CASE STUDY

Streamlining Energy Industry Field Work with Mobile Solutions from Microsoft and Intel

Iberdrola Renewables optimizes processes through mobility and data integration

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"When you are out in the field and you are troubleshooting, you really need to know the history of that turbine. It's really nice to have all that at your fingertips."

– Devin Carder, wind plant technician, Iberdrola Renewables

Iberdrola Renewables, LLC is the second-largest wind operator in the U.S. and part of the world's largest wind energy company. Iberdrola Renewables is already generating power from nearly 60 renewable energy projects in the United States and is leading America's transition to a renewable energy future.

The company was looking for ways to improve processes and operational efficiencies. Says Iberdrola Renewables director of operations business processes, Amy McGinty, "Our previous work order entry system was all done via pen and paper and manual entry into our SAP system by our plant administrators." Pain points included time spent by administrators deciphering illegible work orders, delays entering data into the system, and parts consumption and inventory management systems that were not kept up-to-date. Inconsistency of processes and procedures across wind farms presented another challenge.

The Mobility Program was implemented to improve business operations and productivity through the introduction of technology: a mobile tablet to support its field technicians. Says McGinty, "The mobility program first started in Spain in 2012. The intent of the program is to digitize our work order entry system to improve inventory management and parts consumption tracking, and make everything more real time."

Iberdrola Renewables relies on a corps of field technicians to monitor and maintain its extensive wind farms. Responsibilities include ongoing maintenance and repairs, troubleshooting when issues arise, job safety analysis, and conducting Environmental Protection Agency (EPA) Spill Prevention, Control, and Countermeasure (SPCC) inspections.

The company's IT staff in Spain and the U.S. analyzed different tablets, evaluating a range of criteria including memory, performance, hard disk, and screen sensitivity. The Microsoft Surface Pro* 3 was then chosen directly by the technicians from the frontrunners in an initial pilot. Jeff Buckley, senior wind turbine technician at Iberdrola Renewables was one of the trial participants, "We chose the Surface Pro because it was slim, yet had a good size screen, as well as a keyboard so we could input all the data we needed. And the protector was strong enough to hold up to anything that we needed." The learning curve has been swift—with a two-hour training session all that's needed to get technicians up to speed—and the tablet has allowed for seamless integration into the company's daily workflow. The choice was also optimal from the IT perspective. Says Eduardo De Frutos, IT project manager for Iberdrola, "Our main image is Windows, so by choosing a Windows tablet, we could allow our users access to all the corporate applications. We have deployed all security infrastructure and policies—this was a key part of the process of making sure the tablet we were using was able to be integrated into that security."

A custom Web-based application allows technicians to enter work order information, from turbine downtime to parts consumed to the number of hours spent working on a turbine. All the data can be entered in a simple, straightforward process.

Previously, in the event of equipment or performance issues, technicians would have to return to the wind farm's operations building to research the history of a turbine. Now, accurate, relevant data is available in a fraction of the time. Says Buckley, "When I go out to a wind turbine, I have pretty much our whole file cabinet on one device." Wind plant technician, Devin Carder agrees, "When you are out in the field and you are troubleshooting, you really need to know the history of that turbine. It's really nice to have all that at your fingertips."

"We are finding increased efficiency in the way our work orders are processed. We're finding our inventory is kept up-to-date and more accurate, and it's also improving consistency across our fleet of nearly 60 renewable facilities."

– Amy McGinty, director, operations business processes, Iberdrola Renewables

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Looking Forward

By addressing these specific and relatively small challenges with technology, Iberdrola has opened up new opportunities for business growth. Says McGinty, "This is just the beginning of a lot more we hope to do with these Surface Pro devices." Continues McGinty, "We find that this Mobility Program is just the starting point for our technicians to work with this new technology. In the future, we hope to grow into more collaboration between technicians using the mobile devices, better document management, and to move into a barcoding program which will better manage our parts inventory and warehouse capabilities."

McGinty sums up the solution benefits, "The Mobility Program has offered a lot of benefits so far in its rollout. We are finding increased efficiency in the way our work orders are processed. They're processed in a more timely and efficient fashion, and are a lot more accurate because we have our technicians working directly in the devices and that information is sent directly into our SAP system. We're finding our inventory is kept up-to-date and more accurate, and it's also improving consistency across our fleet of 55 wind farms." Adds wind plant technician Devin Carder, "The mobility device is definitely a must have any time you leave the shop."

The longstanding collaboration between Microsoft and Intel is enabling the energy industry to think differently about its core practices and competitive opportunities. From the beginning, Iberdrola's IT project manager Eduardo De Frutos recognized the critical relationship between business growth and technology, "We understood some years ago that if we are not able to increase the technology, we won't be able to increase our business to be better. That's why we put the technology in the center."

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About Iberdrola Renewables

Iberdrola Renewables, LLC is transforming the way the U.S. produces and uses energy. Strongly positioned to develop, build, and operate the clean energy infrastructure of the future, Iberdrola Renewables, LLC is already generating power from nearly 60 renewable energy projects for its customers in the U.S. and leading America's transition to a renewable energy future.

IBERDROLA, S.A. is an energy pioneer with the largest renewable asset base of any company in the world – more than 14,000 megawatts (MW) of renewable energy spread across a dozen countries. A company with a 150-year history, Iberdrola S.A. employs more than 28,000 people in nearly 40 countries and has placed the environment and sustainable development at the center of its global strategy.
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