IT6423 IT Systems Acquisition and Integration
Exercise 5- Implementation and Integration Phase of IT Systems Acquisitions
Developed by Richard Halstead-Nussloch Version 07Jan13
To accompany material developed by Han Reichgelt

All Students are required to complete Exercise 5

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- Submissions made through a means other than the GeorgiaView D2L Dropbox will be ignored and earn a 0.
- Submissions without your name stated above earn a 0.
- Submissions not in an rtf or pdf file or with the original questions and/or formatting removed from the file earn a 0.
- Submissions without adequate references or acknowledgements will earn a discounted grade, potentially a 0.
- Submissions that I cannot open or require a password will 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 for Implementation and Integration

Q1) Read the process areas in CMMI-ACQ for AM, AVAL, and AVER. Evaluate the applicability of each to the implementation and integration phase of an IT system or service acquisition project. In 2 pages here, document your observations, assessments and recommendations. Include specific recommendations to your RFP team. Don't forget to cite your references and update your discussions and Blogging!

ANSWER

Many acquisition projects today involve the implementation and integration of purchased product to ensure that the product fulfills requirements specified by the firm or the relevant stakeholders. Unless there is a unique competitive advantage, it's not cost effective to develop in-house IT system or service when similar systems are in use by most enterprises (Cliff, 2007). Human resources systems and accounting systems for example are common systems that are shared within industry group. The choice of these common systems is also substantial from a number of venders and getting bigger all the time. Therefore, with all of above reasons, the directly applicable CMMI-ACQ process areas, such as Acquisition Verification (AVER), Acquisition Validation (AVAL), and Agreement Management (AM), is suitable guidance to improve the IT system implementation and integration process to increase the possibility of selecting a right product that meets organization's business needs.

The implementation and integration phase is one of the high level activities in the life cycle model for IT system or service acquisition. During the phase, there are six activities that need to be achieved: Planning, High-Level Design, Detailed Design, Configuration, Implementation, and Support and Maintenance (Cliff, 2007). First, Planning is the phase where organization's business requirements are finalized, a selected product is learned, and a solution using the product is defined to meet these requirements. Next, High-Level Design and Detailed Design are phases where the planned solution is further clarified and developed according to how the product operates.

Configuration is the activity where the product is set up its parameters with the values defined in the phase above. Interfaces, data conversion, and customized programming, if any, are also done in this phase. Implementation is the activity where the product is implementing as well as integrating to the current operations. Last, Support and Maintenance is the activity where the product is turned over to the normal support and maintenance process.

AM, AVAL, and AVER are directly relevant to all above sub-activities in the implementation and integration phase. These process areas are used through out the implementation and integration phase as the standard to manage the contract and to

ensure that selected product meets requirements specified in the contract and fulfills relevant stakeholder's needs.

Agreement Management (AM) 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.

Acquisition Validation (AVAL) is used to illustrate that a selected product or service fulfills its intended use when placed in its intended environment. Validation activities are performed incrementally throughout the implementation and integration phase. These activities can be applied to all aspects of the product and its components in any of their intended environments, such as operations, training, manufacturing, maintenance, and support services (Built with WIT, 2007). Once validation issues are identified, these issues are referred to processes associated with the Acquisition Requirements Development or Project Monitoring and Control process areas for resolution.

Acquisition Verification is utilized to make sure that an acquired product or service meets specified requirements. Acquisition Verification is inherently an incremental process since it occurs throughout the implementation and integration phase, beginning with verification of requirements and plans, progressing through the verification of evolving a selected product such as design and test results, and culminating in the verification of the completed product (Built with WIT, 2007). In addition, the Acquisition Verification process area is used to address peer reviews that help the acquirer to remove defects early and to develop and maintain the acquired product.

It's suitable to use all above process areas when conducting the implementation and integration phase in the life cycle for IT system or service acquisition. As mentioned above, AM, AVER, and AVAL help an acquirer to manage a supplier agreement and to ensure that acquired product meets requirements specified in the agreement and satisfies relevant stakeholder's needs. The organization can mostly be leaded to the most appropriate IT system or service.

The following are a set of recommendations for my RFP group:
1. Verify the accuracy of the description of the current IT infrastructure
2. Be clear and accurate on terms, conditions, and evaluation criteria

3. Ask vendors to include the implementation time and process of an acquired product
4. Be clear on the scope of work or how the project will be implemented
5. Check the details of delivery

Q2) Do some library research[i] to locate an article or case study that concerns IT system implementation and integration project. Read it and complete a one-half-page to a one-page summary of it here. Also, consider the following questions and cover your perspective here and in the discussion forum:

1. Comment on the acquisition phase in the project or case. To what extent did the acquisition phase set the stage for the outcomes of the project?
2. Identify features and criteria that determine success or failure in the project. Draw two or three recommendations for your team's RFP.
3. If you were to be put in charge of a system implementation and integration project, what are the top five things you would you do and why?

Don't forget to cite your references and update your discussions and Blogging!

ANSWER

I select Six Steps to a Successful COTS Implementation written by Arlene Minkiewicz. It was published in Crosstalk Journal of Defense Software Engineering in 2005.

"A successful implementation of a Commercial Off-The-Shelf (COTS) intensive software system can save programs money if you have the right solution and understand the potential risks involved," Minkiewicz (2005) stated. Federal organizations are relying on commercial applications to enhance or replace current systems. This dependency is driven by the promise of improved functionality and reduced total ownership cost, as well as the concern over the lack of capability to develop and maintain proprietary IT applications. However, failure to successfully select, control and implement these critical components continues to result in acquisition projects that are delivered late and over-budget.

The article mentions six steps methodology highlighting the important activities that should take place during a COTS implementation. Following this methodology throughout the life cycle for an acquisition project will solve one of the biggest problems sighted in COTS based projects that is a disconnect between time and cost expectations during planning and those actually realized. It also ensures that significant activities are not being ignored and will increase the chances of planning, executing, and deploying a successful COTS based software solution.

The first three steps are software requirement analysis, evaluation and selection for COTS solution, and negotiation with vendors. These main steps provide necessary to determine, establish needed functionality for the capability of delivery required by users. Using this functionality is to identify available COTS solution and points to those pieces of functionality that can't be satisfactorily implemented by existing off-the-shelf solutions. In the negotiation phase, it is important to negotiate the best deal possible when working with one or more vendors to craft a solution. It is even more important to understand the impact of these negotiations and their timing on the eventual success or

failure of an acquisition project.

The last three steps are about implementation, integration, and maintenance of an acquired product. During these steps, an acquirer performs activities in or around software to get the COT software components configured for the system and its requirements. The software also needs to be integrated and tested with the current system to ensure that all functional and non-functional requirements are met. Upgrades and updates may be included if they contain required bug fixes, improvements to keep the look and feel current with user expectations, or features that relate to requirements missing or incomplete in earlier versions. Quality and stability of the vendors along with the vendors regular release schedules are important factors in assessing effort associated with updates and upgrades.

A well thought out and well executed software project that incorporates one or many COTS solutions can happen more quickly and be more cost effective than the same system implemented with custom developed components. Too often COTS projects are not well thought out or well planned, running on the incorrect assumption. This way of thinking leads to unrealistic and poorly managed expectations that results in failed projects. These types of failures occur when projects fail to plan for or incorporate the additional activities unique to COTS acquisitions. Following the 6 Steps Methodology will ensure that important activities and decision points are properly executed and reducing many of the risks associated with such projects.

The following are my answers for the questions:

1. **Comment on the acquisition phase in the project or case. To what extent did the acquisition phase set the stage for the outcomes of the project?**

The 6 Steps Methodology will ensure that important activities and decision points are properly executed and reducing many risks, such as disconnection between time and cost expectations during planning phase, late delivery, and over-budget.

2. **Identify features and criteria that determine success or failure in the project. Draw two or three recommendations for your team's RFP.**

Criteria that determine success or failure in the project are the following:
   1. Cost
   2. Time schedule

Recommendations for my RFP team are the following:
   1. Well thought and planned on time and costs expectation
   2. Including time schedule and project budget in a RFP
   3. Be clear on time schedule and project budget

3. **If you were to be put in charge of a system implementation and integration project, what are the top five things you would you do and why?**

If I were in charge of a system implementation and integration project, I would consider five things below:

1. The interaction of technology and the organization – a broad concept that lays the groundwork for many of the other factors for consideration, such as work practices, work values, and a change in the relationship between employees and tasks accomplished through use of a new technology.
2. User involvement and participation – influenced by a number of variables that must be carefully balanced in order to ensure success of the involvement.
3. Resistance – can work for or against a project depending upon how it is managed.
4. Planning – more able to be controlled by project managers than other success factors, and involving many critical components.
5. Risks – exist with every project but must be anticipated and managed in order to achieve success.

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.)

Cliff, R. (2007). A systems implementation project planning guide. Retrieved from http://www.cliffconsulting.net/wp-content/uploads/2012/08/System-Guidelines-w-Matrix-v4.pdf

Software Engineering Institute. (2010, Nov). CMMI for acquisition, Version 1.3. Retrieved from http://www.sei.cmu.edu/library/abstracts/reports/10tr032.cfm

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

Minkiewicz, A. (2005). Six steps to a successful COTS implementation. Crosstalk Journal of Defense Software Engineering.

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.)

Karen Purcell

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[i] One can do an online library search using the SPSU VPN at http://connect.spsu.edu using your email id and password to login. The library link is in the upper left corner.