Project Management Model for Outsourced Projects

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Objectives

This module will enable the participant to:

Plan and execute Software development projects with sub-contractors

Set up the right processes to achieve project success
Content

- Software Outsourcing in the view of Supplier Agreement Management
- Project Management Overview
- The Process of Supplier Agreement Management
  - Definitions, Goals, and Practices
  - Sub-goals and Sub-practices and Recommendations for
    - Determine Acquisition Type
    - Select Suppliers
    - Establish Supplier Agreements
    - Execute Supplier Agreement
    - Accept, transfer, and integrate the Acquired Product
- Summary
Project Management Overview

**Project Planning**
- Project Planning
- Plans

**Project Monitoring & Control**
- What to monitor
- Identified Risks, Risk Migration Plans
- Risk Status, Corrective Actions
- Progress, Issues vs. Corrective Actions

**Supplier Agreement Management**
- Supplier Agreement
- Supplier Agreement (Outsourcing Partner = Supplier)

**Risk Management**
- Identified Risks, Risk Migration Plans
- Risk Status, Corrective Actions
- Replan

**Acquiring Company**
## Supplier Agreement Management – Specific Goals, Practices

<table>
<thead>
<tr>
<th>Specific Goal</th>
<th>Specific Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Establish Supplier Agreements</strong></td>
<td>1.1 – Determine Acquisition Type</td>
</tr>
<tr>
<td></td>
<td>1.2 – Select Suppliers</td>
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<td>1.3 – Establish Supplier Agreements</td>
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<tr>
<td><strong>Satisfy Supplier Agreements</strong></td>
<td>2.1 – Execute the Supplier Agreement</td>
</tr>
<tr>
<td></td>
<td>2.2 – Monitor Selected Supplier Processes</td>
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<td>2.3 – Evaluate Selected Supplier Work Products</td>
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<td>2.4 – Accept the Acquired Product</td>
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<td>2.5 – Transition Products</td>
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Supplier Agreement Management addresses the need of the project to effectively select and manage those portions of the work that are conducted by suppliers.

A Supplier may take many forms:

In-house or external organization that develops, tests, or supports products or components that play a role in the delivery to customers.
Buyer / Supplier Relationship

Internal Organization

- Users
- Requirements
- Software and support services
- Product Responsible Unit or IT Organization

External Organizations

- Supplier, Outsourcing Partner, Sub-Contractor
- Software Products based on negotiated contract

Internal or External Outsourcing: Requires the same Supplier Agreement Management to receive a quality product.
Supplier Agreement Management: Process Overview

**Acquiring Company**

1. Determine Acquisition Type
2. Select Outsourcing Partner (= Supplier)
3. Establish Supplier Agreement
4. Execute Supplier Agreement
   - Track Progress / Performance
   - Resolve Changes to SOW, Plan, ...
   - Periodic Reviews with technical team and management
   - Monitor SQA Activities of sub-contractor
   - Monitor and align SCM activities
5. Accept Acquired Product
   - Acceptance Testing, Integration
   - Close Project
   - Evaluate Project Performance

**Outsourcing Partner**

- Supplier Skill base
- Umbrella Agreements (MBA, IPR, ...)
- SOW, Plan, Requirements
- Progress Reports
- Change Requests
- Review Reports
- SQA reports, measurements
- Configurations, Baselines
- Released Software, Test reports

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**Project Management,**

**Project Monitoring and Control,**

**Risk Management,**

**Configuration and Change Management**
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Acquiring Company
- Supplier Performance Records

Outsourcing Partner
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Project Management,
Project Monitoring and Control,
Risk Management,
Configuration and Change Management
Determine Acquisition Type

- Buy (modified) COTS products or services
- Have it custom-made through a contracted external company
- Have it realized by another in-house development unit
- Obtain components from customers

Remark:
It’s possible to have a combination of the above
Supplier Selection Process

1. From Budgetary plan / Project Plan identify software skills / activities to be outsourced

2. Search for prospective partner profiles (scan existing and potential new partnerships)

3. Evaluate with few selected prospective partners
   - company profile and business data (vendor rating)
   - generic requirements for performing required activities

4. Audit supplier’s competence and processes

5. Collect data in a supplier score sheet and compare with benchmarks (e.g. already existing suppliers)

6. If score exceeds acceptable limits, make umbrella agreements like MBA
## Supplier Evaluation Criteria Catalog

<table>
<thead>
<tr>
<th>Item</th>
<th>Sub-Contractor 1</th>
<th>Sub-Contractor 2</th>
<th>Sub-Contractor 3</th>
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<tbody>
<tr>
<td><strong>1 Company Reference Items</strong></td>
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<td>1.1 Market Reputation</td>
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<td>1.2 Infrastructure</td>
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<td>1.3 Business focus</td>
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<td>1.4 Skill profile: Management, Engineering</td>
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<td>1.5 Process focus</td>
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<td>1.6 Confidentiality</td>
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<td>1.7 Performance Records</td>
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<td>1.8 Price</td>
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<td>1.9 Internal Assessment</td>
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<td><strong>Project Specific Items</strong></td>
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<td>2 Domain Score Rating</td>
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<td>3 Prior experience on similar</td>
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<td>4 Timeline</td>
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<td>5 Location/ease of execution</td>
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<tr>
<td>6 Effort ...of subcontractor ...of acquirer</td>
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<td>7 Project Cost ... base cost ... taxes and credit ... payment method</td>
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<td>8 Guranteed quality</td>
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<td>9 Warranty</td>
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<td>10 Training and Support</td>
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<td>11 Deliverables</td>
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<td>12 Risk, deviation sought</td>
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Establishing and maintaining the supplier agreement provides the supplier with the project needs, expectations, and measures of effectiveness.

The supplier agreement typically includes:

- Frame Agreement (Master Business Agreement)
- Statement of work, plans, requirements
- Terms and conditions
- List of deliverables, schedule, and budget
- Defined acceptance process with acceptance criteria
Agreements for Project Execution

- Identify critical dependencies between the project and the supplier
- Agree on processes, procedures, guidelines, methods, templates, etc. that will be followed
- Agree on the form, frequency, and depth of project oversight; and define evaluation criteria to be used in monitoring the supplier’s performance

Agreements for Managing Change

- Identify project and supplier representatives responsible and authorized to agree to changes to the supplier agreement
- Agree on the process for handling requirements change requests from either side
Agreements for Handling the Product

- Identify warranty terms, ownership, and usage rights for the acquired product

- Identify the supplier’s responsibilities for ongoing maintenance and support of the acquired product
Supplier Agreement Management: Process Overview

1. Determine Acquisition Type
2. Select Outsourcing Partner (Supplier)
3. Establish Supplier Agreement
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6. Close Project
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Acquiring Company
- Supplier Performance Records
- Project Management
  - Project Monitoring and Control
  - Risk Management
- Configuration and Change Management

Outsourcing Partner
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- Released Software, Test reports
- bug fixes
Planning for Quality

Time Schedule
When/how often: reviews, metrics collection, reporting?

Resources for QA Activities
Who will act as reviewer, tester? Which test environment?

Reviews and Audits

Tests
Which tests? (modules, integration, UI and usability, stress and field tests, acceptance …)
Who is responsible for each test?
How is it planned and documented?
Which processes and tools to use for tests?

Standards, Procedures and Tools
Review Process, Document templates, Coding rules, …
Design tools, Development and test environment, Configuration management tools, …

Metrics
Which data will be captured and monitored for the project?

Deviation Handling
How to document and handle deviations in the project? (faults, misunderstandings, technical issues, …)
Escalation procedure depending on type of deviation (e.g. design mistake found during testing)

Quality Records
Which data and documents will be stored for the project? (review reports, error lists, process audit reports, …)
Management and Technical Reviews with Supplier

Periodic reviews are conducted between the project’s management team and the supplier’s management team to review progress as defined in the supplier agreement.

Technical reviews typically cover:

- Performance of the project (technical, cost, schedule, staffing)
- Technical issues are communicated and resolved
- Clarification of the end user or project’s customer needs
Planning for Reviews and Audits

What will be reviewed?
(Requirements, architecture, design, process, management plans, …)
- Which documents will be reviewed?
- What is the process of a review?

What will be audited?
(configuration audit, process audit, …)

Who is responsible?
- … that reviews and audits are carried out?
- … that review records and approved documents are collected?
(to control that all planned reviews have been performed)
Checks for a Project Status Report

- Overview
- Expected Benefits
- Intellectual Property Issues, if any
- Performance measures
- Deliverables in time period
- Risks
- Organization
- Schedule – plan vs. actual
- Cost – plan vs. actual
- Quality – plan vs. activities performed, metrics
- Documentation – plan vs. actual
- Issues and concerns
Monitor Selected Supplier Processes

- In situations where there must be tight alignment between some of the processes implemented by the supplier and those of the project, monitoring these processes will help prevent interface problems.

- Analyzing selected processes involves taking the data obtained from monitoring selected supplier processes and analyzing it to determine whether there are serious issues.

1. List processes selected for monitoring or rationale for non-selection
2. Collect Activity reports
3. Collect or create performance reports and curves
4. Communicate discrepancies and take corrective actions
Evaluate Selected Supplier Work Products

- Performed in supplier projects with custom-made products, particularly those that present some risk to the program due to complexity or criticality.
- The work products selected for evaluation should include critical products, product components, and work products that provide insight into quality issues as early as possible.

1. List work products selected for monitoring or rationale for non-selection
2. Evaluate work products
3. Discrepancy reports and actions

Requirements Analyses
Architecture
Documentation

- Traceability of requirements
- The architecture is feasible and will satisfy future product growth and reuse needs.
- Documentation that will be used to operate and to support the product is adequate.
- Products and product components can be integrated.
- …
Supplier Agreement Management: Process Overview

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**Suppliers**
- Supplier Performance Records

**Acquiring Company**
- Project Management,
- Project Monitoring and Control,
- Risk Management,
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**Processes**
- Determination of acquisition type
- Selection of outsourcing partner
- Establishment of supplier agreement
- Execution of supplier agreement
- Acceptance of acquired product
- Evaluation of project performance
- Close project
Acceptance Procedure on Supplier Delivery

Acceptance reviews, tests, and configuration audits must be conducted for the acquired products to achieve formal acceptance.

Activities in detail:

- As part of the planning and contract agree at project start on the acceptance procedure and criteria
- During project execution monitor the progress and fulfillment of requirements (functional, performance, quality, usability) through reviews, functional and physical audits, or prototypes, to avoid late surprises
- At the delivery stage perform agreed acceptance procedure to confirm that the acquired work product satisfies the requirements and commitments.
Transition of the product to the Acquirer

Monitor the transition of the acquired product from the supplier to the project.

Activities in detail:

- Ensure that the appropriate facilities to receive, store, use and maintain the acquired product are available.
- Ensure that appropriate training is provided to assist in the transition (for using and maintaining the product).
- Ensure that the storing, distribution, and use of the acquired product is performed according to the terms and conditions specified in the supplier agreement.
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