

CASE STUDY

ServusNet: Enhanced Wind Energy Forecasting



The Need

ServusNet Informatics, a Cork based software company, specialise in wind farm operations management. Their existing solution provides operational intelligence & decision support capability to wind farm owners & operators. ServusNet identified an opportunity to combine their turbine data analysis expertise with metrological data to develop an Enhanced Wind Energy Forecasting solution. Collaboration with the TEC Gateway at Cork Institute of Technology allowed ServusNet to secure funding from Enterprise Ireland to develop and commercialise a forecasting solution which can achieve significantly enhanced accuracy of wind energy forecasting.

The Solution

Under the management of the TEC Gateway, the project combined ServusNet's turbine intelligence with best-in class numerical weather prediction and turbine modelling expertise. The project team comprised of leading international academic experts in wind forecasting, turbine modelling and energy management from UCC's Sustainable Energy Research Group, NUIM and CIT's TEC Gateway, and project management and software development from CIT's [Nimbus Centre](#). A solution was developed which allows producers to earn more revenue by selling more effectively into wholesale electricity markets.

The Result

- Wind forecasts downscaled to individual turbines.
- Historical, real time & planned turbine availability profiles rather than simple average values
- Competing wind forecast providers selected based upon their actual performance at specific site.
- Closed-loop statistical calibration of forecast versus actual for both wind & energy values.
- Probabilistic energy forecasts.
- Global hosted solution requires no on-site hardware and caters for all major turbine models.
- Extracts data from existing asset databases and exports to incumbent IT systems or through web browser.



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TEC Gateway

The TEC Gateway is the industry interface of the [Nimbus Centre](#), providing prototyping and innovation services and facilities to enhance existing regional industry, to create new start-ups with international potential and to build industry-led programmes to sustain growth in the Irish embedded systems industry.

ServusNet

ServusNet is a software company developing Operations & Maintenance and Operational Intelligence solutions for the renewable energy industry. Growth in this sector is driving the need for sophisticated software tools to manage larger portfolios of wind and other distributed energy generation technologies. Their team has experience in telecom network management and delivers innovative operations software products that reduce operating costs, improve production efficiency and increase planning accuracy.