# OESuite™ Lifecycle Cost Analysis (LCA) Feature

Reliability and system engineers must recommend actions to repair, overhaul, and replace assets and systems to maximize the life expectancy of the facility, protect its profitability, and protect the jobs it represents. **Lifecycle Cost Analysis (LCA)** is a valuable tool for making the financial case for those recommendations. Competition for value-maintaining capital versus other initiatives in the company can be intense, so an LCA translates the engineer's recommendations into the financial language of the company.

The **OESuite™ LCA Feature**, part of the **OESuite™ Asset Analysis Module**, enables users to generate tables and cost charts with comparisons of alternative project options. Models developed in the **Reliability Centered Maintenance (RCM)** cost portion of the **RCM Module** enable users to consider replacement vs. repair and overhaul options, while supporting the optimum timing for these decisions.

For each LCA, basic financial parameters are defined (e.g., analysis period, number of periods, depreciation method, interest rate, tax rates, escalation rates, discount rate, etc.). Then the user can compare and contrast each scenario's Net Present Value (NPV), Total Cost of Ownership (TCO), and, if revenue is specified, the Internal Rate of Return (IRR). Each scenario contains the expected cash flow by category and by period. Based on the calculated NPV, TCO, and IRR, an engineer can choose and recommend the most financially valuable strategy.

Figure 1 –
OS Life Cycle
Cost Analysis
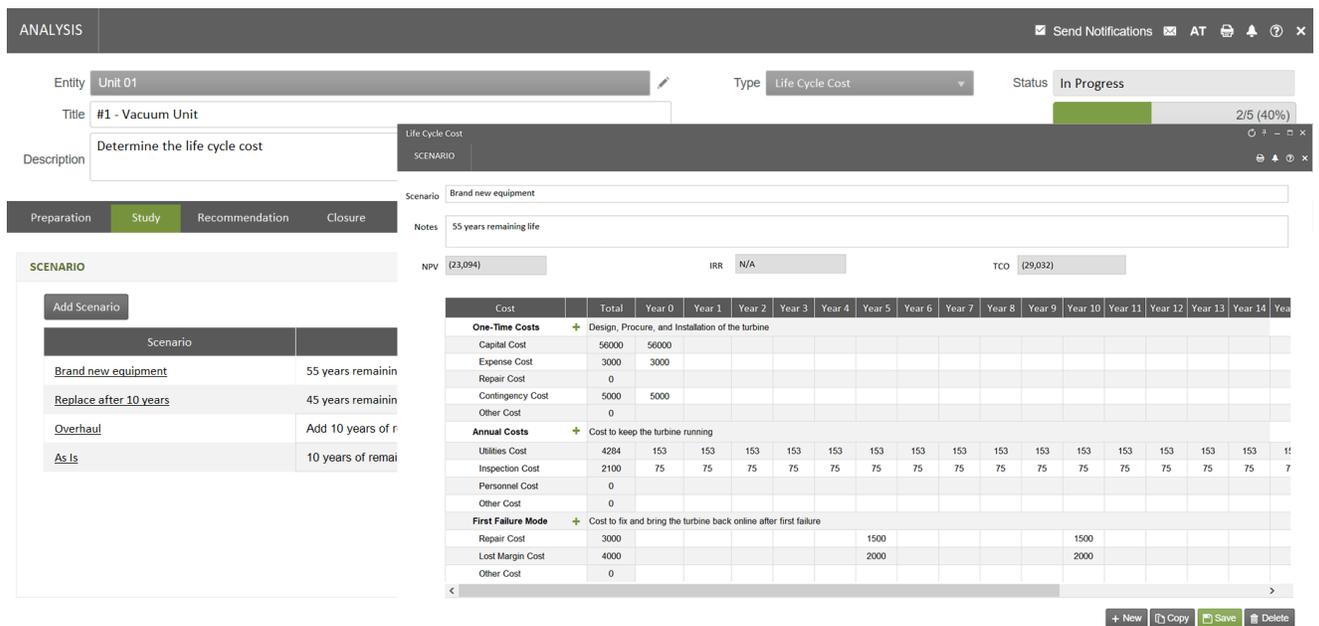
Users can assess projects at any facility on a system-wide level, including the cost of acquisition, ownership, and disposal. Projects can be linked to the existing asset integrity, maintenance, and reliability strategies in the **OESuite™ Asset Strategy Module**.

Early in the design phase, project alternatives can be evaluated to identify the scenario with the lowest overall cost of ownership. Later, adjustments can be made to further refine initial assumptions, while capturing additional LCA cost reductions.

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Both phase-dependent and user-defined cost equations can be created, along with time-dependent cost equations. Estimated costs can be integrated with actual costs to tune project assumptions.

Net savings, savings-to-investment ratios, IRRs, and payback periods are just a few of the economic evaluations included. Supplementary measures such as Savings-to-Investment, Simple Payback, Discounted Payback, Net Savings, and Adjusted IRR can be leveraged, too.

Key benefits of the **OESuite™ LCA Feature** include:

- Reduce uncertainties that can lead to poor project outcomes
- Quantify risk exposure
- Accurate forecasts of inspection and maintenance budgets
- Payback period determination
- Leverage a cost template library
- Determine operating costs
- Develop asset management strategies

LCA is a tool for assessing different project options that have been proven to meet operational needs and determining the one with the lowest overall cost to your business, the lowest capital-intensive solution, or the lowest operational cost through its lifetime. Finally, LCA helps ensure the most valuable recommendations are approved and implemented, based on real-time, specific data from your facility's assets.

For more information email us at <u>info@DrivingOE.com</u> or call (713) 355-2900.