

Software Acquisition & Supplier Management Training Course Offered by The Westfall Team

Software Acquisition & Supplier

Management is a 4-day course designed to provide a knowledge base and practical skills for anyone interested in implementing or improving Software Acquisition and Supplier Management techniques and practices in their organization. Throughout the course, major issues that are typically encountered during software acquisition and supplier management are identified and their impact analyzed. Students learn to tailor and implement proven industry good practices for preventing and resolving these issues.

Method of Instruction: This course is taught through lecture and interactive discussion. Actual examples from the software industry are utilized to make the information relevant. Throughout this course, learned skills are practiced using individual and team exercises. The emphasis of this course is on techniques that allow the attendees to transition the skills learned in this course to their own work environments.

Target Audience: Software procurement officers, program and project managers, functional managers and other stakeholders who will be involved in initiating, planning, executing, monitoring and controlling software acquisition and supplier management activities.

Detailed Outline:

I. Software Acquisition and Supplier Management – The Basics

1. What, Why, When & How
 - a. What is Acquisition & Supplier Management?
 - Types of Software Acquisition
 - b. Why Acquisition & Supplier Management?
 - Advantages of Outsourcing
 - Outsourcing is Risky
 - Why Are Acquisition & Supplier Management Important?
 - c. The When of Acquisition & Supplier Management
 - Development Life Cycle
 - Product Life Cycle
 - d. Software Acquisition & Supplier Management - "How To"
2. Software Acquisition & Supplier Management Process
 - Acquisition & Supplier Management Process
 - Acquisition & Supplier Management Context
 - Enterprise Environmental Factors
 - Organizational Process Assets

- Software Acquisition & Supplier Management as a Project
- Project Trilogy Plus Risk
- What Does Success Look Like?

3. Related Standards & Models

- CMMI[®] for Acquisition
- ISO 9001-2008 Quality Management System
- IEEE Standards
- PMBOK[®] Project Management Knowledge Areas & Processes

II. Initiate & Plan Acquisition

1. Acquisition Initiation

- Initiating Process Group
- Acquisition Boundaries
- Acquisition & Supplier Management Roles
- Develop Project Charter Process
- Contents of an Acquisition Charter
- Acquisition Vision
- Vision Statement Template
- Vision Statement – Exercise
- Defining Business Objectives
- Business Objectives – Examples
- Characteristics of "Good" Business Objectives
- Acquired Product's Scope & Limitations
- Product Context Diagram
- Product Context Diagram – Class Exercise
- Cost/Benefit Analysis

b. Identify Stakeholders

- Identify Stakeholders Process
- Project Stakeholders
- Product Stakeholders
- Benefits of Identifying Stakeholders
- Step 1: Identify Product Stakeholders
- User Types
- Step 2: Prune the Stakeholder List
- Identify Stakeholders – Exercise
- Step 3: Define Participation Strategy
- Stakeholders Participation Strategy - Exercise
- Stakeholder Conflict Management
- Decision Criteria Alternatives
- Customer's Bill of Rights
- Customer's Bill of Responsibilities

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2. Plan Acquisition

a Plan Acquisition

- Planning Process Group
- Project Planning Goals
- Project Planning
- Plan Procurement Process
- Acquisition Plan
- Define Acquisition Activities
- Work Breakdown Structure Defined
- Acquisition WBS – Example
- Include Everything
- Breaking the Project into Tasks
- Long-term vs. Near-Term
- Work Breakdown Structure – Exercise
- WBS Dictionary – Example

b Project Estimation & Scheduling

- Project Estimates & Forecasts
- Estimation Methods – Expert Judgment
- PERT Method
- Expert Judgment – Strengths & Weaknesses
- Estimation Methods – Model Based
- Model Based – Strengths & Weaknesses
- Activity Networks
- Activity Network Relationships
- Critical Path
- Schedule Duration
- Staff & Resource Allocation
- Costs

c Quality Management

- Quality Management System Hierarchy
- Quality Planning Hierarchy

d Communication Management

e Risk Management

- Risk Defined
- Risk/Opportunity Balance
- Types of Risks
- Risk Management Process
- Risk Identification
- Risk Statement
- Risk Statement – Exercise
- Risk Analysis
- Risk Context
- Risk Exposure
- Risk Prioritization
- Risk Management Planning
- Techniques for Handling Risks

- Taking Action
- Risk Tracking
- Risk Tracking Mechanisms

III. Define Product Requirements

1. Requirements – The Basics

- Requirements Defined
- Levels & Types of Requirements
- System & Software Engineering
- Why Are Requirements Important?
- Issue: Project Failure
- Issue: Incomplete Requirements
- Issue: Lack of User Involvement
- Issue: Requirements Defects
- Issue: Requirements Churn
- Issue: Wasted Resources
- Issue: Gold Plating
- Issue: Inaccurate Estimates
- Benefits of Good Requirements

2. Requirements Engineering Process

- Requirements Engineering Process
- Incremental Requirements Development
- Collect Requirements Process
- Requirements Engineering is Iterative

3. Requirements Development

a Requirements Elicitation

- Requirements Elicitation Techniques
- User Stories
- Steps to Defining Use Cases
- Use Case Diagrams
- Use Cases
- Use Case – Exercise
- Human Factors Studies

b Requirements Analysis

- Requirements Analysis
- Data Flow Diagram
- Entity Relationship Diagram
- State Transition Diagram
- Class Diagram
- Sequence Diagram
- Activity Diagram
- Process Flow Diagram
- Decision Tree
- Event/Response Table
- Prototyping
- Prioritizing Requirements
- Prioritization Considerations
- Prioritization – 1st Pass

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- Prioritization – 2nd Pass
 - c Requirements Specification
 - Use Case -> Functional Requirements
 - Use Case -> Functional Requirements – Example
 - Data Requirements
 - Data Requirements – CURDL
 - Use Case -> Nonfunctional Requirements
 - Quality Attributes
 - Usability Requirements – Examples
 - Measurable Nonfunctional Requirements
 - Writing “Good” Requirements
 - Product Requirements – Exercise
 - Class Diagrams -> Product Requirements
 - Data Flow Diagrams -> Product Requirements
 - Software Requirements Specification
 - d Requirements Validation
 - Hold Many Peer Reviews
 - Requirements Checklist – Specification
 - Requirements Checklist – Each Requirement
 - Ambiguity
 - Text Matrix – Example
 - 4. Requirements Management
 - Requirements Management Practices
 - Good Requirements Management Practices
 - Requirements Specification Acquisition
 - Sign-off
 - Bi-Directional Traceability
 - Traceability Matrix
 - 5. Determine Acquisition Approach
 - Investigating Options
 - Develop In-House – Checklist
 - Outsourcing – Checklist
 - Information Gathering
 - Cost/Benefit Analysis
- #### IV. Identify, Evaluate & Select Suppliers
1. Identify Potential Suppliers
 - a Conduct Procurement Process
 - b Identify Potential Suppliers
 - c Supplier Identification Methods
 - d Must Have Checklist – First Pass at Selection
 2. Evaluate Potential Suppliers
 - Evaluation Methods
 - Request For Proposal (RFP)
 - Request For Proposal (RFP) – Example Contents
 - Supplier Demos
 - Prototypes & Evaluation Copies
 - Checking References & Past Performance
 3. Define Contract Requirements
 - Types of Contracts & Agreements
 - Fixed Price Contracts
 - Cost Reimbursement Contracts
 - Incentive Contracts
 - Indefinite Delivery Contracts
 - Time & Materials / Labor Hours Contracts
 - Letters of Agreement
 - What Should Be In a Contract?
 4. Select Suppliers
 - Supplier Selection Considerations
 - Supplier Evaluation Checklists
 - Supplier Scoring Matrix – Example
 - Supplier Scoring Matrix – Exercise
 - Supplier Prequalification Audit
 - Audit Steps
 5. Negotiate & Award Contracts
 - Negotiation Defined
 - Negotiation Skills
 - Negotiation Process
 - Award Contract
 6. Preferred Suppliers Relationships
 - Strategic Partnering
- #### V. Manage Supplier & The Project
1. Conduct the Acquisition
 - Acquisition Execution
 - PMI Executing Process Group
 - Direct & Manage Project Execution Process
 - Integrated Product Teams
 - Integrated Product Teams – Examples
 - Acquirer/Supplier Team Communication
 - Stakeholder Communication
 2. Technical Management
 - a Technical Management – Technical Reviews
 - Acquisition Technical Management
 - Candidates for Technical Reviews

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- Technical Review Methods
 - Quality Gates
 - Milestone/Phase Gate Reviews
 - Milestone/Phase Gate Reviews – Examples
 - Verifying Entry & Exit Criteria
 - Entry & Exit Criteria
 - Technical Management – Exercise
 - b Technical Management – Verification & Validation
 - Verification & Validation Defined
 - Verification & Validation
 - V&V Methods – Static Analysis
 - V&V Methods – Dynamic Analysis
 - c Technical Management – Interface Management
 - Interfaces
 - Interface Management Activities
 - d Requirements Management
 - Requirements Management Good Practices
 - Bi-Directional Traceability
 - Requirements Volatility
 - e Configuration Management
 - Software Configuration Management Activities
 - Configuration Identification Activities
 - What are Configuration Items?
 - Baselines
 - Versions, Releases & Revisions
 - Unique Identifiers
 - Configuration Control
 - Controlled Software Artifacts
 - Change Control Process
 - Document Control Process
 - Configuration Control Board (CCB)
 - Configuration Status Accounting
 - Configuration Audits
 - 3. Supplier Monitoring
 - a Supplier Monitoring
 - Supplier Monitoring Objectives
 - Administer Procurement Process
 - Mechanisms for Supplier Monitoring
 - b Product & Process Quality Assurance
 - Process Audits
 - Product Audits
 - Project Audits
 - Desk Audits
 - Gathering Objective Evidence
 - Turning Requirements into Audit Findings
 - Audit – Exercise
 - Process Assessments
 - 5 Assessment Principles
 - c Performance & Metrics Reporting
 - Performance Reports
 - Roles of Measurements
 - ISO/IEC 15939
 - Goal / Question / Metric Paradigm
 - Metric Selection – Exercise
 - 4. Project Monitoring
 - Project Tracking & Control
 - Monitoring & Control Process Group
 - Joint Supplier/Acquirer Meetings
 - Project Team Status Reviews
 - Senior Management Reviews
 - Gantt Charts
 - Earned Value
 - Earned Value Tracking
 - Staff & Resource Tracking
 - Productivity Tracking
 - Size – Function Points
 - Size – Other Size Metrics
 - Problem Report Arrival Rates & Status
 - Completeness of Test Coverage
 - System Performance
 - 5. Corrective Action
 - a Project Corrective Action
 - Project Corrective Action Steps
 - Product Corrective Action
 - b Product Problem Resolution
 - Impact Analysis
 - Backward Traceability & Impact Analysis
 - Forward Traceability & Impact Analysis
 - c Process Corrective Action
 - Process Corrective Action Process
 - Corrective Action
 - 6. Partnering for Process Improvements
 - Benchmarking Defined
 - Benchmarking Process
 - Benchmark Based Improvements
- ## VI. Complete the Acquisition
1. Accept the Software
 - Testing Acquired Software
 - Alpha Testing

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- Acceptance Testing
 - Beta Testing
 - Functional Configuration Audits
 - Physical Configuration Audits
 - Accept the Acquired Product
2. Deployment
 - a Deployment
 - b Replication & Delivery
 - c Delivery Vehicles
 - d Production
 - e Installation Testing
 3. Acquisition Project Closure
 - Why Project Closure is Important
 - Close Project or Phase Process
 - Project Closure Checklist
 - Close Procurement Process
 - Post Project Review Process
 - Post Project Review Forms – Examples
 - Post Project Review Meeting
 - Post Project Review Follow-up
 - Post Project Review – Class Exercise
 4. On-Going Support & Maintenance
 - Support & Maintenance Process
 - Support Requirements
- Types of Maintenance
 - Change Requests
 - Retirement
5. Evaluating Supplier Performance
 - Post Release Metrics
 - Post Release – Problem Report Arrival Rate
 - Product Quality Metric
 - Product Availability Metric
 - More Post Release Metrics
 - Problem Report Responsiveness Metric
 - Incident Report Closure Metric
 - Customer Satisfaction
 - Supplier Score Card

Customized Software Acquisition & Supplier Management Courses: Our acquisition and supplier management course is modularized so that it can be easily customized for in-house course offerings that focus on the specific content and topics needed to meet your organization's exact training requirements. For in-house courses, class exercises can also be tailored to include actual examples from your organization in order to make the training even more relevant to your environment.

For more information about these and other course offered by The Westfall Team:

Visit our website at: www.westfallteam.com

Send an email to: lwestfall@westfallteam.com

