - that universities and companies halt their military spending. In the late 1990s, sustainable investment was a fact and the Dow Jones Index decided to launch the DJSI (Dow Jones Sustainability Index), which defines sustainable development as a **long-term value-creation approach for shareholders**, covering the opportunities and managing the risks of the present that arise at an economic, social or environmental level. The UN also launched the Principles for Responsible Investment and in the European sphere, the Green Deal sets the goal of transforming Europe into the first climate-neutral continent by 2050.

But really, **what does an investment require to be viewed as responsible?** It is likely that some of us, talking about sustainable finance, have heard the term greenwashing, coined by the hotel industry in promoting the reuse of towels as an environmental strategy, when in reality it was a cost-optimising exercise. For **an investment to be considered sustainable, it must meet certain environmental, social and governance criteria denominated ESG** (Environmental, Social and Governance), which encompass, firstly, the environmental factor to take decisions according to how the activities of companies affect the environment. Then the social factor, to take into account the impact on the community of the activities carried out by the company, for example in terms of diversity, human rights or healthcare. And lastly, the governance factor, which studies the impact of the shareholders themselves and the administration,

and is based on issues such as board structure, shareholder rights or transparency.

The main business levers banks are activating are green lending and their investment strategy, highlighting green and social bonds that serve to finance environmentally sustainable projects. However, from an ethical point of view we are looking at others, where we highlight **Socially Responsible Investment** (SRI), which includes investments whose purpose is to generate social and environmental impact and financial return. Here it is the Nordic banks that top the rankings and, for example, DNB has pioneered the blue economy with its DNB Future Waves Fund. There is also **the ethical bank**, which carries out its activity according to the criteria of transparency, democracy and sustainability alongside classic banking financiers. In Spain, one example of this type of banking is Triodos Bank, whose vision is to build a better world for people and the planet. Lastly, **microfinance,** which will serve to provide financial services for groups in a vulnerable situation. Another example we know well is that of the BBVA Fundación Microfinanzas which, in addition to fighting poverty in Latin America, aims to promote sustainable and inclusive economic and social development through multiple entrepreneurship programmes and financial inclusion.

In one of its reports ("Financial innovation for a sustainable economy", 2019 - Andrés Alonso and José Manuel Marqués), the Bank of Spain also analyses the innovations that are emerging on the path to more sustainable finance. It analyses a range of issues such as the emergence of new suppliers and services, the creation of new financial products or adapting risk management policies. However, what we are most interested in is the analysis of technological advances applied to climate change, highlighting some in the areas where we have already been collaborating.

This is the case with the application for natural language processing (NLP) and artificial intelligence to track sustainability metrics or measure the environmental reputation of companies, interpreting texts, articles and reports. In addition, massive data management is applied along with advanced analytics techniques. Another interesting use case is the measuring of physical risk resulting from climate change where, thanks to machine learning techniques together with Open Data, we can **analyse the risk an extreme weather event poses for a real estate asset.**

Although not mentioned in the report, many digitisation projects in banking have been carried out to reduce carbon footprint, some of them in the paperless area, reducing physical documents in a banking process, for example digital on-boarding or the online mortgage, and some as simple and complex as teleworking, which have been imposed by Covid-19. Another of the social objectives we are looking to achieve thanks to digitisation is the deployment of the financial services network in a depopulated Spain since owing to operating costs bank branches no longer make sense, making way for other relationship formats between bank and client.

Looking ahead, we must not lose sight of the fact that **consumer habits are changing with the new generations** and the appropriate inclusion of ESG elements within the business strategy to improve the image and reputation that has been so greatly damaged after the last crisis. This will provide a competitive advantage in terms of engagement with millennials and, more importantly, with Generation Z, both of them digital natives.

Following the impact of Covid-19, we have already seen examples of banking responding to global challenges that go beyond the day-to-day, and certainly in this new paradigm, they must play a key role given that sustainable finance is here to stay.
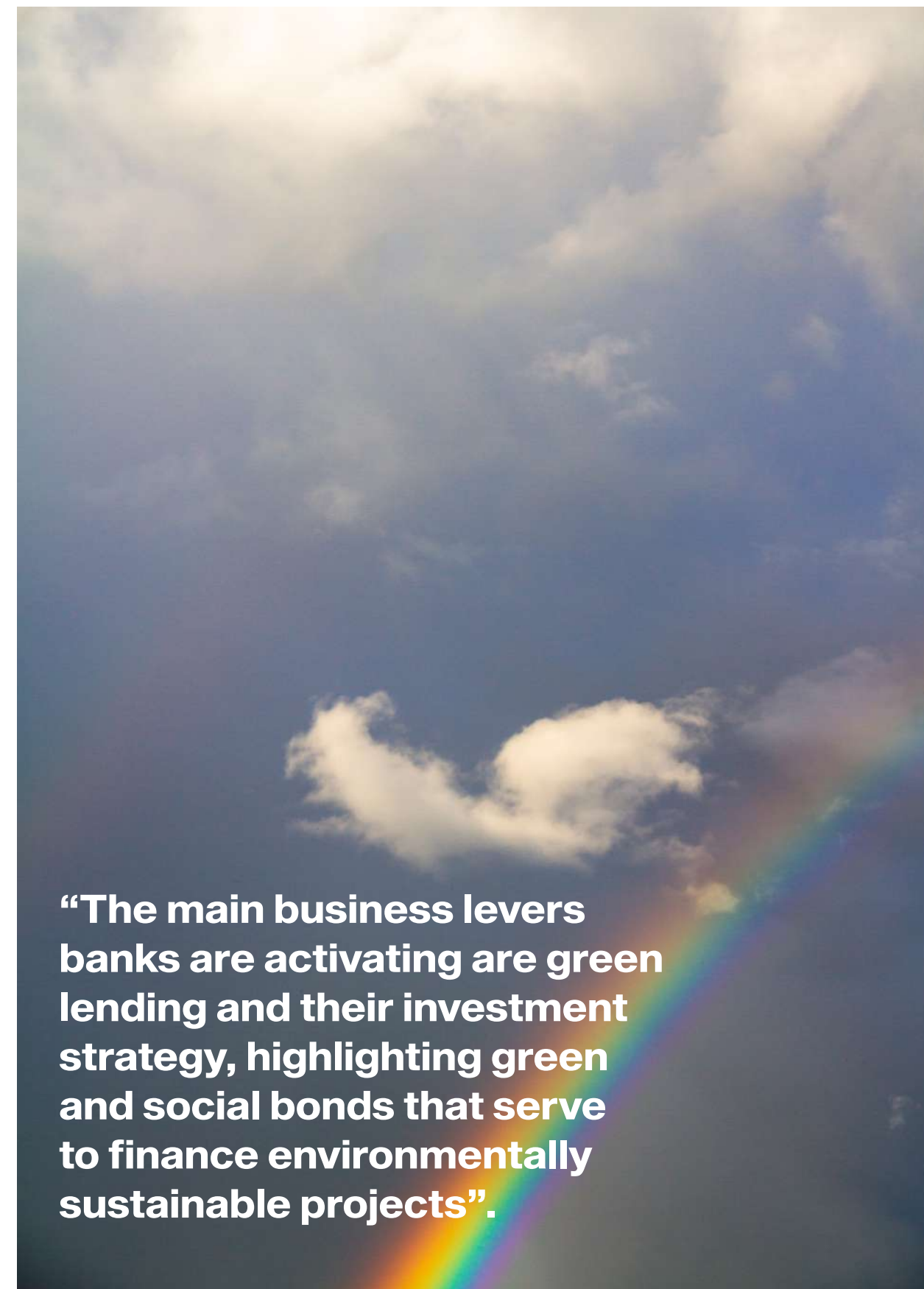
**"The main business levers banks are activating are green lending and their investment strategy, highlighting green and social bonds that serve to finance environmentally sustainable projects".**

# This is the green hour

The awareness of a more sustainable world is a debate that goes beyond the political. New consumers, headed by a new Generation Z - much more involved in reversing climate change - have acquired new and increasingly digital consumer habits and are far more environmentally aware than previous generations.

**Juan Manuel Arjona**
Head of Innovation at Babel

Studies show that more than 60% of 20-35-year-olds have incorporated new practices into their daily lives in the wake of the pandemic that can be considered sustainable, and more than 80% take the values and positioning of brands into account when choosing their products or services. When it comes to businesses, they increasingly consider these same criteria when choosing their partners and suppliers.

We are not just talking about sustainability, **we are talking about impact and making it measurable.** Corporate social responsibility goes further: it paves the way for social and sustainable investment strategies, and companies are increasingly integrating these types of markers in their core business, in alignment with it. The challenge is major: making an environmental and human impact, being seen as a contributor to the cause without falling into greenwashing.

We must measure, and measure well. Indicators of carbon emissions, of investment in social causes to promote equal opportunities, health impact indicators, etc. are at the same level as other more traditional business KPIs and are already part of management boards and executive meetings. This involves **a revamp of current business and a travel companion: data.** Time ago we talked about data as "the petrol of the future". The future is now. Data governance is company-wide and part of every process. A new paradigm, businesses and suppliers are obliged to share this information with users and consumers. We are no longer judged just by what we do, but also by how we do it. Business intelligence, dashboards and applied artificial intelligence become communication and leverage tools for new opportunities.

A new industry appears: The green industry, and the role technology plays is crucial. According to Greenpeace, **data processing currently consumes 21% of the total used in the IT sector**. Virtualisation and cloud computing processes are helping to optimise resources and reduce the carbon footprint by 30% to 90%. Companies like Google say they have cut their energy consumption by 50%. With a forecasted increase of 500% in processing over the next decade, the figure of the green datacenters is appearing. This represents a major shift in the industry. With an investment of 36 billion US dollars in 2021, it is using new technologies and creative solutions to optimise the use of resources with much more energy-efficient machines. Recently, Apple has positioned its range of processors as another more efficient alternative with higher performance, doubling the previous generation in sales.

The circular economy and adjacent industries (recycling, repairing, sustainable manufacturing, products with a new life) represent an opportunity amounting to 4.5 trillion US dollars. After the publication of recent European directives, they have become a must. This impact is also evident in investment to create new businesses: 23% of successful start-ups in Europe have a lot to do with sustainability. Europe leads this ranking with an investment of 39 billion US dollars, and this is nothing more than **the consequence of the greater awareness of developed countries.**

In this new scenario, in addition to new businesses, **new job opportunities appear: the green jobs.** Leaving the pandemic aside, remote working has opened up yet another window to globalisation in the quest for talent, and new career opportunities are emerging linked to this new movement. Specifically, **it is estimated that more than 18 million jobs have been created in this decade in Europe.**

Green-collar workers will be responsible for drafting strategies, for controlling recycling, for reviewing how sustainable a company is, for measuring the impact on user health, for reviewing software to ensure it is more efficient, for designing eco-friendly products, for managing citizen's movements in the metaverse, they will take responsibility in water pollution issues... **Newly created positions will require new competencies** that we do not yet know about today and which we have to start preparing for.



**"23% of successful start-ups in Europe have a lot to do with sustainability".**

27

# Technology that empowers people

Technology is a catalyst for humanity's progress which – in many cases – has propitiated changes so profound that they have marked a watershed in the economy, in production, and in society itself. There are two transformations that are currently considered to be among the most influential: the shift from traditional programming to no-code/low-code development models, and the leveraging of the organisation's entire workforce (people, robots, artificial intelligence) to perform the automation of its processes, hyperautomation.

## Luis Rodríguez and Leopoldo Colorado
Babel Head of Digital Process Automation and Head of Low-Code and Cloud Services

The no-code/low-code movement shortens the space between the need to develop applications and the technical knowledge required to implement them. Applications are an essential part of any organisation, whether to provide a direct service for its customers or to support a corporate or departmental process. **No organisation is free from the need to build its own software if it wants to be efficient and differentiate itself,** and yet this is still a technical challenge requiring highly specialised personnel.

No-code/low-code platforms come with a clear value proposition: **bringing application implementation capability closer to less technical users,** or increasing the capacity of existing technical equipment through tools.

**While no-code solutions provide specific tools for a concrete area (marketing, content, sales, etc.) and are aimed at users who are experts in their field to make them more independent in managing their area of responsibility, low-code solutions aim to boost the productivity of teams (generally with technical capabilities) to implement applications with less.**

These tools seek to boost the productivity of the teams (usually with technical capabilities) to implement applications with less effort and in less time, since they delegate to the platform many of the more technical activities that they previously had to perform as well. There is no clear dividing line between platforms, since each manufacturer proposal is different, but all of them try to provide greater autonomy for the company's decision-making and executing areas, increase productivity and reduce the technical gap, **right at the moment when a greater shortage of technical profiles is combined with exponential needs in process automation,** the most advanced stage of which is hyperautomation.
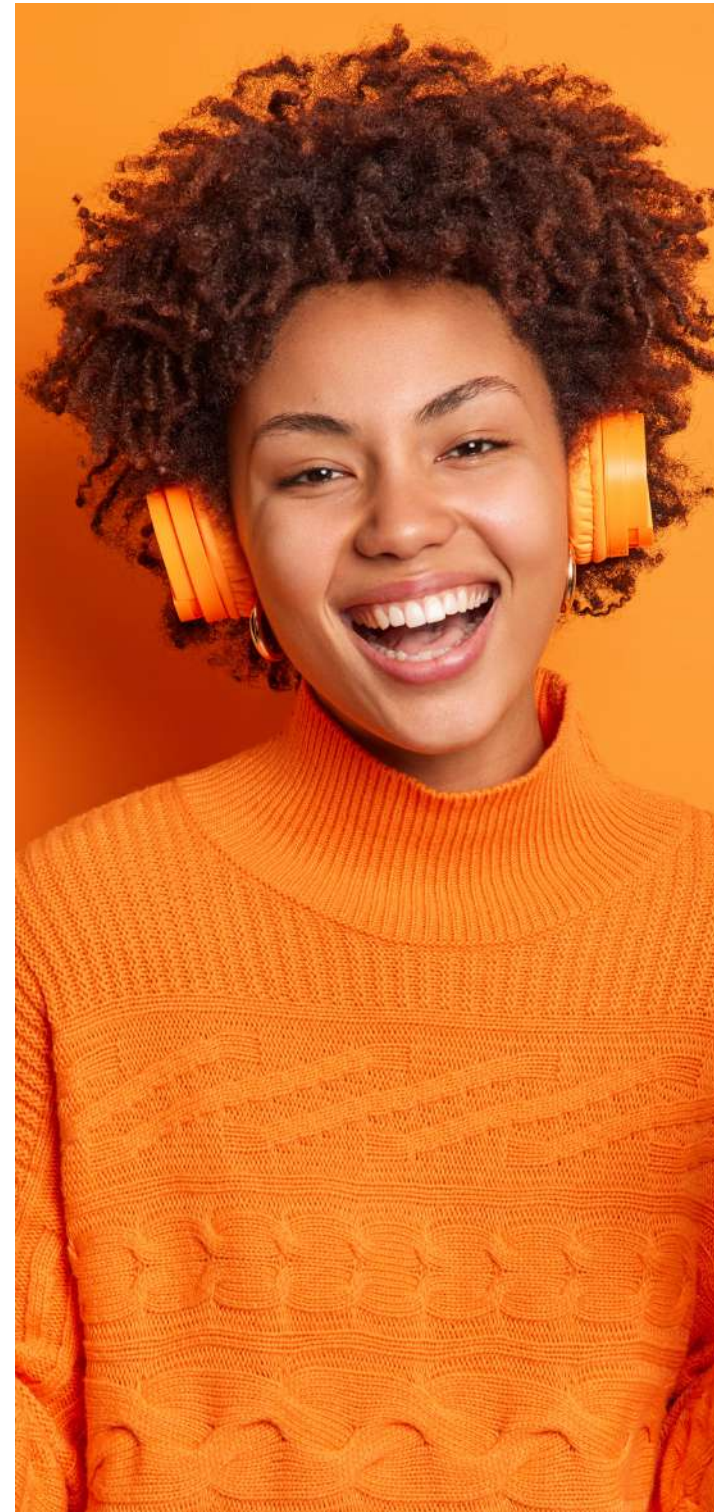
Hyperautomation as a concept has become very important in recent years. Gartner defined it as

"the approach in which organisations quickly identify, examine and automate both business and IT processes in a disciplined manner."

Furthermore, we need to **understand hyperautomation as a support tool for developments implemented by human talent** and as a form of operation and control that allows for optimal development in all areas of an organisation. If not, we run the risk of placing human capital on a fine line between optimising processes and the un-certainty that we might be replaced by a robot, a system, etc., when in fact what this is about is blending and combining the best of automation with the best of people and the knowledge they have of their business.

**To navigate the path to hyperautomation there are different stages, such as discovery, analysis and design as well as their automation,** measurement and monitoring, supported by the organisation's training and culture. There are also some key technology components, namely RPA, which support repetitive common activities involving a high workload. Or iBPMS, representing the point of union between technology and people, facilitating integration with other tools and enabling the insertion of new technologies such as RPA, artificial intelligence (image and text recognition, predictive analytics, etc.) in the organisation. All this must be supported by the prior optimisation of the processes under study, otherwise we will be more effective, but only as efficient as we have been up to now. This is why process analysis approaches, with BPA, with process mining, task mining, remain a crucial element in any automation scenario.

This hybrid model that promotes hyperautomation brings with it a transformation in **organisational culture and change management, making the training of people and investment in talent development key elements** that will give greater added value to any operational efficiency. In addition, the no-code/low-code movement is causing manufacturers to focus on building applications or digitising and automating processes with the least possible technical effort so that end users can design and deploy the solution independently.

We can therefore say that low-code is the technological partner which organisations can rely on to maximise the talent of their teams and scale up by automating their processes.

# Why are companies failing to implement business agility?

Many organisations fail to implement agility because they consider it the effort of a department, which is obtained by changing the process documentation to evolve from the traditional to the agile model, thus ignoring the cultural issues, people's behaviour and the necessary resources to achieve change.

Julio Córdoba
Babel Solution Architect

According to the "Business Agility Report 2021" published by the Business Agility Institute, the main challenge to overcome in implementing agility in organisations is resistance to change, since resetting people's mindset is hugely complex in the adoption process. Many organisations fail because **there is no leadership qualified for guiding a change of mindset** in the members of the organisation. Decades-long inherited behaviours make change a very complicated affair in corporate environments that have been hierarchical since their initial conceptualisation in the last century.

Change management experts have established that what is required is to shape a coalition of people within the organisation who are properly trained to lead change, with sufficient leadership to allow that change to be participatory and above all well transmitted at all levels. It is not uncommon for there to be resistance, it is completely normal behaviour in human beings, and there are mechanisms, such as gamification, that allow it to be approached from a more human and less technical standpoint.

**Business agility requires a culture of respect,** trust, learning and autonomy, an obsession with creating timely experiences for customers that meet real needs, a committed and aligned workforce regardless of the business unit or function, a management with the capacity to catalyse action and aligned corporate objectives, processes and policies.

According to the above-mentioned report, on a scale of 0 to 10 in maturity, the list is headed by Oceania (5.6), Asia (5.4), Europe (5.1), and finishing the list are America and Africa (4.2). This shows that there is still a lot of work to be done. In general terms, organisations stand at between 4 and 5 in their maturity level, so the adoption of agility is a practice that requires an integrated effort, from the top level (CEO), to the lowest levels in the hierarchical structure, and they are not isolated or brief efforts, they are part of a repetitive, incremental and constant process.

According to the Business Agility Institute, organisations with between 50 and 200 workers present the highest level of maturity with 5.5, while organisations with between 1,000 and 10,000 workers present the lowest level of maturity with 4.5, denoting that the **number of people is a factor influencing maturity.** Factors such as talent management and leaders' growth mindset have been identified as the lowest in the study. This shows **that the change to be made is more complex with people than with the processes or tools involved in it.**

The agile organisation's journey is not something you achieve in months. Organisations that have been working for less than 2 years on this change have

> **"The main challenge to overcome in implementing agility in or - ganisations is resistance to change".**

# Customer experience

reached a maximum maturity level of 5.3, while organisations between 3 and 8 years reach a maximum maturity level of 6.6 and finally organisations with more than 8 years attain a maturity level of 8.32. This shows that **the time required to see benefits for the organisation is 2-8 years**, confirming that this is not a quick change; it is constant and repetitive change that succeeds in improving through small victories that impact business productivity over time. Another failure factor in adoption initiatives is that senior executives want the benefits to be obtained immediately (3 to 6 months), when in reality change requires a longer period of time.

The appropriate involvement of the different departments has been another factor that prevents a complete organisational transformation. **Most organisations initiate their change through the information technology (IT) area, supported by operative areas of the business, sales, marketing, PMO or human resources**; however, it is not possible to make a substantial change that delivers tangible benefits for the business until **all its members are aware of and actively participate in the agile transformation that is happening.** It is not possible to make a change only in the IT area, as many roles outside IT are required to achieve the expected impact.

After SARS-CoV-2 (2021), organisations realised **the importance of variables such as: workforce, happiness, predictable deliveries, quality, response to change, time to market, and delivered value.** All organisations made changes to their operational models to improve the effectiveness of each of those variables in order to survive the pandemic. All the-

se changes involved the highest level of hierarchy in companies, hence the levels of improvement in variables over time. Another factor in why companies fail in this implementation is that their highest level (C-level) is not actively involved in generating change as part of the change coalition that leads the transformation.

Finally, it is critical to think about favouring workflow optimisation in the organisation through the value streams and the teams that support them. One of the main objectives of business agility is **to optimise workflow through value flows.** This is a key factor in responding to customer and market needs and in accelerating the feedback cycle.

# Public administration, reality and future

We sit down with Fernando de Pablo, Director of the digital office of Madrid City Council, and Alberto Pérez, Public Sector Director of Babel, to talk about the state of the public administration, reality and future.



Fernando de Pablo, Director of the Digital Office of Madrid City Council, and Alberto Pérez, Public Sector Director of Babel, at the Babel offices in Madrid

## Pandemic as a test of maturity

**Alberto Pérez.** In a way the pandemic has influenced the development of the e-administration and made us reflect on what we were doing.

**Fernando de Pablo.** The pandemic has been an example of an opportunity crisis, a tragic opportunity. We have been talking about the importance of electronic relations for many years, ever since Act 11-2007 on Electronic Access of Citizens to the Public Services (LAECSP). And all of a sudden reality hit us, in just a few days we went from having a very in-person relationship - in most cases - to a fully electronic relationship. Both the Administration and we the general public have adapted to this hybrid way of life, which has become structural rather than circumstantial. At that time the digital administration, thanks to technology, deployed its full potential, which has allowed us to interact, study, work from home... It is also true that it has put existing limitations on the table: the digital divide, the digital capacity of electronic entities, interoperability between applications, cybersecurity... there is much work still to be done.

That's right, these elements became a catalyst for the public administration. A situation that tested us and allowed us to overcome barriers and keep functioning, and we had to adapt over a very short period of time, a time we would have considered impossible in another situation. This revolution led us to a point of no return. Now citizens are more demanding on digital issues, they want an administration that is always accessible and stable. If we are to provide a quality service, 24 hours a day, seven days a week, we have to work towards that.

The process of digital transformation in the administrations and society has speeded up hugely and we have also become more flexible. We are never going back on electronic relations between citizens and the administrations. Technology is the means, not the end. Citizens want simple, convenient and fast services; their quality and usability will be the most important feature. Technologists, companies often think too much about technology, will we use artificial intelligence? The metaverse?... but citizens have simple problems and what they want are simple solutions to their everyday problems.

## Challenges, the Coming Administration

We must be able to transfer the "robustness" of the in-person administration to the digital medium, the assurance that everything will work properly. This revolution affects not only citizens but also the administration, which must create new services. And we must not forget how the Administration's own employees are affected by this process since, increasingly, these professionals are attending to the citizens remotely.

The administrations that have best withstood Covid-19 were those that had their electronic relationship system between citizens and businesses at a very advanced stage. There were already administrations in which 80% of their relationships were electronic, while others were only at 20%. Now everything has changed. Electronic relationships have become absolutely universal in public administrations, and this translates into a natural shift towards teleworking, which has gone from almost "being forbidden" to an absolute necessity. This shift implies a huge change, which mainly affects the culture of organisations and employees, from an in-person and time control culture to one of trust and goal-based work.

Issues which were already there and are coming to light have had – now – become pressing. Interoperability between the public administrations is one of them. This can have a transformational thrust in the administrative system because there are very few procedures that belong to one sole organisation, and if we want to keep citizens from becoming the workflow of a procedure, taking paperwork from one administration to another on their own legs, this must be viewed as an urgent improvement.

Spain is a small-scale Europe owing to the level of administrative decentralisation, and that is highly positive because many of the political decisions are taken closer to the citizens. But at the same time, we have elements of administrative fragmentation. **Interoperability between the administrations must be seen as absolutely essential if we are truly thinking of an Administration focused on the citizens.** Citizens - in my opinion - perceive the Administration as a unitary whole, they don't care whether a process belongs to the General State Administration, to an autonomous region, to a provincial council or a city hall, what they want are integral, convenient and easy services.

This also relates to the re-engineering of processes. It is not enough to transfer the world we had on paper to the internet. You can do things on the web not only much faster, but also much better. This is why a rethink of administrative procedures is needed in order to simplify them, so that the services are truly more convenient, direct and simple for citizens and, above all, I would say, for businesses, which are perhaps the ones that have the greatest need.

**Fernando de Pablo**

"The pandemic has been an example of an opportunity crisis"

"We will no longer go back on electronic relations between citizens and the administrations"

## Citizens and public employees, digital natives

In 10 years there will be digital natives both on one side and the other of the old "counter", and this generation will not think it reasonable to do much of the paperwork we are used to doing. **How do we adapt to that new generation and how do we blur the boundary between front office and back office?**

Totally, you said it: digital transformation is a process that is done by people for people. And in this process we cannot generate new digital divides but should instead overcome existing ones. There are citizens of all ages, and we have public employees of all ages as well. Right now we have a very important challenge in the public administration, which is generational renewal, the average age of many administrations stands at above 50. For the next few years we will face a talent renewal challenge, from recruitment to the transfer of knowledge between people who are about to retire and young people who have just entered the workforce.

## The role of NextGeneration Funds

All of the above is closely related to the economic factor: increased productivity, fluidity, teleworking, reduced carbon footprint... At this point I would like to talk about the Next Generation funds, because they will be an accelerator. And here it is important to bear in mind that, in this transformation process, **technology is an element that helps in achieving a goal, not the end in itself**. It's not about removing one technology and putting another one in its place. Transformations take time. To what extent can we leverage Next Generation funds for all this that we're talking about?

European Next Generation funds are a unique opportunity that we cannot squander. In this economic crisis Europe has opted for investment in critical sectors. In previous crises austerity was the route taken; there is a very important difference that comes to us from Europe, which is why I say that we cannot waste this circumstance. We have already experienced previous stages of investment, which in some

cases have not been sustainable over time. It is very important for the public administrations as a whole to be capable of investing in those projects that are truly the ones we need, those that will provide better services, that will make us more competitive and that will be sustainable when this stage of European investment ends, in a real way, with no associated marketing.

**One concept that seems critical to me, not just because of the Next Generation funds, is continuity in technological transformation policies, which I often compare with road plans that, in order for them to be successfully completed, must be considered in the long term.**

Technology projects are temporary and infrastructure projects, so from a political point of view, a government has to be able to launch a complicated project, even knowing that - perhaps - the returns will be obtained by the next government. Technological transformation projects are often long-term projects.

## The future

How do we expect the future of the administrations' transformation to be?

Digital transformation is an essential process for the administrations, and for the country as a whole. It is a necessity that governments have brought to light. A well-executed digital transformation will bring us a fairer and more sustainable society. In the case of Madrid City Council, we always hold that this has to bring us a more efficient City Council, I believe this is the main obligation, and a more attractive and more competitive city, because we should not forget that an important part of our responsibility has to do with the city, not only with the City Council's internal operation but also **with the city model we want to build. We want a more attractive**

city with a higher quality of life for its citizens, and a more competitive one from an economic point of view. Digital transformation and technology have to be valid in achieving all these goals; if technology is not useful for this, then technology is worthless. When asked in a technological context what a smart city is, I always answer: a smart city is a city made by governments that are capable of applying technology for the benefit of their citizens.

**Alberto Pérez**

"It's not about removing one technology and putting another one in its place. Transformations take time"

"Citizens are now more digitally demanding, they want a permanently accessible and stable administration"

# Digital solutions for a fitter and healthier society

In recent years we have been seeing a complete transformation in our habits and life models, driven in large part by technologies and by the digitisation of many of our life experiences. In the field of health, too, many of these technological trends (digital experience, use of mobile and wearable devices, access and exploitation of data in the cloud, artificial intelligence, etc.) are being transferred to the reality of patients, care givers and medical professionals.

**Jesús Marco**
Director of the Insurance and Health Unit

The emergence of Covid-19 and the implementation in different countries of measures and restrictions to control the pandemic have speeded up **the drive towards digital health services** in society.

Lockdowns, restrictions on population mobility and measures to protect vulnerable people have led to the consolidation of some of the trends we had already been gradually observing in recent years.



ADOPTION OF DIGITAL HEALTH TOOLS
2015-2020
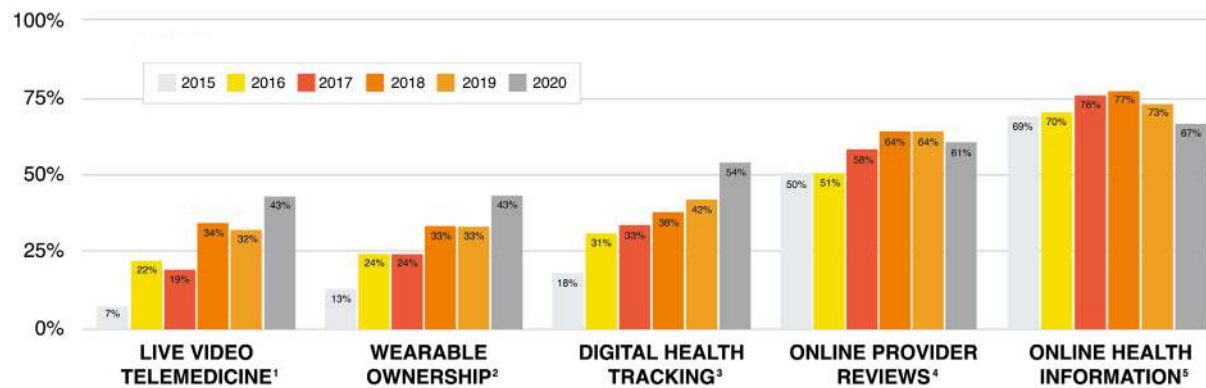
**Insurance companies have not been unaware of this new reality.** In fact, the sector has long been committed to the implementation of digital tools and services in the world of healthcare. Chats and video consultations with medical professionals, online access to any diagnostic tests conducted and their medical reports, monitoring of treatments or access to health and wellness plans are some of the services that companies have been offering to their policyholders in recent years through their main digital platforms and mobile apps.

But this is no longer enough. The health sector must continue to evolve in its transformation. Going from a model based on the integration and aggregation of care services to an integrated and unique experience for the patient, where not only are their care and health needs met, but **healthy guidelines and habits are also created to help support and prevent** diseases and improve people's quality of life in the long term.

In this line, a number of innovative initiatives are being launched in the sector in which Babel is ac-

tively involved as a technology partner. One of these initiatives is **"Cuida Tu Mente" or "Care for your Mind"**, a healthcare service recently launched by Sanitas which forms part of its ecosystem of digital services MiSanitas, for the support and assistance of its insured members in diseases related to mental health.
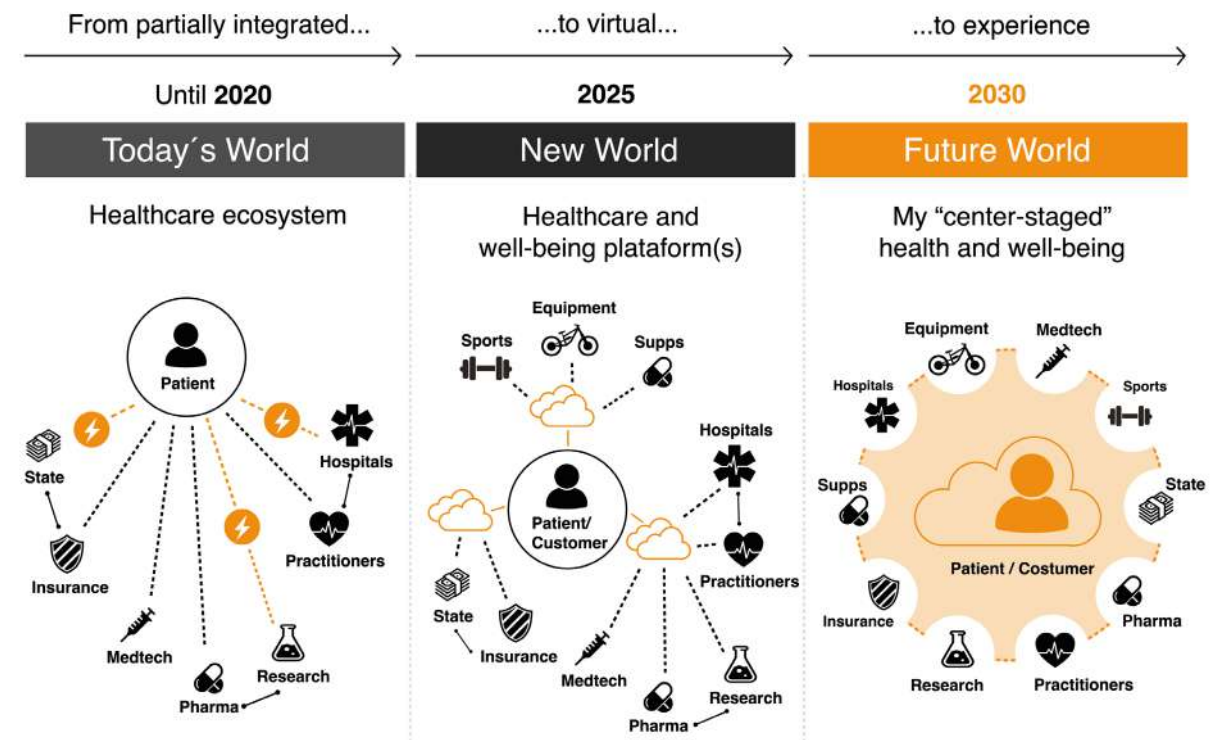


Anxiety and stress are increasingly common diseases among people, the result of a very demanding work and social environment, which has worsened in recent years as a consequence of Covid-19 and which, according to a recent study conducted by FREMAP, already account for the second group of diseases to have generated the most days of sick leave in Spain in 2021.

To mitigate the effects of this type of disorder, Sanitas has launched **a digital healthcare service** for insured members in which, with the support of a team of psychologists and psychiatrists, personalised therapies and healthcare pathways are defined.

To identify and assess the initial disease, Sanitas has designed a triage tool supported by artificial intelligence, which performs an early diagnosis and a first assessment and suggests a personalised therapy for each patient. To do this it is supported and assisted by a team of medical professionals specialising in psychology and psychiatry. This initiative is a clear example of the growing concern of insurance companies regarding these types of ailments and their short and long-term health impacts. And also of how technology and the emergence of new digital tools can help mitigate and overcome them.

New players are also emerging and investing in the healthcare sector, building on the development of new technologies. Technology companies such as the bigtechs, specialised start-ups (healthtechs) and even important companies from other sectors (such as Telco) **are committing to offering healthcare services to their clients or to creating new business models relating to health and wellness.** Partnerships such as Microsoft's with the AXA Group for the creation and launch of a health platform to simplify healthcare and allow its customers to access a fully integrated ecosystem based on the cloud capabilities of this technological giant.

Or, more recently Amazon, which already launched its Amazon Care program in 2019 and which has just partnered with the therapy company Ginger to offer its users a set of mental health services on demand, are clear examples of this commitment.

And this trend will continue for years to come. The increase in life expectancy, the consolidation of the silver economy, and technological development itself make this evolution unstoppable. **At Babel we are convinced that with technology we can continue to support our clients and build a fitter and healthier society.**

## Customer Experience

"Cuida Tu Mente", or "Care for Your Mind", is the new digital mental health service we will offer our BluaU customers from October. With this service we intensify our efforts to harness technology so as to increase our presence in people's lives, promoting healthy lifestyles and providing effective solutions that allow us to move towards the healthcare provision of the future. Technology and health go hand in hand in "Cuida Tu Mente".

**Jesús Jerónimo**
Director of New Digital Products and Services at Sanitas + BUPA ELA

### Application Services & SW Development

CX & DESIGN
SW engineering
Cloud Native Development
Low Code
Application Services
Mobility
Q&A
Infrastructure Services
Architecture
Devops

### Modernización & Hyper Automatization

Application Modernization
Low Code
iBPM
Process
Mining
Business Process Automation
RPA
Modern Workplace
Agile Transformation
Learning experiences

### Cloud

Cloud Migration
Cloud Governance
Cloud modernization
Cloud Devops
Cloud Architecture
Cloud Finops

### Data & Analitics

AI
Data Governance
Data Visualization
Visual Analyti
Big Data Architecture & Development
Data Streaming
Analytics

### Cibersecurity

Security Awareness
Risk & Compliance
Manage
Security
AppSec
Cloud Security
Security Architecture
Managed Services
Data Security

### Innovation

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