

Session 5. Federal and Commercial IT Acquisitions

The federal government and commercial organizations both plan and implement IT acquisitions and there are many similarities in the process and tools they use. They both use tools such as the work breakdown structure (Activity 5) and economic analysis (Activity 7), but there are also important differences.

A. Session Objective

The objectives of this session are to:

- provide insights into the similarities and differences in federal and the commercial IT acquisition practices;
- demonstrate the value of performing an economic analysis of alternative solutions to an organization's performance problem; and
- give an example of an economic analysis tool and provide an opportunity to use it.

You will also be assigned the next two Activities in your IT acquisition planning. These are Activity 7, Economic Analysis (using a provided template), and Activity 8, Comparative Value-Risk Analysis (also using a provided template).

This session relates primarily to the following CMMI® Acquisition Module process area: Organizational Innovation and Deployment.

Keep in mind that the focus at this point in the planning process is on alternative solutions to the problem not on alternative sources (e.g., contractors) for implementing the solution. A decision must first be made on the best solution before consideration can be given to the best source for providing and implementing that solution.

B. Commercial Versus Federal Acquisition Practices

Commercial firms have been the leaders in developing best practices for IT acquisition. Over the past twenty years, a major effort of the federal government has been to capture the acquisition best practices of commercial firms and pass laws and regulations requiring federal agencies to use them.

Although initially developed in the private sector, the best practices are also generally applicable to government agencies, including the federal agencies. There are several differences, however, that influence the IT acquisition policies and practices employed by commercial firms as opposed to those employed by federal agencies.

Federal agencies rely to a significant extent on other federal agencies in planning and implementing IT acquisitions. In general, federal agencies do not compete with each other for customers, so information sharing and mutual assistance among agencies are encouraged. Moreover, all federal agencies (with few exceptions) are bound by federal

acquisition regulations, which largely control how they go about IT acquisition planning and implementation.

Commercial organizations, on the other hand, do compete with each other and their IT planning and acquisition activities may be considered proprietary information. Accordingly, they are very selective in choosing firms to assist them in IT acquisition and implementation. Further, they are not bound by a common set of acquisition regulations, so they have greater freedom in how they plan and who they select to assist them.

Other important differences include:

- Commercial firms generally do not have the intense political pressures that face many government agencies and affect their IT acquisitions.
- Commercial firms have the profit motive, while government agencies have not-for-profit motives.
- Commercial firms can go out of business relatively quickly when they make a serious IT acquisition mistake, while government agencies are rarely dissolved, no matter the dimensions of an IT acquisition error.

The result is that commercial firms are under more pressure to make the correct IT acquisition decisions and they generally make them faster than government agencies. Moreover, commercial firms are quicker to adopt new technology, which they use to seek or maintain a competitive advantage. A global vendor of software says government agencies are generally two technologies behind the private corporations.

The fact that commercial firms often feel great pressure to make decisions quickly can cause them to skip vital steps in the IT acquisition process. As stated in an earlier session, Gartner, an IT research organization, examined IT project successes and failures among its many member firms and then recommended that organizations double the amount of time they spend planning IT projects.

Interestingly, some executives complain about the amount of time and resources spent on planning IT acquisition projects. Of course, how much time and resources to devote to the planning is a judgment call. The general rule is to balance the investment in planning with the estimated value of the acquisition results. In other words, don't spend more on planning than the project is worth. The other side of the coin is do not make the mistake of too little planning, the common error that Gartner points to. Leading organizations that are known for their "best practices" use a standard methodology for planning and conducting projects. As a result, these organizations have more project successes than those that do not use a standard methodology.

C. Economic Analysis of Alternative Solutions

Economic analysis is a management tool that assists in determining and documenting the financial costs and financial benefits of each alternative solution to a problem. The product of the economic analysis of an IT-based alternative solution is a projection of its risk-adjusted financial return on investment (ROI) and the net present value (NPV) of the

investment. This financial information can be key in selecting the best alternative solution and gaining management support.

The first reading from IT Economics Corp. defines ROI and NPV and compares them. It explains how both ROI and NPV are adjusted for the time value of money and adjusted for risk as part of the economic analysis. It describes the methodology and concepts underlying the economic analysis and the key aspects of the economic analysis tool you will use. The reading provides a link to an economic analysis worksheet tool that you can use to perform economic analyses of the alternative solutions to your performance problem.

The second reading from IT Economics Corp. provides a template that supports a comparative analysis of solution alternatives. It provides criteria that you can use to evaluate and compare your alternatives so you can select the one with the best balance of benefits, cost, and risk.

The reading from the CMMI® Acquisition Module report focuses on organizational process performance, which is the objective of the economic analysis of alternative solutions.

D. Required Readings

a. Federal Versus Commercial IT Acquisition Practices

Federal Acquisitions. Several federal agencies provide acquisition services to other federal agencies. The federal General Services Administration (GSA) is one that principally services civilian agencies. The Department of Defense (DoD), which includes many agencies, has several agencies that assist other DoD agencies in their planning and implementing IT acquisitions.

Explore the following websites below to gain insight into federal IT acquisitions, including the IT acquisition services offered by some federal civilian and DoD agencies to other federal civilian and DoD agencies.

- Explore how agencies can use the GSA's acquisition services. Look at the top of the screen and run your cursor over "Doing Business With GSA." Click on each of the following programs: **GSA Schedules, Technology Program** (and examine some of the technology programs, especially **GWACs** and **SMARTBUY**), and **Assisted Acquisition**. Click on any other of the programs and etools that might interest you. You should strive to gain an idea of the range of the program services available to agencies from GSA. Available at:
<http://www.gsa.gov/portal/category/100000>
- Explore the Department of Defense (DoD) acquisition website at the Defense Acquisition University (DAU). The Defense Acquisition Guidebook (DAG) is a tool widely used throughout DoD as a source of DoD acquisition information, it is worth your while to examine its contents and get a general notion of what is

available to the DoD acquisition community (includes the military services) by clicking on this URL:

<http://www.acq.osd.mil> and explore the links on the web page.

The DAG is available at:

www.acq.osd.mil/dpap/sa/Policies/DefenseAcquisitionGuidebookServices.html

Commercial Acquisitions. These three readings can give you greater insight into commercial acquisition practices.

(1) Read this one-page article titled: *Part 1: Major Differences Between Commercial & Government Practices.* (ND) Available at:

<http://www.treasury.gov/about/organizational-structure/offices/Mgt/Pages/dcfo-osdbu-how-to-part1-04-majordiff.aspx>

(2) Scan this document (attached) by The Gadwell Group on *Information Technology Procurement*. It provides insights into private sector IT procurement (acquisition). Look for differences between the private sector and the government sector. See reference list.

(3) Read this one-page piece titled: *Applying Private Sector Best Practices in Information Technology*. (2012). U.S. Office of Management and Budget. (About one page.) Available at: <http://www.whitehouse.gov/blog/2012/03/30/applying-private-sector-best-practices-information-technology>

Optional: This is material you might find interesting. Buying Information Technology Solutions (BITS) is a Scottish website that describes a 9-step process for buying IT solutions. It is a government site but it mirrors private practices and contains a lot of practical wisdom. It even illustrates the use of a Gantt chart. However, you will need to get used to discussing money in terms of pounds rather than dollars. It is located at: <http://www.bitsandbobs.scot.nhs.uk/bits2004/STEP1.htm>

b. Economic Analysis of Alternative Solutions

Carnegie Mellon Software Engineering Institute. *CMMI@ for Acquisition*, Version 1.3. November 2010. Read: Organizational Process Performance, pages 233-245. See Session 3 reference list.

IT Economics Corp. *Economic Analysis of Alternative Solutions*. This reading also provides access to the Economic Analysis Worksheet, which you can download. Available at: <http://www.iteconcorp.com/T7EconomicAnalysis.html>

IT Economics Corp. *Comparative Analysis of Acquisition Alternatives*. Available at: <http://www.iteconcorp.com/T8AnalAlts.html>

c. Optional Reading

Forrester Research. Video: [Next Generation Outsourcing](http://www.nextgenoutsourcing.com)

d. Assignments

1. Individual Project Assignments

You completed Activity 6 and should be ready to proceed to the next several activities. They are:

Activity 7. Prepare Economic Analyses. The two work breakdown structures you prepared in Activity 6, along with their supporting data, should provide you with much if not all of the information needed to perform an economic analysis on each of your two final alternative solutions. Use the Economic Analysis Worksheet provided in the *Economic Analysis* reading from IT Economics Corporation. The reading and template are available at: <http://www.iteconcorp.com/T7EconomicAnalysis.html>

You need to submit **two** completed Economic Analysis Worksheets, one for each of your two final alternative solutions. The worksheet is set up so that you can enter each on a separate sheet of the same Economic Analysis Workbook. All you need do for each worksheet is enter the name of your project, the project cost by calendar year, the benefits by calendar year, and risk probability data for each calendar year. Detailed instructions for completing the worksheets are provided in the Workbook. You should rely on the information you generated in preparing the WBS's for each of your two best alternatives, which will help you make reasonable estimates for the calendar year(s). Submit the actual Economic Analysis Workbook Excel file that you downloaded and used to enter information for your two alternatives. Do not put the Economic Analysis worksheets into a Word document or a pdf file.

Special Note: The worksheet from IT Economics Corporation is "locked" so that only the information needed can be entered and the formulas can't be changed to distort the spreadsheet results. Anyone can purchase software that unlocks spreadsheets. However, unlocking an economic analysis spreadsheet is not permitted in organizations because then the data it contains cannot be trusted. Moreover, the Workbook is copyrighted by IT Economics Corporation and there are ethical and legal issues that arise from tampering with copyrighted software. There is no need to unlock the spreadsheet and no spreadsheet that is unlocked or modified can be accepted in this course.

Activity 8. Perform a comparative value-risk analysis of the two alternatives, using Template 8 (IT Investment Assessment Rating Form). The template is in the reading from IT Economic Corp. titled *Comparative Analysis of Acquisition Alternatives*. It is available at: <http://www.iteconcorp.com/T8AnalAlts.html>

Use the criteria categories and weights provided in the template to rate your two alternative solutions. Based on the results of your assessments, select the best alternative. In other words, you conclude that it is the best solution to the performance problem because it has the best balance of value and risk for your organization.

Activities 7 and 8, along with Activities 9 and 10, must be posted in your Assignments Folder no later than the end date of Session 7.

2. Discussion Questions

After you have completed the above readings, please post a response to Session 5 discussion questions, each of which is provided as a separate conference.