



Introduction To Life Cycle Costing (LCC)



Introduction:

Life cycle costs are the summation of project equipment costs from inception to disposal with consideration for the time cost of money. Finding costs requires knowledge of the life and death of equipment. The course uses life models developed with reliability engineering principles. The objective of life cycle cost analysis is to choose the most cost effective alternative from a series of approaches so the least long-term cost of ownership is obtained. Decisions are made between alternatives using net present value concepts. The course shows how to merge engineering and financial details for cost-effective, long-term, decisions.

This course covering the use of Life-Cycle Cost (LCC) analyses to communicate solutions to management and members of the financial community. LCC evaluates many alternatives to identify the alternative with the least total cost of ownership. Evaluations are based on the entire cost of ownership including design, procurement, installation, maintenance, repair, and disposal costs. LCC analyses are based on the concept of Net Present Value (NPV) and can be discrete or probabilistic in nature. Participants will learn how to put reliability engineering skills into financial accounting terms. Each attendee will also learn techniques to perform real-world studies to evaluate the sensitivity of assumptions and uncertainties in the LCC model.

Who Should Attend?

Plant, equipment and reliability engineers, supervisors, and managers with little or no previous financial experience

Course Objectives:

By the end of this course delegates will be able to:

- What Life Cycle Costing (LCC) is
- Demonstrate basic Life-Cost Cycle Analysis (LCCA) principles
- Describe how and in which situations LCCA principles apply
- Explain why LCCA principles are beneficial
- The difference between standard costing and LCC
- How to determine the entire cost of ownership
- How to calculate net present value (NPV)
- How to quantify reliability engineering activity into financial terms
- How to perform real-world LCC studies
- How to present LCC data to management and the financial community
- What is the LCC philosophy
- The steps for performing a LCC analysis
- The concepts of Net Present Value and Future Present Value
- How to use LCC to make better asset acquisition decisions
- Communicate the results of the LCC analysis
- Recognize when a LCC analysis is warranted
- Test the assumptions and uncertainties of the LCC analysis
- Become familiar with financial concepts such as net savings, savings-to-investment ratio, adjusted internal rate of return, and discounted payback
- Use LCC to evaluate the varying efficiency levels of competing designs
- How to use LCC for value engineering to buy the right solution based on long

Course Outline:

Introduction to the Basics of Finance in Reliability

- Definitions and basic concepts
- What is life cycle costing?
- Why is it considered important?
- Different uses of life cycle costing
- Balance sheet
- Profit/loss statement
- Cash flow statement
- Depreciation
- Ratios

How to Do Life Cycle Costing

- How to do it and what to take into account
- Basis of calculations: Net Present Values, LCC metrics
- Factors which influence life cycle costings: discount rates, time, costs, service life, quantities, components and maintenance

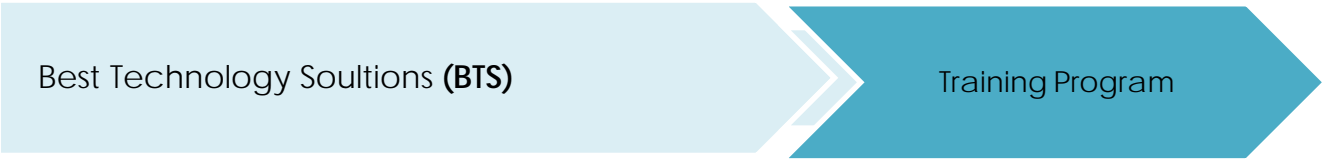
Introduction to Time Value of Money (TVM)

- Net Present Value (NPV)
- Future Present Value (FPV)
- Return on Investment (ROI)
- Internal Rate of Return (IRR)

Time Value Analysis and Life Cycle Decision Making

Plant Equipment Project Analysis

- Putting it all together
- Effects and treatments for taxes



Best Technology Solutions **(BTS)**

Training Program

Driving Improvement with Life Cycle Cost