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## **System Development and Acquisition**

Last month, we started a new series of articles related to the recently released (April 2004) FFIEC System Development and Acquisition regulatory guidance. This month's article will continue the series with a discussion on Project Management.

### **Background**

The "Development and Acquisition Booklet" is one in a series of booklets updating the 1996 *Federal Financial Institutions Examination Council (FFIEC) Information Systems Handbook* (FFIEC IS Handbook). The booklet, which rescinds Chapter 12 of the 1996 *FFIEC IS Handbook*, provides examiners and financial institutions with guidance for identifying and controlling development and acquisition risks.

The FFIEC agencies plan to distribute these books electronically via the Internet through the FFIEC's InfoBase application. The InfoBase includes each booklet in Adobe Acrobat file format as well as an online version with links to various resource materials and an orientation to the handbook update process. The new documentation can be found at:

[http://www.ffiec.gov/ffiecinfobase/html\\_pages/it\\_01.html](http://www.ffiec.gov/ffiecinfobase/html_pages/it_01.html)

### **Action Summary for Management**

Financial institutions should establish appropriate development, acquisition, and maintenance project management methodologies. The methodologies should match a project's characteristics and risks and include appropriate:

- Project plans;
- Definitions of project requirements and expectations;
- Project management standards and procedures;
- Quality assurance and risk management standards and procedures;
- Definitions of project roles and responsibilities;
- Involvement by all affected parties; and
- Project communication techniques.

Project management in its basic form involves planning and completing a task. Technology-related tasks include ongoing operational activities and one-time projects. A project's impact on operations must be a key consideration when assessing development, acquisition, and maintenance activities.

### **Business Impact**

Detailed project plans, clearly defined expectations, experienced project managers, realistic budgets, and effective communication significantly enhance an organization's ability to manage projects successfully. Ineffectively managed projects often result in late deliveries, cost overruns, or poor quality applications. Inferior applications can result in underused, insecure, or unreliable systems. Retrofitting functional, security, or automated-control features into applications is expensive, time consuming, and often results in less effective features. Therefore organizations

must manage projects carefully to ensure they obtain products that meet organizational needs on time and within budget.

## **Project Management Models**

Financial institutions use various methods to manage technology projects. The systems development life cycle (SDLC) is the primary project management methodology described in FFIEC guidance. The SDLC is used for illustrative purposes because it provides a systematic way to describe the numerous tasks associated with software development projects. Organizations may employ an SDLC model or alternative methodology when managing any project, including software development, or hardware, software, or service acquisition projects. Regardless of the method used, it should be tailored to match a project's characteristics and risks. Boards, or board-designated committees, should formally approve project methodologies, and management should approve and document significant deviations from approved procedures.

## **System Development Life Cycle – SDLC**

Structured project management techniques (such as an SDLC) enhance management's control over projects by dividing complex tasks into manageable sections. Segmenting projects into logical control points (phases) allows managers to review project phases for successful completion before allocating resources to subsequent phases. The number of phases within a project's life cycle is based on the characteristics of a project and the employed project management methodology. A five-step process may only include broadly defined phases such as prepare, acquire, test, implement, and maintain. Typical software development projects include initiation, planning, design, development, testing, implementation, and maintenance phases. Some organizations include a final, disposal phase in their project life cycles. The activities completed within each project phase are also based on the project type and project management methodology. All projects should follow well-structured plans that clearly define the requirements of each project phase.

## **Alternative Development Methodologies**

The SDLC provides a logical approach to managing a sequential series of tasks. However, a drawback to using a traditional SDLC is that project risks may not be adequately controlled if tasks are completed in a strictly sequential manner. For example, using a traditional SDLC methodology, users define functional requirements and pass them to system designers. Designers complete the designs and pass them to programmers. If programmers subsequently discover improved ways to provide the functional requirements, the designers must redo their work. However, if programmers are involved in the planning and design phases, they may be able to identify improvements earlier in the process. Therefore, to enhance the effectiveness of project activities, organizations should employ methodologies that involve all parties in each project phase.

**Next Month – We will continue with our series of articles on the recent FFIEC System Development and Acquisition booklet with an outline of roles and responsibilities.**

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