System Development and Life-Cycle Management (SDLCM) Methodology

Subject		Type	Standard
Solution Integration Plan		Identifier	S–5053
		Effective Date	February 2002
		Revision No.	2

Approval

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A.   PURPOSE

This standard specifies the content and format requirements for a Solution Integration Plan.

B.   APPLICABILITY

This standard applies to all NRC Project/Tasks, subject to the SDLCM Methodology, that plan to develop and deploy a new, upgraded, or migrated data processing system or software application.

This standard is used by those persons who create, review, and approve the Solution Integration Plan.

C.   REFERENCE PUBLICATIONS

The following publications contain related information:
- *SDLCM Methodology Handbook, Component 3*
- SDLCM Methodology Standard S–5051, Tactical Integration Plan
- SDLCM Methodology Standard S–5151, Test Plan
- SDLCM Methodology Standard S–1052, Project Management Plan
- SDLCM Methodology Standard S–1057, Software Development Plan
- *NRC Model Tactical Integration Plan, January 3, 1997*

D.   STANDARD

The Solution Integration Plan provides a detailed description of the activities involved in the integrating the hardware and software configuration items (CIs) of the solution system. It also specifies roles and responsibilities and the integration schedule, and identifies any risks, and risk mitigation approaches applicable to the integration process.

Tailor this standard as needed to be consistent with the size, scope, and complexity of the installation and integration effort. Add sections and subsections for special topics.

Sections and subsections that are not applicable should *not* be deleted; they should indicate "not applicable."

If the solution system is a small one and includes only one or two CIs, the integration effort may be described in the Tactical Integration Plan (TIP).

The following paragraphs describe the content of each section of the Solution Integration Plan.

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1.   INTRODUCTION

Provide any information necessary for understanding the Project/Task effort in the integration of the hardware and software CIs of the solution system as they are built.

1.1   Objectives

Describe the end or ends that the Project/Task intends to achieve during the solution integration process. If there is an overall goal, state that within this section and clarify that it is the goal.

1.2   Scope

Describe the scope of this plan. Identify the activities that mark the beginning and end of the integration process. Also identify any activities related to the integration process that are not covered by this plan.

1.3   Assumptions

Identify any assumptions related to the integration of the solution system. Include any identified open issues if the integration effort is to continue while issues remain unresolved. Include the degree of criticality in the description of each assumption.

1.4   Applicable Documents

List the documents that support this plan or that provide additional information about the various activities included under this plan, such as test requirements, training materials, applicable system requirements and specification documents, Project/Task schedules, and problem resolution policies and procedures.

2.   Approach

Describe the overall approach that will be followed to integrate the hardware and software CIs of the solution system.

2.1   System Overview

Briefly describe the solution system function and the context in which it operates, including the support equipment interfaces.

Identify the hardware and software CIs that will be integrated to form the solution system. If they are being developed or acquired by different organizations, specify that information. Indicate when each component is planned to be ready for integration. This information may be provided in tabular form.

State any special conditions that exist and how they might affect this plan or its implementation.

2.2 Integration Activities

Describe the various stages of activity and the strategy for accomplishing the integration of the various CIs. Clearly identify the date and activity that marks the end of the solution system integration effort.

2.3 Integration Milestones

Provide the milestone schedule for the solution integration period. Indicate dependencies.

Refer to Section 1.4, Schedule for Development of Deployment Plan Components, of the Project/Task TIP as appropriate If the solution integration effort is a small or uncomplicated one, include all integration milestones in Section 1.4 of the TIP.

2.4 Integration Roles and Responsibilities

Provide a table indicating the activities required for integration of the solution system and the Project/Task personnel (NRC and contractor) having responsibility for their completion.

Specify by role name (or sub-role name in the case of Development Team members), the person(s) responsible for each activity. The *SDLCM Methodology Handbook* contains role names, descriptions, and responsibilities as they apply to the methodology.

Refer to Section 1.3, Roles and Responsibilities, of the TIP as applicable. If the effort is a small or uncomplicated one, include all integration related activities and the associated roles and responsibilities in Section 1.3 of the TIP.

2.5 Problem Identification and Resolution

Identify the problem reporting and tracking procedures that will be followed. Identify who is responsible for reporting problems during solution integration and for implementing approved fixes or changes during the integration process. Refer to the Project/Task problem resolution procedures, as applicable.

2.6 Risks and Risk Mitigation

Enumerate the risks associated with integration of the solution system. Examples of such risks include availability of CIs when they are scheduled for integration into the solution system, availability of the needed support environment, and failures of hardware or software CIs during integration. Analyze the potential impact of any identified risks and describe any proposed risk mitigation strategies, such as activity re-

sequencing. Analyses should consider critical Project/Task objectives that may be jeopardized.

Refer to Section 2.3, Risk Management, of the Project Management Plan, and to the Software Development Plan, as applicable.

2.7   Integration Testing

Identify the procedures that will be used to verify successful integration of the hardware and software CIs of the solution system. Refer to the Project/Task Test Plan for a description of the testing that will be performed.