



# Solution Life Cycle

**Navigating  
SFA's SLC**





## Systems Acquisitions in the SLC

- **Solutions Life Cycle (SLC) Framework**
  - **Objectives of the SLC**
  - **Benefits of the SLC**
  - **Capability Maturity Model in the SLC**
- **Key Process Areas in the SLC**
  - **Solution Acquisition Planning (SAP)**
  - **Solution Acquisition Project Management (PM)**
  - **Requirements Development and Management (RDM)**
  - **Configuration Management (CM)**
  - **Transition to Support (TTS)**
  - **Quality Assurance (QA)**
  - **System Security**
- **Summary**

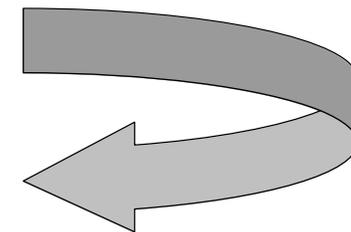


## SLC Framework

The SLC is a framework to guide a successful Solution Acquisition from business need to deployment and support. The outline for the SLC is illustrated below:

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

This framework provides SFA with repeatable processes that allow project management to cut down on time, effort, and unnecessary steps.





## SLC Objectives

**Project managers should evaluate how the SLC supports their project and follow the SLC because:**

- The SLC Provides processes and tools to maximize the efficiency of projects.
- The SLC supports SFA in compliance to Clinger Cohen and Office of Inspector General audits.





## SLC Benefits

**The SLC establishes repeatable processes reducing time, effort, and unnecessary rework.**



- Improved predictability of development initiatives
- Clarified scope, requirements and delivery commitments
- Improved predictability of development initiatives
- Greater visibility of project progress for business owners



## Capability Maturity Model in the SLC

**SLC is further enhanced by SFA's Solution Acquisition Capability Maturity Model (CMM). This is a framework for organizational improvement.**



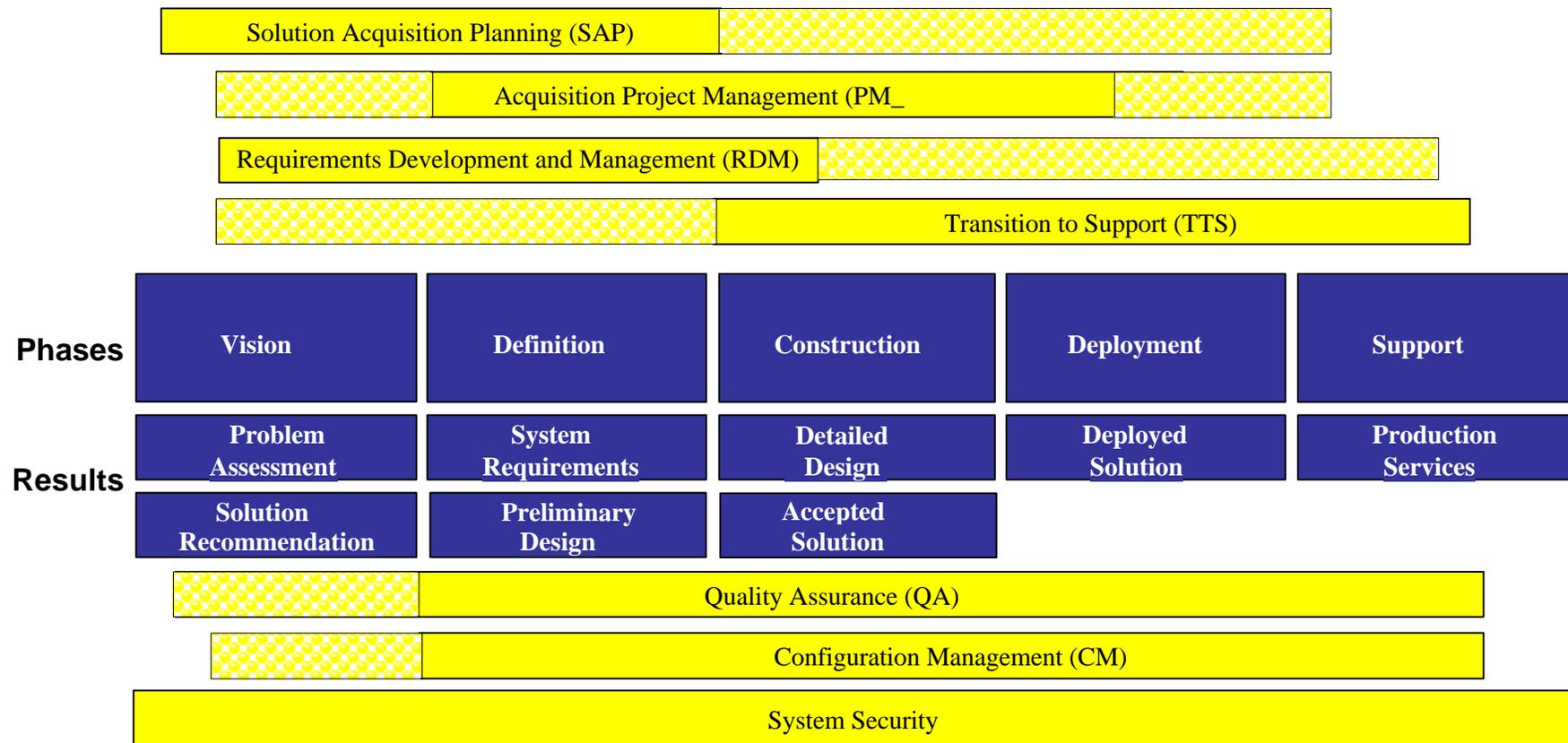
**The SLC is enhanced by two SEI CMM's:**

- Software Acquisition CMM
  - addresses the project's **entire software acquisition** process and life cycle support
- Software CMM
  - model for **benchmarking** and **improving** the software development process



## Key Process Areas in the SLC

**These KPAs were chosen from the Software Acquisition and Software Capability Maturity Models. System Security was added as a KPA.**



**Now to review each KPA in more detail**



## Solution Acquisition Planning (SAP) Defined

**SAP ensures that reasonable planning is conducted for an acquisition and all elements are included. SAP begins as soon as it is determined a system is needed.**

SAP Involves planning for all other KPA activities specifically:

- Development of the overall SAP plan
- Development of the Life-cycle Support Plan
- Document Life-cycle cost estimates
  - Acquisition Time
  - Acquisition Costs
- Record
  - Actual Time
  - Actual Costs



## SAP Objectives and Benefits

**As described in the Vision phase of the SDLC, SAP begins when it is determined that solution will be acquired.**

### **Objectives:**

- A well developed Acquisition Strategy is documented
  - Templates and defined procedures have been developed for use
- A reasonable, documented planning effort takes place
  - Executives are aware of what the project will deliver
  - Executives are aware of what the project will not deliver
- Plan, account manage, and measure Acquisition costs and support
  - A firm foundation is established to build the work breakdown structure
- Clearly define SFA personnel responsibilities

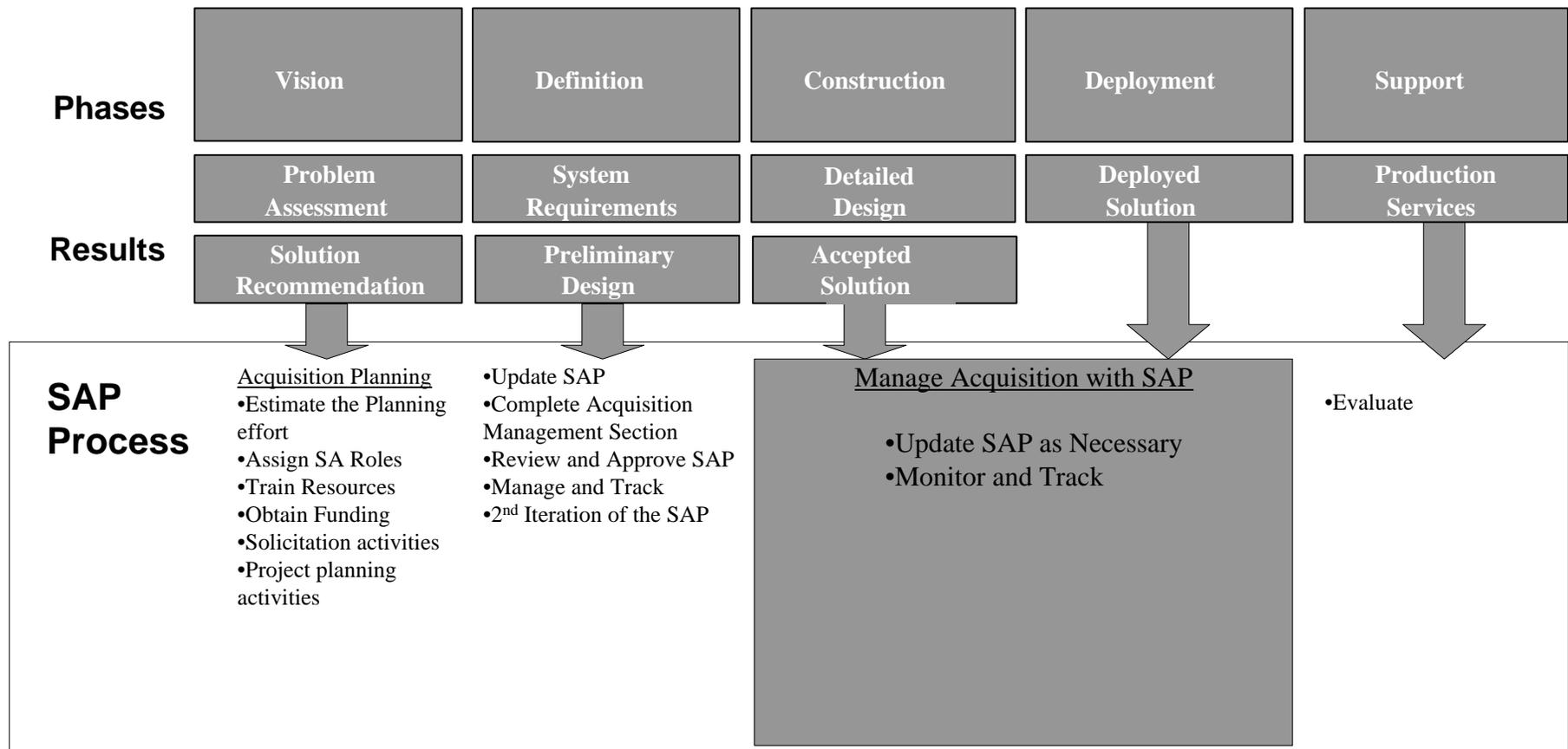
### **Benefits:**

- Using the appropriate processes means higher quality work (Increased Employee and Customer Satisfaction)
- Repeatable processes means lower cost (Lower Unit Costs)



## SAP in the SLC

As described in the Vision phase of the SLC, SAP begins with the need for a solution acquisition.





## Project Management (PM) Defined

**PM manages and tracks project activities to ensure a timely efficient and effective acquisition. PM helps keep a project on track.**

### **Project management involves:**

**Development of the overall acquisition schedule**

**Estimating costs and effort**

**Tracking:**

- Quality
- Risks and Issues
- Costs
- Schedule





## PM Objectives and Benefits

**The purpose of PM is to monitor and control solution acquisitions.**

Objectives of PM include:

- PM activities are planned, controlled, organized, and communicated
- Ensure personnel are trained to perform their role
- Problems discovered during the solution acquisition are managed, controlled, and corrective action is taken
- Review and Accept products and/or services

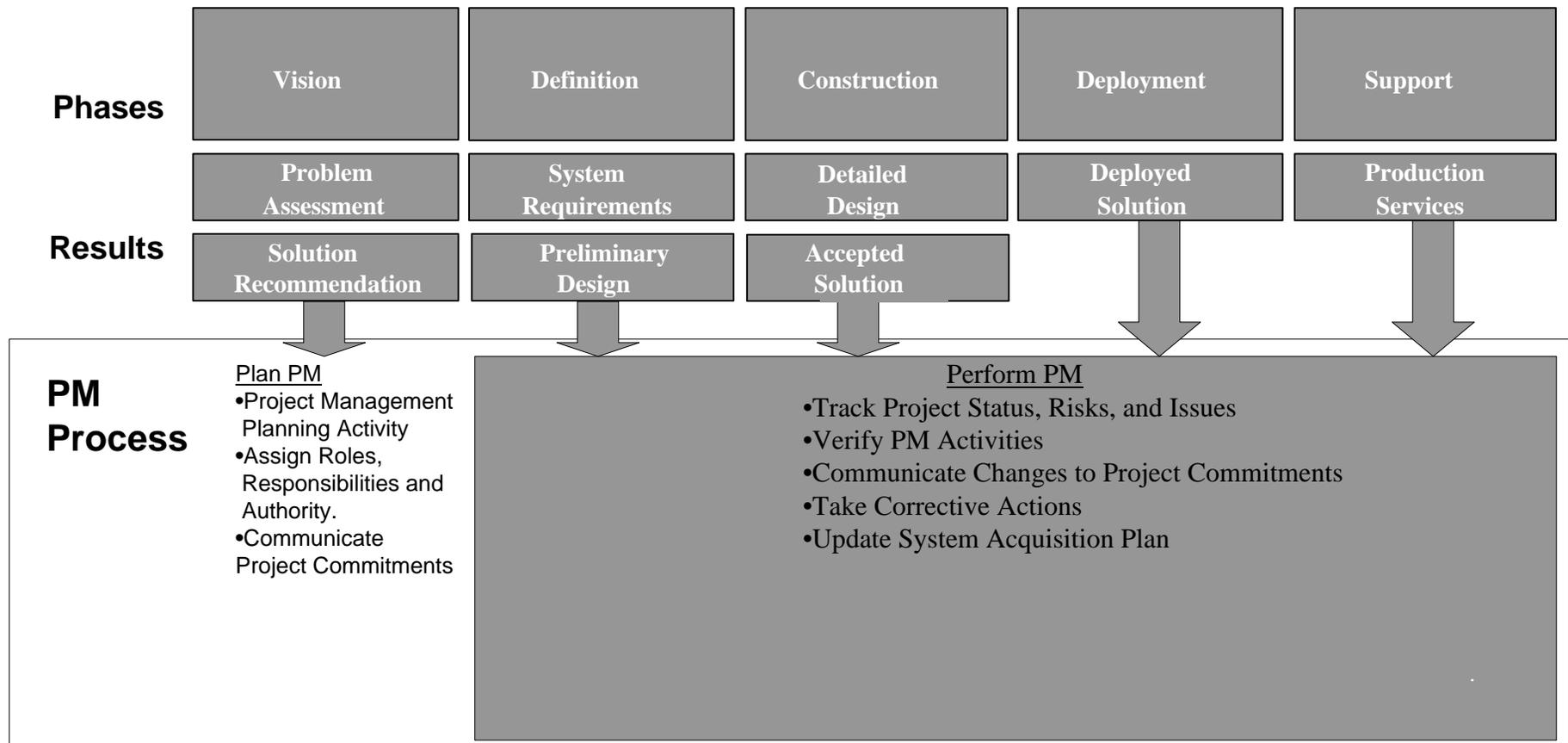
Benefits of PM activities include:

- Clearly defined roles
- Disciplined approach
- Streamlined process
- Less duplication of effort
- Supports compliance to Clinger-Cohen act



## PM in the SLC

**Project management provides the tools to plan and manage a system acquisition.**





## Requirements Development and Management (RDM) Defined

**RDM is the development and management of solution/system requirements with end users and key affected groups in mind**

### **In Development –**

Technical and non-technical requirements are clear, complete, baselined and traceable.

### **In Management –**

Changes or updates to baselined requirements are managed and controlled, monitored and verified.





## RDM Objectives and Benefits

**The purpose of RDM is to establish a common and clear definition of solution requirements**

Objectives of RDM include:

- Solution requirements are developed, documented, managed, and maintained
- The end user and other affected groups have input to the solution requirements over the life of the acquisition
- Solution requirements are traceable and verifiable
- The solution High Level (HL) requirements are baselined with the approval of business case

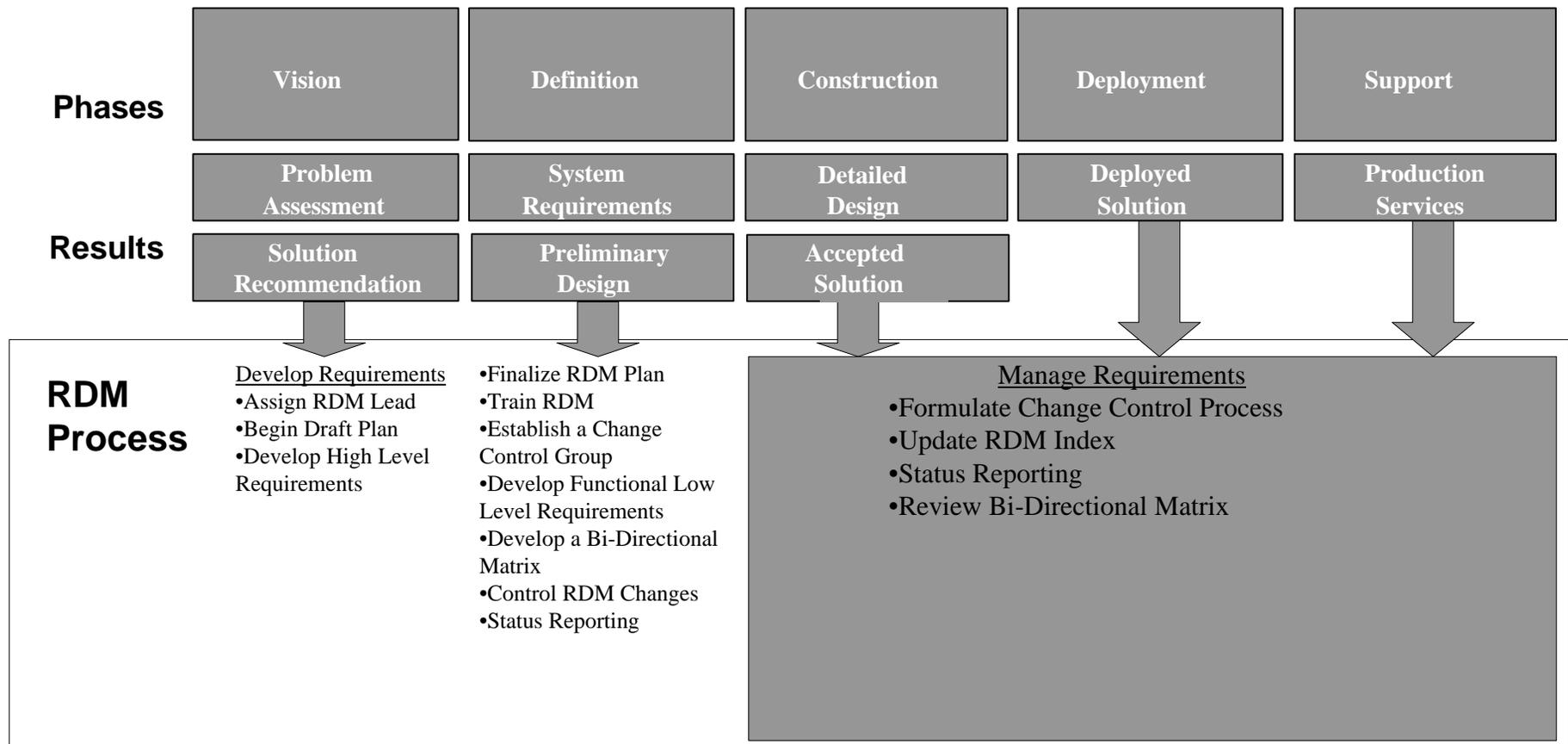
Benefits of well-developed and managed requirements include:

- Well-formed requirements are identified and developed
- Requirements are traceable to end-user needs
- Requirements are reviewed approved and controlled
- Agreed project scope can be managed and controlled more effectively



## RDM in the SLC

**RDM guides projects through the development of both high and low level requirements and the managing of those requirements.**

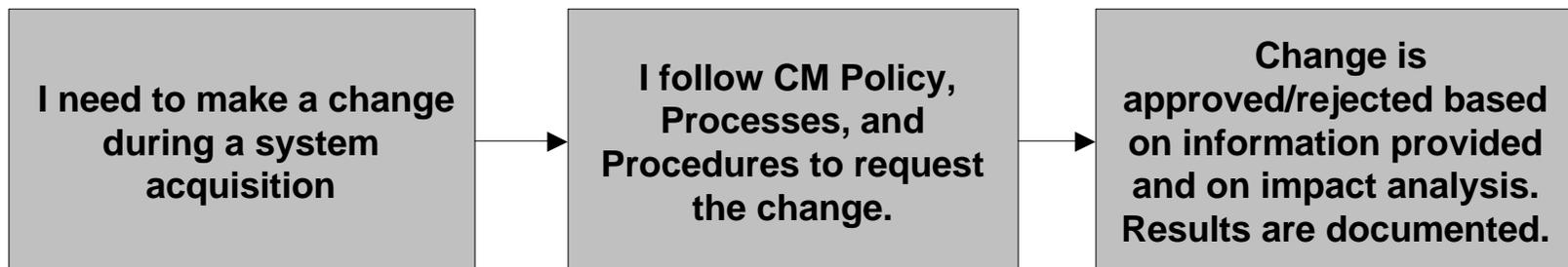




## Configuration Management (CM) Defined

### **CM includes Change Control for System Acquisitions.**

- CM is the process of identifying, organizing, and managing the integrity of critical work products as they evolve through the Solution Life Cycle; this includes both software and non-software components.



Also includes:

- Configuration Identification
- Control
- Status Accounting
- Baseline Auditing



## CM Objectives and Benefits

**CM saves SFA and Acquisition Projects time, money, and effort, while lowering risk of rework.**

### Objectives of CM Include:

- Implementation of common repeatable processes and procedures to improve consistency across the enterprise
- Reduction of errors and rework by following a pre-approved process
- Assisting SFA employees in maintaining organized and accurate data for their projects

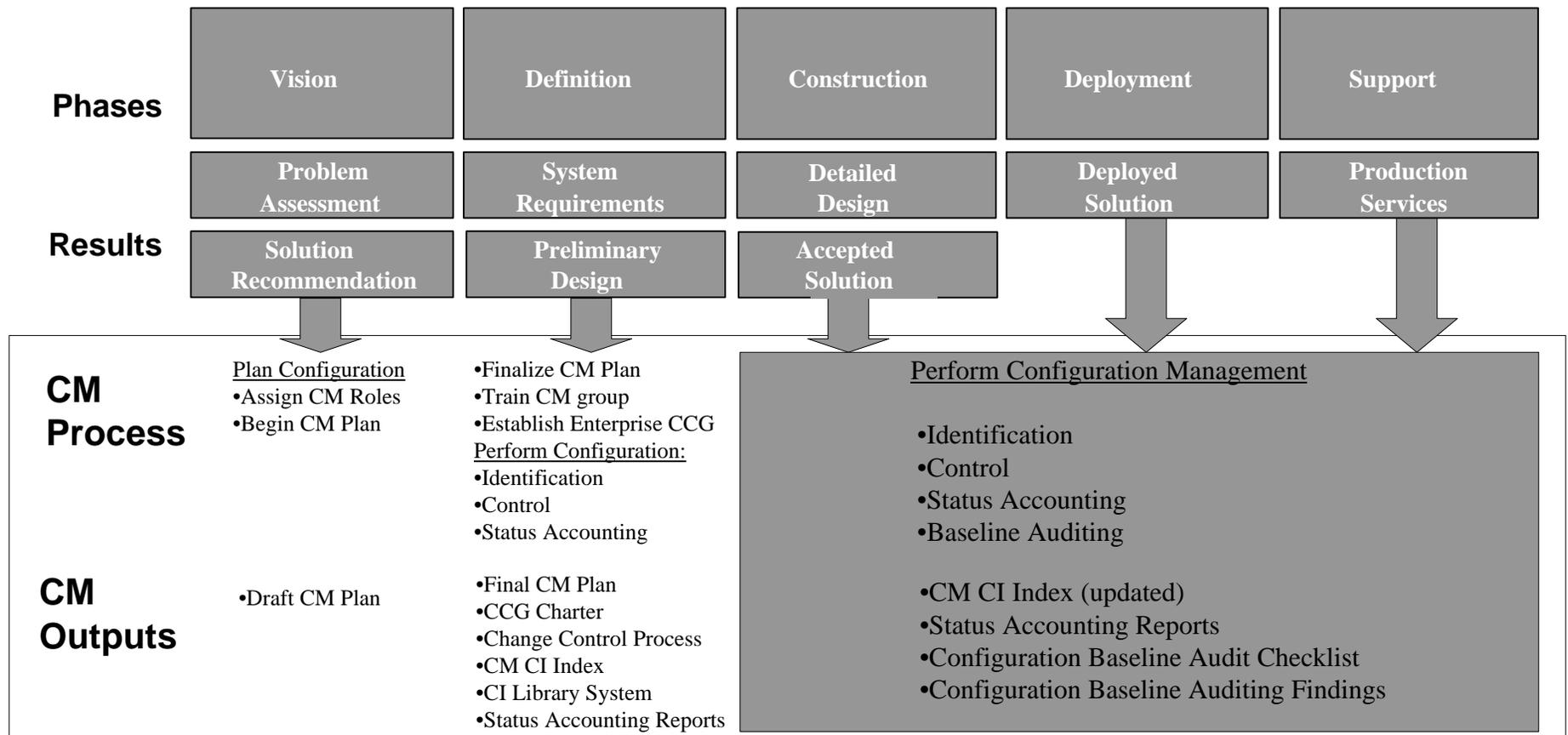
### CM takes place at two different levels:

- Enterprise (SFA-wide) level
- Project Level



## CM in the SLC

**The CM Process Guide is the main support tool for the CM Process.  
The CM Process Guide defines Planning and Performing CM.**





## Transition to Support (TTS) Defined

**TTS is a transfer of solution components from the development organization to the support organization.**

### **Transition can occur in several ways:**

- One day of transition or “cut over”
- Parallel systems are run between Deployment and Support organizations
- Build, Run, and maintenance is conducted in iterative phases





## Transition to Support Objectives and Benefits

### Transition to Support:

- Provides for the transition of the core software products to the long term system operations provider in a repeatable way
- Communicates support requirements to all affected parties
- Provides an orderly transition of services which is seamless to the customer

### Benefits include:

- Easing the transition effort to a support organization
- Roles and responsibilities are clearly defined for the transition effort
- System CM integrity is maintained throughout the transition
- Invisible transfer to support organization and no loss of service levels to the customer



# TTS in the SLC

<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		
<b>TTS Process</b>	<ul style="list-style-type: none"> <li>Assign TTS Lead</li> <li>Begin Draft Plan</li> <li>Develop Transition estimate</li> <li>Develop Support Organization estimate</li> <li>Identify Support Organization</li> </ul>	<ul style="list-style-type: none"> <li>Train TTS TTS Lead and Team</li> <li>Finalize TTS Plan</li> </ul>	<ul style="list-style-type: none"> <li>Monitor Transition Activities</li> <li>Develop TTS Readiness Review Material</li> </ul>	<ul style="list-style-type: none"> <li>Develop Project Inventory List</li> <li>Conduct TTS Readiness Review</li> <li>Monitor Transition Activities</li> <li>Get Transition Sign Off</li> </ul>	
<b>TTS Products</b>	<ul style="list-style-type: none"> <li>Draft TTS Plan into SAP Plan</li> <li>Transition estimate</li> <li>Maintenance estimate</li> <li>Support Organization Identified</li> </ul>	<ul style="list-style-type: none"> <li>Baseline TTS Plan</li> <li>Trained TTS Lead and Team</li> <li>Process Reports</li> </ul>	<ul style="list-style-type: none"> <li>TTS Readiness review document</li> </ul>	<ul style="list-style-type: none"> <li>Project Inventory baselined</li> <li>Signed Transition document</li> <li>TTS Readiness Review completed</li> </ul>	



## Quality Assurance (QA) Defined

**QA provides assurance to SFA Leadership that an acquisition project's work products comply to SFA standards.**

Quality Assurance:

- Verifies project management processes are followed
- Ensures high-level development processes practices comply with the project's plans and SFA standards

Why QA is important

- Validation provides an independent and objective look at product quality
- Ensures products conform to project requirements
- Ensures process steps are completed
- Tracks corrective actions to closure
- Provides timely feedback to projects to ensure overall quality of deliverables



## QA Objectives and Benefits

### QA Ensures:

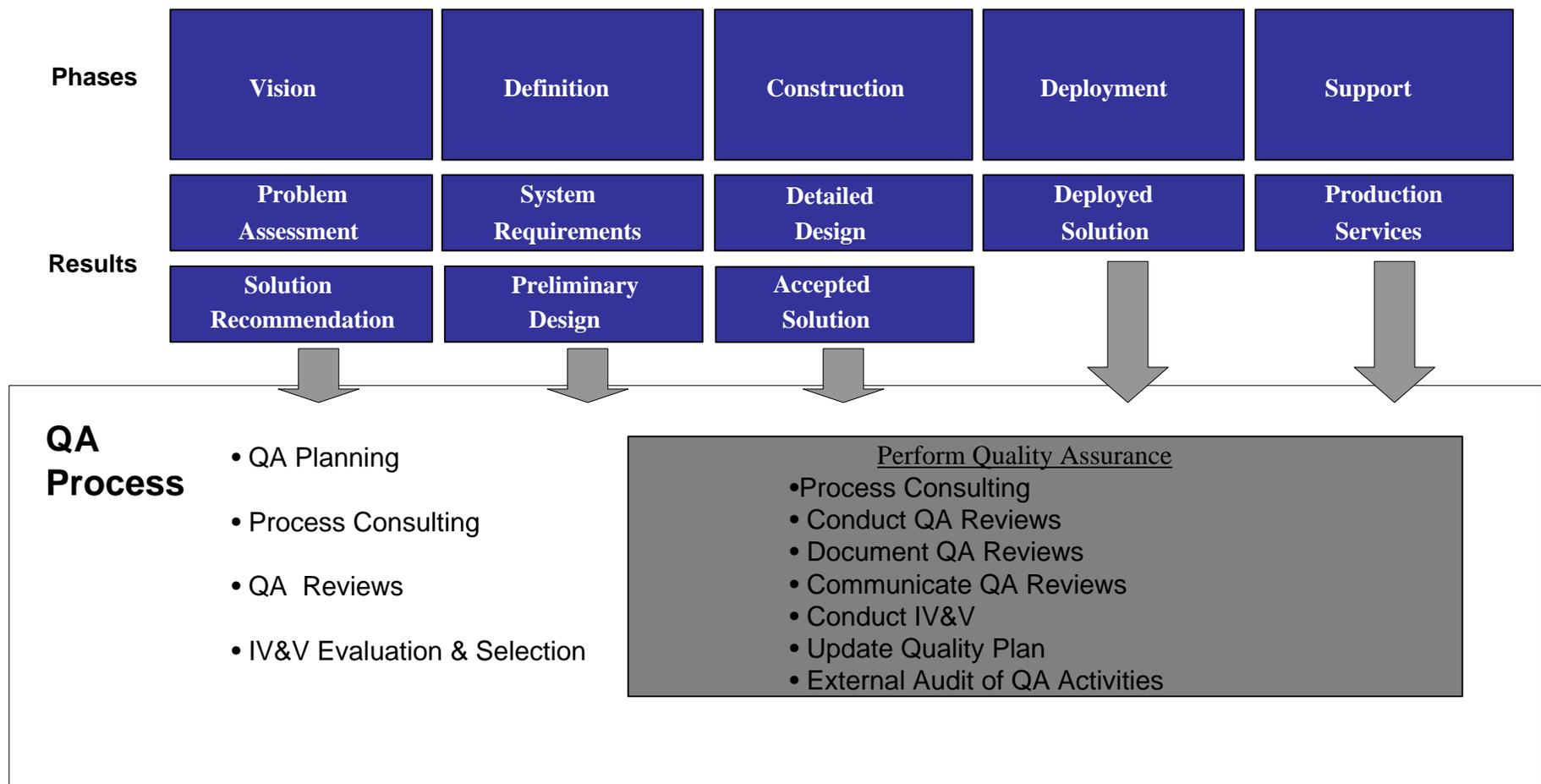
- Quality Assurance activities are planned
- Adherence of software products and activities to SFA standards, procedures, and requirements is verified objectively
- Affected groups and individuals are informed of QA activities and results
- Non-compliance issues that cannot be resolved with project teams are addressed by senior management

### Benefits of QA include:

- Assure appropriate reviews and inspections are performed
- Assure quality-gates are signed-off
- Collect and Analyze Quality Metrics
- Assure corrective and preventative actions are performed



## QA in the SLC





## Summary

**The SLC is an “Evergreening” framework, designed to establish repeatable process to help SFA simplify the solution acquisition process.**

- The framework needs to you! Your insight and input will help us further improve how we do business.
- To easily access additional information:
  - Modernization Partner should access X:/SLC Tools/ for SLC process and latest tool updates.
  - For SFA employees the SLC is available on the extranet along with the technology handbook.
- Open Discussion

