Enterprise SOA Project

- Missions and Goals
  - Achieving Strategic Goals
    - Organizational strategic goals
  - Achieving Routine Goals
  - Improving Effectiveness
  - Virtual Projects
  - Quasi-Projects
    - Project’s objectives are not well understood,
    - Time deadlines unknown, and/or
    - Budgets undetermined
- Project Manager, the Organization/Enterprise, and the Team
  - Three inter-related goals (objectives) of a project
    - Performance (meet required performance specifications)
    - Cost (meet the budget limit)
    - Time (finish on schedule)
  - Project Plan (need some reasonable flexibility)
    - A set of Deliverables
    - A fixed budget
    - A firm schedule
  - Flexibility and Trade-Off (one objective for another)
    - Time adapt to unpredicted change
      - Adding resources (labor, tools, equipment, etc) - shortening time
      - Budget cannot be raised to cover the additional resources– negotiate with the client for a later delivery day
      - If neither cost nor schedule can be negotiated
        - Swallow the added costs
        - Pay a penalty for late delivery
        - Accept lower profits
  - Risks Analysis and Management
    - Risk Identifications [1]
      - Human
      - Operational
      - Reputational
      - Project: cost, budget, time
      - Technical
      - Natural
      - Political
      - Others
    - Risk Profiles and Matrix
      - Risk Scales
    - Risk Analysis
• Estimates or assumption about the probability distribution associated with key parameters and variables
• Evaluate the desirability of certain managerial decisions
• Tools  
  o Excel Add-In  
  o Crystal Ball  
  o Minitab  
  o MATLAB
  
  ▪ Risk Management  
  o Project Life Cycle (S shape and J shape)  
    ▪ Born & slow start  
    ▪ Grow & quick momentum  
    ▪ Slow finish  
    ▪ Completion

Project Portfolio Process [2] – link the organization’s project directly to the goals and strategy of the organization.

• Step 1: Establish a Project Council  
  o Senior project manager  
  o CIO  
  o Relevant managers/general managers/VPs  
  o Relevant senior technical staffs
• Step 2: Identify Project Categories and Criteria  
  o Project Categories  
    ▪ Derivative Projects (lower price version, upscale version)  
    ▪ Platform projects (major departure from existing offerings in terms of either the product/service itself)  
    ▪ Breakthrough Projects (newer technology than platform projects; may be a disruptive technology)  
    ▪ R&D Projects (endeavors, oriented toward using newly developed technologies or existing technologies in a new manner)
  o Size/resource needs of the project  
  o Other Characteristics  
    ▪ Internal/External  
    ▪ Long/medium/short term  
    ▪ Order, or time frame – to be implemented
• Step 3: Collect Project Data  
  o Assemble the data appropriate to project category’s criteria  
    ▪ Include the timing, date, and duration for expected benefits and resources needs  
  o Conduct a good data estimation using  
    ▪ A project plan,  
    ▪ A schedule of project activities,  
    ▪ Past experience,  
    ▪ Expert opinion.
  o Project scoring and screening
• Criteria:
  • Costs
  • Benefits
  • Mandated by regulations or laws
  • Competitiveness
  • Operating necessities
  • Environmental

• Step 4: Assess Resource Availability
  o Internal/external resources
  o Resource type
  o Department
  o Timing

• Step 5: Reduce the Project and Criteria Set (multiple screens to reduce the number of competing projects)
  o Criteria
    ▪ Required competence exist in the organization
    ▪ Market for offering
    ▪ Likely profitability
    ▪ Risk level of the project
    ▪ Potential partners
    ▪ Right resources, right times
    ▪ Good technological/knowledge fit with the organization
    ▪ Use organizational strength, or depends on its weaknesses
    ▪ Synergistic with other important projects
    ▪ Dominated by another existing or proposed project
    ▪ Project slipped since last evaluation

• Step 6: Prioritize the Projects within Categories
  o Rank project: score and criterion weight
  o Subjective evaluation
    ▪ Development of new knowledge
    ▪ Development of new capabilities
  o Summarize the potential ROIs from the project

• Step 7: Select the Projects to be Funded and Held in Reserve
  o Resource capacity reserve (10 to 15 percent is often insufficient) for
    ▪ New opportunities
    ▪ Crises in existing projects
    ▪ Errors in estimates
  o Resource allocations
  o Include some speculative projects
    ▪ Future options
    ▪ Knowledge improvement
    ▪ Additional experience in new areas

• Step 8: Implement the Process
  o Document reasons for
    ▪ Project cancellations
    ▪ Deferrals
The Project Management Knowledge Areas [3]

- Project Integration Management
- Project Scope Management
- Project Time Management
- Project Cost Management
- Project Quality Management
- Project Human Resource Management
- Project Communication Management
- Project Risk Management
- Project Procurement Management

Project Management Process

- Plan
- Do
- Check
- Act

SOA Project Planning, Budgeting, Scheduling, Resource Allocating

- Initiating SOA Project
  - Project Charter
  - Preliminary Scope
- Develop the SOA Project Plan [3]
  - Scope
  - Scope Definition
  - Create WBS
    - Schedule Development
    - Activity Definition
    - Activity Sequencing
    - Activity Resource Estimating
    - Activity Duration Estimation
    - Cost Estimating
    - Cost Budgeting
    - HR Planning
    - Quality Planning
    - Communication Planning
  - Risk Assessment
    - Risk Identification
    - Qualitative Risk Analysis
    - Quantitative Risk Analysis
- Plan Purchase and Acquisitions
  - Plan Contracting
  - Risk Response Planning
References