



Quality
Assurance



Federal Student Aid

Quality Assurance Awareness Presentation



Quality Assurance Process

- **Solution Acquisition in the Solution Life Cycle (SLC)**
- **SA-CMM and the SLC**
- **Quality Assurance in the SLC**
- **What is Quality Assurance?**
- **What are the Objectives of QA?**
- **What is the QA Process?**
- **What are the QA tools?**
- **What are the Benefits of QA?**
- **Review and Summary**



The SLC is a framework to guide a successful solution acquisition from business case to deployment and support. The outline for the SLC is illustrated below.

This framework provides FSA with repeatable processes that allow project management to reduce time, effort, and unnecessary steps by providing an outline to follow throughout the project.

Planning/ Managing	Acquisition Planning and Managing				
Phases	Vision	Definition	Construction	Deployment	Support & Retirement
Results	Problem Assessment	System Requirements	Detailed Design	Deployed Solution	Production Services
	Solution Recommendation	Preliminary Design	Accepted Solution		
	Quality Assurance (QA)				

Solution Acquisition Quality Assurance provides visibility into acquisition projects and products.





Vision

Definition

Construction

Deployment

Support & Retirement



We begin with a Vision.

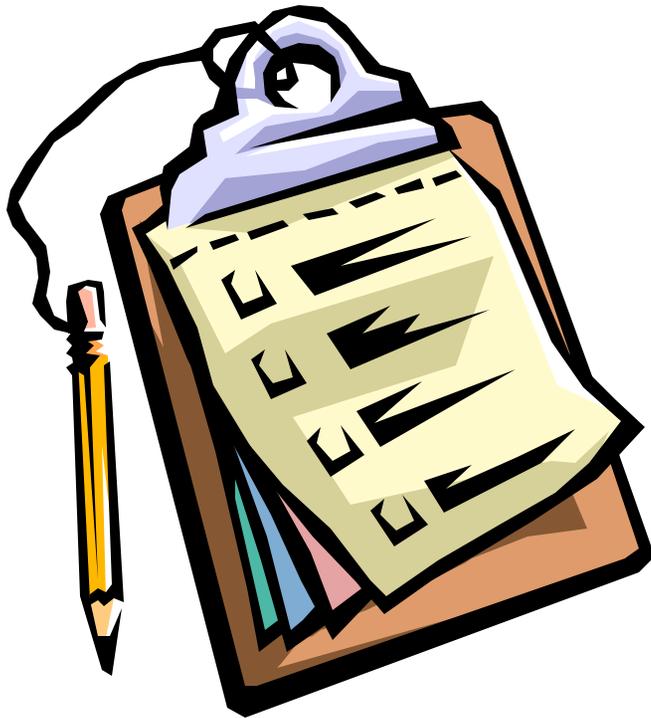
A business need has been identified that requires an assessment and solution recommendation. This is where Quality Assurance begins.

A member of the FSA Management team is identified to oversee the Vision Phase processes and manage the solution effort from Vision to Support & Retirement.

This FSA employee is the FSA Project Manager.



The Solution Acquisition-Capability Maturity Model (SA-CMM) is a framework for organizational improvement.



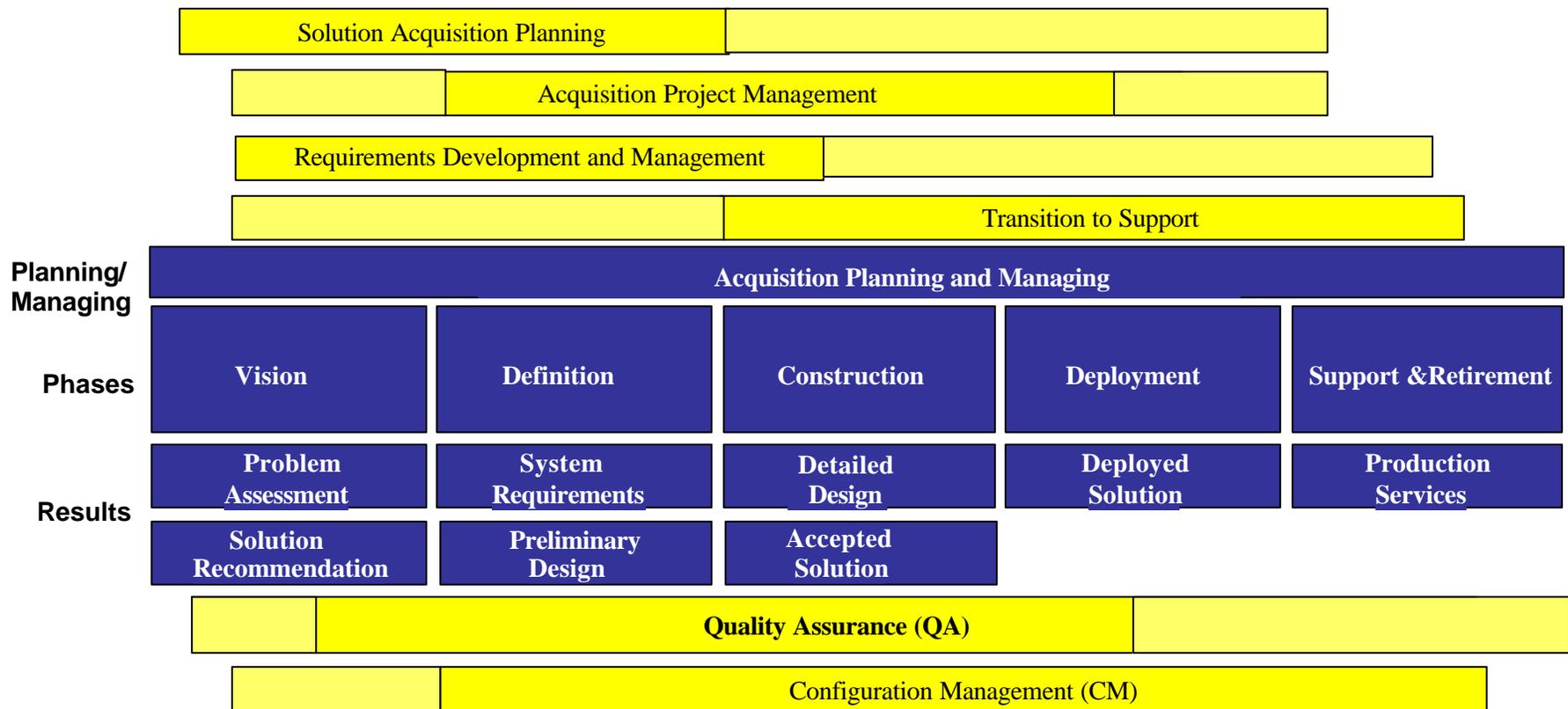
The SLC is further enhanced by the SA-CMM.

SA-CMM identifies Key Process Areas (KPAs) that organizations can implement to focus their efforts and ensure the efficient operation of solution acquisition projects.

These KPAs align with different phases of the SLC. Defining and developing repeatable processes and procedures within each KPA will help FSA increase the efficiency of the SLC.

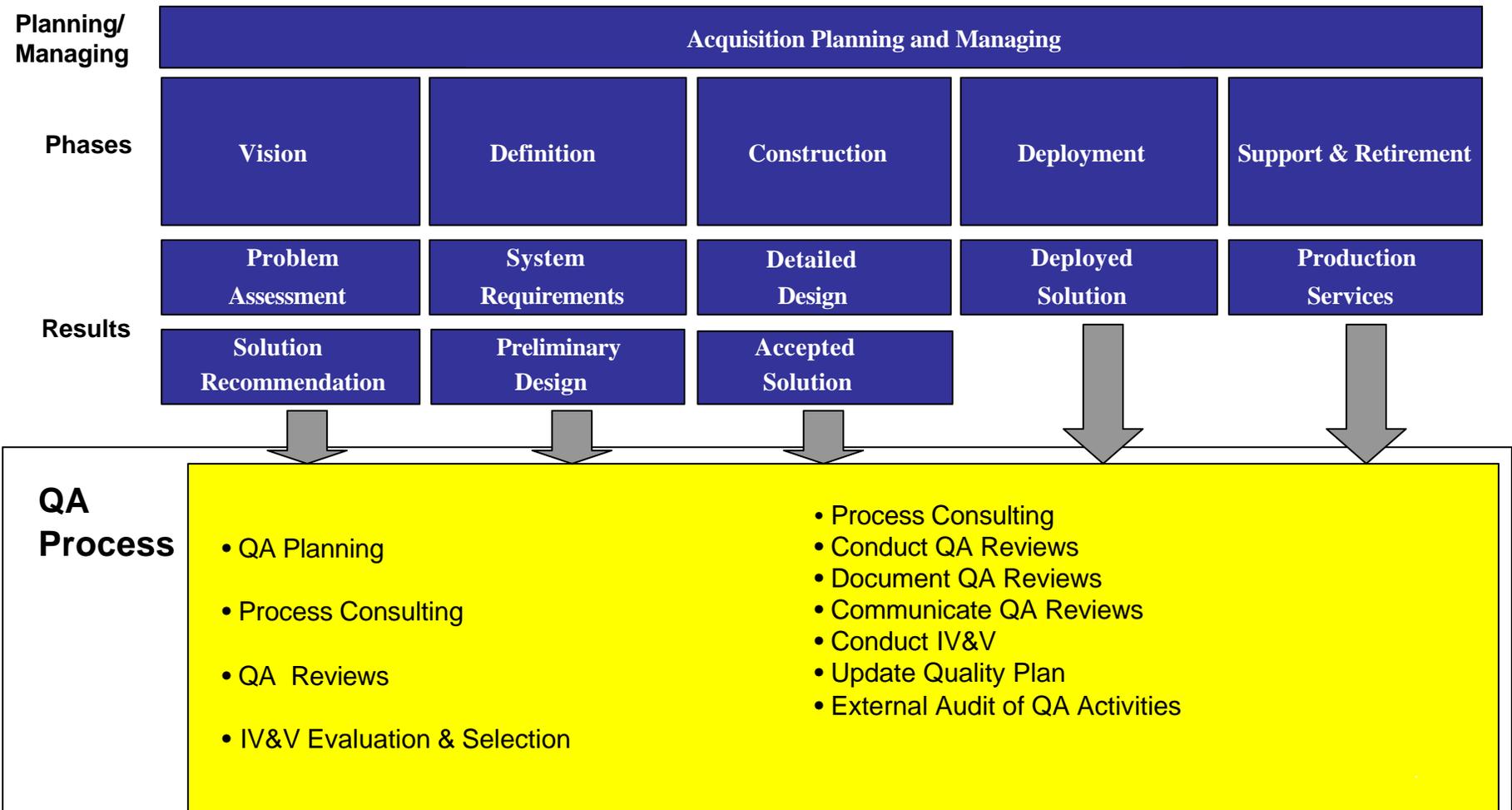


These six KPAs were chosen from the Software Acquisition (SA) and Software (SW) CMM models



QA in the SLC

Quality Assurance



What is Quality Assurance?

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“Quality Assurance is the activity of providing to all concerned the evidence needed to establish confidence that the quality function is being performed adequately.” Juran

What are the Objectives of QA?

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- Quality Assurance activities are planned
- Adherence of software products and activities to FSA 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

What is the QA Planning Process?

Quality Assurance



Entrance Criteria

- Approved Business Case,
- OR, Appropriate approval

Inputs

- Project objectives, context, requirements
- Project constraints
- Applicable risk information
- Applicable standards, processes, procedures
- Applicable policies

Process

- QA Plan prepared for each project
- QA Plan developed in parallel with project plan or SAP
- QA planning defines roles, responsibilities, work products, and process reviews
- QA Plan to be managed by SCM group after approval
- Schedule of QA activities included in project plan
- Project plan includes master project schedule

Outputs

- Approved QA Plan
- QA activities identified in project schedule

Exit Criteria

- QA Plan meets QA Plan Standard
- Approved QA Plan at project, program, enterprise levels

What is QA Process Consulting?

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Entrance Criteria

- Additions, changes to policies or objectives
- Process evaluation needed

Inputs

- Organizational changes in process areas
- Project changes in process areas
- Open process issues

Process

- Provide consultation & training on standards, policy, or process compliance
- Provide consultation & training on externally imposed standards and requirements
 - Provide consultation on selection of processes for projects
 - Orient new team members on QA Process
 - Carry out tailoring of QA Plan

Outputs

- Process changes are accepted, rejected or modified

Exit Criteria

- All process issues are documented and tracked to monitor progress

What is the QA Review Process?

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Entrance Criteria

- Work product ready for evaluation
- Documentary evidence to begin review
- Evaluation scheduled, checklist sent
- Evaluation criteria accepted

Inputs

- Work product
- Standards, processes, policies
- Approved QA Plan
- Sampling criteria
- Enterprise policy

Process

- Prepare review
- Perform review
- Document findings
- Distribute findings
- Evaluate noncompliance
- Document response
- Implement corrective action plan

Outputs

- Memorandum of Record (MOR) inclusive of metrics is shared with project team

Exit Criteria

- MOR signed off by organization QA group representative

What is the IV&V Evaluation/Selection Process?

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Entrance Criteria

- Need for IV&V effort is identified
- Need to select IV&V partner is recognized
- IV&V Partner volunteers services

Inputs

- Evidence stating need for IV&V process
- Partner qualification requires evaluation
- Corporate Capabilities Package (CCP) requested by FSA
- RFQ has been submitted to FSA

Process

- Evaluate Partner qualification criteria
- Evaluate Corporate Capabilities Package (CCP)
 - Engage FSA/FEDSIM Evaluation
 - Review selected Partner

Outputs

- Potential IV&V Partner meets FEDSIM conditions
- CCP submitted to FSA/FEDSIM for analysis
- FSA/FEDSIM evaluate potential Partners
- QA 8(a) Contractor Performance Measures applied to potential Partner

Exit Criteria

- IV&V Partner is selected and reviewed

What is the External Audit of QA Activities Process?

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Entrance Criteria

- External audit has been scheduled

Inputs

- QA Policy, QA Process Guide, QA Plans, QA Checklists, QA Guidelines
- Documented results of QA activities
- Project team availability for clarification

Process

- Ensure funding is available for external audit
 - Inform FSA QA Team of forthcoming audit
- Ensure activities are part of FSA QA Team plan and schedule
- Conduct external audit of FSA QA Team's activities
 - Address risk management issues

Outputs

- Audit report or review report
- Findings briefing

Exit Criteria

- Audit report completed
- Findings briefing conducted

What are the QA Tools?

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- **QA Process Guide**
 - Process Checklists (SAP, PM, CM, RDM, TTS)
 - QA Action Plan
 - QA Review Schedule
- **QA Plan Template**
- **FSA System Integration & Testing Process Handbook**
- **IV&V Handbook**



What are the benefits of QA?

Quality Assurance



Customer Satisfaction

Management Visibility

Assure Reviews & Inspections Performed

Assure Quality-gates-signed-off

Assure Corrective & Preventative Actions Performed

Collect & Analyze Quality Metrics

Continue Process Improvement



QA Knowledge

- Solution acquisition and the SLC
 - SA-CMM and SLC
 - QA in the SLC
 - QA Definition
 - Benefits of QA
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- Questions?