

Building a Better Approach to Generator Sourcing and Preventative Maintenance

How Vertix Consulting Helped a Major US Telecom Service Provider to Understand the True Costs of Generator Maintenance



THE CHALLENGE

A major US telecom service provider desired to reassess its approach to maintaining its diesel backup generator ('genset') portfolio, having previously procured an extended warranty, coupled with an exclusive agreement for preventative maintenance directly with the manufacturer of the generators. These generators were used to provide emergency power to customer cell site equipment in the event of a utility power outage. Previous analysis had concluded that it made sense to adopt this structure.

The client was planning an additional large purchase of generators using the same approach to maintenance, combining an extended warranty with an exclusive maintenance agreement with the OEM. Vertix was brought in to analyze the assumptions behind the original business case to determine if there was a more favorable approach to repair and maintenance with both the initial pool of installed generators as well as for the pending new purchase.



THE SOLUTION

Vertex was engaged to assess the previous business case, including its structure and assumptions. It was also asked to review the current draft of the new generator RFP and to suggest improvements to the RFP approach and structure for both the equipment purchasing and maintenance elements.

A list of key subject matter experts was created for Vertex to interview. This included the Business Analysis team that worked on major business cases, the team responsible for managing the NOC and field dispatch, the team overseeing alarm monitoring of cell site equipment, and also the supply chain experts tasked with devising the RFP for the next round of generator purchases.

Vertex analyzed the NOC dispatch data to determine dispatches, repairs, and component replacement per-generator, based on age, model/size, operational area, state, and other criteria. Repairs were analyzed in terms of those that required replacement components vs. those

that did not (e.g., resetting, cleaning components, refilling fluids). Vertex also analyzed in-warranty repair visits that resulted in expenses for the repair of non-warranty items. Trend analyses were created to show the number of repairs by genset age, to understand the potential exposure to repair costs for generators outside of the extended warranty period.

In terms of the approach to alarm capture and monitoring, Vertex analyzed the alarms captured by genset type and by alarm type, etc. to determine trends and potential operational improvements. Vertex identified key opportunities for process improvement, including alarm capture and filtering. Vertex determined that a small number of generators were creating a disproportionate number of alarms, and that many of those were informational or otherwise unactionable by the operations team and third party repair vendors. Vertex also noticed that many alarms were created by issues with the alarm components themselves.



The results from alarm and dispatch data analysis, as well as the maintenance spend, was utilized to identify a cost-baseline. Alternative maintenance costs projections were then created to support decision making for the future generator maintenance strategy. The identification of historic data on warranty / non-warranty maintenance was utilized to refine the client's support requirements for the RFP, as well as expected costs that would result from breaking with the existing extended warranty and support agreement.

THE RESULTS

Using both our sourcing experience and business case validation capability, Vertix identified issues with the original extended warranty business case that significantly overestimated the likely cost of a non-warranty alternative. This enabled the client to approach its impending generator sourcing initiative with more flexibility in terms of maintenance options, potentially reducing maintenance costs.

Vertix identified that the extended warranty had been capitalized as part of the initial purchase. This enabled the CFO group to reassess the accounting treatment, and also to fully understand the financial implications of moving away from the extended warranty program early.

Working with the client's legal team, Vertix identified language in the original generator agreement that would allow the client to source maintenance services without requiring it to exclusively use the original equipment manufacturer's services.

Vertix used its significant sourcing and RFP structuring experience to suggest material changes to the draft RFP and sourcing approach for the upcoming generator sourcing initiative, including the use of a tiered volume discount structure.

Vertix's analytics experience helped it identify specific generators and alarm types that were driving the overall generator alarm volumes and creating



an unnecessary load on the NOC team. Vertex further highlighted an issue with the storage process for alarm data.

Finally, Vertex determined that over 40% of repairs for in-warranty generator installations were non-warranty repairs, with the labor and parts being paid outside of the warranty agreement. As the original business case assumed that 100% of repairs were in-warranty, this enabled the client to use more realistic assumptions in its future generator maintenance business cases.





About Vertex Consulting

We are a highly specialized consulting firm that provides pragmatic and actionable insights on the most critical issues faced by providers and consumers of telecom, media services, and technology.

At Vertex, we pursue our collective passion for helping carriers, OEMs, tower companies, MSOs, network services vendors, equipment suppliers, and telecom and technology consumers resolve their most complex strategy, sourcing, and deployment challenges. From helping a carrier deploy a 4G network to negotiating an IoT services contract for a client in the manufacturing sector, we cover the entire TMT value chain.

Our focus and simplified model enables us to deliver an alternative vision for our clients: producing client-centered solutions in a way that only experienced and proven professionals can.

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