

# Vision 2020+<sup>1</sup>

## A Future to Be Built

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### THE ORIGIN OF VISION 2020+

Vision 2020+ is a story of restlessness: the restlessness to discover the future possibilities of BBVA and those of the financial industry itself, based on the information we have today.<sup>2</sup>

In our analysis, we have selected a series of indicators that go beyond our operational scope as a bank — indicators that affect us and involve everyone collectively. Above all, they are concerned with people's

1. 2020+ refers to the decade beginning in 2020.
2. "Vision 2020+" is the result of two years of collaborative work between the people of BBVA and an extensive network of experts: an immensely enriching experience. This article, together with the rest of the publication, will be available on OpenMind at [www.bbvaopenmind.com](http://www.bbvaopenmind.com) and on the BBVA Innovation Centre website: [www.centrodeinnovacionbbva.com](http://www.centrodeinnovacionbbva.com). Readers can also visit the Madrid Living Lab to experience first hand the new technological applications for banks, delving deep into the future. I would like to thank readers for their interest and I am available for any comments or clarifications on: Facebook (<https://www.facebook.com/beatrizlarabartolome>), Twitter (@beatrizalara) and LinkedIn (<http://www.linkedin.com/in/beatrizlarabartolome/>).  
In writing this article, I have been fortunate to be able to count on many of my usual collaborators and friends from the BBVA Innovation Centre, whom I thank for helping compare viewpoints, gain inspiration and find direction in developing the various arguments.  
I also want to pay homage to those people from the BBVA Innovation Unit and some friends from the Innovation Centre who have been more than helpful with their contributions, baptising some of the characters in the families who illustrate the scenario of a "World in Balance." Between us all, we have made this compendium of the BBVA Vision 2020+ possible.  
The BBVA Innovation Network has enabled us to examine technological applications for the latest scientific advances and we have been able to estimate their degree of acceptance thanks to the understanding of the "human factor" from Continuum, Ideo, Gravity and Mormedi, our usual collaborators in the designing of some of the pieces that will form part of the new reality. I would like to make equal mention of the Z Punkt team, who have provided us with methodology and new search tools and analysis to prepare the scenarios, and the Institute for the Future, who have given us the long-term perspective (of 100 years) to evaluate the impact of the trends for the coming decade.



quality of life and with sustainable growth. Some of the indicators are alarming, others hopeful; the way many of them evolve may be corrected or accelerated, depending on the decisions that we take both as institutions and as individuals.

The perspective of over 150 years of history, during which BBVA has done nothing but grow, speaks of our comparative capacity to adjust ourselves to the world around us. BBVA has survived and prospered through military conflicts, changes in government models, political tensions, energy and economic crises, etc.

This is partly because we have always concerned ourselves with observing trends in order to plan our activities. But nowadays, it is not enough to observe: we need to anticipate. Reactive adaptation is no longer effective enough.



BBVA Innovation Center in Madrid

We need to understand the dynamics of change from the moment it begins and we have to venture possible future scenarios to help decision-making now. That is why we created an innovation unit at BBVA 10 years ago, so that, resolute and free from complacency, we could explore the transformations that globalisation — and especially technological innovation — were going to bring about on multiple levels on the planet: all this to understand how these changes could affect the logic of our relationship with our customers, our business model and the future development of the financial industry.

## BBVA Innovation Centre in Madrid, Spain

In 2010, following several years of work, we began putting together the BBVA approach to the Bank of the Future, in which we analysed how information and communication technologies affect and will affect the financial business. That was the first time BBVA announced a line of information and analysis that was not strictly economic. In it, we highlighted the need to transform the financial industry and our commitment to be consistent with that vision.

All of the knowledge accumulated in the last 10 years has crystallised into the current BBVA Vision 2020+ that we are presenting to you today.

### *The method: beyond the conventional*

Strategic planning methods have been applied since the last century to define medium-term goals and the courses of action of an organisation. Using those instruments, we extrapolate the future and, by analysing the strengths, weaknesses, opportunities and threats, we understand how to tackle business and develop the skills of a company.

Going beyond the conventional requires an approach to the future that offers us a longer journey than that of conventional strategic planning. That is why at BBVA we apply a different methodology. We visualise the future from the present situation and we travel along the return path so as to decide what we want our arrival position to be in the medium term.

The future is our starting point: in this way we anticipate uncertainty and we learn to manage it. At the same time, we set a course towards the new skills that will enable us to shape the opportunities that the future always brings.

We start by identifying the factors or conduits for change that are now shaping great evolutionary trends. We then look at the panoramas that these trends sketch out for the decade of 2020 in technological, personnel, demographic and economic matters. This allows us to then analyse the challenges that crop up along the path towards consolidating those trends.

After assessing the possible evolutionary routes of the change factors and the interaction between them, we have found three possible future scenarios for the decade of 2020. We have also identified what we would need to implement now in order to bring ourselves closer to a desirable future. The sum of all of these parts constitutes the BBVA Vision 2020+.

To prepare Vision 2020+, we have based ourselves on open information: substantiated data sources; global field studies to spot undiscovered consumer needs; mathematical tools for analysing trends and the probability of scenarios; as well as idea creation and discussion workshops with specialists from the BBVA international innovation network.


All this has been possible thanks to collaboration from the people who make up BBVA, together with a set of consumers, observers, thinkers and specific experts in the task.

Given that this Vision 2020+ is not a closed or self-conclusive thesis about how the future will be, but rather a systematic approach to its potentiality, I invite readers to participate in it.

You can contribute with your knowledge and viewpoint on the design and construction of the better future that we all desire on OpenMind, *CentrodelaInnovaciónBBVA*, or any other BBVA social network (see footnote 2).

### ***Science and Technology, catalysts of human evolution***

Over the last two centuries, science and technology have been the great catalysts of change in the history of humanity. The world population did not rise above 500 million inhabitants before the invention of the steam engine that got the planet moving. The telegraph distanced the message from the messenger, making it possible to have the first real-time expansion of knowledge. Electric light added hours to the day, and delivery periods shortened. Penicillin lengthened life expectancy and so on, successively, until the transistor opened up the gates of the digital world and the Internet for us, the information society.



**The extrapolation of modern trends only enables us to sketch out a panorama for 2020, not to accurately predict the reality of that future life. What we do from now until then is what will determine our “final scenario” — the reality we will inhabit in 2020+**

In a little over 20 years, more than 5 billion people have gained access to a GSM network. Just the basic service, the possibility of making a simple call, has meant an extraordinary improvement in the quality of life all over the world. For example, in Africa, millions of people have to travel for kilometres to reach a water well. Now, in times of drought, they can ask if a well still has water and, if not, they can head for one that is still working.

Science and innovations generate huge benefits, but they also entail an effort to adapt on the part of individuals. People who are over 80 can testify to this. As children, they saw the first light bulb being switched on in their house; they witnessed the first television set and the first mobile telephone. They have lived through the birth of commercial aviation and its evolution into a low-cost service. They were surprised with the arrival of a man on the moon and it now seems natural to them to look at “human flying saucers” on Mars.

But our lives have changed in an even dizzier way over the last ten years. That which did not exist a decade ago is now essential to us. In August 2002, Nokia presented the first telephone with a camera and Blackberry introduced electronic mail into mobiles. In December of the same year, Apple launched its iPod with iTunes, joining the applications era that was initiated by NTT DoCoMo and was consolidated with the i-Mode. All of these devices enabled the Internet to expand. New businesses sprang up in the digital world and the value chains of many traditional businesses were transformed.

The concept of a particular audience for radio and television evolved with the appearance of new participatory services between users such as Wikipedia, YouTube, Facebook and Twitter. Without realising it, we have gone from asking, “What are they showing on telly?” to participating actively through Twitter in conversations and discussions, and choosing the video we want to watch on YouTube.

### **Exponential growth**

We continue to harness new technological progress. In the field of technology, every new phase is built on the resources, knowledge and methods that we have obtained in earlier phases so that, in finance, interest is added to capital for the next cycle.

Compound interest means that our assets are growing at a rate that is proportional to their value; this is known as exponential growth. We can see this type of growth in a country's economy that grows at 3 percent per year, or in the world population that is increasing at an annual rate of 1.5 percent.

Understanding exponential behaviour is not straightforward, but it is fundamental for extrapolating the future. Few are worried by the population growing by one or two percentage points per day, yet the consequences of this surprise us: every person is born into a world with four times fewer inhabitants than the planet on which he or she will die.

The speed of the Internet is an even more extreme example: its speed doubles every year meaning that, in 2032, downloading the 200 million videos that exist on YouTube today will take... two minutes. Of course, by then YouTube will also have grown exponentially.

Human beings are protagonists in and subject to changes. The technology that they produce changes them and they project it to a new evolutionary state in an exponential process.

### **Network externality effect**

Technology makes our lives easier, whilst at the same time increasing the complexity of systems. It connects everyone to everyone else, generating the “network externality” effect. This effect is easily observed in social networks. The first members of a network seldom find readers who share their opinions, which is why the network is of limited use. Therefore, its existence is most endangered in its first months of operation. Then, the more people who join in, the easier it is for each of the members to put forward an opinion because of the visibility it attains. Its usefulness grows exponentially as the acceptance of it grows, in a virtuous spiral. Simultaneously, the relationships between the people in the network grow more and more complex.

When something is complicated, human intelligence has learnt to moderate it by dividing the problem into elemental parts and looking for relationships that explain the behaviour observed. However, even though we have applied technology to improving and automating the parts that

make up modern ecosystems, we have not been very effective when it comes to understanding and improving the relationships between the parts.

In an interconnected world, the output of each element supplies another one that in turn re-supplies the first one. Modern reality, as well as changing exponentially, is complex. However, our advantage is that the technology that creates this complexity is also our best ally in managing it.

### *The future does not happen suddenly*

The future is starting to be created right now. Our decisions and actions are shaping it and they are leading us towards the future along a path of infinite alternatives. When it comes to giving shape to our Vision 2020+, we have taken scientific thought as a guide to structure our approaches to possible future realities.

According to Einstein's special theory of relativity, space-time is a place where all of the physical events of the universe occur, which means that our reality is a space-time continuum, from which we cannot escape. Each of us is observing a reality and every step that we take towards the future leads us to a new point in that space-time, where multiple opportunities are put to us again.

Defined in this way, the future is being built on a concatenation of events. Our influence on the reality that we are building means a huge responsibility for the decisions we make and the actions we perform.

A better future means something different to each of us. It is directly related to our current situation and our aspirations. Present well-being, individual or collective, depends on our state of mind, our living conditions and our culture. Aspirations are intrinsic to our nature, to our capacity to imagine. How do we get it right in a labyrinth of decisions? What actions are the most effective for achieving this? And, even more difficult, how do we get the multiplicity of personal alternatives to come together in a better quality of life?

Faced with the multiplicity of states of matter, Heisenberg proposed accepting vagueness as a consubstantial principle of the universe at sub-atomic levels. Rather than following the evolution of physical systems from start to finish, he analysed the initial and end states that he observed, within an applied margin of uncertainty, without concerning himself too much with what happened in the middle. The development of this principle has made it possible to make great scientific progress. The immediate application of this was the drafting of new laws for mechanics for the sub-atomic world, where it was concluded that we cannot know exactly the starting point and the quantity of movement of a particle.

We use these two scientific approaches by analogy to understand the paradox of the future. We cannot accurately predict it, but we can analyse its possibilities. The extrapolation of modern trends only enables us to sketch out a panorama for 2020, not to accurately predict

the reality of that. What we do from now until then is what will determine our “final scenario” the reality we will inhabit in 2020+.

## 2020 TRENDS

In order to find our place in the future, which we will be able to influence through our decisions and actions, at BBVA we have deconstructed current reality in search of the factors that are driving the change. We start defining a trend by identifying a fact that is significant to us, something that attracts our attention because it stands out within the context observed. After noting it down, the fact is monitored and alerts are established to observe its evolution. Sometimes it is an isolated fact that does not set a trend and so it is discounted as a change factor. With others, however, we see multiple connections beginning to form around them. In these cases, we have a relevant fact that has an influence on the environment: a factor or driver of change.

A data analysis is then made in search of evidence to track its possible line of progression. The trend that is thus established is complemented by an estimation and analysis of its possible catalysts and inhibitors.

In drawing up these future trends, we have based ourselves on publications in different fields of knowledge. We have used knowledge management tools to scan modern life in its different facts and search engines to monitor patents. Similarly, in the process of defining how change factors profile trends, we have used software tools for the logical analysis of decision-making in complex environments.

### *Trends that profile our lives*

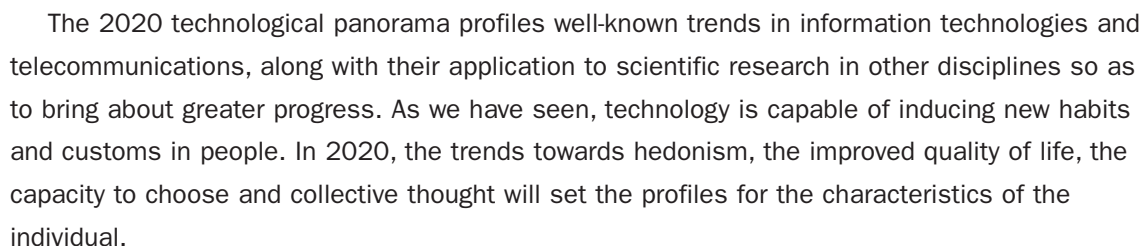
Formulating trends is essential in order to share and contrast the sense and magnitude of the changes with others in a more intelligible way than by using abstract mathematical probabilities. Once again, the scientific method has inspired our work in preparing this substantive part of our Vision 2020+.

In 1851, Jean-Bernard Léon Foucault, a French physicist, hung a spherical pendulum from the dome of the Pantheon of Paris and demonstrated the rotation of the Earth, in a simple and comprehensible way. Foucault's achievement did not consist so much in persuading his fellow citizens of the rotation of the planet, a fact that few doubted in the mid-nineteenth century, but rather in making that reality evident, tangible, comprehensible and incontestable.

Thus, we have identified 14 trends of change that map out a panorama of feasible opportunities for the year 2020 in technological, individual, social and economic matters.

Figure 1. shows a simplification of those 14 trends.





In the 2020 economic panorama, the growth of emerging countries will be greater than that of developed countries; there will be a scarcity of key professionals for development; we will see the appearance of new business ecosystems and of new models of industrial relations; and we will witness the appearance of the knowledge economy as a fourth sector.

Tomorrow's devices will be considered to be key for accessing an infinite number of services. We will see the proliferation of sensors in packets, rubbish bins, traffic signals, domestic appliances, even in our clothing and in soft drink tins. The information gathered from these will

be used for real-time decision-making based on evidence and applied to new logistics systems, to urban waste management, as well as to assist drivers, surveillance, remote control or population reduction.

The “man-machine” interface will be invisible to us. Goodbye to the mouse and to CTRL + ALT + F1. Machines will have a “man-machine” interface: they will talk to us, listen to us and they will be touch-sensitive.

The underlying idea of Moore’s law will still be valid: the price of devices will drop at the same time as their provisions grow and today’s Smartphone will become “tomorrow’s PC.” There will be devices for all pockets that will assist billions of us with our transactions between the physical and the virtual worlds. The progress of three-dimensional printers will enable us to print off everything, even food. Because of their cost and complexity, these printers were only used in large industries until a short while ago, but they have evolved in accuracy, simplicity and price and they are starting spread across the entire production sector. In the decade of 2020, we will have them at home, converting every house into a potential manufacturing centre. They will lead to a revolution in the logistics and distribution of product manufacture, because they will make it possible to produce articles whenever and wherever they are needed. In short, the digitalisation of objects will have an impact on the manufacturing value chain, just as the digitalisation of content has had on music and movies.

### *Living in the clouds*

The device revolution will feed back into the evolution of networks. Given the growing demand, telecommunications companies will offer reasonably priced broadband services. In the next ten years, everything will be connected to everything: people to people, people to things and things to other things.


Interoperability standards will have been defined and computer networks will talk to each other as telecommunications ones do today. Applications will write on open interfaces with an entire community of developers and they will have the capacity to move from one network to another, just as happens with telephone calls today.

As a result, the Internet will become increasingly smart — the environment where objects come to life. Computers will have a sufficient level of understanding of what is happening on the Internet to generate new types of information. The cloud of contextualised contents will understand what we want to say and it will go from being a tool to becoming our advisor. Furthermore, augmented reality will form part of our day-to-day living: We will deliver information to our environment and it will return to us enriched.

The Software as a Service (SaaS) trend will end up imposing itself in order to automate tasks and optimise processes, with a consequent improvement in the competitiveness of many medium-sized companies and the appearance of new business models.

At the same time, different scientific and technological fields will begin to converge into “super-disciplines,” extending and surpassing the line currently known as “NBIC convergence”: the result of merging research and development into Nanotechnology, Biotechnology, Information Technology and Cognitive science (NBIC).

These four disciplines not only complement each other, they also come together in many fields of application in order to achieve a qualitative leap forward in research or developments that would otherwise not be possible. One example: the advances in understanding the human genome have come about thanks to the confluence of an increase in calculation capacities, the miniaturisation of sensors and progress in biology and medicine.



**Tomorrow's devices will be considered to be key for accessing an infinite number of services. The information gathered from these will be used for real-time decision-making. There will be devices for all pockets that will assist billions of us with our transactions between the physical and the virtual worlds**

Similarly, the NBIC convergence will make it possible to make progress in epigenetics, the science that studies how external factors act on the development of an organism. It has already been demonstrated that a temperature change activates “sleeping” genes in the DNA of flies and plants, and that this alteration is passed on to the next generation. In 2020, we will have more information about how our lifestyle affects our cell development and how it has an impact on ageing and the development of illnesses. Medicine is the great field of application of this young science.

The trend towards NBIC convergence will become consolidated as a reality in the decade of 2020, thanks to the short-term benefits that this means for many research centres in sharing their R+D costs.

#### ***New possibilities: nanotechnology and graphene***

Although nanotechnology will still be immature in 2020, we have already seen its first results in new materials such as graphene, a bi-dimensional carbon atomic layer. The 2010 Nobel Prize for Physics was awarded to two Russian researchers from the University of Manchester, Geim and Novoselov, for characterising this material and discovering its extraordinary properties.

Graphene generates electricity when light reaches it at almost any frequency. It is 200 times more resistant than steel, almost as resistant as diamonds, as transparent and elastic as plastic, as well as being as light as carbon fibre, but much more flexible. It has high levels of thermal and electrical conductivity, it is wholly impermeable to all gases and liquids — apart from water — and it is not affected by ionizing radiation.

Its capacity for chemical reaction with other substances can produce compounds of different properties and this endows it with great developmental potential in covering surfaces, armour-plating, waterproofing, energy generation, interactive protective screens, etc.

With graphene, we can create a sensor superimposed on living cells that allows us to see the communications going on between them with no need for a microscope. In the field of medicine, there are already very promising laboratory prototypes. In the coming years, we will be able to see the first devices with graphene screens that are transparent and resistant and that can be folded up like a sheet of paper.

In spite of the many applications of graphene, there are still great developmental challenges in realising its potential. Right now, it can only be asserted that this new material — and more generally — nanotechnology will have an impact on our lives even greater than electricity had on the lives of our grandparents.

### *The power of the individual over the group*

The technological panorama described will open up new possibilities for individuals and it will induce gradual changes in their habits and customs. The trends that we observe in this area are contradictory. On the one hand, we see growing trends towards “I” and, on the other, the development of strong links between individuals who do not personally know each other. Both trends pivot around the unlimited access to information that the Internet offers us. We will be able to choose to extend our social circles beyond their physical environment and be part of a greater whole, or to cut ourselves off as we differentiate ourselves from the whole or, of course, do both, depending on the circumstances and our state of mind.

### *The individual focused on self*

Hedonism has been a constant feature of humans. But in the coming years, individuals will increasingly focus on themselves, on differentiating themselves from others and seeking to improve the quality of their lives with minimal effort.

In biological terms, older people will be younger and adolescence will be even more prolonged than it is now. Lifestyles will share an obsession for health and physical well-being, and “life coaching” — advice on planning your life — will enjoy great popularity.

The generation of digital natives will have set guidelines for managing online relations; we will be consumers and highly flexible employees, without loyalty to brands or employers. We will make choices all the time, considering the best for ourselves. Given similar options, we will choose the easiest or the most entertaining one.

The life of an individual will be governed by his or her own life plans, with preferences for institutions such as the family, a partner and the community where he or she lives. Personal realisation will be sought at work, and reaching this will be a sign of achievement. Personal



relations will be more distant and we will consider consumption to be a way of feeling ourselves to be loved and of acquiring greater social status.

### *Collective mind*

In spite of this trend in continuous growth that associates individualism with happiness, we will — in some respects — be more sociable than ever before. The mobility of information will create a heightened awareness that we are a human collective with similar motivations and necessities, regardless of our origin or situation. Every part of the world will coexist in one single virtual world and we will have created connections independent of time or place.

We will have a common awareness, a collective intelligence; we will reinvest in how we get on with each other and how we make decisions because we will all participate in what happens on the planet.

For the first time in human history, we will see the effectiveness of individual power over the group; an idea could go around the world in a few hours.

We will produce and consume differently, giving rise to multiple models of individual and collective provisioning. Crowd-sourcing for talent, crowd-funding for financing and “peer-to-peer” for the exchange of goods and services will be commonplace.

### *The power of influencing*

Thanks to technology and its capacity to break down space–time barriers, one single click will awaken the individual’s awareness of possessing a certain “gift of ubiquity”. Each of us will also be aware of the potential power in our individual capacity to express ourselves on the Internet. We will participate in defining and preparing company visions, products and services by criticizing, recommending and giving opinions that brands and institutions will not be able to ignore because they will be public. Furthermore, each of us will have enough information to decide whom to trust, influenced by the community of the digital world. A brand’s reputation will be that observed by the community, not that which the brand communicates.

New ways of organising and understanding life will lead to bespoke educational itineraries designed in line with personal talents and aspirations, and freelance opinion will prevail over fixed professional careers. We will see new political parties, new models of organisation, a new paradigm in decisions about consumption and the rise of participatory democracy for certain local government decisions.

### *Older, city-dwelling and tolerant*

In the geo-demographic aspect, the panorama is marked by a dual pattern. Populations of developed countries will age even more, to reach an average age of 42 and life expectancy of 79, while developing countries will have younger populations and a much higher number of

inhabitants: 6.4 billion as compared to the 1.2 billion who will inhabit the OECD countries. At the same time, the average age in emerging countries will also rise from 27 to 29 years old, as a consequence of increased life expectancy.

### *Dual world*

These demographic profiles face different problems: some of them will fight to maintain their living standards while others will strive to meet their basic needs. Demographic changes indicate a trend towards stagnation and deceleration in developed economies, which means that workers will have to work more hours and postpone their retirement. In the meantime, the emerging countries, with a relatively young workforce, will enjoy much more dynamic economies, and they will be responsible for a large part of the global economic growth.

The fall in competitiveness in developed countries will prompt the most qualified workers to move to emerging economies, in search of more promising and stimulating careers. Similarly, the most skilled emigrants who travelled to developed countries in the past will return home to see if there are better prospects for the future in their countries of origin. As a result, the growth of the global middle class will be concentrated in emerging countries and, in general, their inhabitants will enjoy considerable improvements in their quality of life.

### *Homo “urbanus”*

Today, the urban population of the planet exceeds the rural one and it will keep on growing. Human beings continue to appreciate the economic and social benefits of the city as a living environment and it is expected that over 1 billion people will migrate to urban areas in the next ten years. We have never faced such high migration rates before: it is as if almost the entire population of China decided to move their place of residence in just one decade.

In 2020, it is very likely that more than half of the world's major cities (in terms of population and contribution to GDP) will be located in emerging countries. The number of cities with over a million inhabitants will triple in a decade, and there will be twice as many megacities with over 10 million inhabitants. Many of these cities will be connected to each other, thus consolidating the concept of cross-border economic macro-regions.

The development of urban nuclei and the concentration of people in them will require new city models, large investments in infrastructures, a greater diversion of basic resources to urban centres, and special attention to and control over CO<sub>2</sub> emissions. Nor can we rule out the appearance of new cities due to the mass displacement of people caused by natural disasters or significant socio-economic instabilities. Refugee camps will grow in number and population, and settlements initially considered temporary could become cities of hundreds of thousands of inhabitants with dire nutritional needs and urgent infrastructure requirements.


### ***Cultural mixing and gender equality***

Immigration will cause people from multiple cultures and origins to live together; the virtual world will bring together people of any age, origin or life experience in work or leisure environments.

Measures for promoting the presence of women in economic and social decision-making positions will improve the representative balance of men and women in many other social spheres. The frontier between gender roles will become blurred.

Mixing and exchange will produce more open, dynamic and creative societies, with systems of mixed values, more detached from the concept of a nation. Although discriminatory behaviour will not disappear everywhere, we will be on the way towards a more tolerant society.

Individual behavioural trends, along with demographic ones, will lead to a substantive change in the concept of the family unit. The traditional family of “a young mother and father with children” will be just one option amongst many. There will be more partners of divorced people who bring children to the new family nucleus, more couples who are together but live separately, more single parent duos, etc. Living alone will be more widespread and those who decide to get married and have children will do so later than is common now, in both developed countries and emerging ones.



**A transition of power in other spheres will also take place, hand in hand with economic power: the geo-political landscape will change significantly as the countries that are most advanced today become less influential, and emerging ones, especially in Asia, become more powerful**

### ***Disparate growth in an environment of scarcity***

In this dual world with two-speed growth, the concerns and interests of countries will also be divergent. If the mature economies are chiefly concerned with the re-balancing of the commercial equilibrium and the persistent unemployment rate, emerging countries will focus their attention on price increases and economic overheating.

A transition of power in other spheres will also take place in a manner that goes hand in hand with economic power: the geo-political landscape will change significantly as the countries that are most advanced today become less influential, and emerging ones, especially in Asia, more powerful. Their influence on multilateral institutions will increase. The pre-eminence of the developed economies in global governance will be eroded by the emerging economies, which are seeking a multi-polar global power structure.

### ***The economic “EAGLEs”***

At BBVA, we believe that the future economic panorama will be marked by countries we have named “EAGLEs”.

The EAGLEs are Brazil, China, Korea, India, Indonesia, Mexico, Russia, Taiwan and Turkey, countries that will be responsible for over half of world growth in the next ten years.

China and India are the most prominent EAGLEs. China’s contribution to world economic growth in the next ten years will be 34 percent and that of India, 11.9 percent, as compared to the 9.6 percent contribution from the US.

Potential EAGLEs make up the “nest” nations, a group of countries that contribute more to world economic growth than the lowest contributing member of the G6 nations: Italy. The nest nations currently number 15: Egypt, the Ukraine, Chile, Argentina, Bangladesh, Colombia, the Philippines, Malaysia, Nigeria, Pakistan, Peru, Poland, South Africa, Thailand and Vietnam. Over the next ten years, the EAGLEs will be responsible for around 60 percent of global GDP growth, while the nest countries will contribute 9 percent. All G7 countries together will contribute 16 percent.

### ***China, Africa and Latin America establish close ties***

China is Africa’s leading trading partner with 150 billion dollars in exchanges during 2011. It is one of the main investors in sectors related to natural resources and in the infrastructure of countries such as Zambia, Angola, Sudan and Côte d’Ivoire.

At the same time, economic relations between Asia and Latin America have also been strengthened: trade movements between both regions have increased nine-fold over the past 20 years. The main opportunities come from China, which has become the partner of choice in trade and investment in the region. Everything indicates these trade and investment relations will grow even stronger in the coming years.

### ***Growing demand, limited resources***

The intensive consumption of energy, water and food linked to economic and demographic growth maps out a complex panorama. In 2020, natural resources will play a crucial role in global prosperity. Countries that produce raw materials will have currencies that are ever more valuable in acquiring international influence. The current map of producer countries will change because, in a world with limited resources, it is foreseeable that prices will rise and the considerable reserves of minerals thus far unexploited will start becoming profitable. This, in turn, will lead to further environmental erosion.

For the individual, this scarcity of resources will be translated into higher prices for end products, widening the gap between rich and poor. The scarcity will also hit expert human resources, including health and teaching professionals needed to deal with the growing populations of developing countries.



### ***New business ecosystems***

Outsourcing and offshoring models will be common, enabling companies to concentrate on their business, while insourcing will be done so as not to lose basic skills or to incorporate others deemed necessary.

The large global companies we know today will have lived through a process of transformation. In order to cut costs and maintain competitiveness, they will harness the collective talent of the digital community and introduce new models of relationships with their suppliers. All this will bring about new business ecosystems that will establish themselves as conglomerates of activity, based around a common goal. Temporary alliances and partnership networks will proliferate and competitiveness will spring from talent and innovation.

Future business environments will be characterised by flexibility, personalised services and the decentralisation of the focal points generating value. Small and medium-sized businesses will become even more important.

### ***New working world***

In this space, the key driver of growth will be knowledge-related jobs. Workers will have better training and they will be able to carry out their work in more open structures. The world of industrial relations as we know it will not fit in to a world in which the knowledge gap between emerging countries and developed ones will — albeit slowly — become narrower.

An entrepreneurial culture, self-employment and the creation of new forms of relations between professionals will certainly be patterns in the future world of work, one that is already starting to emerge.

The abundance of information will shift market conditions in favour of experts who can extract maximum value from that information. In this context, the poet T. S. Eliot's observation, "Where is the wisdom we have lost in knowledge? Where is the knowledge we have lost in information?," becomes particularly relevant.

The "war for talent" between companies, the mobility of workers and the decentralisation of corporate structures will enrich the professional ecosystem, spawning new types of work and more flexible ways of understanding employment contracts.

## **THE NEW CHALLENGES**

The future is the result of the interaction of multiple elements and trends. Companies, organisations and individuals take directions that jointly determine their development routes. When the various paths cross and interlink, and a series of challenges emerges in parallel, we need to move ahead to achieve a desirable future.

We have distinguished five large categories of global challenges that will condition the quality of our lives in the coming years: these categories are new technologies, demographics, natural resources, new economic and work paradigms, and individuals.

### *The challenges of technology*

In recent years, mobile telephones and the expansion of the Internet have contributed towards communicating with and connecting most of the inhabitants of the planet. Aside from these advantages and opportunities, there are already big differences between those who have access to superior technology and those who do not.

As we have seen in the 2020 technological panorama, savings stemming from sharing R+D costs is one of the key factors in the trend of NBIC convergence and the advances associated with this. However, maintaining international cooperation in technological development is not easy when the discoveries represent a clear competitive advantage. It may not be profitable in the long term for some of the biggest leaders to share these benefits. This would lead to delays in obtaining results and greater inequalities in the overall quality of life.

As NBIC research matures, new ethical issues will emerge. For example, experts in the field of genomics are working on increasing brain capacities, curing and preventing illnesses, and extending longevity, aspects that could pave the way for a group of “ge-nobles,” privileged people who have access to this type of treatment.

According to the modern Hippocratic Oath, health professionals must ensure they “apply all the necessary measures for the benefit of the patient”; and they must “not permit considerations of religion, nationality, race, party politics or social standing to intervene,” according to the Geneva Convention. Can the consensus that exists in medicine, to always act for the benefit of human beings, be extended to all “advanced technologies”? One ethical issue arising from this would concern access to advanced technology, depending on whether the users could afford this or not.

Given that the characteristics of the 2020 socio-demographic panorama suggest a dual world, the challenge is to stop a new type of technological gap appearing that is directly related to health and the quality of life.

In the field of telecommunications, this same issue provokes a debate on how to define the “universal service” of access to communications in different countries. Regardless of whether fewer or more people gain access to new technologies in the future, we can assert that the number of Internet users will grow in percentage terms. In the coming years, the Internet will be present in all corners of the planet, in one form or another; all of us will be in the cloud. In this context, we will have to find effective ways to transfer basic rights from the physical world to the virtual one.

In the physical world, attempted robberies or identity thefts trigger a set of protection mechanisms (complaints at police stations, international communication of stolen documents,

etc.), but these are not clearly defined in the virtual world. The great challenge will be to define, protect and guarantee our future digital identity, articulated in the same way as any other civil right.

Violation of our privacy is a crime in the physical world. It is necessary to have a court order to search our homes or obtain our bank details. In the logic of the Internet, all our information will reside in the cloud. The Internet will collect all our movements, tastes and even opinions, blurring the line between offering personalised value-added services and intruding on our privacy.

Since the Internet is a global environment, the regulations concerning privacy and security must also be drafted in global terms.

Another challenge is constituted by the risks of a type of freedom of expression that, in its digital form, does not have ethical codes. The Internet was created by the scientific community with the aspiration of creating a “service for everyone,” in which everyone is entitled to share the information that they want in any way they choose, as long as they do not commit an offence. We all feel that we have something to say; we all want to be heard. But not all of us are trained, for instance, to carry out a medical check-up. For many people, it is very difficult to determine the quality of the source consulted when there is no digital identity which guarantees that the author is an accredited individual. Therefore, health authorities can only provide adequate information with the hope that their opinions will prevail, amongst countless incorrect sources.

Guaranteeing the quality of Internet services is another key area. We have grown used to using free services that exempt the supplier from liabilities in the event of improper functioning and release them from indemnifying damages. Tighter limits must be set to ensure the relationship between consumer and supplier is always resolved to their mutual benefit, with all of the necessary guarantees.

Furthermore, the smart drivers of the cloud will not cease to be applications generated by a community of developers. Here, we have no alternative but to trust the ethics of these experts when it comes to designing and applying any automatism, given that there are not yet any mechanisms to find out, *a priori*, whether they are guiding us properly.

Advances in artificial intelligence will make it increasingly difficult to determine whether we are interacting with a machine or a person. We will have to develop mechanisms of trust when we perceive the loss of human control over a world that is excessively technologized.

### **Cyber-terrorism, a separate section**

One large technological challenge of the coming years will be the new areas of insecurity in the virtual world. It will be increasingly difficult, if not impossible, to define the thin line that currently separates the secure and reliable “interior” of our corporate networks from the insecure and ungovernable “exterior” of the Internet.

The Internet is based upon open standards and platforms on which highly useful services and applications are developed. Many of these services store data of a personal nature. Organised criminal gangs represent a clear threat, because they try to find vulnerabilities in order to access personal data with malicious intent. In addition, it is foreseeable that we will see a rise in cyber-crime and cyber-terrorism activities, carried out by criminal organisations capable of generating malware in the form of Advanced Persistent Threats (APTs). This type of malicious software is especially dangerous because it can conceal itself for long periods of time, and it attacks business or political targets.

Cities, infrastructures, homes and individuals are vulnerable to digital attacks, just as in the physical world. However, there are three important differences in the digital world. Firstly, attacks may originate from any point in the Internet: geographic proximity is not necessary. Secondly, the anonymity granted by the Internet makes it much more complicated to pursue those responsible. Finally, the intrinsic capability of propagation generates a multiplying effect as attacks appear simultaneously and unexpectedly at a multitude of sites.

### *Challenges for the individual*

In the last ten years, the individual has been able to adapt to technological advances, but each of us now faces many more simultaneous changes occurring on many fronts.

The individual has gone from having a single identity in the physical world to being capable of creating different personalities in the virtual one. We need to take precautions to avoid having our privacy invaded or exposing ourselves to security risks.

In the world of work, people will have to accept that every temporary job they take will require certain skills and different ways of doing things. It is even possible that daily work will arrive in batches from a crowdsourcing environment that allocates our tasks through algorithms and that may also assess the quality of our work (the “boss”).

The borders between personal and working life began to blur at the end of the last century. They will be very hazy in 2020. Distance working means working from home, while for those who have emigrated, family and friends are located in the virtual world. With these premises, the individual will have to find a way to reconstruct his or her personal lifestyle in these new physical spaces, while at the same time incorporating his or her virtual identity. All this must be achieved without losing the connection to reality and without becoming an entity that is split into parts.

Furthermore, being part of the “collective intelligence” will entail actively participating in social networks and discussion forums or those of common interest. It is safe to assume that time spent connected will reduce contact time with the “real” physical world. It is highly likely that behavioural disorders related to the intensive use of the Internet will spread.



## **Social cohesion**

Cohesion enables societies to be efficient, keeping the peace and facilitating the inclusion of all of its elements. Societies strive to ensure that this cohesion is not lost or degraded, even seeking to reinforce it. New challenges are presented by the living conditions within each country and also between societies across the length and breadth of the planet, together with population ageing and the growing diversity of the value systems.

In the OECD nations, the level of economic resources of the richest 10 percent of the population is on average nine times greater than that of the poorest 10 percent. Inequality has also been rising in recent decades. In the UK, the gap widened from a proportion of 8 to 1 in 1985, to 12 to 1 today. Even in those countries that are traditionally considered to be more egalitarian such as Sweden, Denmark and Germany, the gap between the income of the rich and the poor is also widening: from a proportion of 5 to 1 in 1980, to the current one of 6 to 1. In the leading emerging economies, the disproportion in the possession of wealth is 50 to 1.

But income is not the only dimension of inequality. We will see a significant disparity in the social opportunities of people who migrate to cities and those who stay in rural areas, in terms of both access to health services and job offers that enable them to improve their lifestyles. The growth of the city will be concentrated on the outskirts. Some of the new suburbs will be marginal neighbourhoods and their inhabitants will not find it easy to gain access to the education necessary to escape their social exclusion.

Gender inequality represents another great challenge. Significant progress has been made in this field; women today represent 40 percent of the planet's workforce and they account for over half of the university places. Yet even if these advances continue, the gender gap will persist. Girls will still be less likely to receive education than boys in developing countries, especially in sub-Saharan Africa and in some parts of south Asia. Women will also remain less involved in the political arena and less present in the upper levels of institutions, whether these are companies, political parties or scientific environments.

In the developed world, the proportion of retired people will grow, with the consequent pressure on pensions and health systems.

If measures are not taken to combat the effects of the different sources of social inequalities, we could see the development of two parallel cultures, with different scales of values and attitudes, in every town or city.

Tackling the challenges of global demography and integrating the needs of all individuals to guarantee social cohesion is therefore an imperative that cannot be postponed.

## **Natural resources and infrastructure**

Natural resources and ecosystems, infrastructure and the mechanisms of government are the basic systems that ensure the survival of humanity. These systems are and will remain exposed

to a variety of pressures. How we handle these pressures is going to determine how we will live in the future.

The technological deployment since the Industrial Revolution has brought about a huge growth in population and improvements in living conditions. But, it has also sparked an unsustainable increase in the consumption of natural resources. The demand for energy, food, water and raw materials is going to keep on growing, with the consequent impact on the mechanisms of the biosphere, especially as far as the climate is concerned.

A variety of indicators demonstrates climate change is underway: the worldwide increase in temperatures, the thawing of the polar ice caps of the Arctic, the disintegration of Alpine glaciers and the rise in sea levels.

Three quarters of greenhouse gas emissions — responsible for heating the planet — can be attributed to the energy cycle, both in terms of production and consumption. Although gas emissions per capita in the developed world are still much higher than those of emerging countries, they are rising much more quickly in the latter.

Stabilising the levels of greenhouse gases in the atmosphere is acknowledged as a necessary condition for first limiting the rise in global temperatures, and then stabilising it. This requires drastic cutbacks in the emission of gases in a global economy with a growing “hunger” for natural resources.

It is generally thought that we are still in time to avoid a catastrophe, but that optimistic assessment is useless if we do not act now. The coming decade will be decisive for determining the direction the climate will take and the living conditions of humanity.

There is undoubtedly concern about energy sufficiency and whether many natural resources will be able to meet human needs. But it is water that constitutes the biggest challenge. The data are not optimistic: climate change will have very significant adverse effects on the availability of water. At the same time, the demographic growth has tripled water consumption in the last 50 years and if the population continues to grow at its current rate, the demand for water will increase by 64 000 cubic metres a year.

Pressure on water supplies is also closely associated with food production, thereby establishing a vicious circle that is very hard to break. Agriculture is by far the biggest consumer of water, accounting for 70 percent of total demand. Economies dependent on agriculture are therefore very vulnerable and at serious risk of food crises.

The scarcity of resources goes beyond the natural ones. Manmade infrastructure also faces very serious challenges. Infrastructure is the backbone of social and economic development: it shapes all aspects of daily life, as well as trade and manufacturing. We only notice it exists when it fails, revealing just how dependent we are on it. From electricity outages, trains that do not arrive on time, and servers that go down, all these events send our daily lives into collapse.

Infrastructure challenges present themselves in different ways, depending on the region. The focus in the developed world lies in improving the existing capacity, while in emerging economies more importance is placed on the capacity for deployment to meet the emerging demand. In the most disadvantaged countries, infrastructure needs to be built: its absence severely hinders their economic and social progress.

Developing infrastructure requires plenty of time and money, and maintaining it is costly. Infrastructure is designed to keep working for a long time; therefore, inherited infrastructure tends to engender a particular form of “protectionism” that makes it very hard to change it.

Adapting the global energy system to meet growing demand whilst taking care of the environment is one of the biggest challenges humanity is facing. First, we have to assume that the existing structure is not as efficient as technology allows for, so we should completely rethink the way energy is produced and distributed to the end consumer, identifying new renewable sources and new distribution plans.

Transport is another area of infrastructure that presents a very significant challenge, fundamentally because it is one of the economic sectors that makes the most intensive use of energy resources. Globally, lifestyles are trending towards the generalised adoption of western models: everyone wants their own car and they aspire to travel by plane with the consequent energy consumption and gas emissions.

Infrastructure related to water actually worsens water availability. Developed countries have antiquated installations, with no recycled water circuits. These need renovation, which requires massive public investment. Meanwhile, in emerging countries, 15 percent of the population does not yet have direct access to drinking water. These countries have to tackle the lack of health infrastructure and waste collection, both essential for the public health of 2.6 billion people worldwide.

It is clearer to all of us every day that prompt and energetic measures are needed to tackle all of these challenges. Perhaps the biggest advance to date is the consensus around the global nature of these challenges. But that is just the first step towards resolving them.

### ***New paradigms for work and businesses***

Asian economies are no longer just assembling products for western consumers; the competitive framework has changed. Thus, companies in emerging economies will become the competitors of western corporations. Western multinationals hope to find 70 percent of their opportunities for future growth in emerging markets. India and China would represent 40 percent of that growth. But operating in these environments requires profound changes in the business models that are dominant at present.

Many of tomorrow's new multinationals will probably have their headquarters in emerging countries. These corporations will adapt, developing practices to enable them to make a profit


in this new environment. They will turn themselves into the seeds of innovation and rise up as a great challenge to their western competitors.

The new global landscape sketched out for the business world means companies need to revolutionise not only their business models, but also the ways in which they innovate. It is increasingly clear that integrating clients and suppliers as a decisive part of the innovation process leads to more satisfactory results. The challenge is how to transcend the limits of a particular corporate culture in order to commit to co-creation models, to open up innovation processes to social networks, to invest in third-party activities, and to gestate companies with a view to ultimately granting them their own existence.

This new way of thinking and operating will eventually materialise as companies see that the old business methods limit their ability to harness the potential growth that the new business models offer. The challenge is to manage the transition and to make use of the right resources to achieve this.

Both production workers and those who work with knowledge will find themselves forced to compete in a global market. People could potentially find work anywhere in the world because the knowledge-based economy knows no borders; it identifies talent and it seeks it out wherever it may be located.

Workers who cannot or do not know how to adapt to the knowledge economy will face job insecurity. Flexible contracting and temporary employment will be common practices in the near future and workers will have to acquire skills quickly in order to adapt to demand.

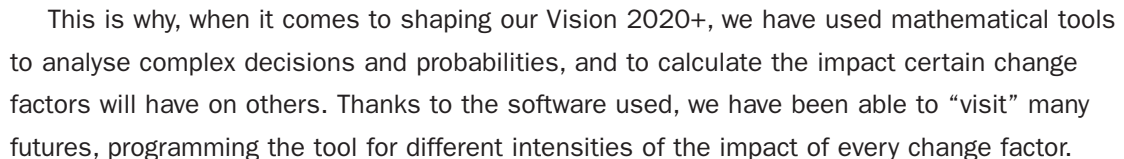


**Stabilising the levels of greenhouse gases in the atmosphere is acknowledged as a necessary condition for first limiting the rise in global temperatures, and then stabilising it. The coming decade will be decisive for determining the direction the climate will take and the living conditions of humanity**

## 2020+ SCENARIOS

Constructing future scenarios requires a lot more than correctly identifying relevant trends. In reality, each of the fourteen trends defined has an impact on all of the others; at the same time they all place conditions on each other. The diagram below shows all the possible interactions between the trends described. From this, we can see how difficult it will be to distil, determine and explain the influence of each trend in the future. In turn, the trends relate to more profound change factors, which are also interrelated in a complex and often random way.





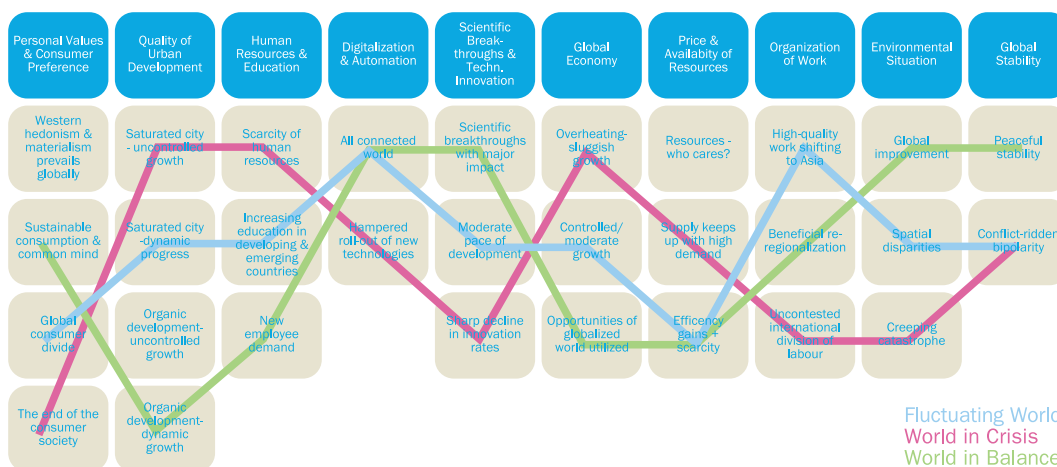
In preparing the scenarios we have taken into account the argument that tensions stemming from the scarcity of resources or social inequalities may unleash specific and localised violent events. This change factor has not been aggravated to the point at which military conflicts can be scaled up to global level. Similarly, the initial premises have not considered a pandemic or a natural cataclysm that would massively affect the global population. Technological threats have been taken into account in order to weigh up the evolution of the Internet and its impact on the reality through which we are living.

### Three possible scenarios

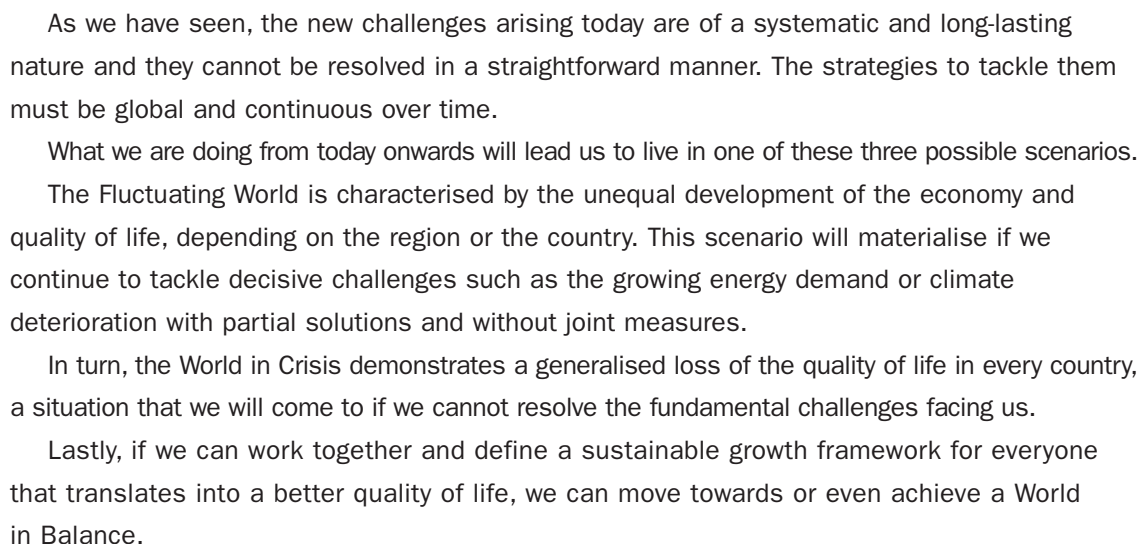
After running through the number of combinations of results of the different change factors, depending on logic of occurrence based upon comparative data, we have found three possible scenarios that we may live through in the decade of 2020. We have called these scenarios: Fluctuating World, World in Crisis and World in Balance.

The diagram below shows how the change factors — the creators of the 2020 trends — evolve in each of the three scenarios.

### Figure 3. Change factors in the preparation of scenarios



To best highlight the differences between these scenarios, we have shown them in a graph with two separate axes. The vertical axis, from a greater to a lesser extent, shows the soundness of the economy and the associated level of quality of life, both closely related to making the best use of opportunities. In the horizontal axis, we move from lesser to greater global coherence in the actions of the countries. That is to say, on the left we see the lowest level of coherence, where some countries are trying to resolve their problems in an isolated way and others work together in order to achieve this. On the right, the action of the countries is homogeneous, they all act in the same way: they all compete or they all work together.



## A Fluctuating World

In a Fluctuating World, the energy demand will continue to grow due to the proliferation of technology and to population growth. Energy will therefore constitute one of its biggest

challenges and needs. Resources will be increasingly scarce, and there will be a growing tension between countries that make intensive use of resources.

At the same time, the environmental situation will deteriorate as a direct consequence of the increase in consumption of the middle classes in emerging countries, which will add to the already high consumption levels of developed countries.

Similarly, the Fluctuating World will be a highly complex, highly connected scenario, where any local conflict or solution could spread to global levels with exponential speed.

Technology will perform a significant role in the digitalisation and automation of tasks, but it will not be possible to make use of its full potential to manage complexity and anticipate solutions, because the data and information necessary to do this will be incomplete.

In the face of scarce resources, the only thing that will grow in an unlimited way will be information. However, resources will not be linked so as to make them manageable, because infrastructure will be inadequate. Consumption and leaks will not be efficiently measured, and demand will not be tracked to identify possible solutions.

In addition, we will see some highly protectionist and competitive countries and institutions refusing to share their information. It will therefore not be possible to understand the full movement of the consumption of resources from their sources of origin to their destination, something necessary to design coordinated measures that guarantee supply.

Therefore, the prevailing tone of a Fluctuating World will be reactivity and improvisation when it comes to dealing with new challenges, mostly because long-term global solutions for managing the complexity will not be found.

In this scenario, many countries in the world will have chronic budgetary difficulties, unable to correct the imbalances generated during the financial crisis. The population-ageing phenomenon will also contribute to a long-term imbalance of the fiscal balance and high unemployment rates would similarly translate into a fall in the contributions obtained from raising taxes.

In the economic field, new blocks will take shape based on differential economic growth. Heading towards 2020, many countries that we today describe as emerging will have stopped being so. They will move on to the frontline, and those that we today call “developed” will have started on the path towards decline.

Inequality in access to education and social services will be another characteristic of this Fluctuating World.

Basic educational centres may become insufficient and education could go from being a public to a private asset. It is also likely that emerging countries will face a lack of services as health or education. There will not be enough teachers or health care staff to meet the needs of a population that is constantly growing.

In this scenario, serious safety threats could arise from an environment of collective hysteria or fear, which have never been the best allies in the search for solutions to meet new needs. The costs of the measures for coping with these threats would be huge, and what is worse, their human implications would lead to restrictions on daily life and would restrict already scarce resources.

In other words, the Fluctuating World is essentially an extrapolation of the current one: the world we live in today will, with a very high degree of probability, lead us to a Fluctuating World. A Fluctuating World has to be understood as an unstable world, with a growing risk of heading towards an even worse scenario.

### *A World in Crisis*

Let us now imagine that we have not been able to make the most of the opportunities the 2020 initial panorama offered. We have not taken the necessary measures to correct the course of reality. We know that attitudes have to change imminently, so inaction would lead to disaster. We would therefore find ourselves in the scenario of a World in Crisis.

This is not a catastrophic scenario based on pessimistic reflection. Instead, it is an entirely possible framework that has arisen from a close analysis of the evolution of change factors.

The World in Crisis will be more disruptive than our current situation, because it means that after the centuries of evolutionary learning that have brought us thus far, humanity has been overtaken by the challenges it faces. In such a discouraging scenario, political and economic systems will be subject to huge pressures that could end in violent demonstrations.

In the World in Crisis, global stability will be threatened by a growing, tension-fuelled duality. The global economy will have failed to get out of the recession that began in 2008 and that has presented western countries with massive problems concerning public debt and currency stability.

Countries, both emerging and developing, will not be able to invest in infrastructure, health, education and environmental protection. The much-needed advances will not only not have happened, they will not even have been discussed and no feasible solutions will be seen on the horizon.

At supra-national level, a new type of nationalism and protectionism will become the prevailing tone in the political environment of this World in Crisis. Military conflicts between industrialised and emerging countries could not be ruled out — evidence of the inability to define a path towards a solution given the tough economic times.

In this scenario, many will defend autocracy as a suitable form of government in order to overcome an economic crisis whose effects are excessively prolonged. Public opinion will favour the governing elite closely guarding their powers, associating efficiency, capacity and stability

with autocratic political systems. Most will flee from the complexities of the democratic process, whose decisions will be seen as slow and not very effective.

In developed countries, the wealth gap that seemed unbearably wide during the recession after 2008 will reach discouragingly record levels in 2020. While being poor will not under any circumstances mean losing the right to vote, it will raise issues of fair representation in a political system that defines itself as democratic and in which the capacity to influence is a key part of the process.

Democracy in a World in Crisis will also be impoverished, moving away from its ideals and losing traction as the needs of the individual cannot be met.

The coexistence of the “first” and “third” worlds within developed countries will aggravate the social situation: inequalities within industrialised countries will not only increase, the richest will also start to be affected.

Cutbacks in basic social services such as education will end up seriously affecting the quality of training and its human resources. There will therefore be a severe shortage of trained people able to apply mechanisms of creative thinking to unblock a situation of deep crisis. The scarcity of human resources will affect fundamental aspects of existence such as health and education. In emerging countries, there will not be enough teachers or doctors to attend to and train their inhabitants, and the lack of international cooperation will hinder the development of distance services and distance education.

The business community will also resent that lack of skilled human resources. In fact, they will respond to the crisis by placing the focus on a policy of cost-efficiency rather than applying the levers of innovation. In this context, a growing global supply of cheap manpower will make it possible to manufacture and distribute low-quality products for the segments of clients with less income.

The economies with the best chance of subsisting would be those directly associated with the production of essential goods, because the long and intense period of mass consumption would have placed excessive pressure on the availability of natural resources.

Unemployment is another fundamental cause for concern. The continued economic recession will raise unemployment figures to unprecedented rates in some western countries. There will be a generalised fear that employment rates will never return to levels prior to the 2008 crisis.

Emerging countries will not be able to make the leap to knowledge-based economies and they will suffer as their production centres are moved to even cheaper regions. People will then follow the employment trail, generating a migratory movement to the cities where they hope to find more opportunities. As a consequence, cities will grow in an uncontrolled way that will exceed the existing capacity to generate habitable environments. A huge number of megacity citizens will live in marginal neighbourhoods, with limited access to health infrastructure and the



constant threat of criminality. The worst form of poverty will be urban poverty. Social tensions will be heightened, and street protests and unrest will be commonplace.

Most of the population will only meet their most basic needs; personal values and consumption preferences will be things of the past. In fact, in the scenario of a “World in crisis,” we will live through the end of the consumer society as we know it today. The power of the individual in the collective will be reduced to the point at which people will be first and foremost resources for their governments rather than citizens.

There will be no demand for new technologies, even those that could generate affordable and significant improvements. This will not just be because they are unaffordable but also because of a generalised distrust regarding matters such as reliability and privacy. The capacity of technology as a catalysing element of change will be nothing more than a theory, cast aside. Only its dark side — the threat it poses to privacy — will remain.



**The World in Crisis will be more disruptive than our current situation, because it means that after the centuries of evolutionary learning that have brought us thus far, humanity has been overtaken by the challenges it faces**

### ***A World in Balance***

This scenario is the result of having satisfactorily coped with most of the challenges on the horizon, consolidating the opportunities present in the 2020 panorama. This in itself would constitute a change in paradigm compared to current reality.

In this scenario, the equilibrium between the US and China will lead to global economic and ecological cooperation, guided by transparency. This will enable us to establish bodies to oversee the interest of the planet as a living element and one that we share as a human collective.

In the scenario of a World in Balance, high energy prices and scarce resources will have forced us to adopt new behavioural patterns, making sustainable consumption a general practice. Growth will be defined in terms of global well-being. Communication technologies will have become ever more affordable.

In this World in Balance, most people will enjoy good living standards in healthy cities endowed with smart structures. Economic and political agents will understand that sustainability is a competitive advantage and that too many regulations reduce economic freedom. In this World in Balance, we may see the rise of business initiatives with a social foundation and a return to the regionalisation of the economy with an increase in the global division of labour, lowering unemployment rates.

In short, environmental efficiency, new types of work, technology at the service of people, smart infrastructures, etc. will have materialised in the World in Balance. Our everyday life could be similar to that of the families that we have imagined in order to visualise this better future for everyone; the reader will find their stories below.

### *A better future is possible*

The World in Balance is a possible scenario based on a thorough analysis and not an idealistic vision born from optimism. It is feasible to achieve this world if we put the right measures into practice now.

Human beings are capable of evolving and re-investing themselves to make their aspirations become a reality. From the outset, they have transformed their reality, creating more favourable environments for their survival and that of their community.

Many events in history and at present are appalling; they horrify us from the perspective of our modern knowledge and values. Many others are admirable and they inspire us to move ahead. Invention and innovation are innate to human nature and life in society; cooperation has been key to the development of humanity.

Today, we are living together in a melting pot of societies and with sophisticated technologies. Our habitat is much more complex than any earlier human habitat and it also offers many more possibilities. In spite of all the existing problems, never before in the history of humanity have we had a starting point for our future like the current one.

Today we have more democracies, fewer military conflicts, greater freedom of expression, better legal guarantees and a higher level of development and quality of life than just a few decades ago.

Politically, we are living in a present with many parliamentary democracies and states where there are broad margins of political rights and civil liberties that have never been seen before. The number of autocracies has fallen since the middle of the 1970s; certain forms of autocratic states allow for growing margins of liberties — such as Singapore and Dubai — and even the Asian giant, China, is moving in a slow but constant way towards greater social conquests.

The end of the Cold War caused a dramatic drop in armed conflict around the world. During the 1990s, the number of wars between states plus internal or civil wars plummeted — down 60 percent from its peak. This downward trend has continued since the start of this century.

Even more importantly, conflicts no longer go unnoticed. Information and telecommunications resources and technologies are improving all the time, and as a consequence, we can access relatively objective and high quality confirmation of peace. The boom in independent news media is occurring in tandem with the global trend towards greater democratization and peace.

Today, the values of life, dignity and human rights are widely shared. The Universal Declaration of Human Rights protects and promotes the rights of all individuals, regardless of

their sex, race, religion, cultural background or other condition. Tolerance, equality and respect help reduce friction in society and create the kind of societies in which we would like to live.

Since 1990, historical breakthroughs have been made to benefit children during the first nine years of their life; the worldwide rate of mortality of children under 5 has fallen. In several regions around the world, the gender distinctions in primary school enrolment have been eliminated, and huge improvements have been made as regards access to primary schooling and childhood vaccinations. We are currently in pursuit of formulas to ensure support given at infancy continues into adolescence; this situation was unimaginable just twenty years ago.

Human development is understood to be the process by which a society improves the living conditions of its citizens through an increase in the assets required to cover their basic and complementary needs, and in the creation of an environment in which the human rights of everyone are respected. The Human Development Index, drawn up by the United Nations Development Programme, has recorded major progress worldwide (41 percent) since records began in 1970, with substantial improvements in health, education and income. Almost all countries are showing signs of progress, although to very different extents. Only the Democratic Republic of Congo, Zambia and Zimbabwe have indicators that are worse now than in 1970.

In July 2011, the General Assembly of the United Nations recognized the pursuit of happiness as “a basic human objective” and invited Member States to promote public policies that include the importance of happiness and well-being in their commitment to development. The resolution (passed unanimously) also recognizes the need to apply a “more inclusive, fair and balanced” approach to economic growth to promote sustainable development, eradicate poverty, and foster the happiness and well-being of all peoples.

### *Towards the Millennium goals*

Moreover, there is also a common project: the Millennium Development Declaration and Goals, passed by the General Assembly of the United Nations in September 2000.

The formulation of the Millennium Goals has set up a series of specific aims (reducing the proportion of people living in poverty or suffering hunger, reducing infant and maternal mortality, achieving universal primary education for all children, increasing the number of people with access to clean drinking water, etc.). This has meant that for the first time, specific objectives have been established for all international policies as a whole.

The Millennium Declaration represents an agreement between the main economic players on the world stage. Poor countries have promised to improve their policies and government management, and to strengthen their accountability to their citizens. Rich countries have promised to provide the resources. Because the commitment to meeting the goals was made at the highest political level, for the first time entire governments are committed to achieving

them. And the main international financial institutions (the World Bank, the IMF, regional development banks, and increasingly, the members of the World Trade Organization) expressly declared they would also monitor the achievement of the goals.

Furthermore, the goals also define specific aims to be reached within set time spans, in most cases by 2015. Here it is very important to underline the fact that compliance with the goals is being monitored.

Although the conclusions or declarations at each summit have not always been signed and ratified by the various states, if we look at the degree to which goals have been met, the fact that there is a binding project with on-going efforts provides hope for a better future. Perhaps no more than 50 billion dollars of additional aid is required to meet the goals. The numbers are clearly huge, but we can put them into perspective when we think of the 900 billion dollars spent on arms every year, or the 300 billion that rich countries spend on agricultural subsidies.

## DECISION-MAKING TIME

The trends we have observed involve a transformation in our technology, identity, society and economy. We have set ourselves vital challenges that must be overcome in order to move towards a sustainable future.

It is not a question of “retouching” structures. We have to reformulate institutional models on a very basic level and revolutionise our everyday behavioural criteria. This means a deep-seated cultural transformation.

At BBVA, we believe this context requires us to think in a disruptive way, including relationship and partnership mechanisms so decisions are taken that best foster positive progress for the planet and the people living on it.

On our journey towards a World in Balance, managing the transitions between the current paradigm and the new one — which we have to define — we must observe the highest possible ethical values in terms of integrity, transparency and responsibility.

The decisions we will take over the coming years and the actions we undertake to implement them are crucial. It is time to ask ourselves whether we are “Fortune’s fools,” as Shakespeare had Romeo describe himself, or whether we can start to influence our future to prevent the current situation from degenerating into a World in Crisis.

### *Principles for action towards a World in Balance*

The notion that the future is not predetermined is key to being able to take action and turn the world into a place in which we would like to live. But how should we act? What levers should we pull in order to be truly influential?

Together, we have the knowledge, the resources and the technology required to tackle the transformation and overcome the challenges. However, their size and complexity make it impossible for a single organization or institution to face them alone. Solutions come from contributions made by everyone: governments, institutions and companies, and individuals, articulated around civil society.

The concept of cooperation must be transferred to the logic of all areas (co-creation, co-branding, co-working) in order to make effective use of technology in line with human needs and to generate useful innovation — not only innovating more products and services, but also bringing innovation to the way we innovate.

Partnerships between players are needed to help understand the mosaic of relationships surrounding the challenges we face. Even if we now have access to an increasingly large amount of data, these data are usually property of the institutions holding them, and their interpretation — the information — is biased towards the particular needs of each owner. Only a coordinated effort undertaken between everyone involved will enable us to understand the dynamics of the system and to internalize the undeniable network effects. At this point, innovation must provide new sustainable solutions.

Collaboration between governments, institutions and companies is a basic mechanism required to foster change towards a World in Balance, hand in hand with technology focused on individuals and systemic innovation. We have identified a variety of economic and social domains in the analysis of scenarios, in which the application of these principles is essential to changing the dynamics of the world towards sustainability.

### **Smart cities**

What smart cities have in common is the efficient management of resources and a better quality of life for inhabitants through the use of technologies and information. At the centre of this concept lies a model that views the city as a complex, dynamic and interconnected system. Information generated by the city at any given moment helps us retrieve the knowledge needed to take decisions aimed at optimal management.

The activities of the citizens, the operations of organizations and urban services, communications networks, buildings and infrastructure, environmental sensors and means of transport — everything generates information in the form of digital footprints referenced in space and time. The data and the knowledge involved are the heartbeats of the city and its essence.

All the technology deployed in smart cities would make little improvement in the quality of life of citizens without the collaboration of all the institutions responsible for regulating urban services. Quantitative models based on information are needed to design new services that are the right size. The design process must involve the entities responsible for implementing and

managing the services, and formal innovation processes are needed to provide solutions for the vital needs — whether explicit or not — of the citizens.

### ***Smart infrastructure to combat scarcity***

Once again, collaboration, technology focused on people, and innovation are the only viable ways to reduce the overall vulnerability of infrastructure. Over the course of the coming decades, a large-scale change will be necessary to ensure infrastructure meets growing demand. As progress is made towards ecological sustainability, it must continue to act as an engine to activate economic and social development.



**Collaboration between governments, institutions and companies is a basic mechanism required to foster change towards a World in Balance, hand in hand with technology focused on individuals and systemic innovation**

Our energy model must change to prevent supply from being based solely on fossil fuels. This is where renewable sources come in, the possibilities of which are almost infinite — a clear source of hope. Developments in energy generation will activate the change, but it is also necessary to reduce losses during transport.

Nor is there any limit to the research into this field. Alongside the modernization of cables, there is even the possibility of doing away with them altogether through wireless technology by means of electromagnetic induction or light beams.

Innovation in this field is starting to bear fruit. In pursuit of answers to growing energy demand and a responsible reduction in CO<sub>2</sub> footprints, technology companies are locating their large data centres alongside waterfalls, in mines to take advantage of geothermal energy, or next to the sea to use the tides and waves. These pioneering initiatives are having a simultaneous impact on the generation, distribution and sustainability of electrical energy. They efficiently bring generation close the point of consumption, while at the same time integrating it into the electrical distribution network.

This approach, applied to other infrastructure such as water, transport, recycling or telecommunications, marks the path to follow.

The new concept of the “generation” of basic resources will facilitate decisions, allowing the management of investments to be brought closer to the point of consumption, to citizens and to companies.



In some cases, this transformation involves the selective decentralization of infrastructure for basic services, or the regional relocation — worldwide — of production processes in order to seek out optimal locations. In others, it may be necessary to first centralize and reorganize, in order to then distribute using a different layout. This also necessarily leads us to a new concept in the topology of distribution networks for basic services and the need to endow them with the intelligence to manage multiple sources of generation and consumption.

Furthermore, bringing resource generation closer to consumption would help reduce demand, because consumers would become aware of the importance of savings. For example, the smart metering of electrical consumption in companies and homes has engendered new services related to energy saving. Another example is how introducing gamification in automobile electronics could lead to more efficient and safer driving habits.

On a political level, setting a suitable price for carbon emissions as part of a global climate framework could help people and companies to become more aware of the environmental consequences of their actions. Similarly, there is also huge potential for smart incentives for the efficient use of resources.

This process will also require new financing mechanisms to ensure suitable levels of investment in green infrastructure. Collaboration between public and private organizations could serve as a tool to facilitate investment by sharing costs and bridging economic gaps. In India, for example, the first rapid transit bus system was deployed in 2006 after this approach was taken.

### *Improvements in education systems*

Evolving towards a World in Balance scenario involves profound changes in society. More than ever before, individuals will need to be educated in social skills, creative abilities and trained in technology, able to recognize their own emotions and talent.

The adaptation of education systems is essential. Primary and secondary education must be universal, since they constitute a basic lever for progress. Education should therefore be democratized. In a first instance, this means free access to education. Here, technology plays a vital role: firstly, because of its ability to disseminate academic contents beyond educational centres using the Internet as a basic vehicle; and secondly, because of the economies of scale provided by digital formats over paper and other materials, as well as being much more environmentally friendly.

There are more and more informal activities on the Internet providing education opportunities that are not formally structured. This provides access to education for a large number of people without economic resources, or who do not live close to an education centre, or who are unavoidably busy when traditional centres give their courses. There are good examples of initiatives promoted by universities from all over the world and training platforms

open on the Internet. Nevertheless, strong institutional backing is still required, as is the case with the recent phenomenon of massive open online courses (MOOC) on the Internet.

This technology means any student can access training given by the best educators. And what is more, this makes it possible for everyone to choose what they want to learn and to add their own experience to the body of knowledge.

On another level, democratizing education means guaranteeing a method that allows everyone to learn. We do not currently know how to evaluate or develop all the skills of all individuals — their “multiple intelligences.” The Montessori Method demonstrated the existence of educational alternatives focused on personalizing the way in which each individual is educated.

Given the challenges we are faced with, education does not need to be reformed: it needs to be transformed. The key to this transformation does not lie in its standardization, but rather in its personalization, in revealing the individual talents of every child, and developing a passion for learning.

Unfortunately, around the world, with a few exceptions, the reality is still one of curricular contents more focused on deadlines and standardized contents than on ensuring every individual assimilates them correctly and is prepared to employ the knowledge gained appropriately.

Educating in accordance with the natural abilities of the individual, without reducing the demands made, can also lessen the stress on students, thereby preventing failure at school and people leaving the system early. We would have better prepared individuals to face the changes and uncertainty ahead. Education systems must start to design programmes that include workshops to develop social skills and entrepreneurship as well as the current analytical and rational techniques.

The more educated and trained individuals are, the greater the collective intelligence of humanity as a whole, and the faster we will progress.

### *Individuals in a World in Balance*


If you accept that collaboration is one of the keys for finding answers to new problems or problems of an exponentially large scale, then individuals in a World in Balance must be intensively involved in their realities. And they cannot expect problems to solve themselves.

Being properly informed about all the forces at work in the scenario in which we live is the first step towards reflecting on and deciding how to contribute to improving it. Learning to distinguish which elements we can act on most effectively is an aid to constructing the desired reality. The main assets at the disposal of individuals in a World in Balance are their lifestyle, collective power and social entrepreneurship.

### **Sustainable lifestyles**

The consolidation of new lifestyles will help conserve our natural resources and better protect the environment. Since energy consumption is what most damages the environment, any practice that saves energy is an efficient lever for sustainability. Systematic practices for reuse and recycling are also a responsibility that must begin at home, with changes to habits that reduce the quantity of waste each family generates, opting for more environmentally friendly packaging and containers or rationing the use of the family car by using public transport alternatives with a low environmental impact.

In a World in Balance, individuals would change their consumption preferences, placing a premium on products and services created using environmentally friendly processes. This could mean, for example, encouraging the consumption of pulses and vegetables to drastically reduce the consumption of meat because of the environmental consequences of raising livestock for human consumption.



**Social entrepreneurship is a key concept combining multiple levers. It is a multiplier that consolidates business excellence practices for the purposes of serving the common good. The organizations that have been set up with this spirit constitute a seed that could flourish into an example of the virtues required by our society at this moment in time**

The pursuit of mechanisms and alternatives to facilitate the multiple use of a single asset by various people is another common recourse. Clear examples can be found in the practice of sharing private vehicles for everyday transport in urban areas (carpooling or car-sharing), the return to exchange systems, giving away what is no longer useful to you, and even opting to rent instead of purchasing and owning assets.

Education at home should strive to create a balanced attitude to income. It should promote equal opportunities between genders and establish healthy guides for conduct, thereby reducing health costs and improving quality of life in old age, while encouraging the mixing of generations. These are all guidelines that each individual should follow to make the transformation towards a World in Balance possible.

### **The power of the people**

Individuals have a growing potential to act as agents of transformation by adopting ethical criteria for all of their actions and demanding that those with institutional responsibilities apply them too. This power is backed up by the integration of interest groups in collectives, in order to achieve improvements more quickly and to have a greater impact.

The Internet and social networks are vehicles that have demonstrated the power of the collective, with results both in the virtual world (all kinds of viral campaigns) and in the real world too, acting as a catalyst for transformation processes such as the Arab Spring, among others.

Moreover, the concept and practices of co-working and crowdsourcing are a possible response to the challenge of a flexible labour market in which people can influence each other and join forces even though they do not necessarily work in the same activities or on the same projects.

### **Social entrepreneurship**

Individual good intentions are not enough on their own to move the planet towards sustainable growth. We will require mixed forms of organizational culture, such as a cross between profit-led organizations and traditional assistance networks.

Lever such as social entrepreneurship — a practice which places equal importance on the generation of profits for reinvestment and on sustainable social benefits over time — spur people to act as agents of change for the positive development of society.

The benefits of achieving social entrepreneurship, currently in its infancy and mainly involving individual initiatives in developing countries, could cause the transfer of this approach to the domain of traditional companies, which currently aim exclusively at obtaining profits for shareholder pay-outs. If this occurred it would be highly desirable.

Social entrepreneurship is a key concept combining multiple levers. It is a multiplier that consolidates business excellence practices for the purposes of serving the common good. The organizations that have been set up with this spirit constitute a seed that could flourish into an example of the virtues required by our society at this moment in time. BBVA can be found amongst these, as will be shown below.

Today, the pioneers of change are promoting market solutions to global challenges, on a small scale. They employ financial practices in the developing world, help construct water infrastructure in remote populations, implement new shared vehicle schemes to reduce traffic and pollution, and apply new health service methods in countries with low incomes and ageing populations.

Even though these efforts are minuscule compared with the magnitude of the challenges we are facing, they play a vital role in starting the transformation and they significantly contribute to redirecting our path towards a World in Balance.

# ***Different Lives in a World in Balance***

## **Families, increasingly diverse**

### ***Farha and Bettina, happily bringing their family together. Sydney, 8 May 2025***

Farha (46) and Bettina (43) live in Sydney with their two children, Daniel and Aashi. Bettina works as an environmental mediator and spends a lot of time travelling. She is currently in Melbourne.

It is six in the morning. Farha loves getting up early. “I must be the only one on the whole planet,” she thinks.

But there is Bettina, her image perfectly reflected in the mirror as if she was at her side. They say hi and talk about their plans for the day.

Before breakfast, Farha goes up to the garden they have on the roof. This is her favourite part of preparing breakfast. Each family has its own space on the flat roof of the building and they pick their own avocados, strawberries and peaches.

At the table, Aashi chatters away while Daniel, her older brother, eats breakfast in silence and checks the messages on his phone. After clearing the table, they put the cups and plates in the dishwasher, which will start automatically when the home software determines the solar cells have produced enough energy and there is enough hot water in the tank on the roof.

Farha, Aashi and Daniel check the school timetable. Both children have flexible timetables adapted to their specific interests. Today, for example, Daniel is registered for a virtual visit to the World Expo and he will have to produce a multi-media report. Aashi, on the other hand, has opted to participate in the “Democracy Game.” The game gives students real municipal government problems and asks them to suggest possible solutions.

When they leave the apartment, Farha looks at her electronic agenda to check the morning’s energy use. Their home has emitted almost 2 percent more CO<sub>2</sub> than normal because Daniel had to heat water using network electricity. “We’ll have to compensate for this during the rest of the week,” thinks Farha. She sends a message to say she will pick up the evening dress she has ordered from the Spanish store associated with [tenestilo.com](https://www.tenestilo.com), rather than paying the delivery costs.

Farha accompanies her kids on the bike ride to school. They are there in less than 15 minutes because the traffic lights have been optimized for bicycles. Very few people use their cars on a daily basis; there are several car-sharing services and Farha is using one today to go and buy her daughter’s birthday present, a second-hand piano she found on a website for exchanging hobby items. Over the past 15 years, sustainable consumption has slowly been introduced and today it is completely normal in Sydney.



When she gets home, she starts work. As a life-planning consultant, Farha is contracted by companies who want to ensure their employees have the best possible working environment and they can reconcile their working and family lives in order to optimize their capabilities. Farha uses AIAnalyzing software to look over the profiles of her clients. Depending on how much data the client is willing to share, she reviews training calendars and working timetables, checks posts on social networks, sends messages of encouragement, suggests changes in diet, asks people to get into contact with her, and responds to requests for consultancy. She is especially happy with the progress of Harry, who works as branch manager for a major bank. He is from Hobart, Tasmania, and he has managed to change his lifestyle in order to be able to look after his adopted son.

At lunchtime, Farha takes a look at the network of local stores. She wants to know which products are in season before going shopping. Each food item has a RFID (Radio Frequency Identification) label and is registered automatically in the fridge, so the fridge itself notifies her before anything reaches its expiry date. This has dramatically reduced the amount of food thrown away: in 2012, up to a third of all food produced was wasted.

Before returning to work, she checks on Bettina's day in Melbourne and takes a couple of minutes to analyse the health data of her parents in Bangalore. Everything seems fine on the



other side of the Indian Ocean. Her phone also informs her that Daniel and Aashi will be home in an hour's time.

Aashi is a member of a virtual orchestra made up of kids living on all five continents. There is an open rehearsal scheduled for today and the whole family can watch, even their grandparents. When they arrive at the cultural centre, Aashi goes to the music cubicle, and Daniel and Farha look for a seat in the audience. The connection is made to the platform and they find themselves amidst a large audience, which does not stop them from all having the sensation of being in the front row. Their grandparents are projected alongside them, so they can chat as if they were really sitting together.

Back home, they have dinner together and then the kids go to bed. Farha connects with Bettina again and tells her how well Aashi played the piano during the rehearsal. They talk about their day in the living room, with Bettina's face on the TV, almost as if they were together.

### **The new environments of the individual**

#### ***Wei-Lu, happy with his lifestyle. Shanghai, 8 May 2025***

Wei-Lu is a 39-year-old engineer specialized in Information Technologies. He is single and he lives in Shanghai, working for SMG (Shanghai Media Group), one of the most important companies in Asia. He has a good job and he enjoys working in the sector of IT security and human relations.

Wei-Lu is very interested in the relationship between art and technology in a city such as Shanghai, the largest in the world in terms of GDP growth and the second largest in terms of the number of homes. When he wakes up, Wei-Lu can still sense the virtual reality he programmed the previous night for his dream, which enabled him to enjoy views of the fishing port and the pagodas of medieval Shanghai. When he gets up, there are just skyscrapers and neon lights.

He has a sweet rice soup as part of his vegan breakfast while getting ready for work, and he connects to his smartphone application on the screen in his living room. His “assistant” — his smartphone — has the same name as his favourite childhood singer: Jay.

Jay suggests a possible timetable, which Wei-Lu changes slightly by delaying a meeting. The smartphones of the others attending the meeting are quick to confirm the change.

Wei-Lu checks the press but Jay does not highlight any particular news, so he takes a look at the information most viewed by his friends on the social networks. He then orders Jay to tell anyone writing to him he will respond personally to messages when the meeting is over. The smartphone screen is flashing: it is Alexander, who is about to go to work. Wei-Lu sends him a request to pass by so they can go together.

Three minutes later, he is closing the apartment automatically and descending from the 88<sup>th</sup> floor to the hall. The people around him are all in a hurry to get to work and he remembers the



medieval Shanghai of his dream; a few trees would not be amiss. Alexander's ETA is 90 seconds, and he turns up right on time in his brand new German vehicle. The passenger seat is upholstered in leather, but the fuel cell in Wei-Lu's car is much better, as befits someone with his position in the company. Alexander turns on the automatic driving so they can discuss work. Jay directs the vehicle to the closest drive-through ATM, because he knows Wei-Lu needs money to buy vegetables in the traditional market, which is held every Thursday in the neighbourhood.

Half an hour later they arrive at the tower where the meeting is to be held, as recognized by their smartphones. Two hours later, Wei-Lu returns to his post. The meeting has been a success, there were no problems and those in attendance were happy with the improvements made to the conference room: they talked as if everyone participating was actually there. Wei-Lu was responsible for the machine which prepared and handled the connection data and which was charged with evaluating the participants based on analysis of previous meetings.

During the rest of the morning he answers his messages and talks to some co-workers, tasks only interrupted by a break for tea. Jay reminds him it is lunchtime and asks if he wants to visit a new art gallery. Wei-Lu asks him for a 75-minute break and a CO<sub>2</sub> zero-emissions driverless taxi to take him to the Beijing East Road art gallery, with a stop en route to pick up

some fast food. The gallery is specialized in virtual sculptures: objects only visible through glasses which decipher the corresponding software. The gallery staff explains that there are a limited number of pairs of glasses to see the works of art concealed in the city. Jay recommends he buy two pairs and does not allow anyone to bother him for the next half hour.

Before returning to work, Wei-Lu publishes a comment on his social network and checks out what his friends are up to. His smartphone tells him his purchases have been made and the products will be delivered that night to his home. He always works until sundown, and when he gets home the lights of his apartment are already on.

Handel's music is playing. Wei-Lu is happy and his mood is reflected in the menus and applications he consults. When the shopping arrives and everything is organized, he accesses his parents' database to find out what they have done during the day. He is an only son and has to take care of them. They live in a village close to Zhengzhou just three and a half hours away by train, but they still view it as 1 000 kilometres and feel a long way away. When he left home, the relationship between them became closer. Today his mother has received an unscheduled visit from the doctor so Wei-Lu calls them: it was nothing serious.

His parents are the members of a page that lets them look for relationships for their son, and they have organized a meeting with a girl called SunYue. He should go. Wei-Lu goes out onto the balcony. From there he can see his office. He is thoughtful and decides to have a cup of tea with his Confucian deity. He starts the programme; the projection begins with the programmed movements. Then come the questions on two topics: his parents and society.

The rest of the night goes well. SunYue, the girl he meets, seems interested in art, so they go to the centre of the city in his vehicle. The glasses allow them to see the sculptures interacting with the environment: waves on the asphalt, the passers-by transformed into an army of ants, etc. And they arrange to meet next Saturday so she can show him where she works: one of the first nano-electrical power plants working with photosynthesis in the province of Zhejiang.

To end the day, he reads the news while cleaning his teeth, and once in bed, he accesses the medieval view of Shanghai in his virtual reality. To go with the images, the system reproduces a fragment of the rehearsal of an orchestra of children from all five continents, which is a hit on the social networks. Wei-Lu falls asleep with the feeling of being in a very different Shanghai to the one in which he lives.

### **The elderly, getting younger and younger**

#### ***Carmen and Antonio, happy to manage by themselves. Madrid, 8 May 2025***

For more than 25 years, 72-year-old Carmen helped her husband in the office with programming and the accounts. Since her retirement, she has run "Hire a Grandmother," an Internet service for helping families with small children. Antonio (76), her husband, teaches carpentry to young people in a local school. Their son, Jorge, works in Jakarta.



During his entire working life, Antonio hated getting up early, but now he has been retired for a decade and can sleep all day long, his internal clock wakes him up at six. There are still 30 minutes to go before he has to take his morning medicine. He gets up without waking Carmen, and in the corridor he says: “Lola, reading glasses.” Lola is the name he has chosen for the “smart” system application of his house. It is also the name of the virtual assistant of his bank. The response is immediate: “On the kitchen table.” He is happy there are sensors in the house. At first he did not want to bother, but the joint offer from the mobile phone and security company works really well.

At quarter past seven, Carmen joins Antonio in the kitchen. She is accompanied by her small robodog, who also looks after them in her own way. Zita, as she is called, fetches Carmen’s pills, and she encourages them to play ball with her if they have not done any exercise. Last year, Carmen fell over when Antonio was away, and Zita called the ambulance and contacted the tele-doctor.

Carmen consults the electronic blackboard in the kitchen and tells her husband his carpentry class is today at three in the afternoon. Around a dozen students are scheduled to take part. As for her, she has to pick up Jaime, one of the kids she looks after as a grandmother. For evening plans, her telephone guru suggests a Galician bagpipe concert, which she thinks is a great plan.

While she is going over the agenda of her “Hire a Grandmother” service for the next week and responding to the mails from new families in need of her help, she receives an on-screen call from Jorge. It is 10:30 am in Madrid, which means he is about to finish his working day in Jakarta. Antonio is happily pottering around in his small workshop, but that does not stop all three of them from enjoying an animated conversation.

On Thursdays their food is brought to them at home. The company, a subsidiary of their medical services supplier, brings individual meals exactly in line with their nutritional needs. If they use the service at least three times a week and allow it access to their personal health data, they get a significant discount on the service.

Carmen loves looking after Jaime. They walk to the nearby park together, where there are just a few children. Aluche has become a neighbourhood full of old people, Carmen thinks, and she entertains him with the images of a children’s concert that is about to end.

Antonio always calls a taxi when he goes to the school to give classes. He likes chatting with the drivers. Lola has managed his agenda and taken care of reserving the classroom. Now her voice is telling him he is just five minutes away, and she reminds him not to forget his toolbox and the work samples he promised the kids last class.

The students arrive in high spirits. Apparently the school has been awarded a grant to set up a new virtual reality room. That is good news. But Antonio thinks the kids should learn things based on reality. He starts his class by explaining the tools he has brought with him. Some of them remember the names from the previous week, but others write them down in their digital folders to find out what they are used for.

During dinner, Carmen and Antonio talk about their day’s activities. A few minutes later, with the table cleared, Carmen’s smartphone guru reminds her of the bagpipe concert. Eight people they know are going to see the band. They reckon they could take advantage of their community points to buy the tickets. After all, Carmen gets points for looking after kids with learning difficulties three times a week during the summer holidays. Another option would be to watch and listen to the concert at home using their virtual reality system.

An hour later, Carmen and Antonio are on their way to the concert hall. The cost of travelling around Madrid is astronomical; it varies according to the CO<sub>2</sub> emissions of the vehicles. So they decide to go by metro. While they are waiting for the train, the advertising board on the platform links up with Carmen’s smartphone and they access the list of their latest digital purchases. Then the system starts to suggest brands and products. At the concert hall, Carmen’s phone shows them the way to their seats, where their friends are waiting for them.

It is almost midnight when they get home. They are very tired, but they are happy to know their home looks after itself: during the night, the robot vacuum cleaner cleans up the dust and the dishwasher starts automatically when network electricity demand is at its lowest. That is

also when Zita plugs herself in to recharge her batteries. The TV has even recorded from the Internet the rehearsal of the Mawaar virtual orchestra made up of children from all over the world.

### More opportunities for children

#### *Julio Edgardo and Ana, happy to get ahead. Mexico City, 8 May 2025*

Ana (30) is a freelance designer of handbags and craftwork inspired by Mexican art. She is married to Julio Edgardo (32), a security guard at a large shopping centre. They want their children, Jorge and Luisito, to study so they have better opportunities in life. Julio Edgardo's parents live with them.

Ana wakes up first and does a mental check of her daily tasks. In the days running up to 5 May, a Mexican national holiday, sales have been good, especially because she managed to get some of her work into Fonart stores, which belong to the National Fund for the Development of Arts and Crafts.

Her father-in-law's smartphone, a model designed for older people, is charging in the living room. Ana could use her Internet TV to check her e-trade platform but the solar panels do not produce enough energy at this time in the morning. She does not want to spend too much, so she picks up her father-in-law's phone and consults the sales and the pages visited. It only takes a minute to access the data.

Then Claudio, her father-in-law, gets up. The first thing he does is his lung test using a preventative tele-health application. Then he is off to the community garden.

The city government leased the management of this space to the neighbours, and they pay a small amount in exchange for the services provided. Claudio is responsible for allocating and rotating the small allotments among the families and for the storage and provision of tools. The garden has sensors to monitor the humidity and the pollution of the fruit and vegetables. His grandchildren have installed an easy application for him so there is no waste during watering and natural insecticides are used.

Jorge and Luisito go to the bus stop on their own. For their safety, the school provides waistcoats with integrated RFID chips so in the event of an emergency, the children can warn the authorities or call a helpline.

Luisito knows school is important if he wants to get on in life — his parents are always telling him so — but he cannot help dreaming about football. Nonetheless, he tries hard to concentrate on his lessons. They are talking about how excess CO<sub>2</sub> caused the acidification of the oceans. He knows all about this subject. In actual fact, his grandfather lost his fishing boat because of it. His father is astonished by what the kids are able to understand in 2025. He had to watch an old film by Al Gore twice before he understood what it was about.





In the meantime, Jorge is busy in the school laboratory. He wants to compete in the National Chemistry Olympic Games and in order to classify at the end of July, he has to set up and document a difficult experiment.

At break-time in the shopping centre, Julio Edgardo chats with his colleagues in the staff room. They are recalling how they celebrated the 5 May party and one of them tells a story about an augmented reality projection, which gave him the sensation of being in the middle of a battle.

It is Julio Edgardo's job to control the monitoring station of the shopping centre for the next three hours; metal seagulls fly around the car parks and local streets.

Ana likes working in the sewing workshop. She shows other people how to sew the most difficult pieces, which she designed, or she looks at other people's work in search of inspiration. The government pays a good chunk of the rent, otherwise this space with its 3D printer and fast Internet connection would be too expensive. Today she has received an order for eight personalized handbags from a Spanish green brand and now — having distributed the work among the best weavers on the web, all grandmothers — she is busy drawing the designs.

When Jorge and Luisito come home from school, Ana is already at home, with all the designs finished and submitted to her colleagues. It is hard to motivate the kids to go over their

lessons, but Ana and Julio Edgardo are convinced the only route to a better life is through education.

A large part of the family budget goes towards paying training credits, which can be exchanged for online lessons. Many higher education providers now offer their services on the largest platform in the country, and just choosing the right lessons is an art in itself.

Julio Edgardo has bought a TV with Internet access thanks to a large discount he was given at the shopping centre. For several weeks now, Jorge and Luisito have been attending English classes in the University of Nairobi. They are cheaper than other options and they are very good. Educator training has been a major concern in Kenya for over twenty years.

The conversation over dinner is about the new environmental legislation aimed at reducing pollution and increasing energy efficiency, a measure Julio Edgardo is very critical of. Energy is getting more and more expensive, he says, and they already have problems paying the bills. Ana tries to make him see the positive side: they can always sell excess energy from their panels, or try to save to install more panels, so when the prices rise, they can earn more money.

They see some lovely images of kids yawning on the television, and turn the volume up. The worldwide concert has been a success despite the fact that the young musicians had to get up early in Mexico and stay up late in Sydney to adapt to the timetable of the conductor, a rather elderly man in Israel.

Before going to bed, Ana checks her orders again and her bank tells her she has one more, paid in advance! Tomorrow she will have to send another handbag by mail to San Francisco. May has turned out to be a successful month. She joins her husband and thinks to herself before falling asleep: we are climbing up the ladder in the world.

## BBVA COMMITMENT

The Vision 2020+ we have just unfolded, which originated from concerns regarding the fulfilment of our own potential future as an institution, leaves us with one very clear conclusion: the statement that our realities can be improved leads to our commitment to get involved in their transformation. This commitment is nothing less than the reflection of the BBVA vision, which sums up our strategy and our culture:

### *At BBVA we are working for a better future for people*

Our vision requires work to achieve the attributes of a better world: quality of life, respect for the environment, sustainable growth and the development of a partnership society. And it makes two things essential: the first is to take action in accordance with strong ethical principles — honesty, integrity and transparency. And the second is to be optimists: to believe human beings can and must find the way to solve the challenges we currently face. We also believe that a global financial group such as BBVA can make a significant contribution towards achieving this.

The financial industry is vital to development: World Bank data for the Human Development Index show a clear positive correlation between the per capita GDP of countries and the proportion of the population with access to financial services. The greater the degree of access to banking — and the more efficient and higher quality these financial services are — the greater society's capacity to respond to the major challenges of tomorrow and provide well-being to its citizens. That is why the main contribution a bank such as BBVA can make to development is precisely to perfect the way it offers financial products and services: in price, in accessibility and in how it adapts to the needs of each client.

Especially when we take into account the fact that only a fourth of the world population has access to financial services. In other words, there are more than 2.5 billion adults around the world excluded from the banking system, almost 90 percent of whom live in developing countries. Providing populations without access to banking with basic financial services would probably be the greatest impact a bank could have on human development.

In tandem with its daily activities, BBVA also undertakes a major exercise in corporate responsibility, to which it devotes an amount equivalent to 2.5 percent of its attributed profits. This task is focused on those levers we consider to be vital to improving the future of everyone, as described in the pages above: the generation and dissemination of knowledge, education and the fostering of social entrepreneurship.

These are the objectives guiding the range of initiatives undertaken by the Group, which include the BBVA Foundation, set up to promote and disseminate knowledge; and the BBVA Microfinance Foundation, already serving a million clients in Latin America (almost 4 million

beneficiaries). Then there are the programmes of the BBVA Group itself, which include the Financial Education Global Plan; the grants programme “Children Getting Ahead”, implemented in Europe, the US and Latin America; and the worldwide “Momentum Project”, supporting social entrepreneurs.

Banking — the financial industry in general — needs to bring about a profound transformation in order to adapt to major technological, social and individual changes and to contribute effectively to the great objective of a World in Balance. Changes that must be aimed at getting the most from the possibilities provided by technology in order to provide the best possible services and help achieve a better future for people. BBVA aspires to lead the transformation in the financial industry. To this end, we believe innovation is an essential lever: innovation for people.

### *People-focused technology*

Technology is a key lever for innovation. And innovation is the base of our business project. As a consequence, we have adopted a proactive approach to get ahead of the panorama appearing before us. Our work on prospecting and monitoring technological trends has enabled us to draw up a map of the future of technologies that are going to have an impact on the financial sector over different time scales.

This map has served, in a first instance, as an operational tool to improve our technological platform. That is how we have built a highly automated, consolidated and universal infrastructure to enable us to optimize our services, reduce costs and eliminate risks. This technological platform is the base on which we can set up a user-centred business model.

In addition, the map helps us anticipate technological innovations that continue to change the relationship models with our clients, and to detect business opportunities that will arise in the future as people adopt new technologies. Relationships with clients take on a new dimension when we are able to generate commercial offerings suited to the real needs of clients in real time, while connecting the real world to the virtual world seamlessly. From this point on, we are ready to tackle a disruptive change in order to develop our model, by placing the client at the heart of our business.

### *Understanding peoples' needs*

In order to ensure we can respond to the financial needs of people, we have carried out a major field study with interviews and observations from people with a range of attitudes and in different living situations: with or without access to banking, high/low incomes, experts in technology and banking and over a wide range of ages. Thanks to what people tell us, what they do, think, feel and believe, we are able to reflect on the nature of the bank of the future.



Easy Bank

From the perspective of clients in the financial industry, their functional needs can be summarized in two categories: “undertaking things,” in other words, solving transactional questions on a daily basis, and “achieving financial well-being,” which is connected to long-term objectives. In addition to these functional needs, clients expect to be recognized by the institution, they want operation dynamics to be safe and comfortable, and they want to feel satisfied what they achieve.

We have discovered there are a range of types of people, and they all have these same emotional needs in regard to their finances, but they value them differently during transactional experiences and when they are planning their financial future. Therefore, as a bank we have to provide an adapted response to build confidence and simplicity in the relationship, giving mutual respect and an adequate proposal.

This is the bank clients want.

### **Customer-centric bank**

In line with these ideas, we have been working on transforming the client relationship model to keep pace with developments in technology, individuals and societies.

The traditional banking model provides clients with a series of services. There is just one offer and clients must adapt to it. This is over. Banks must reinvent themselves and dance to the tune of client needs: we must give them what they need when they need it, so individual expectations are met. In a world in which clients have taken control of the relationship, the banks of the future must become a guide for them to achieve their aims.

BBVA's response is the Customer-centric Bank model, a bank with clients at its heart; one that is ubiquitous, transparent and intelligent, without losing sight of its human side. The new banking model is focused more than ever on clients, and it is geared towards offering a satisfactory user experience, consistent in all points of contact from the branch to the mobile telephone, from interactive ATMs to the Internet and the social networks, and through any kind of device.

In order to meet this objective, the bank must become universal, completely digitalized and integrated, providing global and easy access to its products and services with a robust and seamless experience.

The bank must have a flexible relationship model that facilitates contact with clients. Points of contact or channels offer all the options of access to banking services on a daily basis, so clients can set up the relationship in the way they feel is most suited to each moment, in a more granular way — in real and virtual worlds — and in a highly functional manner.

On the physical side, the concept begins to take shape through the creation of a new bank branch space called the Easy Bank.

### **Easy Bank**

This is a simple way of banking, in which clients make their transactions by themselves.

In this model, new spaces are designed to foster relationship transparency and break down barriers between clients and bank clerks. Interaction between clients and managers is easy and shared through a new partnership desk. The space is for and occupied by the clients. The clerks' workstations are moved to the backroom, which they leave to come and attend to clients.

In addition, new automated "ways of doing" have been set up, paper-free and with digitalized processes, as in the case of signing documents electronically.

Clients choose the channel they want to use to receive services. On many occasions, they do not require help from a clerk and prefer the self-service option. To this end, BBVA has developed a new self-service experience called Abil.

### **Abil**

Automatic teller machines were introduced en masse in the banking sector more than 40 years ago. ATMs met major needs of both the financial industry — service cost reduction and




increase in capillarity — and the clients — speeding up some of the most frequent operations and expanding the availability times of services. However, very few functional changes have been made to this channel since.

That is why, when BBVA decided to bring the financial self-service experience closer to the real needs of twenty-first century clients as part of its Customer-centric Banking strategy, the design of the ATM had to be developed to make it truly adapted to the needs and motivations of clients.

By responding to the aspirations of users in terms of simplicity, flexibility and ergonomics, the new design provides innovative concepts such as the large tactile screen with guided navigation, direct access and privacy; a single slot; 90-degree angle (perpendicular to the wall); and ancillary space so it can be operated comfortably. These operational advances have been recognized by prestigious and heterogeneous institutions such as *The Banker* in the UK and New York's MoMA Museum of Modern Art in the US.

The success of this initiative has led BBVA to improve other similar channels such as the Drive-Thru, self-service for vehicles, with a high degree of expansion and acceptance in certain regions of the US, which has benefited from the Abil experience. This approach has also been turned on the virtual channels, such as remote banking and mobile banking, where users want a better experience.



**Right now, the Innovation Network — a network of collaborators — is a highly developed and stable ecosystem, which has expanded around the world and is composed of more than 40 000 scientists, investors, entrepreneurs and some of the best known analysts in the science and technology sectors**

#### ***Lola: Distance banking virtual assistant***

At BBVA we have analysed the demands of the users who most use virtual channels and the barriers that put many other clients off using them more. We have learnt that clients expect these unattended channels to provide a simple and individualised experience, and above all, for them to generate the same confidence in operations and decision-making as inspired by a personal clerk at a branch.

That is why at BBVA we have been working on the design and development of Lola (the internal name of the project) for some time now. This is a virtual assistant specifically for financial services, capable of communicating with clients by using natural language and helping them find the information they need, or even making transactions in their name.



The assistant, which understands the bank's commercial offer and the needs of every client, can even give advice on decision-making related to financial situations, and it is able to contract products.

### ***BBVA: Our own innovation model***

Innovation is more than just managing creativity and ideas; it requires a method and skills in order to apply a range of disciplines. At BBVA, we first focus on client needs, and then we evaluate the alternatives depending on their attractiveness for the client and their economic sustainability. The entire rational process involved in our innovation initiatives undergoes a series of monitoring points to guarantee only the ones that become increasingly viable during the process make it to the next stage.

BBVA's innovation agenda takes a range of dimensions into account to ensure balance; one concerns the scope of the transformation. For BBVA, one aspect of incremental innovation is the on-going improvement of our service in all the regions in which we operate, and the significant improvement in our skills, which differentiates us in the eyes of our clients. Innovation is disruptive when it allows us to expand the frontiers of the business and creates completely new value for the brand. It is a question of reinventing experiences, and leading the transformation of the financial industry.

The route map we designed has led us to generate numerous significant innovations in our current business model, many of which have become points of reference within our sector of activity.

This is all the result of a decade of work. At the beginning of the millennium, here at BBVA we set up the first innovation organization in order to respond to the opportunities on offer at the birth of the digital world, in anticipation of the impact this would have on the way clients operate with the bank. That is how Uno-e — an online bank, Adquiria — the marketplace for online purchasing and negotiation, and Solium — cloud computation services, came into being alongside other initiatives.

While analysing the key factors for the 2020+ outlook, at BBVA we have identified the emergence of new economic frameworks, which in some cases transcend the financial sector. BBVA works to identify the opportunities on offer and to develop solutions covering the needs detected. We also have to analyse them in relation to our key skills and identify which skills have to be acquired or improved.

Areas with major opportunities for development for 2020 include universal banking access, health, digital entertainment, smart cities and education.

### ***Universal access to banking services***

As we have pointed out above, providing financial services suited to populations without access to banking is essential to building a better future. However, the traditional financial services industry does not offer a complete solution to the basic financial needs of the most

disadvantaged populations. The main reasons are that people do not hold all the necessary documentation (such as a mailing address); they live a long way from bank branches (involving additional costs and loss of income); and they cannot afford the price of traditional banking services.

The field research carried out around the world to better understand the needs and wishes of this population has raised three global questions that must be tackled simultaneously. The first of these is key and consists in promoting the adoption of financial services. Populations with access to banking must be educated to increase their understanding of financial products and services and to help them benefit from them. At the same time, questions concerning accessibility must be resolved. We have to eliminate the long journeys required to visit a branch and simplify contact points, enabling banking without branches and creating easy-to-use machines. Lastly, there is affordability. Most people without access to banking are paid in cash, they spend 80 percent settling bills in the first few days after being paid, and they keep 20 percent for the rest of the month. At BBVA we have been working to implement much more accessible and cheaper models — especially in Latin America — in order to provide financial services in more disadvantaged sectors. At the same time, our efforts in financial education seek to promote the adoption of financial services.

### **Smart cities**

By the end of 2012, 74 percent of economic growth worldwide will be concentrated in cities, together with half the world population. This kind of concentration is already generating tensions in the exploitation of natural resources and infrastructure. It is not therefore an exaggeration to claim that the living conditions of the vast majority of humanity depend on the efficient and sustainable management of cities.

In this context, a large number of metropolises around the world are moving towards the smart city model. What smart cities have in common is the efficient management of resources and the improvement in the quality of life of their inhabitants through the intelligent use of technologies and information. In what is commonly referred to as the “Internet of things,” data generated by sensors are doubtless one of the most potentially interesting and rich flows of information for measuring and understanding the rhythm of cities and their inhabitants.

At BBVA we analyse these data for a variety of applications, such as to determine the optimal location for public services, to model the real impact of events, to optimize transport networks and to determine the precise valuation of commercial outlets.

Of particular importance amongst the challenges faced by smart cities is the area of transport and mobility. Tensions inherent to the use of natural resources and the limitations of infrastructure become apparent here. What is more, transport has its own challenges as regards its environmental footprint, its direct impact on everyday well-being, its capacity for



BBVA Innovation Center in Madrid

creating economic growth, its strict requirements for coordination and operability, and lastly, its global nature, which transcends the scale of the cities.

At BBVA we are exploring solutions to some of these transport challenges in order to contribute to the development of more convenient, accessible and sustainable services. An important trend is towards seeking out multi-modal solutions for transport, where the user gains

an improved experience of mobility thanks to the integration of a range of means of transport such as private vehicles, trains, the subway, bicycles and taxis. A vital element guaranteeing the success of these solutions is the transparency of the user experience. And a necessary condition for this transparency is open and multi-modal payment solutions: here is where a financial institution could play a major role within a value chain that continues to offer big opportunities.

### **Health**

The health market is not saturated: the more demand is met, the more it grows because life expectancy is increasing. Nevertheless, the consequences are clear: unlimited demand for a finite service produces an increase in costs and generates tension due to the impossibility of meeting it.

The health care ecosystem is undergoing a profound transformation through a range of health systems in order to guarantee greater access to quality, which is endangering its sustainability over time.

The new paradigm of the healthcare model must be defined to ensure it is more efficient, sustainable and balanced. To this end, a new relational model is required capable of strengthening the patient-doctor union, based on three essential axes: new technological developments, new clinical research, and innovative business models.

BBVA has the opportunity to participate meaningfully in this industry, and by employing its skills, it can provide new solutions to facilitate and promote this new relational model.

### **Digital entertainment**

Technology and social networks have radically changed the way in which people consume content, relate to each other and have fun. “Network leisure” is growing exponentially and it has sparked the appearance of virtual currencies and new payment methods providing backing for the new business models generated by these new consumption habits.

A new trend, which is revolutionising digital marketing, has appeared strongly related to the concept of digital leisure and entertainment we are exploring. “Gamification” takes the mechanics and dynamics of the design and experience of games and applies them in other domains. BBVA is having an impact on these and other aspects in order to apply the new trends to our proposal and relationship model.

### **Education**

As we have discussed above, a World in Balance is only possible if we increase the level of training of the global population. Technology and innovation are key levers for meeting demand and distributing more knowledge to more people without an unsustainable increase in costs. We

at BBVA have spotted major opportunities in this scenario to unify this new offer and manage it properly according to demand, while helping to ensure an increasing number of people can receive training in the areas they require, when and how they want.

### *An innovation partnership model*

We at BBVA understand that only partnership can lead us to a World in Balance. Our corporate responsibility initiatives pursue the creation of partnerships with other institutions such as the UNHCR (the UN Refugee Agency) and the OEI (Organization of Ibero-American States) for primary education initiatives. We work with the World Bank on initiatives for financial inclusion, with the OECD on initiatives for financial education, and with the ONCE Foundation on initiatives for social integration and work for people with disabilities.

This philosophy of partnership lies at the base of our innovation model, a model open to all creative people and institutions with ideas and talent. In fact, we created the BBVA Innovation Centre with the fundamental objective of being close to people and helping them innovate.

### *BBVA Innovation Centre*

The BBVA Innovation Centre is a meeting point and key reference for anyone in the BBVA Group who has ideas and wants to improve things. And of course, its doors are also open to the world outside. It has a wide-ranging agenda of activities and events focused on innovation. Visits by experts, round tables, workshops and meetings add to the chance to get to know first hand some of the group's innovation projects. This is how the centre has become a meeting point to share, listen and learn from others.

The Innovation Centre is a broad concept that is not restricted to a single physical place. We have other spaces in different locations around the world: the US, Mexico and Colombia, where we give local talent access to the knowledge of the expert innovators who work with BBVA. We share our innovation projects and we seek to draw attention to the needs, ideas and talent of the countries where we operate.


The BBVA Innovation Centre is the coordinator behind a large innovation community: experts in innovation and entrepreneurship ecosystems, among others, interact and participate in discussions and activities linked with innovation. Programmes such as BBVA Open Talent and other initiatives supporting entrepreneurship based on technology aim to facilitate the exhibition, visibility and launch of projects, while at the same time keeping BBVA in close contact with ideas and talent.

Other entrepreneurial activities worthy of special mention that receive backing from the BBVA Innovation Centre are the TR 35 awards promoted by the Massachusetts Institute of Technology (MIT) and the EMTECH (Emerging Technologies) event held in countries such as Spain, Colombia, Mexico and Argentina.

Over the years, we have slowly built up a vast worldwide network of innovation, which has enabled us to share information between the best specialist sources of science and technology, experts in different fields and institutes, and companies in different locations around the world.

Right now, the Innovation Network — a network of collaborators — is a highly developed and stable ecosystem, which has expanded around the world and is composed of more than 40 000 scientists, investors, entrepreneurs and some of the best known analysts in the science and technology sectors. The plurality of points of view provided by these experts in different disciplines of knowledge has increased and enriched our capacity to observe different realities.

These areas of knowledge have generated new ideas on how to tackle the following key questions for BBVA from a different perspective: 1) a real, substantive change in the financial industry; 2) a new value proposal for the client; and 3) the identification of new business opportunities beyond conventional models.



**Transforming our client relationship model means making our internal relationship model highly collaborative, based on the sum of each individual's talents. At BBVA we believe in a collective intelligence that emerges when people work together: this is greater than the sum of the individual cognitive skills of each member of the group**

### **Key skills**

The 2020 outlook offers us the chance to move beyond the conventional model for our business, acquiring new key skills to transform the business model and to contribute to a scenario of a World in Balance.

We have currently identified disruption areas common to the new economic and social frameworks. Each of these disruption areas requires a group of skills to meet specific needs and to formulate new business models or new sustainable ways of providing people with services.

BBVA aims to lead the transformation of the financial industry — and we are equipping ourselves with the corresponding skills — using the following lines:

- A branch-free banking model, a step along the road towards universal access to banking starting in emerging markets, whilst simultaneously facilitating entry in mature economies with a simple user relationship model and with cost efficiency.
- The development of new value services closer to people, with a single and simple access, using knowledge based on internal and external data sources.
- New payment methods adapted to all social realities, the ubiquity of the digital world and new purchasing styles.



- Banking as a service that allows us to offer part of our value chain to new or existing business models by generating hybrid value models and proposals.

### **Internal transformation**

It is unrealistic to think about changing outwardly if you do not change internally as well: our intention of transforming our client relationship model must involve transforming our internal relationship model into a highly partnership-oriented model, based on the sum of the talents of each individual.

At BBVA we believe in a collective intelligence that emerges when people work together: this is greater than the sum of the individual cognitive skills of each member of the group. We believe the combination of the knowledge held by the group can create a broader and more complete vision than isolated multiple intelligences and skills. That is why we have made a commitment to building a community to share knowledge beyond the traditional methods of teamwork.

The intention behind introducing the partnership environment to the logic of our everyday work is to activate dynamics that transform the administration of knowledge into a route by which it can be shared more effectively: a route that generates commitment, global thought processes, and improvements in skills and experiences from which our clients can benefit.

In addition to facilitating a partnership of internal talent through a new working environment, our focus is necessarily on attracting, training and retaining the best professionals in the Group. In those countries in which BBVA operates, published surveys identify us as one of the best employers. Leadership is not just an aspiration for BBVA; it is a requirement. As a consequence, we invest considerable effort in training leaders who take on board the values we defend and who make a personal commitment to them. Our executive development programmes are the best guarantee of keeping our commitments over the coming years.

### **CONCLUSIONS**

Through drawing up our Vision 2020+, we have learnt a great many things about our world, our potential as an institution, the power of the collective, the need to get involved in change management, as well as the shared challenges humanity faces and how we can tackle them responsibly and ethically. BBVA is an institution with a culture of ethics and solidarity. And the people at BBVA who work for others participate in this culture. Our Vision 2020+ recognizes that we are part of something bigger than ourselves, and our task of working towards a better future for people requires that we make a contribution to walking forwards together towards a World in Balance.

Let's move ahead.



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BY ANALYSING THE TRENDS AND CHALLENGES THAT WILL SHAPE THE FUTURE, **BBVA's Vision 2020+** IDENTIFIES THREE POSSIBLE FUTURES: A FLUCTUATING WORLD, A WORLD IN CRISIS AND A WORLD IN BALANCE. WE HAVE THE KNOWLEDGE, RESOURCES AND TECHNOLOGY TO HANDLE THE TRANSFORMATION AND IF EVERYONE CONTRIBUTES — GOVERNMENTS, INSTITUTIONS, COMPANIES AND CIVIL SOCIETY — WE CAN OVERCOME THE CHALLENGES TO ACHIEVE A WORLD IN BALANCE. THE ARTICLE CONCLUDES BY SETTING OUT HOW **BBVA** PROMOTES INNOVATION IN ALL AREAS, AND HOW THE BANK WILL TAKE PART IN BUILDING A BETTER FUTURE FOR PEOPLE.

# BIOGRAPHY

## Beatriz A. Lara Bartolomé

BBVA

Beatriz Lara is a graduate in physical sciences from the Complutense University of Madrid (1986) and she completed her university studies with management programmes at the IESE (University of Navarre), MIT Sloan and Harvard.

Since she began as a researcher she has acquired skills in the fields of quality, standardisation, development, information technologies, manufacturing industry, deployment of the net, large commercial accounts, business development, marketing, strategy and the creation of new businesses and alliances.

She has created and led multi-disciplinary teams to take on complex international projects. She is considered to be a visionary and entrepreneurial. She has undertaken most of her professional career in a highly innovative and technological sector, performing leadership roles in multinational such as ITT-Nokia, AT&T Network System, Ericsson and Alcatel. She is currently the Corporate Transformation Manager at BBVA. She joined the group in 2006, in the Technology and Operations department, and she held the post of Innovation Manager until September 2012.