

ATTENTION:
COST ENGINEERS, COST ESTIMATORS, COST
CONTROLLERS, PROJECT MANAGERS, PROJECT
PLANNERS AND FINANCE MANAGERS

DISCOVER PROVEN STRATEGIES TO REDUCE COST & INCREASE PROJECT PROFITABILITY

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- DEVELOP a sound understanding of the principles, methodologies and industry best practices in Cost Engineering and Earned Value Management
 - LEARN how to control, forecast and report the cost and progress during project execution
 - WORK on real Oil & Gas project case studies to practice all aspects of this masterclass



For inquiries on how to benefit on this program,
contact us at +65 6524 4973 or
enquiries@ctsolutionsglobal.com

Training Program Agenda

DAY 1

Estimating Definitions

- Project Life Cycle
- Purpose of Estimates
- Accuracy and Probability
- Allowances
- Contingency and Escalation
- Money of the Day / Real Term
- Estimating Plan
- Basis of Estimate

Factor Estimating

- Definitions, advantages and disadvantages
- Exponent method
- Cost per capacity method
- Lang, Hand and Chilton method
- Peter-Timmerhaus method
- Specific factor method

Case study: Factor estimating

Quantity Ratio Estimating

- Definitions, advantages and disadvantages
- Quantity ratios for piping
- Quantity ratios for electrical & instrumentation
- Quantity ratios for structural steel
- Quantity ratios for civil, painting & insulation

Case study: Quantity ratio estimating

Parametric and Range Estimating

- Nomenclature
- Pareto's Law
- Critical elements and key questions
- Range estimating input and simulation

Detailed Estimating

- Discipline estimating
- Unit rates & sources of pricing
- Estimating of equipment
- Piping estimate
- Insulation estimate
- Civil estimate

Case study: Detailed estimating

DAY 2

Location Factors and Market Factors

- How to set up a location factor
- Location cost surveys
- Steel and commodity prices
- Benchmarks
- Indices
- Cost modeling

Case study: Analyzing differences between locations and markets

Budgeting

- Setting up a project budget
- Project baseline
- Contingency allocation
- Work breakdown structure
- Cost breakdown structure
- Code of accounts
- Interaction with Contracting & Procurement

Case study: From estimate to budget

Project Control

- Why Cost Control
- Potential influences on costs
- Pre-requisites for effective cost control
- Cost control plan and procedures
- Schedule control
- Progress measurement
- Earned value analysis / management
- Project controls best practices
- Integrated cost & schedule control
- Project control tools

Case study: Earned value analysis

Advanced Project Control

- Management of change
- Re-baseline
- Monthly reports
- Forecasting
- Cashflow analysis
- Controlling cost of quality and safety
- Project close-out & lessons learned
- How to manage project control
- Total Cost Management

Case study: Advanced project control

DAY 3

Project Assurance

- Estimate verification and assurance
- Estimate assurance reviews
- Client vs contractor estimate reconciliation

Case Study: Project assurance

Risk Analysis Introduction and Definitions

- Definitions and terminology
- Risk register
- Cost risk analysis
- Schedule risk analysis
- Deterministic methodology
- Probabilistic methodology
- Risk analysis tools
- Risk management

Case study: Setting up a risk analysis model

Risk Management

- Risk mitigation
- Project risk management

Case study: Risk management

Schedule Risk Analysis

- Uncertainties in duration
- PERT
- Critical path
- Critical chain

Case study: Schedule risk analysis

Integrated Cost and Schedule Risk Analysis

- Correlation between cost and schedule risks
- Essentials of cost and schedule risk analysis
- Methodology

Case study: Integrated cost / schedule risk analysis

DAY 4

Definitions, Objectives, Methodologies and Analysis

- Course objectives
- Course program
- Case studies

Definitions and Principles

- Cost Engineering definitions
- Estimates, budgets and value
- Budget and Contingency allocation
- Project baseline
- Work Breakdown Structure
- Cost Breakdown Structure
- Work packages
- Allocation of budget to WBS and work packages
- Basic Earned Value terminology

Case Study: Budget allocation

Project Control

- Project Control objectives
- Project Control variables
- Project Control methodologies
- Project Control cycle
- Project Control plan and procedures
- Project Control best practices
- Schedule Control
- Integrated Cost & Schedule Control

Case Study: Project baseline and control sheet

Earned Value Analysis

- Earned Value Analysis overview
- Evaluate Earned Value techniques
- Define and assess Earned Value
- Cost Variance (CV) and Schedule Variance (SV)
- Cost and Schedule Performance Indicators (CPI and SPI)
- Forecasting on Cost and Schedule
- Different forecasting methodologies and formulas
- Accuracy of Cost and Schedule forecasts
- Generate and Validate Estimate at Completion
- Cost and Schedule performance curves
- Trend analysis
- Productivity analysis
- Earned Schedule analysis

Case Study: Earned Value Analysis

DAY 5

Monitoring, Reporting & Advanced EVM

Monitoring

- Elements of monitoring
- Productivity
- Progress measurement
- Progress milestones
- Monitoring plan
- Cost and Schedule performance
- Identify the steps used in updating the project status
- Understand how predictive performance data is used
- Controlling/managing engineering cost & schedule
- Controlling/managing equipment cost & schedule
- Controlling/managing bulk materials cost & schedule
- Controlling/managing construction cost & schedule
- Baseline Schedule date vs Forecast date

Case Study: Earned Value Monitoring

Reporting

- Reporting requirements
- Reporting calendar
- Reporting templates
- Report on Program Performance Using EVMS
- Best Practices
- Project dashboards

Case Study: Project Controls Report and Dashboard

Advanced Earned Value Management

- Management of Change
- Problems and pitfalls
- Pro's and con's of Earned Value Management
- Alternatives to Earned Value Management
- Earned Value vs Value of Work Done
- Managing change and re-baseline
- How to manage Project Control
- Implementing Earned Value Management
- Earned Value Management tools
- Identify appropriate Work Authorization Levels
- Use CPI and SPI in project management
- EVM and related management responsibilities
- Total Cost Management
- Project close-out & lessons learned

Case Study: Advanced Earned Value Management

About the Trainer



Richard Slingerland, CCE

International Consultant/Distinguished Trainer

Richard Slingerland is a Certified Cost Engineer and a former Board Member of the Dutch Association of Cost Engineers. He is the owner of Pareto Cost Consultancy; a company specialized in cost estimating, project economics, estimate & schedule assurance reviews, project control, benchmarking and value engineering. Richard has more than 15 years of industrial experience in consulting oil & gas projects, both upstream and downstream. For almost ten years, Richard worked in various Shell locations including The Hague, Netherlands, Malaysia and Central America.

LIST OF ACHIEVEMENTS

- Cost engineering services to Shell and third party for large projects up to a CAPEX of more than USD 10 billion for upstream and downstream projects in the Asia Pacific Region.
- Exploration and production cost engineering focal point for the Asia Pacific Region.
- Lecturer of Shell's Project Academy, Cost Engineering courses and several Shell exploration and production courses.

CLIENT LIST INCLUDES:

- Shell
- Chevron
- Petrobras
- SBM Offshore
- APM Terminals
- Abu Dhabi National Energy Company
- OCEP
- Carigali Hess
- JEML

Investment Fee

Course Title	Number of Days	Discounted Investment Fee	Early Bird for registration before 31 Aug 2017	Regular Price
Cost Engineering and Risk Management	3 Days	SG\$ 2,995.00	SG\$ 2,895.00	SG\$ 3,995.00
Earned Value Management	2 Days	SG\$ 1,995.00	SG\$ 1,895.00	SG\$ 2,995.00
Full Course	5 Days	SG\$ 4,995.00	SG\$ 4,895.00	SG\$ 5,995.00

DELEGATE DETAILS

1st Delegate Name	Mr	Mrs	Ms	Dr	Others
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Direct Line	Email				
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Head of Department	<hr/>				

2nd Delegate Name	Mr	Mrs	Ms	Dr	Others
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Head of Department	<hr/>				

3rd Delegate Name	Mr	Mrs	Ms	Dr	Others
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Head of Department	<hr/>				

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