

IT6423 IT Systems Acquisition and Integration  
Exercise 4- IT Systems Acquisitions and RFPs  
Developed by Richard Halstead-Nussloch Version 07Jan13  
To accompany material developed by Han Reichgelt

All Students are required to complete Exercise 4

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- Submissions without your name stated above earn a 0.
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Submissions should use and cite at least one reference and explicitly state who is being acknowledged. Put them in the end of this exercise document in the appropriate sections.

## **Section 1 for CMMI-ACQ Process Areas and IT System Selection and Acquisition**

**Q1)** In 2 pages: 1) Evaluate the applicability of each of the CMMI-ACQ process areas to the selection and acquisition phase of an IT system or service acquisition project. 2) Select the top 5 areas that you nominate for inclusion in your group's RFP and provide a rationale for your choices. Don't forget to cite your references and update your discussions and Blogging!

### **ANSWER**

#### **1) Evaluate the applicability of each of the CMMI-ACQ process areas to the selection and acquisition phase of an IT system or service acquisition project**

CMMI-ACQ provides staged representation that fits those organizations that want to systematically improve the capability of their IT system or service acquisition life cycle. The selection of process areas that belong to a certain maturity level is mainly determined by analyzing the applicability of each of the CMMI-ACQ process areas to phases in a life cycle model for IT system or service acquisition. Organizations need to establish the foundation to become an effective acquirer of needed capabilities, which explains why Maturity Level 2 focuses on project management and acquisition engineering processes.

At Maturity Level 2, there are nine process areas that are applicable to the selection and acquisition phase in the life cycle model for IT acquisition. For example, the Project Planning (PP) process area and the Project Monitoring and Control (PMC) process area define an acquisition strategy, develop project plans, and monitor and control the project to ensure an acquired product is delivered as planned. The acquirer needs to establish agreements with suppliers supporting the acquisition project and maintain these agreements to make sure suppliers deliver on commitments; Solicitation and Supplier Agreement Development (SSAD) and Agreement Management (AM) can be used to accomplish those tasks. The requirements, at Maturity Level 2, incorporate the most important project management areas and are a prerequisite to obtaining higher maturity levels. The assessment will identify strengths and weaknesses and show areas of improvement for operating the selection and acquisition activity (Grundmann, 2005).

At Maturity Level 3, firms define processes for managing projects and suppliers, and it applies the processes consistently and has independent verification of compliance. There are nine process areas that are applicable to the selection and acquisition phase. For example, an acquirer examines whether selected IT system or service meets their requirements and customer or end user needs by using Acquisition Verification (AVER) and Validation (AVAL) practices. To tailor the organizational standards, process descriptions, and procedures, Organizational Process Definition (OPD) and Process Focus (OPF) are used to suit the selection and acquisition phase in the life cycle model. What difference CMMI-ACQ Maturity Level 3 makes is that an acquisition team incorporates successful practices into their procedures and eliminates inefficient or

inferior practices. These practices ensure that their project's requirements and changes to the requirements are captured, reviewed and controlled throughout the lifecycle and ensure that its projects are planned according to the requirements (Trinity).

At High Maturity Levels, acquirers establish quantitative objectives for quality and process performance, use them as criteria in managing processes, and continually improve these processes based on the objectives and performance needs. The acquirers can achieve an effective implementation of four high maturity process areas by ensuring that all members of the organization collect and analyze measurements and propose and evaluate changes to processes.

**2) Select the top 5 areas that you nominate for inclusion in your group's RFP and provide a rationale for your choices.**

1. Project Planning

This process area will help establish and maintain plans that define project activities.

2. Solicitation and Supplier Agreement Development (SSAD)

This process area can be used to help an organization carefully choosing capable suppliers, establishing and maintaining a supplier agreement to acquire an IT system or service.

3. Requirements Management

This process area will help manage the requirements of a project's products and product components and identify inconsistencies between those requirements and the project's plans and work products.

4. Acquisition Requirements Development

This process area describes two types of requirements: customer requirements, which address the needs of relevant stakeholders for which one or more products and services will be acquired, and contractual requirements, which are the requirements to be addressed through the acquirer's relationship with suppliers and other appropriate organizations.

5. Measurement and Analysis

This process area will help develop and sustain a measurement capability that is used to support management information needs.

**Q2)** There are a number of process areas in CMMI-ACQ that are directly relevant to the selection and acquisition phase in an IT system or service acquisition project. The following come most readily to mind:

- Agreement Management (AM)
- Acquisition Requirements Development (ARD)
- Solicitation and Supplier Agreement Development (SSAD)
- (To some extent) Acquisition Technical Management (ATM)

Read the process areas in CMMI-ACQ for AM, ARD, ATM and SSAD and evaluate the applicability of each to the selection and acquisition phase of an IT system or service acquisition project. Put your results in a table discussing the applicability of each area. Post a summary of your observations to the discussion forum and write a few comments on the observations of your classmates. Don't forget to cite your references and update your discussions and Blogging!

### ANSWER

Phases / Process areas	Planning	Information Search	Selection	Evaluation	Negotiation	Choice
Agreement Management			Managing the supplier agreement			
Acq. Req. Development		Specifying customer and contractual requirements that express customer value				
Solicitation & Supplier Agreement Dev.		Selecting capable suppliers, establishing and maintaining a supplier agreement to acquire an IT system or service.				
Acq. Technical Mgmt.			To combine the project's defined process and risk management activities to perform technical and interface management			

### The summary of my observation

Process areas can be viewed as the continuous representation that they are organized into four categories: Process Management, Project Management, Support, and Acquisition. Agreement Management (AM), Acquisition Requirements Development (ARD), Solicitation and Supplier Agreement Development (SSAD), and Acquisition Technical Management (ATM) are included in Acquisition category. AM, ARD, and SSAD are maturity level 2 process areas, and ATM is maturity level 3 process area.

AM, ARD, SSAD, and ATM are directly relevant to the selection and acquisition

phase in an IT system or service acquisition life cycle model. Acquisition Technical Management focuses on conducting technical reviews of the supplier's technical solution, analyzing the development and implementation of the supplier's technical solution to confirm that technical progress criteria or contractual requirements are satisfied, and managing selected interfaces.

Agreement Management is used to manage the supplier agreement by performing activities defined in the agreement, monitoring selected supplier processes, accepting the system or service, and managing supplier invoices. The supplier agreement is the basis for managing the relationship with the supplier, including resolving issues (Built with WIT, 2007). It defines the mechanisms that allow the acquirer to oversee the supplier's activities and evolving products and to verify compliance with supplier agreement requirements. It is also the vehicle for a mutual understanding between the acquirer and supplier. When the supplier's performance, processes, or products fail to satisfy established criteria as outlined in the supplier agreement, the acquirer may take corrective action.

The Solicitation and Supplier Agreement Development process area provides a set of practices that enables the acquirer to initialize and formalize a relationship with the supplier for the successful execution of the selection and acquisition phase. A supplier agreement is an agreement between the acquirer and supplier. This agreement may be a contract, license, or memorandum of agreement. An acquired IT system or service is delivered to the acquirer from the supplier according to the supplier agreement.

The Acquisition Requirements Development process area describes two types of requirements: customer requirements, which address the needs of relevant stakeholders for which one or more products and services will be acquired, and contractual requirements, which are the requirements to be addressed through the acquirer's relationship with suppliers and other appropriate organizations (Built with WIT, 2007). Both sets of requirements must address needs relevant to later product lifecycle phases, such as operation, maintenance, support, and disposal, and key product attributes, such as safety, reliability, and maintainability.

## **Section 2 for Identifying and Assessing an IT Request for Proposal (RFP)**

**Q3)** Locate an IT system RFP, e.g., on the Internet and critique it. In your response to this question, post a link to the RFP that you found (or attach it), and your evaluation of the RFP in light of the chapter you read. For example, does the RFP cover all the elements mentioned in the chapter, and, if not, which elements were missing and was that OK? Also, put yourself in the shoes of a potential vendor and qualify the potential business, i.e., assess whether the RFP gives you sufficient information to determine whether your product or service meets the need of the organization issuing the RFP. Utilize all the sources and information that you have covered about IT system acquisition to this time. Conclude your critique with a set of recommendations to your RFP project team about what you have found. Answer the question of whether the RFP you reviewed contains appropriate information or techniques to incorporate into your team's RFP or not and why. Include your critique in this document here. Don't forget to cite your references and update your Blogging!

### **ANSWER**

I selected the Request for Proposal (RFP) for virtualization of server infrastructure for Pentiction. The City of Pentiction sought to a replacement of its current server infrastructure, with the purpose of achieving greater efficiency and resource usage. The City solicited proposals from experienced and qualified companies to provide server and storage hardware, VMware software, and a backup solution to allow for virtualization of the City's server infrastructure. The purpose for this RFP is to establish a comprehensive virtualization solution for the City of Pentiction.

**Source:** <http://www.pentiction.ca/assets/Business/2012-RFP-03-Fire%20Department%20Services%20Review.pdf>

### **Evaluation of the selected RFP**

The City of Pentiction produced the well-organized RFP to streamline the evaluation process when considering proposals for virtualization of server infrastructure. The RFP contains clear and adequate information and can be divided into four main components: general issues, description of the organization, requests for information about products, and requests for information about vendors.

The first element addresses a number of general issues about the acquisition project, terms and conditions under which an eventual contract will be issued, and a description of the RFP process. General issues include brief introduction, project schedule, as well as the scope of work to allow potentials vendors know if it's worth spending their time responding to the RFP. This section also contains terms and conditions. Terms and conditions stated in the RFP contain adequate information for vendors. For example, about copyright, the firm indicated that all designs, drawings, concept drawings, Specifications, and so on remain the property of them. A

confidentiality statement should also be included in the RFP because it makes vendors confidential to share proprietary or confidential information with the firm. Additionally, the RFP includes evaluation criteria that will be used to evaluate and rank submitted proposals.

The City of Penticton developed the evaluation criteria to identify potential vendors that offer the virtualization for server infrastructure. The evaluation criteria are stated clearly and cover all relevant factors, and according to Government of Canada (2011), to evaluate a proposal properly, it is important to identify all criteria that are relevant. The criteria are categorized into six major categories: relevant experience, approach, cost, qualifications, implementation timelines, and references. These evaluation items in this Request for Proposal are listed in order of importance. As Siecker (2006) describes, “Ideally, evaluation items should be listed in order of importance, with an introductory statement indicating that the requirements are organized according to priority.”

The second element is a description of the organization. In this section, Penticton clearly indicated organization’s background, expected benefits from the acquisition project, and a description of current organization’s environment. This information shows potential vendors what the City is seeking to achieve its expectations and objectives. In addition, this element includes requirements of the server hardware specifications, storage requirements, VMware requirements, and backup solution requirements. Server requirements for example include capabilities that a product must meet or exceed. Furthermore, these requirements are measurable. As Government of Canada (2011) explained an advantage of measurable requirements, “Requirements must be measurable. This allows you to determine if a supplier has fully met, marginally met, or not met your needs.”

Next, this element consists of requests for information about a product. The City of Penticton asked vendors to provide information about estimate time of arrival for a product, costs of the product, and assistance with the configuration of the physical and virtual server, SAN, and backup solution. About costs, the organization required vendors to include costs of their product as well as additional costs, which may charge after the purchasing. It helps the organization estimate the project budget (Government of Canada, 2011). In addition, the City asked potential vendors to provide possible changes in case that scope of work may be adjusted to remain the cost within the budget.

The last major element contains requests for information about vendors. The organization asked vendors to provide at least three references specifically relating to projects similar in size and scope. Moreover, the RFP includes a request about warranty for the server to make an assessment of the long-term viability of the vendor.

In conclusion, This RFP is appropriate to vendors and even my final project team since it is about virtualization of IT infrastructure. The Request for Proposal contains clear and concise information for my team, and it will be a good guidance to help my

group produce a good RFP. The RFP shows me important elements that should be included in a RFP, such as objectives, expectations, and past experiences. I can think of the Request for Proposal (RFP) as being a statement of organization's requirements. When acquisition projects fail, they do so often because of inadequately defined requirements. For that reason, the clearer and more comprehensive a RFP is, the greater chances of getting higher quality responses that lead to a successful outcome.

**A set of recommendations to my RFP project**

1. Verify the accuracy of the description of the organization's current environment
2. Be clear and accurate on priorities and evaluation criteria
3. Make vendors confidential to share proprietary or confidential information with the organization via a confidentiality clause
4. When asking for references, be clear about what the organization really want between contact information (organization, name of person, telephone, and e-mail) or actual letters of reference
5. Check the details of delivery



**Q4)** In preparation for your team project of developing an RFP package, preview the RFP assignment and rubric in the RFP module. Parse requirements out of the assignment and use them to review again the RFP you reviewed in question 1 above. What required elements were included in the RFP package you reviewed? Which were missing? Which elements are most attractive for you to play a major role in developing? Don't forget to cite your references and update your discussions and Blogging!

## **ANSWER**

The following are required elements are included in the RFP:

1. General issues
  - a. Scope of work
  - b. Introduction
  - c. The project schedule
  - d. The confidentiality clause
  - e. Terms and conditions
  - f. Evaluation criteria
2. Description of the organization
  - a. Requirements of a product
  - b. The organization's purpose, expectations, and past experiences
  - c. Description of the current organization's environment
3. Requests for information about products
  - a. Time of arrival of a product
  - b. Assistance
  - c. Overall cost
4. Requests for information about vendors
  - a. Three references

## **The Most Attractive Element**

Description of the buyer organization is the most attractive element since it contains important information, such as requirements, evaluation criteria, and current IT infrastructure, which can allow potential vendors to know whether their products or services meet the organization needs. This element usually includes detailed information about the buyer firm that is not intended for public consumption, and it will be clear that any RFPs that provide this level of detail will have to include a confidentiality statement (Module 5, Item 8). Evaluation criteria are an important part in this element. Evaluation criteria are a checklist for comparing proposals, so the criteria should contain information an organization needs to select a potential vendor. These criteria can include relevant experiences, quality of products, strategies to achieve goals and objectives, expertise in specific fields, proximity, and price. Each criterion should be weighted in relation to its importance to organization's selection parameters.

**Sources and works used in completing this exercise:**

(Please add your references. You must list at least one and use the method-ACM, APA or MLA-chosen at the beginning of the term.)

Built with WIT. (2007). CMMI for Acquisition. Retrieved from <http://chrguibert.free.fr/cmmi12/cmmi-acq/text/index.php>

Module 5. Item 8. Page 1-12. Request of Proposals (RFPs).

Penticton. (2012). Request for Proposal for Virtualization of Server Infrastructure. Retrieved from <http://www.penticton.ca/assets/Business/2012-RFP-03-Fire%20Department%20Services%20Review.pdf>

Government of Canada. (2011). Writing Effective Request for Proposal. Retrieved from <http://fednor.gc.ca/eic/site/fednor-fednor.nsf/eng/fn03284.html>

Siecker, D. (2006, Oct 16). Developing RFP Evaluation Criteria. Retrieved from <http://www.kms.ijis.org/traction#/single&proj=Public&rec=1349&brief=n>

Grundmann, M. (2005, Dec 15). CMMI Maturity Level 2 assessment of RUP. Retrieved from <http://www.ibm.com/developerworks/rational/library/dec05/grundmann/>

Trinity. CMMI Maturity Level 2 and 3. Retrieved from <http://www.trinity-cmmi.co.uk/CMMI%20Maturity.html>

Please complete the following:

☐ I did not use any method of citation (maximum B on the assignment).

☐ I used the ACM approach and have cited my references as I went in the text and also listed them at the end.

☒ I used the APA approach and have cited my references as I went in the text and also listed them at the end.

☐ I used the MLA approach and have cited my references as I went in the text and also listed them at the end.

**Acknowledgements of people (and other exercise submissions) used in completing this exercise:**

(You should at least acknowledge the students helpful to you or on your team.)

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Karen Purcell