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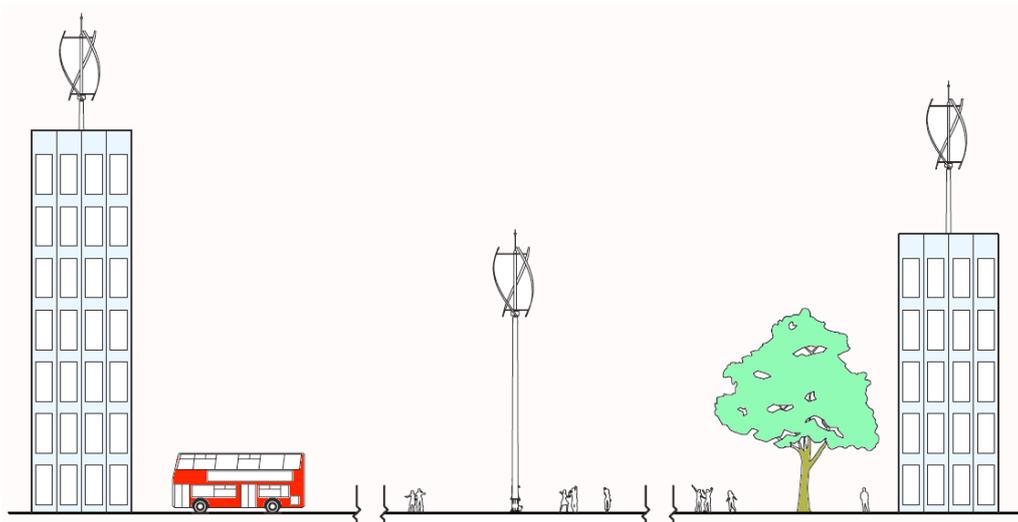
CAS/1024

Case study

Quiet Revolution Ltd

Action	Role	Name	Signature	Date
Authorised	Director	Fraser Mackie	<i>Fraser Mackie</i>	April 2011

Signature box only required for Issue 1 Documents; signatures NOT required on subsequent issues



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Scope of Project

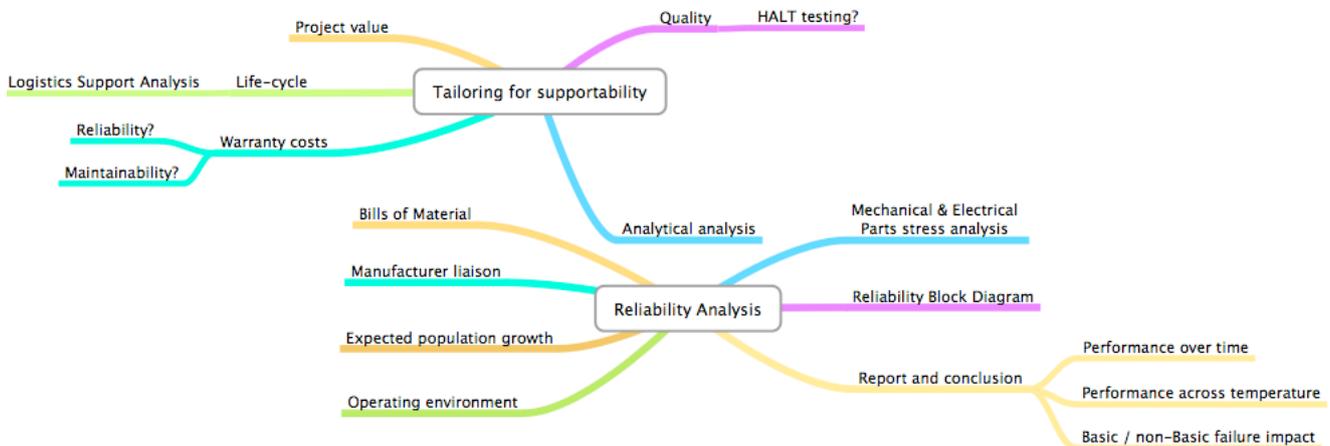
Key requirement: To deliver and satisfy an internal requirement for product reliability analysis, which would help the business focus on key areas for future design improvements.

Unique to the wind turbine market Quiet Revolution has seen demand continue to increase for its urban QR5 V1.4 vertical axis wind turbine. The QR5 rotor maximises output in turbulent conditions as it can use wind from all directions unlike traditional horizontal axis wind turbines that need to track the wind. So it was with great interest ILS Complete were awarded the opportunity assist with future design efforts.

To succeed in the above requirement our client needed expert advice to help maximise supportability of the product as the customer base continues to grow. Whilst notwithstanding mechanical performance of an individual turbine financial performance would also be a key concern. Understanding the long-term performance was a key requirement.

Services Provided

With many years experience in the application of tailoring for supportability techniques, a selection of exercises would be identified to achieve the best possible result. The predictive reliability analysis helped identify system weaknesses, while also assisting with making key design decisions as well as understanding the minimal site visits required for maintenance.



Key benefits

The analysis made for significant cost savings through identifying what sub-system components should be replaced. Maintenance strategies for basic and mission failure rates were also identified. The purpose of which separates performance related reliability issues from functional related issues. Understanding the difference between the two would allow our client to identify essential maintenance and periodic maintenance activities and likely associated costs.