COURSE OVERVIEW PM0673
Project Economic Analysis

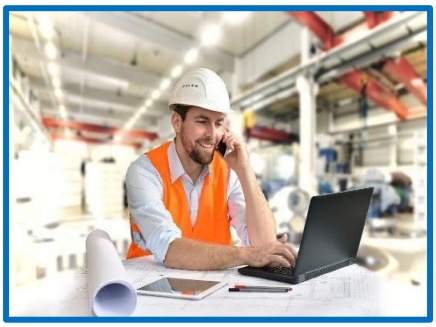
Course Title
Project Economic Analysis

Course Date
July 13-17, 2025/Tamra Meeting Room, Al Bandar Rotana Creek, Dubai, UAE

Course Reference
PM0673

Course Duration/Credits
Five days/3.0 CEUs/30 PDHs

Course Description



This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.

This course is designed to provide participants with a detailed and up-to-date overview of Project Economic Analysis. It covers the purpose and importance of project economic analysis for facility planning and investment decisions; the types of project evaluations and basic financial mathematics, cash flow estimation and project life cycle and cost breakdown; the net present value (NPV), internal rate of return (IRR) and benefit-cost ratio (BCR); the payback period and break-even analysis, sensitivity and scenario analysis and dealing with risk and uncertainty; and the structure of decision trees, calculating expected monetary value (EMV) and using probabilities in outcomes.

During this interactive course, participants will learn the impact of inflation and escalation and financing and capital structure impacts; the public versus private sector project evaluation, real estate and infrastructure project economics and rehabilitation versus new facility projects; the operations and maintenance of cost analysis and sustainability and green investment evaluation; linking strategic goals to evaluation criteria; aligning technical, economic and stakeholder needs; documenting assumptions and limitations and the role of multi-disciplinary inputs; the criteria weighting and scoring, using qualitative and quantitative inputs, application for complex facility projects and decision matrix tools; and the economic feasibility report preparation, communicating economic justifications and post-evaluation and project monitoring.

Course Objectives

Upon successful completion of this course, each participant will be able to:-

- Apply and gain an in-depth knowledge on project economic analysis
- Discuss the purpose of project economic analysis and the importance for facility planning and investment decisions
- Identify various types of project evaluations and basic financial mathematics as well as cash flow estimation and project life cycle and cost breakdown
- Recognize net present value (NPV), internal rate of return (IRR) and benefit-cost ratio (BCR)
- Apply payback period and break-even analysis and sensitivity and scenario analysis and deal with risk and uncertainty
- Describe the structure of decision trees, calculate expected monetary value (EMV) and use probabilities in outcomes
- Discuss the impact of inflation and escalation and financing and capital structure impacts
- Differentiate public versus private sector project evaluation, real estate and infrastructure project economics and rehabilitation versus new facility projects
- Employ operations and maintenance cost analysis and sustainability and green investment evaluation
- Link strategic goals to evaluation criteria, align technical, economic and stakeholder needs, document assumptions and limitations and identify the role of multi-disciplinary inputs
- Carryout criteria weighting and scoring, using qualitative and quantitative inputs, application for complex facility projects and decision matrix tools
- Apply economic feasibility report preparation, communicating economic justifications and post-evaluation and project monitoring

Exclusive Smart Training Kit - H-STK®

*Participants of this course will receive the exclusive "Haward Smart Training Kit" (**H-STK®**). The **H-STK®** consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.*

Who Should Attend

This course provides an overview of all significant aspects and considerations of project economic analysis for project managers, economists and financial analysts, government officials and policy makers, development and NGO professionals, investors and business executives, engineers and other technical staff.

Course Certificate(s)

Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours.

Certificate Accreditations

Certificates are accredited by the following international accreditation organizations: -

- British Accreditation Council (BAC)

  Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

- The International Accreditors for Continuing Education and Training (IACET - USA)

  Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

  Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units** (CEUs) in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

  Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:

Mr. Pan Kidis, MBA, BSc, is a **Senior Project & Management Consultant** with over **30 years** of extensive experience in **Project Scheduling & Cost Control**, **Project Planning, Scheduling & Cost Control Professional**, **Production Planning & Scheduling**, **Administration** Skills, **Project** Management Essentials, **Project** Management **Compliance**, **Strategic Planning**, **Mastering Contract Preparation**, **Contract and Risk** Management, **Value Engineering**, **Negotiation & Administratio**n Techniques, **Office Management** Skills, **Survey** Skills, **Interviewing** Skills, **Interpersonal** Skills, **Communication** Skills, **Negotiation** Skills, **Presentation** Skills, **Manager** Skills, **Supervisory & Management** Skills, **Counselling** Skills, **Leadership** Skills, **Office Management**, **Code of Conduct**, **Train the Trainer**, **Logistics & Transportation Planning** Methods, **Forecasting Logistics** Demands, Visual Network Model, **Logistics Operations**, **Strategic Transport Planning**, **Transport** System, **Fleet Planning**, Routing & Scheduling, **Transport** Cost Concepts & Elements, Costing Vehicles & Trips, Tariff Fixing, **Supply Chain & Operations** Management, **Logistics & Production** Planning, **Cost Reduction** Techniques, **Inventory** Management, **Business Analysis**, **Risk** Management, **Production** Management, **Warehouse** Management, **Production Planning, Material Requirement Planning**, **Budgeting**, Production & Shop Floor Scheduling, **Cost Analysis**, **Database** Design & Implementation, **Business Administration, Production Data** Acquisition & Analysis, Industrial **Logistics**, Process Improvement, Team Leadership & Training, Textile Manufacturing, Staff Reduction, **Warehouse** and **Shipping**. Further, he is also well-versed in **Cash Flow** Management, **Decision Making** Techniques, Production & Product Inventory Control, **Inventory** Analysis Tools, **Stock Management** Techniques, Material Handling, Process Improvement & Equipment Selection, **Costing & Budgeting**, Wastewater Treatment Plant Monitoring & Control, Volume Tank Measurements, Data Acquisition and Energy Conservation. He is currently the **Business Analyst** of Diasfalisis Ltd. wherein he is responsible in the design of the proposed business model and develop and evaluate new applications.

Mr. Kidis had occupied several significant positions as the **Supply Chain Manager**, **Production Planning & Logistics Manager**, **Purchasing Office Manager**, **Project Manager**, **Assistant Dyeing Manager**, **Production Supervisor**, **Production Coordinator** and Design & Analysis Intern for various international companies such as the Hellenic Fabrics, **AKZO Chemicals Ltd.** and **EKO Refinery** and Greek Navy Force.

Mr. Kidis has a **Master's** degree in **Business Administration** from the **University of Kent**, **UK** and a **Bachelor** degree in **Chemical Engineering** from the **Aristotle University of Thessaloniki**, **Greece**. Further, he is a **Certified Instructor/Trainer**, a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management** (**ILM**) and has delivered numerous trainings, courses, workshops, seminars and conferences internationally.

Course Fee

US$ 5,500 per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

30% Lectures
20% Practical Workshops & Work Presentations
30% Hands-on Practical Exercises & Case Studies
20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: ***Sunday, 13th of July 2025***

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0900	***Overview of Economic Analysis in Facilities Planning*** *Definition & Purpose of Project Economic Analysis • Importance for Facility Planning & Investment Decisions • Economic versus Financial Analysis • Key Performance Indicators (NPV, IRR, ROI, Etc.)*
0900 – 0930	***Types of Project Evaluations*** *Preliminary Feasibility versus Detailed Economic Evaluation • Technical, Financial, & Economic Perspectives • Qualitative versus Quantitative Assessment • Screening, Ranking, & Selection of Alternatives*
0930 – 0945	*Break*
0945 – 1100	***Basic Financial Mathematics*** *Time Value of Money Concept • Present Value (PV) & Future Value (FV) Formulas • Annuities & Perpetuities • Discounting & Compounding Techniques*
1100 – 1230	***Cash Flow Estimation*** *Identifying Inflows & Outflows • Capital versus Operational Expenditures • Working Capital & Salvage Value • Net Cash Flow Calculation*
1230 – 1245	*Break*
1245 – 1330	***Project Life Cycle & Cost Breakdown*** *Phases: Concept, Design, Construction, Operation, Disposal • Life-Cycle Cost (LCC) Analysis • Cost Classification (Fixed, Variable, Sunk) • Cost Estimation Techniques (Top-Down, Bottom-Up)*
1330 – 1420	***Workshop: Setting Up a Cash Flow Model*** *Create a Simple Project Cash Flow Table • Identify Capital & Operational Components • Apply Time Value of Money • Calculate Net Cash Flows*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day One*

Day 2: Monday, 14th of July 2025

0730 – 0830	***Net Present Value (NPV)*** *NPV Formula & Interpretation • Choosing the Right Discount Rate • NPV Decision Rule • Strengths & Limitations*
0830 – 0930	***Internal Rate of Return (IRR)*** *IRR Definition & Calculation • Multiple IRRs & Non-Conventional Cash Flows • Modified IRR (MIRR) • IRR versus NPV Comparison*
0930 – 0945	*Break*
0945 – 1100	***Benefit-Cost Ratio (BCR)*** *Ratio Interpretation & Thresholds • Application in Public Sector Projects • Limitations & Common Mistakes • BCR versus NPV Usage Scenarios*
1100 – 1230	***Payback Period & Break-Even Analysis*** *Simple versus Discounted Payback • Time to Recover Investment • Break-Even Point Calculation • Strategic Importance of Quick Returns*
1230 – 1245	*Break*
1245 – 1330	***Sensitivity & Scenario Analysis*** *Identifying Key Variables (Cost, Revenue, Inflation) • Conducting One-Variable Sensitivity Tests • Best Case, Base Case, Worst Case • Visualization Tools (Tornado Charts)*
1330 – 1420	***Workshop: Economic Indicator Comparison*** *Analyze a Project Using NPV, IRR, & Payback • Adjust Assumptions & Re-Run the Model • Plot & Interpret Results • Group Discussion on Evaluation Outcome*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Two*

Day 3: Tuesday, 15th of July 2025

0730 – 0830	***Dealing with Risk & Uncertainty*** *Definition & Difference Between Risk & Uncertainty • Sources of Uncertainty in Facility Projects • Probabilistic versus Deterministic Models • Risk-Adjusted Discount Rates*
0830 – 0930	***Decision Trees & Expected Value*** *Structure of Decision Trees • Calculating Expected Monetary Value (EMV) • Using Probabilities in Outcomes • Application to Phased Project Decisions*
0930 – 0945	*Break*
0945 – 1100	***Monte Carlo Simulation Basics*** *Purpose & Concept of Simulation • Commonly Used Distributions (Normal, Triangular) • Input Variability & Output Range • Tools & Platforms (e.g., Excel @RISK)*
1100 – 1230	***Impact of Inflation & Escalation*** *Nominal versus Real Cash Flows • Adjusting for General & Specific Inflation • Use of Escalation Indices • Currency Exchange Rate Implications*
1230 – 1245	*Break*

1245 – 1330	***Financing & Capital Structure Impacts*** *Equity versus Debt Financing • Cost of Capital & WACC • Impact of Financing on Cash Flow & IRR • Tax Shields & Loan Repayment Schedules*
1330 – 1420	***Workshop: Sensitivity & Risk Application*** *Apply Sensitivity Analysis to Cost Assumptions • Use a Decision Tree for Project Selection • Adjust Cash Flow for Inflation Impacts • Present Updated NPV & Risk Outlook*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Three*

Day 4: ***Wednesday, 16th of July 2025***

0730 – 0830	***Public versus Private Sector Project Evaluation*** *Differences in Evaluation Criteria • Social Cost-Benefit Analysis (SCBA) • Economic Impact on Stakeholders • Non-Monetary Benefits (E.G., Environmental)*
0830 – 0930	***Real Estate & Infrastructure Project Economics*** *Rental versus Ownership Models • Build-Operate-Transfer (BOT) & PPP Structures • Long-Term Lease versus Capital Investment • Asset Depreciation & Maintenance*
0930 – 0945	*Break*
0945 – 1100	***Rehabilitation versus New Facility Projects*** *Comparing Retrofit versus New Construction • Evaluating Existing Asset Performance • Environmental & Operational Factors • Reuse, Salvage, & Cost Avoidance Analysis*
1100 – 1230	***Operations & Maintenance Cost Analysis*** *Lifecycle Costing of Facilities • Preventive versus Corrective Maintenance Economics • Asset Reliability & Replacement Cost Planning • Facility Utility Cost Modelling*
1230 – 1245	*Break*
1245 – 1330	***Sustainability & Green Investment Evaluation*** *Incorporating ESG Factors • Energy Efficiency Return on Investment • Green Building Certifications & Value Impact • Incentives & Tax Benefits for Sustainable Design*
1330 – 1420	***Workshop: Facility Project Comparison*** *Compare Two Facility Investment Scenarios • Include O&M, Risk, & Social Impact • Score Using Multi-Criteria Decision Analysis (MCDA) • Recommend Best-Value Option*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Four*

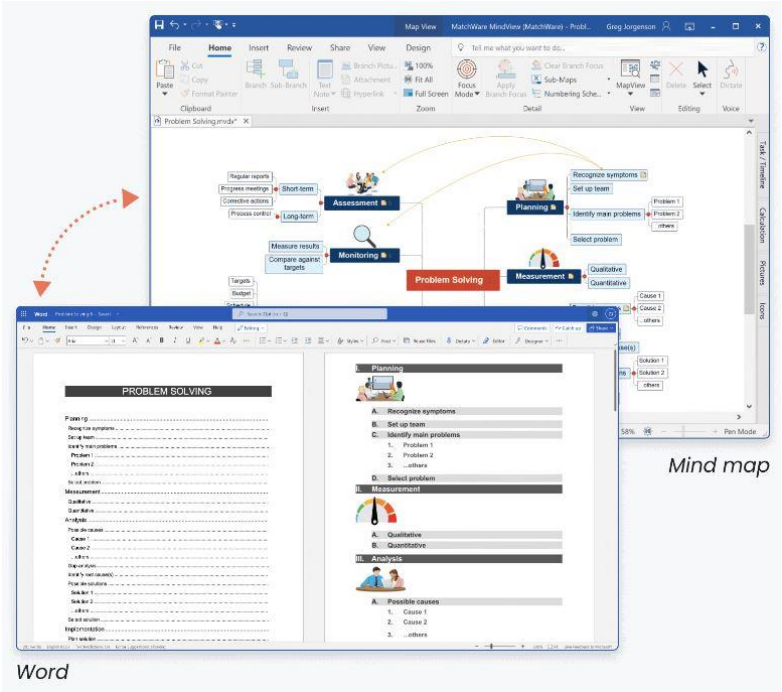
Day 5: **Thursday, 17th of July 2025**

0730 – 0830	***Integrated Economic Evaluation Framework*** *Linking Strategic Goals to Evaluation Criteria • Aligning Technical, Economic, & Stakeholder Needs • Documenting Assumptions & Limitations • Role of Multi-Disciplinary Inputs*
0830 – 0930	***Multi-Criteria Decision Analysis (MCDA)*** *Criteria Weighting & Scoring • Using Qualitative & Quantitative Inputs • Application for Complex Facility Projects • Decision Matrix Tools (AHP, SAW)*
0930 – 0945	*Break*
0945 – 1030	***Economic Feasibility Report Preparation*** *Structure of a Comprehensive Feasibility Report • Presenting Assumptions & Indicators Clearly • Visual Aids: Graphs, Charts, & Dashboards • Tailoring Reports for Different Audiences*
1030 – 1130	***Communicating Economic Justifications*** *Storytelling with Data • Using KPIs to Influence Stakeholders • Addressing Objections & Sensitivities • Presenting Recommendations Confidently*
1130 – 1230	***Post-Evaluation & Project Monitoring*** *Setting Up KPIs for Tracking Actual Performance • Comparing Actual versus Projected Outcomes • Capturing Lessons Learned for Future Projects • Updating Economic Models with Real Data*
1230 – 1245	*Break*
1245 – 1345	***Capstone Workshop: Final Project Evaluation*** *Evaluate a Sample Facility Investment Case • Apply Full Economic Analysis (NPV, IRR, Risk) • Prepare a Recommendation Report • Group Presentations & Peer Review*
1345 – 1400	***Course Conclusion*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course*
1400 – 1415	***POST-TEST***
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

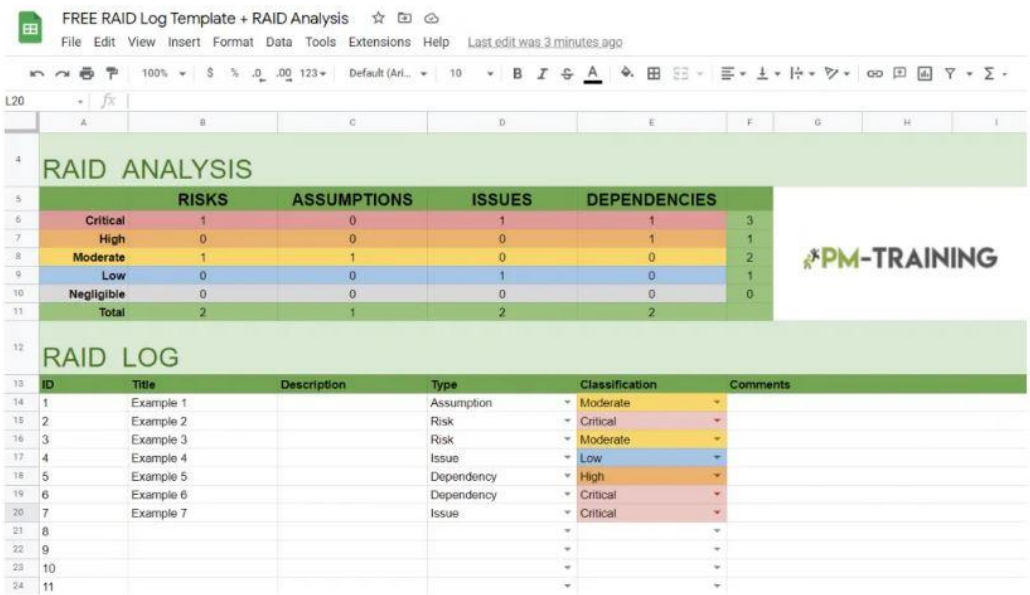
Simulator (Hands-on Practical Sessions)

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using the "MS Project", "Mindview Software" and "Raidlog Simulator".

MS Project



Mindview Software



Raidlog Simulator

Course Coordinator

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