

How to meet worldwide manufacturing and service capabilities with a global technology partner

PES had a conversation with Xabier Irure, who currently holds the position of Global Commercial Director at Ingeteam Wind Energy. Its primary focus at the moment is expanding its global presence. The conversation centered on the potential for growth and the challenges associated with sustainability in a highly competitive environment.

PES: A warm welcome to this edition of PES Wind, Xabier. We're talking to you at what is an important time for Ingeteam, with the recent launch of a campaign focused on your global footprint. Tell us more about that and why this is an important focus.

Xabier Irure: Our customers are global; they manufacture from different locations around the world to serve their key markets, and as they are at the centre of our strategy, we try to stay as close to them as possible. Thus, over the years we have set up different locations globally, attracted the best professionals and transferred our know-how and processes to them to replicate our best practices and standardise quality.

PES: Just to provide us with additional context, your company's headquarters are situated in Spain, and you operate from five manufacturing facilities spanning four continents, is that right? Could you also share the total size of your workforce?

XI: That is correct. Our headquarters are located in Zamudio, Bilbao, where we also have part of our R&D team and state-of-the-art labs. Our main wind business manufacturing factories in Spain are located in Beasain for generators, plus Sarriuren and Sesma for power electronics.

As for the rest of the world, our production sites are located in the US, India and Brazil. Altogether, Ingeteam's headcount adds up to 5,000, considering all sectors we are operating in.

PES: As a global team with a footprint running from Europe to Asia and North to South America, how do you scale as efficiently and sustainably as possible, while delivering reliable and flexible solutions and services?

XI: We are a customer-oriented company, which means we try to be as flexible as

possible regarding product and solutions design, manufacturing and delivering them in key markets and providing after-sales services, such as spare parts, repairs and field services locally, bearing in mind the interests of our customers.

Having different manufacturing locations means we have to be in total charge of our quality control and manufacturing processes, thus we have been working under APQP methodology for years now, more recently under APQP4Wind, which has become the standard for the industry.



PES: How do the needs of the wind sector differ across the various global markets that you serve and how are you able to adapt accordingly?

XI: We adapt to the needs of our customers and at the same time, to the requirements of the markets. We adapt to their product strategies, try to partner with them and offer our technology know-how to develop the most efficient products, and nacelle assembly sites and service centres, to which we try to stay close. Cost competitiveness is a common trend across markets, and we have developed a global supply chain to optimise our product costs, but other regional considerations can affect us as well, such as local market requirements.

PES: With almost 30 years' experience in the wind sector, offering deep manufacturing and service expertise and know-how, what changes have you witnessed over this time?

XI: We have been in the wind industry since it began in Europe, establishing ourselves as early pioneers in this field. We have grown technologically and in capacity alongside very important companies, trying to set up a footprint close to them as they were growing around the globe. Since then, the industry has experienced enormous growth and over the years we have been involved in the race towards a rapid demand in volume, and the shift from remote in-land installations to offshore wind farms.

We have gone from smaller wind turbines with longer product life cycles to shorter life cycles in search of efficiency and bigger

machines, to product stabilisation and reliability, depending on the markets.

Technology and topology trends, technological developments in digital solutions and cybersecurity; the whole value chain of the sector has transcended borders, and competition is fierce now. Geopolitics has played and continues to play an important role too; in raw materials availability, and logistic solutions. Changes in terms of permit and market regulations in various countries, it's been a very intense 30 years, with many changes in an industry that is mature now and will continue playing a capital role in the sustainable electrification of the world and renewable energies.

PES: Your commitment to minimising any negative impact that your operations could have on the environment and ensuring sustainability is important; tell us more about this and how it is achieved.

XI: Ingeteam firmly believes that energy can be generated, transmitted, stored and consumed in a more efficient, and more sustainable way, and we're going to dedicate all our efforts to that in the next few years.

The triple sustainability goal, social, economic and environmental, that we pursue guides us in our daily activities, contributing to the energy transition. Our experience as an innovative company gives us the credentials to position ourselves as a key player in the electrification of a sustainable future.

In the past, we have played an important role as pioneers in the development of renewable energies. Today, our products

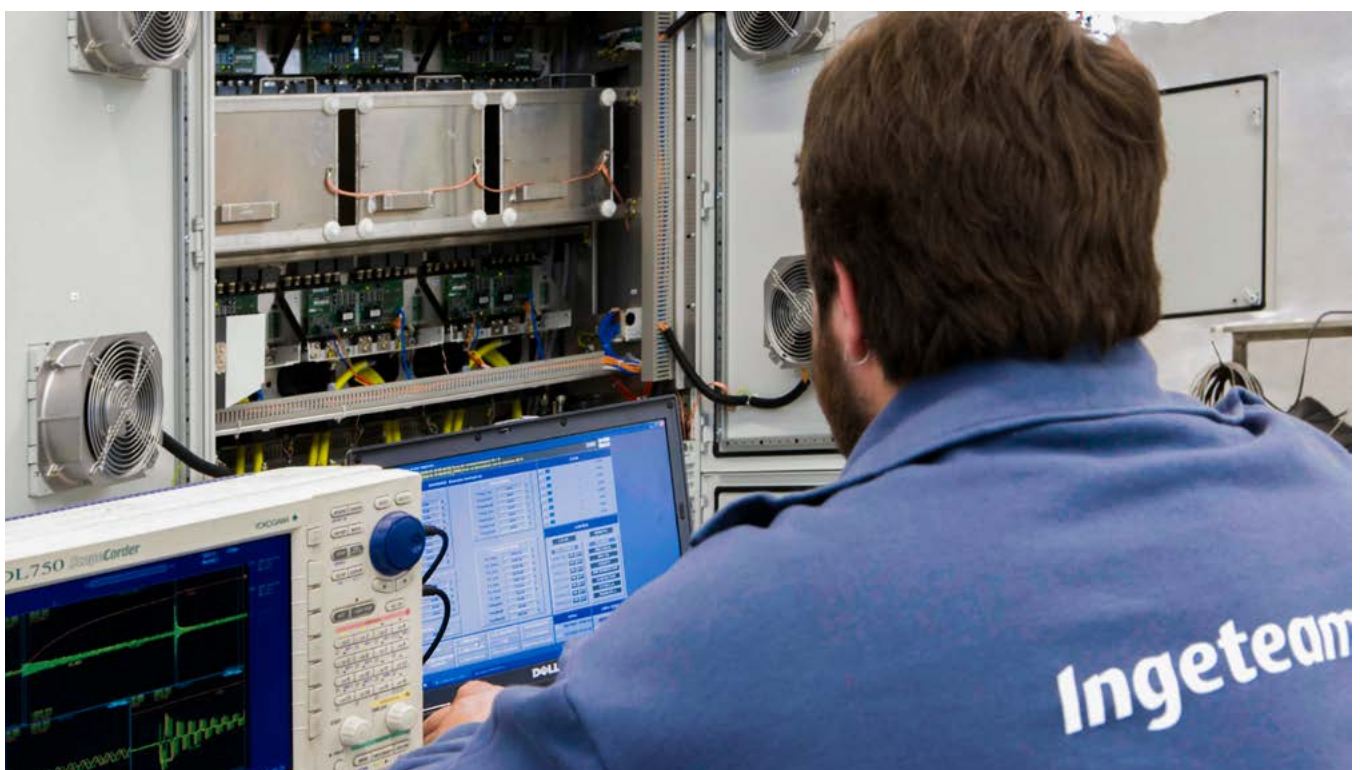


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contribute creatively and effectively to the energy transition from renewable generation to efficient electricity consumption.

We are fully committed to a full array of products, systems and services that will play a key role in the future as an energy carrier on the road to decarbonisation. We are also committed to the fulfillment of the Ten Principles of the United Nations Global Compact, working on the inclusion of aspects related to compliance, sustainability and CSR and conducting an 'Audit of Accounts for non-financial information and diversity' with positive results year on year.

PES: Is it accurate to say that Ingeteam's contribution to the decarbonisation





of society plays a pivotal role in your offerings? How is this commitment reflected in your manufacturing and service capabilities?

XI: At Ingeteam, we help make the environment more sustainable by minimising the impact of our operations on nature, reducing our energy consumption and our emissions of CO₂ and other greenhouse gases and encouraging recycling and awareness, via the training of our human resources and in general everyone with whom we come into contact. In addition, the equipment supplied by Ingeteam has continued to contribute to the reduction of CO₂ emissions into the atmosphere.

Contributing to sustainability as well, we are dedicated to dismantling decommissioned wind farms, and refurbishing and recycling wind turbines.

PES: As many as 11% of your personnel are dedicated to R&D; how important is this to enable you to react to such a fast-paced environment and on a global scale?

XI: As a technological company R&D is always at the core of our activity, developing world-class products and services to support our customers. Partnering with them is always our goal, this is a paramount added value we

offer to them, teaming up from the get-go of new developments, and proactively offering flexible solutions to respond to the complexity of the market.

We have experienced a very short life cycle of the products during the last 15 years, in the race for the next wind turbine, mainly in the onshore market; Western OEMs have reconsidered their strategies in this regard now, focusing on the reliability of their platforms, but Chinese OEMs are still in the race for the biggest wind turbine, both in onshore and offshore wind.

There are different approaches in the market and Ingeteam is ready to cater to the needs of our customers.

PES: To date, you have delivered in the region of 78 GW of converters and Indar generators to the wind industry. What are your plans for growth globally?

XI: Our growth in the wind sector will be aligned with growth coming from our customers and the global wind demand to contribute to the renewable energy development plans to meet the 2050 net zero and Paris Agreement goals. It has taken almost 40 years to achieve the mark of 1 TW of wind installations and the goal is to achieve the 2nd TW by 2030, which will require

the industry to install over 115 GW/year, a very ambitious target that might stress the wind value chain, but we shall be ready to support it and our customers.

PES: What's next for wind generally do you think, in each of the regions that you serve?

XI: As mentioned before, demand is going to be there. Wind energy will continue to be a great contributor to the decarbonisation of the planet. Governments have already set their pledges; they just need to act and act quicker now to enforce those measures that will support the industry growth.

We are seeing local content requirements, in different shapes and forms, being destined to protect and incentivise the industry in the US and Europe, amidst global geopolitical turmoil.

The wind turbine fleet is mature, many wind farms are reaching end-of-life cycles and they will need to be taken care of. Aligned with sustainability and circular economy goals and seeking the efficiency of those sites, dismantling, refurbishing and recycling wind turbine components will play a bigger role, and Ingeteam has already made its commitment to that as well.

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