

Life Cycle Costing for Facilities Training Course

Description

Introduction

Facilities managers play a critical role in ensuring cost efficiency and operational sustainability over the life span of facilities. **Life Cycle Costing (LCC)** is a powerful methodology that evaluates the total cost of ownership (TCO) of a facility, considering initial investments, operational expenses, maintenance, and eventual disposal or replacement costs.

This **5-day course** equips participants with the knowledge and tools to apply LCC principles in facilities management. By focusing on financial planning, cost analysis, and sustainability, participants will gain the skills to make informed decisions that optimize costs, improve resource allocation, and enhance the long-term value of facilities.

Course Objectives

By the end of this course, participants will:

1. **Understand LCC Principles:** Master the fundamentals of life cycle costing and its applications in facilities management.
 2. **Evaluate Total Cost of Ownership (TCO):** Analyze costs across all stages of a facility's lifecycle.
 3. **Optimize Financial Decisions:** Make cost-effective decisions for design, construction, operations, and end-of-life phases.
 4. **Integrate Sustainability:** Align LCC practices with environmental and sustainability goals.
 5. **Leverage LCC Tools and Software:** Utilize advanced tools for accurate cost modeling and analysis.
 6. **Perform Comparative Analysis:** Compare alternative systems, designs, and strategies to identify cost-efficient options.
 7. **Enhance Long-Term Value:** Develop strategies to improve the financial performance of facilities over their lifespan.
 8. **Communicate LCC Insights:** Present LCC findings to stakeholders to support decision-making and planning.
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Target Audience

This course is designed for professionals involved in facilities management, cost analysis, and asset planning, including:

- **Facilities Managers and Directors**
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- Finance and Budgeting Professionals
 - Operations and Maintenance Managers
 - Engineers and Architects
 - Real Estate and Property Managers
 - Procurement and Supply Chain Managers
 - Sustainability and Environmental Consultants
 - Anyone responsible for financial planning and cost optimization of facilities
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Course Outline

Day 1: Fundamentals of Life Cycle Costing

Session 1: Introduction to Life Cycle Costing

- Definition and Importance of LCC in Facilities Management
- Key Concepts: Total Cost of Ownership (TCO) and Net Present Value (NPV)
- Life Cycle Costing vs. Initial Cost Decision-Making

Session 2: LCC Framework and Phases

- Phases of a Facility's Lifecycle: Planning, Design, Construction, Operations, and Disposal
- Identifying and Categorizing Costs: Capital, Operational, Maintenance, and End-of-Life Costs
- Overview of Cost Drivers in Facilities Management

Session 3: Benefits of Implementing LCC

- Improving Financial Planning and Cost Transparency
- Enhancing Decision-Making for Long-Term Asset Performance
- Aligning LCC with Organizational Objectives

Activity: Case Study – Identifying Costs Across a Facility's Lifecycle

Day 2: Cost Modeling and Data Analysis

Session 1: Developing Life Cycle Cost Models

- Key Elements of a Cost Model: Inputs, Assumptions, and Outputs
- Building an Accurate Cost Model for Facilities
- Sensitivity Analysis: Managing Uncertainty and Variability

Session 2: Tools and Software for LCC

- Overview of LCC Tools and Applications (e.g., Building Information Modeling [BIM])
 - Data Collection and Management for Accurate Cost Analysis
 - Leveraging Technology for LCC Accuracy and Efficiency
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Session 3: Data Analysis for Cost Optimization

- Analyzing Operational and Maintenance Costs
- Comparing Alternative Designs and Systems for Cost Efficiency
- Forecasting Future Costs and Trends

Activity: Workshop â?? Developing and Analyzing a Life Cycle Cost Model

Day 3: LCC in Decision-Making

Session 1: Decision-Making Frameworks Using LCC

- Applying LCC to Capital Investment Decisions
- Identifying Cost-Effective Alternatives for Facility Systems
- Evaluating Payback Periods and Return on Investment (ROI)

Session 2: Risk Assessment in Life Cycle Costing

- Identifying and Mitigating Risks in Cost Projections
- Accounting for Inflation, Interest Rates, and Economic Uncertainty
- Scenario Planning for Long-Term Cost Management

Session 3: Financial Communication and Stakeholder Engagement

- Presenting LCC Analysis to Decision-Makers
- Creating Cost Transparency for Stakeholder Buy-In
- Building Consensus for LCC-Based Decisions

Activity: Role-Playing Exercise â?? Presenting LCC Insights to Stakeholders

Day 4: LCC for Sustainability and Asset Management

Session 1: Integrating Sustainability into LCC

- Measuring the Environmental Impact of Facilities Decisions
- Balancing Cost Efficiency with Sustainability Goals
- Life Cycle Assessment (LCA) for Green Building Practices

Session 2: Asset Management and Maintenance Planning

- The Role of LCC in Asset Lifecycle Management
- Optimizing Maintenance Strategies for Long-Term Performance
- Extending Asset Lifespan Through Proactive Cost Management

Session 3: Compliance and Certification

- Aligning LCC with Industry Standards and Regulations
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- Green Building Certifications (LEED, BREEAM) and Their Impact on LCC
- Ensuring Compliance with Local and International Guidelines

Activity: Case Study â?? Using LCC to Optimize Sustainability and Asset Performance

Day 5: Strategic Planning and Future Trends

Session 1: Strategic Application of LCC

- Developing Long-Term Strategies for Facilities Cost Management
- Aligning LCC with Organizational Growth and Strategic Goals
- Building Resilient Financial Plans for Facilities

Session 2: Trends and Innovations in LCC

- The Role of IoT and AI in Facilities Cost Analysis
- Predictive Analytics for Maintenance and Operational Cost Optimization
- Digital Twin Technology and Its Impact on LCC

Session 3: Continuous Improvement in LCC Practices

- Monitoring and Updating LCC Models Over Time
- Leveraging Feedback for Improved Cost Management
- Fostering a Culture of Cost Awareness in Facilities Teams

Activity: Group Exercise â?? Designing a Strategic Life Cycle Costing Plan for a Facility

Course Delivery Methods

- **Expert-Led Sessions:** Delivered by experienced facilities and financial management professionals.
 - **Real-World Case Studies:** Analysis of successful LCC applications in various industries.
 - **Interactive Workshops:** Hands-on exercises to develop and apply LCC models and strategies.
 - **Collaborative Group Discussions:** Peer learning and brainstorming to solve complex challenges.
 - **Tool Demonstrations:** Practical demonstrations of LCC software and applications.
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Key Takeaways

- Master the principles of life cycle costing and its application to facilities management.
 - Develop and analyze comprehensive LCC models to support financial planning.
 - Align LCC strategies with sustainability and long-term organizational goals.
 - Utilize advanced tools and software to optimize cost analysis and decision-making.
 - Gain insights into global trends and innovations shaping the future of LCC.
 - Enhance stakeholder communication and build consensus around cost decisions.
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