

# BASQUE COUNTRY

## A nexus of European innovation

The autonomous region in northern Spain is home to a diverse, modern and internationalized industrial economy.

Strategically located at the center of the European-Atlantic axis and Spain's northern border with France, the Basque Country extends across about 2,800 square miles that is divided into three provinces — Álava, Biscay and Gipuzkoa — with its most famous cities being its administrative capital, Vitoria-Gasteiz; bustling Bilbao that contains one of Spain's most important ports; and Donostia-San Sebastián, which is probably best known internationally for its outstanding gastronomy.

The autonomous region is also home to a flourishing and dynamic economy. While the European Union as a whole recorded 0.5% gross domestic product growth in 2023, the Basque Country's GDP expanded by 1.8% to reach over €80 billion and a further 2.1% rise is forecast by the regional government for this year. "This is a small region, but it's competitive and so is its industrial sector, which is modern, open and internationalized. Our economy is different from others in Spain because of the weight of our industries," says Pedro María Azpiazu Uriarte, former Basque Minister of Economy and Finance.

The Basque Country has always been Spain's industrial heartland, with the historic engines of its economy coming from areas like metallurgy, iron and steel products, rubber and plastic goods, coke plants, oil refining and shipbuilding. Over decades, however, the region has made concerted efforts to constantly build on its extensive expertise in these areas in order to modernize its traditional industries, innovate and diversify into emerging sectors as global circumstances, demands and technologies have changed.

In 2023, exports from the region's productive sectors generated about €33 billion, representing around 41% of that year's GDP. Its biggest export industry at the moment is an automotive sector that is responsible for 45% of Spanish automotive production, with around 300 companies operating across that entire value chain, from global vehicle manufacturers like Mercedes Benz to tire makers, precision component producers and electric vehicle specialists.

Advanced manufacturing is another specialty, particularly in metal components, machinery and equipment, and the Basque Country is now Europe's third-largest producer of machine tools. In energy, the region has combined the strengths of local giants like Iberdrola in electricity and Petronor in hydrocarbons with those of inward investors such as Siemens Gamesa to become a major international manufacturing and technological center for renewables, especially wind.

Other industries of the future that the region has a prominent global presence in include information and communication technologies, electronics, medtech and biohealth sciences such as gene therapies. And all of these export industries benefit from a robust local banking sector and close proximity to the Port of Bilbao, which acts



Designed by Frank Gehry, the awe-inspiring Guggenheim Museum Bilbao is one of the region's most famous landmarks

as a vast state-of-the-art multimodal logistics and transportation hub on the Atlantic coast.

### Investing in the future

The Basque Country's dedication to developing a modern industrial economy has not come at the expense of its 2.2 million inhabitants, who enjoy an extremely high standard of life, with the second-highest GDP per capita in Spain and low unemployment. "We have made progress in well-being because we have maintained a firm commitment in favor of the real productive economy, the generation of wealth as a source of social cohesion, competitiveness, quality employment and social justice," explained Imanol Pradales Gil at his investiture as the new president of the autonomous community, an event that took place in June after democratic elections.

Representing the party that has led the regional government almost constantly since 1979, Pradales' administration "will continue the work done by governments over the last 45 years" over its four-year term, he asserted. "The Basque Country must show that it wants to continue to be a model for political, institutional, economic and social stability."

The region also benefits from financial stability, with a central pillar of its autonomous status being an Economic Agreement with the Spanish state that gives it control over its tax systems. "This is unique in Spain. In other regions, the state collects and distributes revenues from taxes, but in the Basque Country, we collect the taxes and, after paying the state its small share, we are responsible for making sure the moneys are well spent in the region. This model gives us the ability to implement the right policies, as we know the needs of our local businesses, society and every aspect of our region so well," says Azpiazu.

The government's ability to invest in projects that will be advantageous to local industry and citizens has been bolstered by the Basque Country's share of Spain's €163 billion in financing from the EU's post-COVID Recovery and Resilience Fund, he adds: "This is a historic opportunity, being able to use funds of such magnitude to carry out transforming projects to contribute to the green energy, digital and demographic transitions. Some of the projects relate to decarbonization and electric mobility, for example, which will be very useful for our industrial sectors and will improve our competitiveness."

One focus of the government's ongoing investments is sustainable transport, notes Iñaki Arriola López, former Minister of Territorial Planning, Housing and Transport: "Key infrastructure investment projects we've been developing include extending the metro system in Bilbao, the most important metropolis in the region, improving the Basque railway network and increasing tram numbers to enable emission-free urban mobility."

During his investiture, Pradales stressed that his government intended to foster the conditions the region needs to take full advantage of the opportunities offered by digitalization and technology, sustainability and societal and health transformations. To ensure industry will be the driving force of the Basque Country's future economy, he announced various measures, including a new Industrial Development Plan, and he proposed that the region take another qualitative economic-technological-industrial jump forward over the next decade: "The Basque Country has been successful in its commitment to industry and economic modernization since the 1970s. We know well that industrial and economic development is the result of collaboration between public and private sectors. Let's take a new leap."

## Conducive environment for collaborative innovators

The highly innovative region focuses its R&D investments on advanced manufacturing 4.0, energy and biohealth

For the last 20 years, the Basque government has prioritized investing in innovation and providing a conducive environment for companies to do the same. As a result, annual spend on research, development and innovation now amounts to over 2% of the region's gross domestic product, a higher level than in any other part of Spain. According to the Basque Innovation Agency, Innobasque, in 2023 the region's public and private sectors invested a record €1.9 billion in R&D&I, with a large proportion of that spend being targeted at the region's three strategic target areas: advanced manufacturing 4.0, energy and biohealth.

"The Basque Country is classified as a 'strong innovator' in the European Commission's Regional Innovation Scoreboard, which has high impacts on sales of new products manufactured here. The Basque economy enjoys competitive advantages for innovation. For example, there's adequate support from public entities, we have a culture of generating entrepreneurs and capital is available for investment," says Andrés Arizkorreta García, president of the Basque Businesspeople's Circle, an influential body made up of the senior executives of large companies in the region.

The Regional Innovation Scoreboard 2023 states that 39.6% of all small and medium-sized enterprises in the Basque Country are innovators and many of them have been helped in their endeavors by government bodies like Innobasque and SPRI Group, the regional agency for business development. These two in partnership, for in-

stance, run an annual program for SMEs that enabled 385 businesses to carry out 540 innovative projects in 2023.

"The Basque educational system is very powerful too. Half our young people have a university education and there's a strong focus on professional education," says Pedro María Azpiazu Uriarte, former Minister of Economy and Finance. As well as four universities, the region contains around 100 vocational training centers and some highly specialized institutions, such as the world's first gastronomic university, Basque Culinary Center and the Machine Tool Institute — all of which ensure that companies have access to talent with cutting-edge skills and that the next generation of innovative entrepreneurs is secure.

In addition, the region has nurtured a network of 16 world-class technology and research centers — the Basque Research and Technology Alliance — which promotes collaboration, excellence, specialization and critical mass in R&D. With 3,800 researchers and a combined annual budget of €300 million, these centers work in close partnership with local companies to solve industrial challenges and transfer knowledge.

The regional government is equally concerned with adopting innovative technologies for the benefit of businesses and citizens. "We're open to everything," says Iñaki Arriola López, former Minister of Territorial Planning, Housing and Transport. "For example, the government has developed a series of tools for territorial planning that integrate future plans for residential develop-



Half of the young people in the Basque Country have studied at university

PEDRO MARÍA AZPIAZU URIARTE, FORMER MINISTER OF ECONOMY AND FINANCE

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ments, industrial developments, equipment and facilities across the region."

One thing that makes the Basque innovation ecosystem stand out is how all stakeholders collaborate together on major schemes that will advance the region. A great illustration is the Basque Hydrogen Corridor initiative that has 77 members: 12 government institutions, 13 knowledge centers and business associations and 52

businesses. Established in 2021 and spearheaded by energy company Petronor, this €1.1-billion initiative encompasses 46 infrastructure and other projects across the hydrogen value chain that will turn the region into an integrated hub for the clean fuel and help to decarbonize the Basque energy, industrial, residential and mobility sectors.

The new government led by Imanol Pradales Gil wants the region to further cement its position as a leader in innovation and has set a goal for public-private investment in science, technology and innovation to reach 3% of GDP by 2030. Its commitments for helping to achieve that include investing 6% more annually in pre- and post-doctoral programs, promoting financing for young entrepreneurs and increasing public budget investments in research, development and innovation policies by at least 6% every year.

## TOP 10 REASONS TO INVEST IN THE BASQUE COUNTRY

 Strategically located at the center of the European-Atlantic axis	 A transport and logistics gateway to Europe and the rest of the world	 Dynamic and diverse economy that expanded by <b>1.8%</b> in 2023	 Exports from competitive, future-focused industries generate <b>~41%</b> of GDP	 Collaborative business environment with <b>16</b> industrial clusters
 Ranked as a strong innovator within the EU, investing over <b>2%</b> of GDP on R&D&I	 <b>16</b> world-class technology and research centers invest <b>€300 million</b> a year on R&D	 <b>4</b> universities and <b>50%</b> of young Basques are tertiary educated	 Great quality of life, with a UN Human Development Index ranking of <b>0.936</b>	 <b>6th-best</b> FDI strategy of any mid-sized region in Europe, according to fDi Intelligence







# Forging forward in manufacturing

Irizar Forge is a global leader in practical and innovative heavy-duty crane components for offshore, onshore and subsea industries

Reflecting its extensive heritage in iron and steel, the Basque Country is the third-largest producer of advanced machinery in the European Union today and home to a number of hidden champions in high-tech metalwork sectors that are at the forefront of their global industries when it comes to manufacturing quality and innovation.

One excellent illustration is Irizar Forge, the leading expert in the metallurgy of forged heavy-duty crane components such as hooks and blocks that are used in onshore, offshore and subsea sectors like oil and gas, renewable energy, industrial mills, mining, construction, ports, harbors and shipyards. Irizar Forge has been manufacturing components that stand up to challenging applications in the harshest of environments from its Basque forge since 1923, reveals its managing director, Maria Lasa Irizar: "Our forge has been at the center of our business for 100 years and it's still going strong, using a combination of traditional workmanship and modern technology to produce internationally recognized, high-quality components that meet safety standards. Our clients are crane manufacturers and operators, so we work in a heavy-duty material-handling world where the quality and reliability of our products are paramount."

In 2017, the majority of Irizar Forge's shares were acquired by Royal Van Beest Group, the preeminent manufacturer of lifting, lashing and mooring fittings. Headquartered in the Netherlands, the group has a range of other prominent European brands in its portfolio that are experienced in complimentary technologies: Green Pin, Heuer Hebeteknik and Sling Supply International. This ownership has expanded Irizar Forge's global footprint and it now boasts a network of sales agents across the world, plus offices and warehousing in Spain, Brazil and the US.

In the latter, the group has a sales office and 48,000-square-foot distribution center in Houston, Texas, as well as facilities in Chicago that serve clients in the north of the country and Canada. "Irizar Forge's presence in North America is based out of Royal Van Beest's offices in Houston. Having a local team and stock in the US has helped us grow in the market and we've developed great relationships with local clients," states Irizar. As part of Royal Van Beest, Irizar Forge's clients benefit from the group's state-of-the-art logistics systems. It aims to have 99% of the company's standard products available in its warehouses at all times, with shipping taking place within 4 hours of ordering.



**Maria Lasa Irizar**  
Managing Director, Irizar Forge

Irizar Forge's standard products cover a comprehensive range of top-quality heavy-duty crane components that have a lifting capacity of up to 5,000 metric tons. In common with everything the company manufactures, these solutions are created using cutting-edge forging technologies rather than casting. That results in key advantages for clients, including higher safety levels, mechanical values and fatigue ratings, plus lower maintenance costs and longer lifespans. All of its products also comply with the highest international industry standards and are certified by, for instance, the LRS, DNV, ABS and BV.

In addition, Irizar Forge is an expert at developing innovative, tailor-made forged components. In order to solve specific complex engineering challenges for its customers, it offers a full-service advanced package that includes design, manufacture, in-house testing, inspection and securing relevant third-party certifications. In close collaboration with a client, this process starts with the company's engineers designing the right solution in terms of safety, reliability, durability, performance and other factors that are crucial to the individual customer.

This stage incorporates technologies such as 3D modeling, stress studies, finite elements analysis and fatigue strength simulations and, once the design is finalized, the company can forge components of up to 44,000 pounds in weight at its Basque plant. Those components are heat and surface treated to optimize their physical and mechanical properties, assembled into final products if required and they then receive a spe-



Irizar Forge's components are produced using state-of-the art forging technologies

cialized coating to protect them from the precise environmental conditions they will be used in.

## Sustainable partner for offshore sectors

Over the decades, the industrial sectors that Irizar Forge supports have evolved. "For most of our history, we catered to onshore needs, mainly in the form of industrial cranes. As cranes and their hooks have gotten bigger, we've adapted and, for the past 20 years, we've been targeting the heaviest-duty niches. Many of those niches are offshore, as the largest cranes are often attached to ships that used to work for the oil and gas industry. More and more, however, they are associated with offshore renewable energy installations, particularly wind power, which has

MARIA LASA IRIZAR  
MANAGING DIRECTOR, IRIZAR FORGE

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diversified our client base away from oil and gas. We've positioned ourselves to make sure that we can take on the largest, most heavy-duty projects and that our assets and skills are aligned to serve offshore operators," explains Irizar.

"Many of these installations are either built on the seabed or tethered to it. However, an increasing number are not fixed to the seabed, but instead float on mooring lines and this has become a new area of focus for us. Therefore, we're now forging products for mooring and towing, as well as lifting and installation." The company's geographical presence has also diversified, she adds: "We have two key markets at the moment:

North America and Brazil. The Gulf of Mexico is important to us, as is Canada as it focuses more and more on renewables. This year, 15% of our turnover will come from renewable energy, we hope 25% will come from North America and we believe these two areas have the greatest potential for growth. In renewables, Europe is a little ahead of the US, which still produces a lot of oil and gas from the Gulf of Mexico. We will be there as that region prepares to develop its renewable energy potential over the next five years."

Having been certified for waste management under ISO 14001 for two decades, Irizar Forge has been ramping up its sustainability credentials in tandem with its shift toward serving offshore sectors. "We work with very large companies that expect us, as a part of their supply chain, to be at the forefront of environmental responsibility and for sustainability practices to be built into our production processes," states Irizar. "We were a heavy consumer of natural gas until three years ago, when we introduced electrical induction to our forge, which allows us to heat products quickly and efficiently without gas. To further address energy efficiency and the green energy transition, we're now moving to ISO 50001 and have set ourselves the goal of reducing our energy consumption by 30% by 2030."

The company is ambitious to remain the worldwide industry's benchmark for not just sustainability, but also the design, manufacture and testing of practical and innovative heavy-duty crane components, Irizar notes: "Our 100th anniversary last year was a significant milestone. It highlighted our history and gave us an opportunity to look back, to remember where we came from, to look forward to the future and to determine where we are going. We are making sure that we adapt and roll with the times through careful strategic planning to ensure that we will be around for another 100 years."

# Unique medtech components that improve lives

Medical device manufacturers worldwide rely on assemblies, springs, stamping and bending parts from RPK Medical

The Basque medical technology sector is one of the region's most dynamic manufacturing and export industries. Eduardo Melón Lagos is CEO of RPK Group, a global leader in the engineering and manufacture of high-precision complex components that are used in a variety of industries. As he explains, one of the reasons that companies in the region are so strong in this technology area is that, "the Basque Country has an important tradition in mechanical industries — we were founded in the steel, metal, mechanics and automotive sectors."

RPK Group has been a major contributor to that tradition since 1974 when it was established in Vitoria-Gasteiz, the Basque capital. "We've been specializing in wire forming, spring manufacturing and small stampings for industries for 50 years and we have a global presence. More than two decades ago we opened our first plant outside of Europe, which is in Mexico and is currently our second-largest manufacturing facility. In 2009, we opened a plant in India, followed by one in China in 2018," says Melón. "In the last 20 years, the group's most powerful presence has been in the automotive market. Over that period, however, we've been developing other markets, particularly the medical and electrical sectors in which we have a lot of experience and potential."

The group's RPK Medical division is dedicated to the design, engineering, development and manufacturing of diverse metal springs, stamping and bending components, plus spring assemblies that combine both metal and plastic parts. The division's global clients include original equipment manufacturers, contract manufacturers and medical device engineers, which utilize its components in applications such as disposable autoinjectors, pen injectors, staplers, inhalers, pump sprays, wearable devices, safety syringes, catheters, airway products, blood collectors, canulas and lancets.

RPK Medical stands out from other businesses in its sector for a number of reasons. One is its commitment to not just exceeding its clients' quality expectations, but to developing solutions that make the lives of patients and healthcare professionals better. A key illustration of this is its creation of complex springs, assemblies and power packs for disposable autoinjectors, which are often used directly by patients in the regular treatment of, for example, allergies or glucose imbalances. Thanks to RPK Medical's engineering expertise and cutting-edge technologies, autoinjectors that incorporate its components easily, comfortably, safely and reliably deliver precise volumes of medication, whatever the viscosity of the drug being administered.

Another of the group's competitive advantages is the fact that it has six state-of-the-art manufacturing facilities in Europe, North America and Asia, asserts Melón: "We always offer local-to-local manufacturing, producing the necessary parts for any region on that continent. In addition, we have a very long tradition of manufacturing with specialized cleanliness requirements in all our medical clean rooms."

## Tailor-made innovation

Perhaps the most unique thing about the group within its sector is its focus on research and innovation, much of which takes place at the RPK Technological Center in Vitoria-Gasteiz that opened in 2016. "This has led us to greatly increasing our catalog of products in recent years and to expanding our capabilities in different manufacturing processes, such as laser welding and plastic overinjection," he reveals. "In the technology center, we also provide comprehensive tailor-made support to clients, many of which do not have advanced knowledge about our type of parts and their technologies. We can help with initial simulations, design and all types



RPK Medical is meticulous in its manufacturing cleanliness standards

of engineering processes, through to the development of prototypes, packaging, product testing and the industrialization of processes. We not only design products, we design manufacturing systems that incorporate different technologies."

Continuing at the forefront of innovation is a core pillar of the RPK Strategic Plan 2023-2026, which is guiding the group through the next stage of its development. Another is sustainability, Melón says: "Environmental sustainability is part of our company culture. We've had ISO 14001 certification for many years and have substantially reduced the waste we generate. Most of the energy we consume in Vitoria-Gasteiz and other plants is generated from photovoltaic panels and we're working toward 100% renewable energy. Today, the most carbon-intensive part of our product concerns the raw materials we buy. That's something we're working on with our suppliers, so that they also evolve their technologies."

For the CEO, an equally important aspect of sustainability is ensuring the ongoing economic strength of a group that achieved a 33% rise in its sales over the last seven years: "The post-COVID years have been complex for the industry in general due to, for instance, supply crises and energy price surges. RPK Group has come out of that situation stronger than before and in a good position, but we have to keep working on this. We've grown a lot in recent years and we want to continue growing, but in a sustainable way."

RPK Medical lies at the heart of the group's sustainable expansion plans. "We have sufficient knowledge, capacity and experience to grow in the medical sector, which is where we see the greatest opportunities. We're targeting the sector in Europe from our three plants in Spain and in North America from our Mexico plant — those are the markets that interest us the most, as there is exponential growth in the type of applications that we are expert in," states Melón. "If you look at the demographic curves and increase in pathologies in European countries and the US, you see rising demand for more types of treatment in which autoinjectors and inhalers are needed,



**Eduardo Melón Lagos**  
CEO, RPK Group

ones with increasingly specialized characteristics that put the focus on the user. This type of treatment needs to be comfortable and non-aggressive, and we are extremely skilled in those areas."

The group is now dedicating significant additional resources to build on its success in this field through its new RPK Medical brand. The division's primary target is North America, which represents 47% of the total global market and where RPK Medical already has numerous long-term clients. "We have an intense promotional plan in place, which includes participating in all types of general medical fairs and others specialized in certain applications, especially autoinjectors and pen injectors. We also have our own commercial team for the North American medical sector that is working in the region now and we have an important task ahead of us in terms of making ourselves better known," says Melón. "What I can absolutely assure all future customers is that they will be satisfied with our products. RPK has a 50-year history of always providing excellent services to its clients and of developing strong, long-lasting partnerships with them."

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