

Asset Reporting Targeting Wind Farm Optimisation

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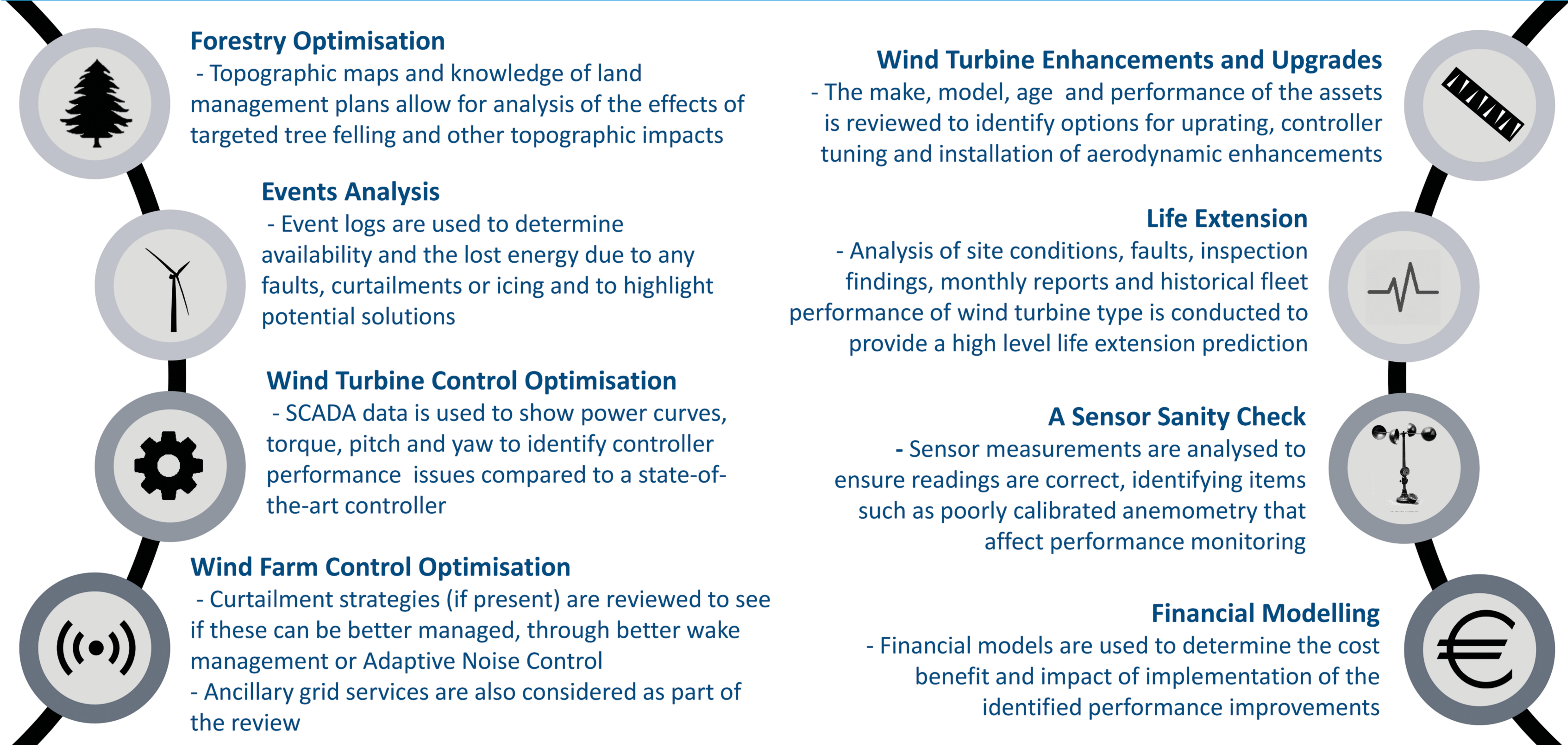
PO.026

Business As Usual

Asset reporting typically focusses on month-to-month operation, with a general performance overview looking at current revenue compared to the predicted revenue (the P50), availability indicators, and sometimes power curves. Whilst this kind of analysis highlights underperforming assets, it fails to highlight what can be done to improve performance and the root causes of any underperformance.

Wood has developed a method that specifically focusses on improving the performance of all wind farm assets, known as Optimiser Phase 1. This analysis uses a wide range of data sources and metrics to identify the root causes of underperformance and quantify potential solutions. This then acts as a springboard to target the most cost effective solutions to improve asset performance.

Wood's Holistic Optimisation Approach Covers...



...And Can Provide Real Returns

AEP gains of 2-6% are typically achievable on the average wind farm or portfolio, but can be significantly greater. This holds true even where regular reporting is taking place and where wind farm performance appears in line with the budget projection.

This is because optimisation takes many forms, can enhance even well performing assets, and requires specialist input. A holistic approach utilising expert opinion is therefore essential, which is where Wood excels.

Representative results from one of the targeted optimisation reports is shown to the right, highlighting some of the many improvement measures considered in a typical analysis.

The commercial gain associated with wind farm optimisation is significant for project owners and can also be used as a tool to support Merger and Acquisition (M&A) activity or refinancing.

Example site with significant potential	Potential AEP Gain [%]	Site Potential Revenue Gain	Outline Value Case
Forestry optimisation	5.0	€300k p.a.	High
Load mitigation using individual blade control	3.0	€180k p.a.	High
Active noise management	2.5	€150k p.a.	High
Improved curtailment strategies	2.0	€120k p.a.	Medium
Life extension	2.0	€120k p.a.	Medium
Control system improvements	1.5	€90k p.a.	Medium
Aerodynamic enhancements (e.g. VGs)	1.0	€60k p.a.	Low
Ice mitigation	1.0	€60k p.a.	Low
Static yaw error corrections	0.5	€30k p.a.	Low

Email Charlie.Plumley@Woodplc.com for more information
and check out PO.003 for technical details on the SCADA analysis

