



EXECUTIVE SUMMARY

THE PROJECT

Spain 2050 is a strategic foresight exercise that has a dual goal:

- To improve our understanding of the social, economic and environmental challenges and opportunities that our country will face over the coming decades; and
- To create a multi-stakeholder dialogue that generates a Long-Term National Strategy that will allow us to set priorities, coordinate efforts, and ensure the prosperity and well-being of our citizens in the future.

This study is a first step in this direction. In preparing this document, we have divided the 27 EU Member States into three groups of countries based on their level of performance (low, medium and high) according to a set of standard economic, social and environmental indicators. We then analysed how, over the last thirty years, Spain has successfully moved from the low to the medium performance group in regard to most of these indicators and asked what we would have to do to join the high-performance group (which we call the "EU-8") in the next thirty years.

The result is a set of *Fundamentals and Proposals* that includes:

- a diachronic and forward-looking analysis of nine major challenges that Spain will have to overcome between now and 2050 if it wants to consolidate its position as one of Europe's most advanced countries;
- more than 200 proposals to achieve this; and
- a set of 50 quantitative targets and indicators to use in designing areas of action, taking specific measures, and monitoring progress over the coming years.

These *Fundamentals and Proposals* have been drawn up by the National Office of Foresight and Strategy of the Spanish Government along with a hundred renowned experts from different generations, political views and a range of disciplines (economics, environmental sciences, demography, sociology, history, political science and law, among others). Support was also provided by several government departments, the AIREF, the Bank of Spain and the European Commission's Joint Research Centre.

Thinking about the future is a State responsibility, not a governmental one, because the time horizon of the exercise spans several parliamentary terms. For this reason, the analysis has been conducted from a non-partisan perspective that places methodological rigour and empirical evidence above political positions. The entire study is based on a broad empirical, measurable and verifiable base, consisting of over 500 data series and some 1,650 scientific publications - mostly peer-reviewed academic articles and reports produced by European institutions, international organisations, think tanks and third sector entities of proven technical competence.

The study, therefore, takes a national approach. The aim is neither to endorse nor refute any political party's programme, although it does aspire to help all of them, as well as public institutions, companies, NGOs, trade unions, universities, foundations, associations and other organisations of our civil society.

We present it not as a *fait accompli*, but as an initial proposal that will need to be improved and completed over the coming months through a national dialogue involving all the stakeholders of the country.

We believe that Spain must look more to the future and that it should do it in a way that differs from the way it tends to look at the present: that is, with less confrontation, more scientific rigour and greater optimism. Our hope is that this exercise will help to achieve this.

ANALYSIS

The content of *Spain 2050* can be summarised in three central ideas:

- I. Spain has improved considerably in the last four decades of democracy.
- II. Spain faces great present and future challenges.
- III. Spain can overcome them all and position itself as one of the most advanced countries in Europe by the middle of the century.

We believe these three statements are simultaneously empirically true and that any strategy we design should take them into account.

I. Spain has improved considerably in the last four decades of democracy

Over the past forty years, Spain has undergone a profound transformation that, in many respects, is exemplary and unique on a global scale. In just four decades, we have gone from an impoverished country poorly connected with the rest of the world to a prosperous and open country, with a modern business environment and an extensive welfare state that has allowed us to reach, or even surpass, the EU-27 average on a wide range of indicators.

Economic progress has been more than remarkable. Between 1978 and today, our per capita income has doubled; our employment rate has increased by 15 points (which is equivalent to generating 8 million net jobs); and our infrastructure network has improved to become one of the top 10 in the world. At the same time, our companies have successfully integrated into international trade and financing networks, increasing our trade openness rate from 27% of GDP to over 67% (that is, more than countries such as France or Italy), and making Spain a world leader in sectors such as tourism, construction, transport, renewable energies, agri-food, banking and fashion.

The quality of our human capital has also improved immensely. Between 1978 and today, the average number of years that our population spends in education has doubled; the school dropout rate has fallen from 70% to 16%; and the proportion of people with higher education (university or higher vocational training) has increased from 16% (among those born in the 1940s) to 47% (among those born in the 1980s). As a result, the skills of our population have improved dramatically, at a rate only comparable to that of Finland over the same period, and are practically in line with the EU-27 average.

This progress would have been impossible without the advances and consolidation of our welfare state, whose capacity to provide quality public services and to support those most in need has increased steadily since the transition to democracy. Today, inequality is down by 37% (doubling the early 70s rate), the State provides us with universal and first-class health cover and supports more than a million people who have dependency needs. Among other things, this has enabled Spain to achieve one of the loftiest goals to which any country can aspire: to have the third highest life expectancy in the world, surpassed only by Switzerland and Japan. Our country's millennials will live, on average, 36 years longer than their grandparents, and 18 years longer than their peers in Morocco. They will also do so in better health.

On the institutional front, Spain's progress has also been enormous. In 1980, the Museum of Modern Art in New York refused to return Picasso's *Guernica*, arguing that the necessary democratic freedoms did not yet exist in our country. Today, Spain is, according to all indexes, one of the fullest democracies in the world, with levels of electoral reliability, freedom, social rights and citizen security higher than those of countries such as France or the United States.

In the area of social inclusion, our progress has been equally remarkable. Spain records one of the lowest gender gaps (in employment, wages, education, rights and political participation) in the EU and become a country that is tolerant of differences and otherness. According to the latest data, Spain is one of the ten best countries in the world to live and work as a woman, and one of the most respectful of people's sexual orientation, religion and culture.

It is also one of the countries most concerned about the climate emergency. In the last two decades, Spain has reduced the amount of municipal waste it produces by 27%, lowered pollution in its cities, and increased its electricity generation from renewable sources to 100,000 gigawatt hours - enough to power more than half of its homes. Thanks to this, Yale University's latest *Environmental Performance Index* ranks us as the 14th most sustainable country on the planet.

All these data illustrate something that should never be forgotten: Spain is a success story. When we think about what is happening by limiting ourselves to the immediate present, it is easy to succumb to pessimism and the feeling that "things aren't getting better" or that "they are getting worse". However, when the empirical evidence and medium- and long-term trends are analysed, it is clear that our country is on a positive trajectory on most fronts.

II. Spain faces severe challenges - now and in the future

Of course, this does not mean that Spain does not have problems or that it should be satisfied with what it has achieved. It is undeniable that many of the changes between 1978 and 2008 were insufficient or inadequate, and that they were often built on weak foundations which, with the crises of 2008 and 2011, began to collapse. Today, the country still has major challenges and faces significant challenges which, if not overcome in the coming decades, will continue to limit our ability to grow in a sustained and sustainable manner in the future; will continue to make us more vulnerable to crises; and will prevent us from converging with the most advanced countries in Europe in terms of key aspects for economic development, environmental sustainability, and social equity and welfare. Of these many challenges, we look at nine here, which we believe will be particularly relevant to our future.

Chapter 1 examines the challenge of productivity and the pattern of economic growth. Despite the many advances made since 1980s, Spain today still has a level of productivity considerably lower than that of its European neighbours. This means that we generate less wealth and opportunities than other countries around us - something that is compromising the development of the whole society and explains the lower salaries, longer working hours, and poor competitiveness of many of our companies.

The demographic ageing that will take place in the coming decades could aggravate this situation. It is estimated that by mid-century, the Spanish population between 16 and 64 years of age could fall by 3.7 million to below 27 million (1996 levels), even if improvements are achieved in the birth rate and hundreds of thousands of immigrants arrive every year. In the absence of productivity improvements, this contraction of the labour force could cause our economy to stagnate between 2023 and 2050, with annual GDP growth of between 0.3% and 1.1% - well below the 2% growth we saw between 1996 and 2019. This would push us even further away from the advanced countries of Europe.

To avoid this negative scenario, Spain will need to make a firm and decisive commitment to education (from birth to old age), redouble its efforts in R&D, accelerate the modernisation of its business environment by taking advantage of the opportunities of digitalisation and green transition, promote the growth of its small- and medium-sized companies, reduce as far as possible the distortions created by administrative obstacles, and successfully tackle the issue of the black economy.

Chapter 2 examines the challenge of educating the younger population. While it has improved considerably, our education system still does not perform to the levels of most of the countries around us. This can be seen, among other things, in our high retake and dropout rates, as well as our learning outcomes, which are still below the EU-27 and OECD average. Without significant reforms, these shortcomings will continue to hamper the country's prosperity and the lives of our population. Between now and 2050, 3.4 million students could have to retake courses, 2.2 million could drop out of school prematurely, and Spain could be surpassed in learning and educational outcomes by countries like Portugal, Hungary and Latvia.

To avoid this, Spain will need to carry out extensive reforms of its education system, taking advantage of the benefits that both digitalisation and demographic change will offer. We need to transform teachers' careers, modernise the curriculum, expand the autonomy of our schools, create an effective evaluation system, strengthen support mechanisms for the most disadvantaged groups, and promote education from 0 to 3 years of age. The goal must be to become one of Europe's education powerhouses by the middle of the century.

The third chapter addresses the challenge of training and requalifying the workforce. In the last four decades, Spain has greatly increased its proportion of the population with a third-level degree (university or higher vocational training) and has converged with the EU-8 countries. However, it still has an excessively high proportion of people (48% of the active population) without professional training. This affects productivity, employment and the welfare of the whole country. Furthermore, our adult population has a considerably lower mastery of basic skills than our European counterparts. So much so that, in Spain, people with a third-level education have a lower level of reading literacy and mathematical ability than those with a baccaureate in the Netherlands.

In the future, as the knowledge economy advances, as technology transforms our business environment, as the working population shrinks, and as global competition increases, these shortcomings will become more acute for the country. And having a well-trained, up-to-date workforce will become even more important. In order not to be left behind in this emerging scenario, Spain will need to: reduce the population with only secondary education (from the current 40% to 15%); significantly increase the proportion of people who obtain a university or higher vocational qualification; and put in place a comprehensive retraining system that will allow us to upskill or reskill at least one million workers (employed and unemployed) every year. Only then will we be able to reap the productivity gains we need, successfully implement the green transition, and ensure the long-term sustainability of our welfare state.

Chapter 4 explores the climate and environmental challenge. Like most developed countries, throughout the 20th century, Spain adopted a pattern of economic growth based on the abusive and linear use of natural resources ("extract, produce, consume and dispose"). This pattern has caused unprecedented environmental degradation and has set in motion a climate crisis that could have catastrophic effects in the near future. The Spain of 2050 will be warmer, drier and more unpredictable than today. If we do not take decisive action quickly, droughts will affect a further 70% of our territory; fires and floods will become more frequent and destructive; sea levels and temperatures will rise; key industries such as agriculture and tourism will suffer severe damage; 27 million people will live in water-scarce areas; and 20,000 people will die each year from rising temperatures.

To avoid this scenario, we will need to become a circular, carbon-neutral economy by 2050, take steps to minimise the impacts of climate change, and transform the way we relate to nature. This will involve, among other things, radically changing the way we produce energy, move around, and produce and consume goods and services. We must take advantage of our great wealth in renewable energy sources, electrify transport, reinvent value chains, rethink our use of water, minimise the waste we generate, invest in organic farming, and promote green taxation. This will have to be done in record time, without reducing the competitiveness of our economy, and without leaving anyone behind.

Chapter 5 looks at the challenge of adapting our welfare state to a society that is living longer. Over the next three decades, the life expectancy of the Spanish population will continue to increase (potentially by more than 3 years), which will lead to strong degree of ageing within our demographic pyramid. In 2050, one in three Spaniards will be 65 or older, and for every person in this age group there will be only 1.7 people between the ages of 16 and 64 (today, there are 3.4). Potential possible improvements in the birth rate and a potential increase in immigration will not be able to completely reverse this scenario. Demographic ageing will bring important social and economic opportunities to the country, but also a significant challenge to the sustainability of our welfare state. By the middle of the century, health spending could rise by more than 1 GDP point, public spending on pensions could increase by up to 5 GDP points, and the number of older people benefiting from care could double, with public spending on care rising from 0.8% today to more than 2% of GDP by 2050.

In order to deal with these changes, Spain will need to commit to technology, redesign part of its National Health System, ensure the sustainability and adequacy of its public pension system, and ensure that older people play an increasingly active and satisfactory role in the economic and social life of the country. The way we think about old age and the division between work and retirement will also have to change - something that will benefit not only the state but also the public as a whole.

Equally important will be knowing how to structure and organise balanced, fair and sustainable territorial development; a challenge addressed in chapter 6. It is estimated that in 2050, 88% of our population will live in cities and that rural Spain will lose almost half of its current inhabitants. If we do not take action, large cities and their metropolitan areas will become larger and less sustainable, and problems such as access to housing and social segregation will worsen, especially in cities like Madrid, Barcelona and Valencia. Conversely, many rural towns and medium and small cities will lose their economic dynamism and suffer a sharp decline in terms of society and assets.

To mitigate these processes, we will need to restore the compact and proximity city model typical of Mediterranean culture; promote the creation of public and social housing; encourage the refurbishment of buildings; and transform the mobility model in favour of public or shared transport and the pedestrianisation of urban spaces. At the same time, we will need to revitalise rural Spain and medium-sized cities through a firm commitment to technological integration, public transport, remote working and economic diversification, taking advantage of the green transition, digitalisation and the development of the silver economy (which is associated with the needs of people over 50).

Chapter 7 examines the shortcomings of our labour market and potential future developments within it. Spain continues to record disproportionately high levels of unemployment and job insecurity that are splitting our society into two and damaging the prosperity of the whole country. This problem could be aggravated in the coming decades by the demographic and technological transformations that will take place. On the one hand, if we do not increase the rates of people getting into work, ageing could lead to a fall in the number of employed people at a rate of -0.5% a year between now and 2050, compared with the 2% increase we saw between 1995 and 2019. To avoid this scenario, we will need to raise the employment rate of women, young people and people over 55; encourage legal immigration; and foster the recovery and attraction of talent. On the other hand, the general spread of digital technologies will lead to a strong modernisation of our business environment that, in the short term, could result in job losses and a worsening of the working conditions of certain groups. To neutralise this risk, a strong expansion of active employment policies will be required; the regulatory framework will need to be adapted; and social safety nets will have to change to protect people rather than jobs.

These measures will also be essential in confronting another of the great challenges facing our country: to reduce levels of poverty and inequality. This is the focus of chapter 8. While Spain has improved considerably in terms of redistribution and social protection, it is still today what it was three decades ago: the EU country with the third highest income inequality and the fourth in terms of risk of poverty. In regard to wealth, the situation is somewhat more favourable, with a level of inequality in Spain similar to the EU average. However, for some years now there has been a worrying trend towards a concentration of wealth, with particularly sharp inter-generational differences. So far this century, the wealth gap between 65-year-olds and 35-year-olds has doubled, and now resembles that of the United States.

Without improvements in productivity and employment, and changes in the education system, inequality will continue to increase in the future, aggravated by trends such as demographic ageing and technological transformation. To avoid this, our country will, among other things, need to change its growth pattern, reactivate upward social mobility, tackle the housing problem, and undertake a gradual but profound tax reform that will provide the system with greater revenue-raising capacity and progressiveness and allow social safety nets to be strengthened.

Ultimately, all of the reforms listed should serve to achieve one goal: to increase the welfare of all citizens until Spain becomes one of the happiest countries in the world. After all, this is the purpose of public policies and of scientific, economic and social progress. **How to turn that progress into greater well-being is examined in chapter 9.**

III. Spain can overcome these challenges and position itself as one of the most advanced countries in Europe by the middle of the century

Overcoming these challenges will not be easy, but it is perfectly possible. The trajectory analyses and comparative policy exercises in this study indicate that, if it puts its mind to it, Spain will be able to weather the difficulties that future trends will bring, take advantage of opportunities and thus converge with the EU-8 countries by 2050. In fact, to achieve this, in many cases it will have to implement reforms and improvements similar in difficulty and magnitude to those already implemented over the last four decades. If we succeeded in doing it in the past, we can do it again, aided by the socio-economic transformations that the pandemic has accelerated and the ambitious recovery funds and plans that the European Union has set out.

Let's consider, for instance, **the economic challenge**. To catch up with the EU-8 countries and close the per capita income gap with them, Spain will need to foster its productivity by 50% between now and the middle of the century, while increasing its employment rates. It may seem like a lot, but the truth is that several European countries (including our own) have already made similar progress in the recent past. The fact that Spain is starting from lower levels of productivity and employment, and that there are favourable trends underway (such as digitalisation and the development of artificial intelligence, women's educational and employment equality, increased training, and the green transition) increase our chances of achieving this.

The same possibilism should guide our approach to **challenges relating to human capital**. To converge with the EU-8, Spain must do two things: improve its learning levels (for instance, with a 20-point increase in the PISA standardised tests) and increase the proportion of the population aged 25-34 with more than compulsory secondary education by 23 percentage points. Can it be done? We think so. For two reasons. First, because Spain has already made similar progress in learning and coverage in the recent past. Second, because the demographic and technological transformations that are already taking place will serve as a tailwind to achieving this. By 2050, Spain will have almost one million fewer students between the ages of 3 and 24. This will allow us to double spending per student to the level of, for example, Denmark without incurring a significant increase in public spending. This injection of resources, together with the widespread use of technologies such as big data, will help us to combat more effectively phenomena such as school dropout and segregation; uncover and make better use of the potential of the younger population; and reap the gains in coverage and learning that we need in order to place ourselves at the forefront of European education.

As far as **training the working population** is concerned, the truth is that we already have the institutions, infrastructures and human resources necessary to articulate the comprehensive retraining system needed. What is needed now is to implement a series of gradual regulatory and cultural changes which, to a certain extent, are already underway. If Spain was able to create almost 2 million training places in higher vocational training and university between 1980 and 2020, then it must be able to create a million places for much shorter training programmes between now and 2050 - especially if it makes use of digital technologies and hybrid teaching formats.

Turning to **environmental matters**, the challenges we will have to overcome in the future are particularly significant. To curb climate change and avoid its most harmful effects, our country, like the rest of the world, will have to go through profound transformations that will enable it to become a carbon-neutral and resource-efficient society, with sustainable and responsible consumption and production patterns. At the same time, Spain will need to increase its resilience to climate change, adapting to emerging risks and transforming the way we relate to the natural environment. Doing so will not be easy, and our track record to date warns us of the need for strong and immediate action in the coming years. Nevertheless, we can be optimistic based on the changes that have taken place since the beginning of the century (in terms of recycling, efficiency in the use of materials, water and energy, and the expansion of organic crops) as well as the plethora of legislative, economic and technological initiatives that are already underway. To the extent that most experts agree that Spain will play a leading role at European level in the green transition.

We should also be optimistic about **the challenges posed by increasing longevity**. The key is to understand that the cost to the State is determined not only by the number of years that citizens live, but also the degree of health they enjoy until the time they die, and their level of work and social activity up until then. Old age in the future will not be the old age of the past. It will start much later, will be more dynamic, and will not be so closely associated with phenomena such as inactivity or dependence. This means that, if we make the necessary institutional and cultural changes, in the coming decades the employment rate of older Spaniards could increase considerably and because they themselves wish it. Along with a series of reforms in our health system and the increase in public revenue that will be achieved by the means described in this *Strategy*, this could mean that by 2050 public spending in Spain on pensions, health and care services will increase, but at a manageable level of no more than 25% of GDP, which is similar to that of countries like Austria and France today.

Another of the great challenges our country faces is **guaranteeing the habitability, social cohesion and environmental sustainability of its cities while mitigating rural depopulation and ensuring territorial balance**. Between now and 2050, the proportion of the Spanish population living in cities will increase by more than 8 percentage points - something that could undoubtedly put additional pressure on current challenges such as access to housing, social segregation and environmental sustainability. However, we must not lose sight of the fact that, in the last four decades, Spain has already recorded a similar increase in urbanisation and that, even so, its levels of residential quality, access to housing, public safety and environmental pollution have improved or remained stable at levels comparable to those of the European average. If we were able to manage the urbanisation process relatively successfully in the past, we should be able to continue to do so in the future, helped by new technologies, phenomena such as teleworking and shared mobility, the increase in social housing, the generalised use of alternative housing tenure formulas, and a much more sophisticated and comprehensive knowledge of urban planning and socio-economic and territorial dynamics than existed in the past.

In some cases, the depopulation of rural Spain will not be halted. But this does not mean that all villages will empty or that opportunities and quality of life for people living in them will be reduced. Advances such as 5G, satellite internet and robotics will allow us to bring employment (remote working) and services (health, education and transport) to places where they have not reached so far; the silver economy, tourism and organic farming will boost economic and social activity in many villages; and the energy transition will provide clean energy and new job opportunities even in the most remote parts of the country. In 2050, fewer people will live in rural Spain, but those who do could live better than they do now.

Adapting our labour market to the new social, economic and technological realities must also be approached from a possibilist perspective. Demographic change will substantially reduce our labour force, but if we manage to cut the unemployment rate and raise the employment rate to the current levels of the most advanced countries in Europe (that is, a 15-point increase to 80%), we will be able to neutralise to a large extent the negative effects of ageing. From losing 2.5 million potential jobs, we will create 1.5 million by 2050. The same will happen with technological transformation. History teaches us that technology always ends up creating more jobs than it destroys. If we are able to take advantage of all its benefits, we will generate new jobs, increase productivity and improve working conditions for the majority of the working population.

Another aspiration must be to reduce inequality and poverty rates. If we succeed in laying the foundations for economic growth based on productivity gains and creating stable, quality employment, we will be able to improve the purchasing power of the population as a whole; greatly reduce the effects of economic crises on inequality and poverty; and generate sufficient public revenue to increase social spending. If we also improve the quality of our human capital at the levels covered by this study, we will manage to reactivate upward social mobility and provide more and better economic and employment opportunities for our population. Reducing inequality to the levels of the most advanced countries in Europe and halving our poverty rate by 2050 is entirely feasible.

The same possibilist approach can and should be applied to other challenges that may arise in the future. Spain has severe shortcomings and will face significant obstacles between now and 2050. Even so, the truth is that, since it has existed as a country, Spain has done nothing but progress and there is no reason to think it should stop doing so now. **The future is brighter than we think.**

THE PROPOSALS

Of course, progress will not happen on its own. In order to continue improving and converge with Europe's most advanced countries, today's generations living in Spain will need to implement profound reforms and bold and sustained initiatives over time.

This study suggests more than 200 that can be summarised into 12 main fronts:

- A firm commitment to improving the education of our population - from birth and throughout life.
- Robust and ambitious support for innovation on all areas, not only in the scientific-technological field.
- Strong modernisation of our productive system and business culture.
- Transition towards a sustainable and environmentally friendly model of development.
- Dramatic expansion of opportunities for young people, especially in areas such as education, employment and access to housing.
- Achieving full gender equality.
- Encouraging legal immigration and attracting foreign talent as additional ways to boost our economy and underpin the viability of our welfare state.
- Strengthening public services, with a special focus on education, health and care.
- Redesigning social benefits to move progressively towards a model that protects citizens on the basis of their needs and not only on their employment history.
- Reforming our tax system to increase its revenue-raising capacity and improve its progressivity, so that it is able to finance the strengthening of our welfare state without compromising the sustainability of public accounts.
- Modernising public administration to create efficiency gains, and improving the policy-making process through a greater attention to empirical evidence, experimentation, evaluation, social collaboration, and the analysis of trade-offs.
- A core commitment to the rights and interests of future generations. The decisions we take today cannot end up jeopardizing our children's well-being.

It is difficult to achieve that which cannot be measured. Therefore, we have created a dashboard that includes 50 specific goals that Spain should meet by 2050 if it wants to converge with the most advanced countries in Europe. When designing and selecting these, we have tried to adhere to the following three conditions:

- The goals are quantifiable. That is, they all can be measurable using datasets that are European in scope, regularly published, and widely approved by the academic community.
- The goals should be ambitious but realistic. The convergence pathways have been designed through a careful analysis that takes account of past trajectories, projected future trends, dozens of comparative policy cases and the interdependence between goals.
- The goals and indicators are capable of being updated and can be modified or replaced by others as the current situation changes, so that they do not end up being obsolete by 2050.

JUST THE FIRST STEP

These goals and measures are merely a proposal - an initial draft that will need to be completed over the coming months through a national dialogue involving the country's main stakeholders. They will need to be reviewed every few years in response to new social, economic, environmental and technological realities as they arise. In other words, this study is not intended to be a rigid roadmap for change, but an invitation to change. A call for reflection, dialogue and collective action.

We humans cannot predict the future, but we can dream it, plan for it and make it a reality. Let's be optimistic. Let's regain confidence in progress, in our country and in ourselves. The well-being of current and future generations depends on it.