Project Management –R&D Organization

Course ID – C123-301
Duration – 4 Days
Training Method - Instructor-led in class

Description

"Project Management" is a key process for delivering a successful project. The Project Manager should have the skill set to manage and monitor 9 knowledge areas including: Integration, Scope, Time, Cost, Quality, Human Resource, customers, risks and procurement. There are many generic skills that are essential to a project manager, when examining the software R&D organization, these skills should be tuned and refined to meet the R&D personnel specific domain. While time, scope and HR management are main activities of internal R&D managers, customer procurement and budget management are somewhat of less importance. This class will provide the students with the understanding of the project manager responsibilities and will equip the student with tools and techniques that are specifically relevant to the R&D organization. The class also introduces the complexity of global product management that is very common in today global R&D organizations.

Recommended Audience

- Novice project managers, R&D team leaders, QA team leaders, Product Managers, System Analysts.

Prerequisites

- Familiarity and experience in R&D and development lifecycle. Prior experience in managing a project or a team is highly recommended.

Skills Gained

- The students will
  - Understand the role and responsibilities of a product manager
  - Be equipped with tools and techniques to manage required knowledge areas (Mainly Scope, Time, Resource, Risk and Quality management)
  - Be introduced to Budget, Procurement and customer management
  - Be equipped with a set of tools to assist them to manage and monitor a project successfully.

1st day 8 hours:

Chapter 1 - Introduction to Project Management

What is a project?
Project Management History and motivation.
Project Management Institute PMI & PMBOK
Project management responsibilities.
The 5 processes & the 9 Knowledge Areas
The project management golden triangle.
Facts and Figures.
Main actors in a project.
The software project unique characteristics.
What is a Successful Project?

Chapter 2 – Development Project Lifecycle

Quick computer history session
Eduard Yourdon and System Analysis
The V model
The square root model
The waterfall model
The spiral model
Initiative stage
Current status analysis stage
Requirement stage
Requested system analysis stage
Implementation research stage
Top Level Design stage
Detailed Design stage
Development stage
Quality Control
Quality Assurance
Deployment and maintenance stage.
Project closing stage

Chapter 3 – Project Scope Management

What I wish for vs. what is required
Project requirements
Requirements vs. "Objectives and Goals"
Requirement types
S.M.A.R.T. Requirements
Critical Success Factors
Success Criteria
Requirements transformation to Working Packages

Work Breakdown Structure – WBS
Organization Breakdown Structure – OBS
Scope Management QA (Cross Matrix, Coverage Matrix)

2nd day 8 hours

Chapter 4 – Project Time Management

Working units (Tasks) dependencies
Network diagrams History
Network diagrams
PERT - Project Evaluation and Review Technique
CPM – Critical Path Method
Tasks time effort measurement techniques
GANTT
Slack time
Project time buffer
Time constraints
Time constraints conflict resolution techniques

Chapter 5 – Resource Management

Resources vs. Constraints
Resources Types
Resource allocations
Developers in project behavioral patterns
Resource Cost
Resource leveling
The project timeline
Critical Chain Method
Buffer Management

3rd day 8 hours

Chapter 6 – Quick Introduction Budget Management

Budget Management Goal
The R&D budget
Cost and the R&D PM
R&D Project Budget Internals
Cash flow
R&D Site budget
Return On Investment - ROI
Main budget and finance concepts (IRR, NPV)
The startup budget - case study
The service company budget – case study

The producer budget – case study

Chapter 7 – Quick introduction Risk Management

What is a risk?
Risk vs. Problem Vs. Challenge.
Identifying Risks
Risk matrix
Monitoring Risks and the control plan
Risk management techniques
Risk Monitoring
Risk reporting

Chapter 8 – Introduction to Quality and Control

Quality Management plan
Quality Management Resources
Verification, Qualification and Validation
Errors-Defects-Bugs
Quality Techniques
Document Testing Techniques
Walkthrough
Inspection
Fish Bone diagram
Quality meetings and reporting
Change Management

4th day 8 hours

Chapter 9 – TBD - Quick Introduction to Customer Management, Supplier Management and Procurement

Who is the customer?
Customer types
Customer involvement
Who is the supplier?
The supplier motivation
Managing suppliers (Freelancers & Contractors)

Chapter 10 – Project Finalization

The process of project finalization
Marketing your success
Case studies
Why do projects fail?

Chapter 11 – Quick Introduction to the Global Project Management challenge

The global challenge
A global team
Measuring cultural difference
Working with US team members
The culture gap or How US team members see IL team members.

Chapter 12 – Final Exercise

A guided mini scale project that summarizes the topics learned in the class or a test.
Exercise will include the following:
PERT
Working Units
Resource Allocation
GANTT
Cost Benefit Technique