



# **SFA Solution Life Cycle (SLC) Process Guide**

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**Document Control Information**

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**DOCUMENT CONTROL INFORMATION**

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***Revision History***

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.01	10/25/00	SFA Modernization Partner	Original Work in Progress release
.02	11/1/00	SFA Modernization Partner	Incorporation of core team comments to Vision and Executive Summary
.03	11/20/00	SFA Modernization Partner	Incorporation of core team comments
.04	12/06/00	SFA Modernization Partner	Incorporation of core team comments
.05	12/13/00	SFA Modernization Partner	Final revisions
1.0	2/12/01	SFA Modernization Partner	SDLC incorporation of SFA comments
1.0	10/15/01	Solution Acquisition Process Group (SAPG)	SLC deliverable formerly submitted to SFA leadership for final approval.

***Release Schedule***

There will be an annual release schedule with periodic updates based on changes accepted by the Change Control Process Group (CCPG).



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## 1. Introduction

This Guide documents the Department of Education’s Student Financial Assistance (SFA) Solution Life Cycle (SLC). Formerly known as the SDLC (System Development Life Cycle), the framework has been updated, modified, and is now known as the SLC (Solution Life Cycle). It provides a baseline approach for solution acquisitions across SFA. SFA acquires IT solutions in order to meet business needs. Once a solution has been identified, SFA acquires the solution which could consist of a system, software, hardware, etc. The SLC is designed to be the process framework used by SFA to acquire the solution from planning to deployment and support.

This document and the overall process will continue to evolve through an “evergreening” process in order to remain as current and relevant as possible. It is SFA’s intent to further develop the processes identified within this Guide as part of a continuous SFA process improvement program.

The SLC Process Guide brings together a variety of standard procedures, best practices, tools and reusable components to enable SFA personnel and contractors to better achieve successful solutions that are on time and on budget. These standard procedures may be modified as required to meet objectives specific to the most effective type of acquisition. Through the use of a standardized process, Project Managers will know what is expected of them and others. This will facilitate communication across the organization and will result in a more efficient and cost effective solution.

The SLC Process Guide is composed of five phases: vision, definition, construction, deployment and support. Depicted in Figure 1. The phases are tailorable so that some elements described within each phase may be skipped or abbreviated, should the solution require it. Regardless of what stage of development a project is in, the SLC can be utilized immediately. Life cycle process steps have been combined together into standard phases and these phases have been defined to help manage the risk inherent in any acquisition project, system development or enhancement project. The phases include commit points for decision-making as well as other forms of review. It is recognized that no project can accommodate all of the practices and processes described within this Guide due to various types of implementation such as Application Service Providers (ASP’s), Commercial off the Shelf (COTS), or Rapid Application Development (RAD), elements of risk and other factors. Therefore, this Guide and its key processes should be used as a tool to add discipline to the acquisition and maintenance of SFA solutions.

### Solution Life Cycle

<b>Phases</b>	Vision	Definition	Construction	Deployment	Support
<b>Results</b>	Problem Assessment	System Requirements	Detailed Design	Deployed Solution	Production Services
	Solution Recommendation	Preliminary Design	Accepted Solution		

Figure 1



The SFA has taken Key Process Areas from the Software Acquisition Capability Maturity Model (SA-CMM) and the Software Capability Maturity Model (SW-CMM) and merged the most applicable practices from each, to form the SFA SLC. This tailored framework is expected to provide maximum benefit to SFA and address specific business needs.

The six chosen KPAs align with different phases of the SLC. The six KPAs are:

**Software Acquisition CMM**

- Solution Acquisition Planning (SAP)
- Solution Acquisition Project Management (SAPM)
- Requirements Development and Management (RDM)
- Transition to Support (TTS)

**Software CMM**

- Quality Assurance (QA)
- Configuration Management (CM)

Each KPA has been converted into a process guide, which further defines and develops repeatable processes and procedures to be followed. Additionally, a Security Process Guide has been developed to identify specific security requirements and activities conducted throughout the Solution Life Cycle. The following Diagram 2 depicts where each KPA and System Security support the Solution Life Cycle.



**Solution Life Cycle**

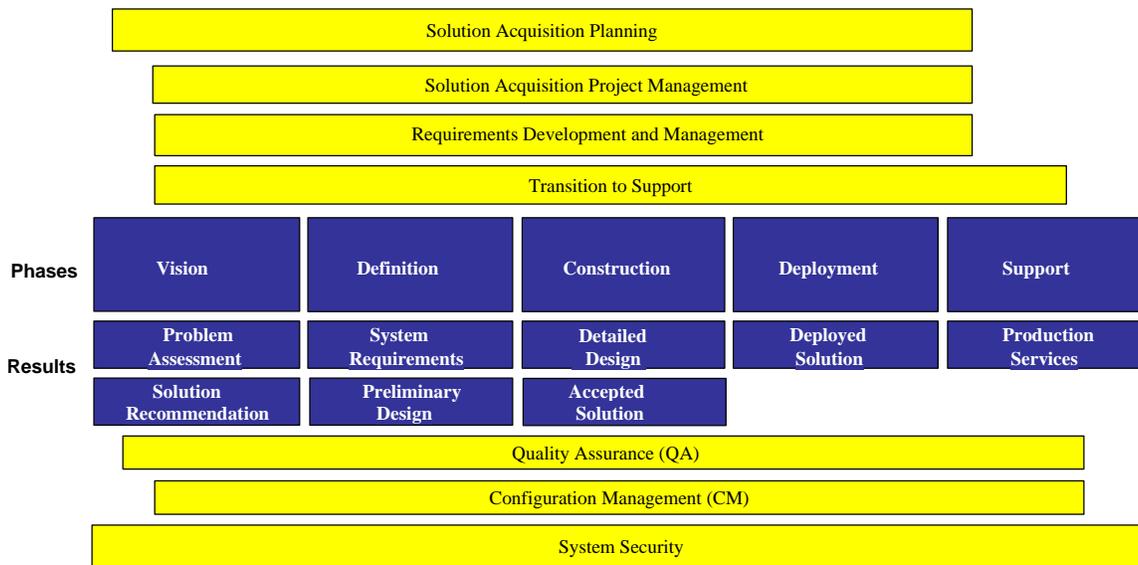


Figure 2

Each phase is guided by user and stakeholder input, and builds upon the outputs and products of the previous phase, with continual consideration of the objectives stated in the Business Case and activities documented in the Solution Acquisition Plan. This Guide is organized by the following topics in distinct sections for each of the five phases:

- Objective;
- Entry Criteria;
- Process and Outputs;
- Roles and Responsibilities;
- Exit Criteria; and
- Job Aids.

These topic areas will enable a project team to quickly look at the five phases within the Process Guide to assess what they need to accomplish. Some projects may develop a solution in several iterations of vision, definition, and construction, and then integrate the iterations together. Other projects may develop and deploy separate iterations, gradually building functionality in use. In all cases, the deliverables of each phase should support the needs of the SFA Business Case for that initiative or project.

Several principles that have guided the development of the SLC are:

- Interaction with the end users and stakeholders is vital to the development of a successful solution;
- There is an inherent need for “standardized” or “core” project deliverables and formats within the SFA organization;



- The process described should be easy to understand and follow, but be flexible enough to allow for growth and change within the organization and its initiatives;
- The SLC should “evergreen”, and be continually maintained and kept current; and
- The end goal is meeting the business need, and keeping the documentation to an essential set.

This Guide is organized so that the necessary steps and activities associated with each phase of the life cycle can be easily identified. It is also designed so Project Managers and team members alike can understand the context of each activity within the entire SLC.