PRECISION STUDIO

A LEADER IN EFFECTIVE COMMUNICATION

Project Management Methodology

Construct & Unit Test SubPhase

Course Purpose

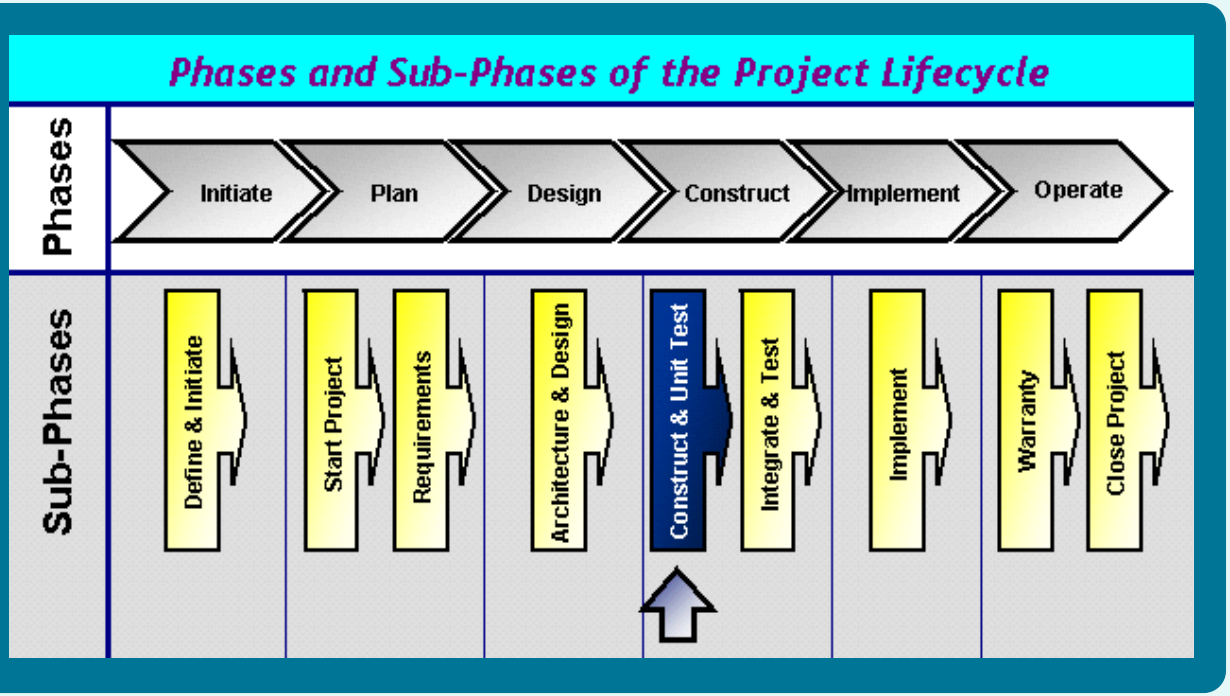
- Familiarize team members with the Construct & Unit Test Sub-Phase processes.
- Understand process flows, team member roles, and artifacts employed.
- Employ the course concepts to participate as a team member in the preparation of critical sub-phase deliverables.

Construct & Unit Test Sub-Phase

Agenda

- Course Outline
- The Project Lifecycle
- Sub-Phase Purpose
- Team Members
- Inputs/Outputs
- Overview of Sub-Phase Processes

The Project Life Cycle



- A Project Solutions Methodology defines a standard project lifecycle.
- The Construct and Unit Test Sub-Phase is executed during the Construct Phase of the standard project lifecycle.

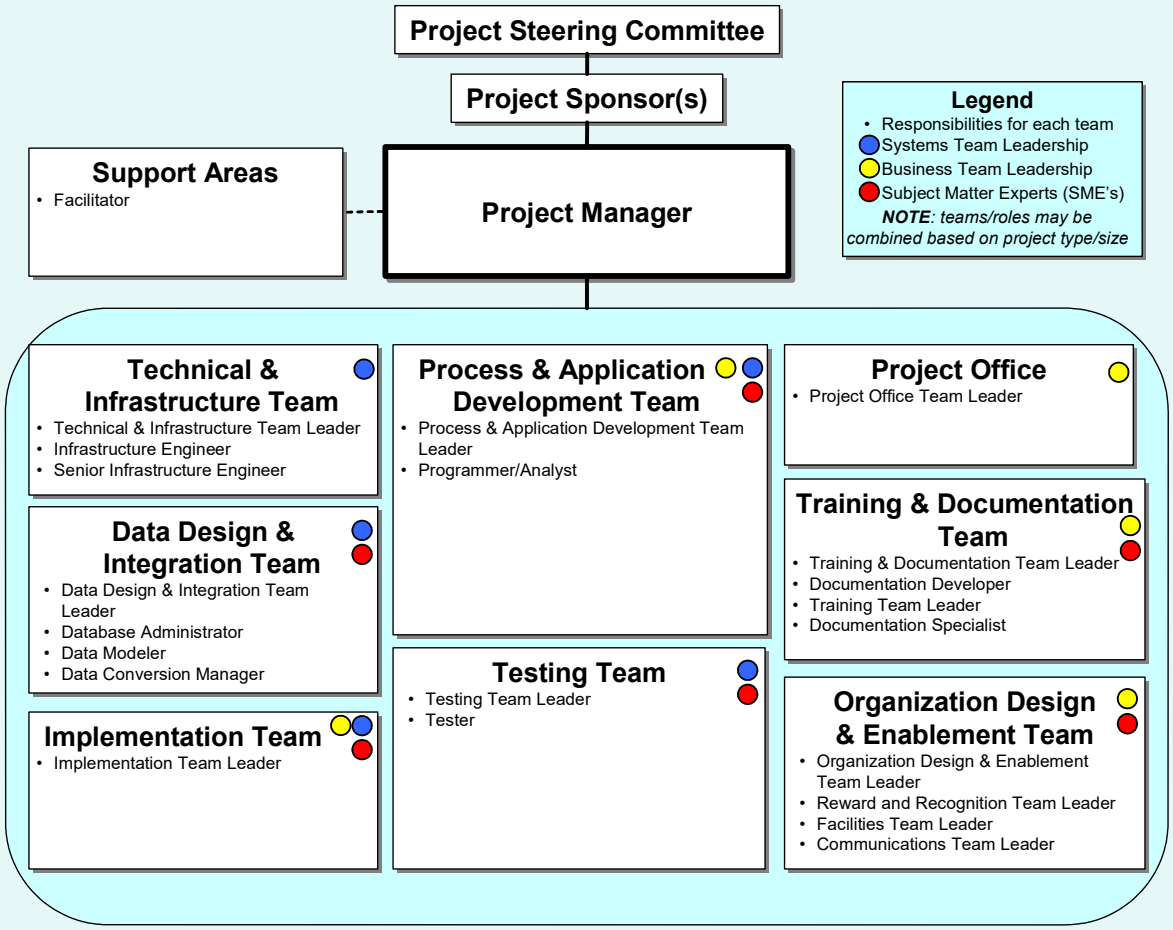
Construct & Unit Test – What Will You Accomplish?

The purpose of the Construct and Unit Test Sub-Phase is to build and individually test all project-related deliverables for a given release. The deliverables span the following:

- System
- Infrastructure
- Business
- Organizational.

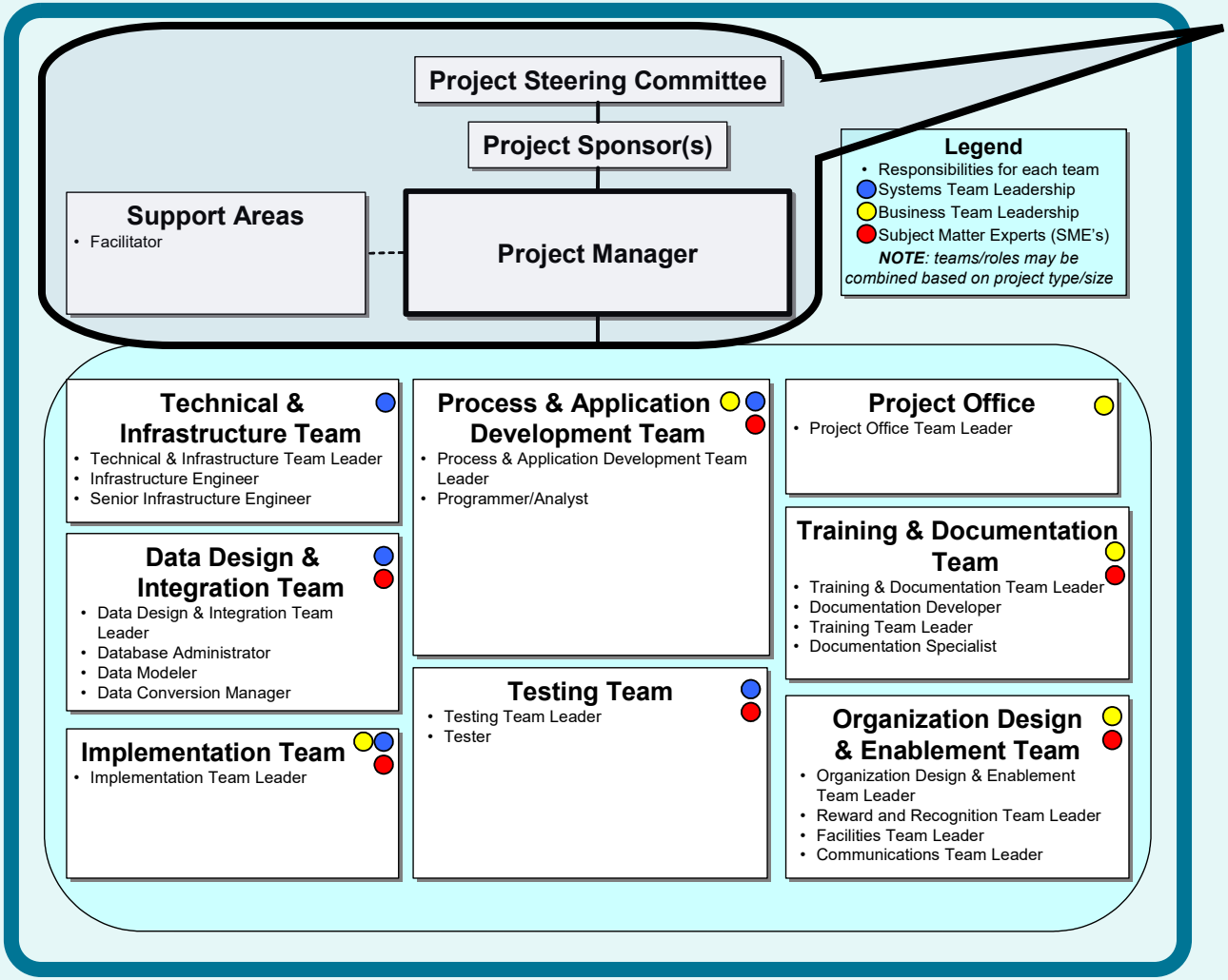
The key deliverables from this sub-phase will combine with those from the Integrate and Test Sub-Phase completing the requirements for the Quality Gate Assessment. A successful review will move the project into the Implement Phase.

Who Are Your Team Members?



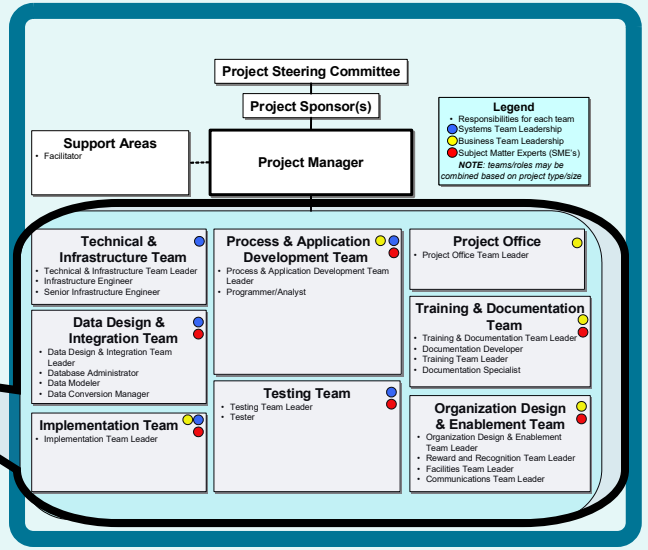
- Individuals with the appropriate skills collaborating to drive a successful project.
- Team roles are subdivided according to functional requirements.

The Management Team



- The Steering Committee provides senior management oversight and direction for a project.
- The Project Sponsor/Business Partner is the "owner" of a project.
- The Project Manager's primary responsibility is to manage and coordinate day-to-day project activities.
- Support Areas provide Subject Matter Expertise

The Support Teams



The Project Office

Provides administrative support for Common Project Management Processes.

The Implementation Team

Responsible for preparing the first-cut systems run book and related system support information.

The Data Design & Integration Team

Responsible for modifying, building and fine-tuning all data stores, and integrating them with the Enterprise Data Model.

The Technical & Infrastructure Team

Responsible for procuring, configuring, fine-tuning and implementing all system software and hardware elements of the solution architecture.

The Process & Application Team

Business representatives on the team are responsible for producing and unit testing Standard Operating Procedures and arranging for location and work area related changes. System representatives are responsible for developing/customizing and unit testing Application Software, Reports and Queries, and User Interfaces.

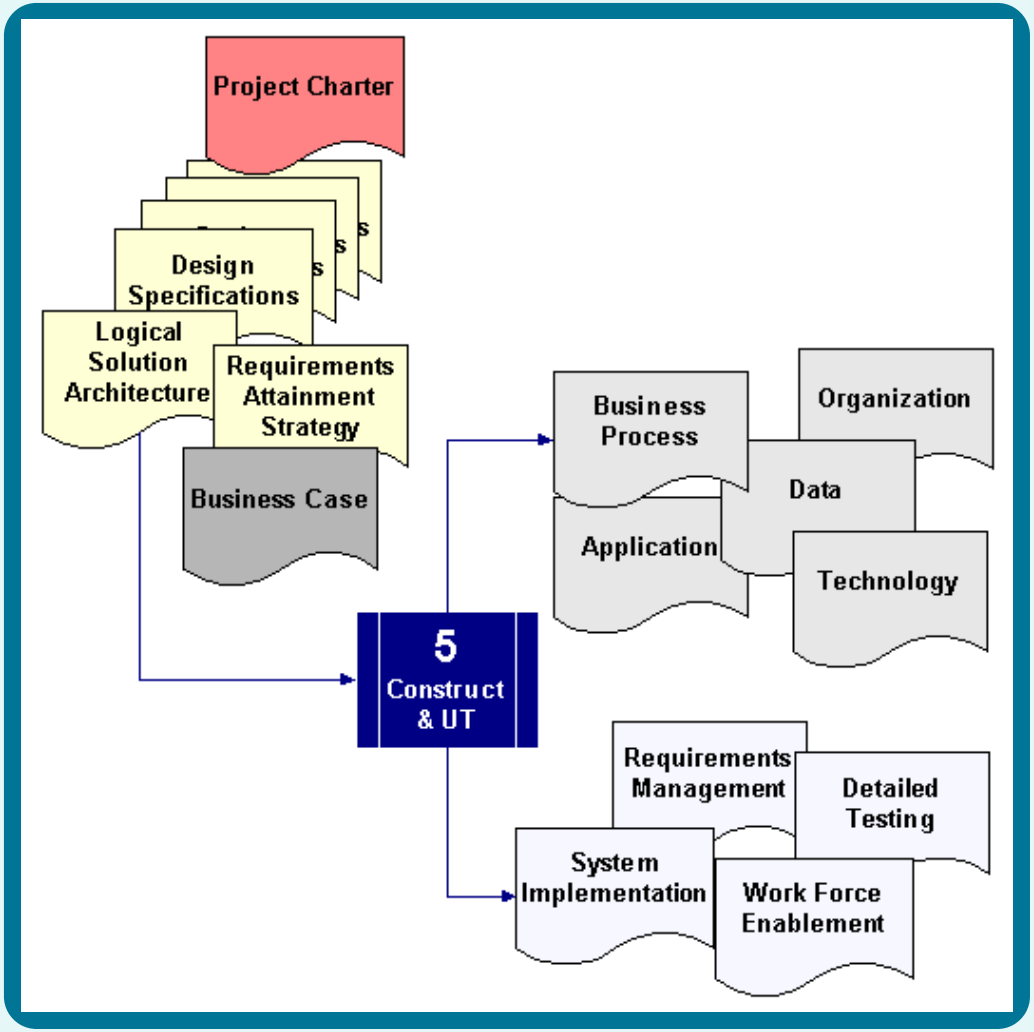
The Training and Documentation Team

Training staff are responsible for producing courseware, help aids, and coaching materials. Documentation staff members are responsible for producing operations reference manuals for business and systems areas.

The Organization Design Team

Staff members are responsible for producing organization charts, organization charters, and job descriptions. Work Force Enablement staff members are responsible for producing staff realization materials, preplanned communications, and incentive related deliverables.

What Critical Outputs Will You Create?



The following key artifacts are created from a compilation of information that is developed by the teams in the Construct and Unit Test Sub-Phase.

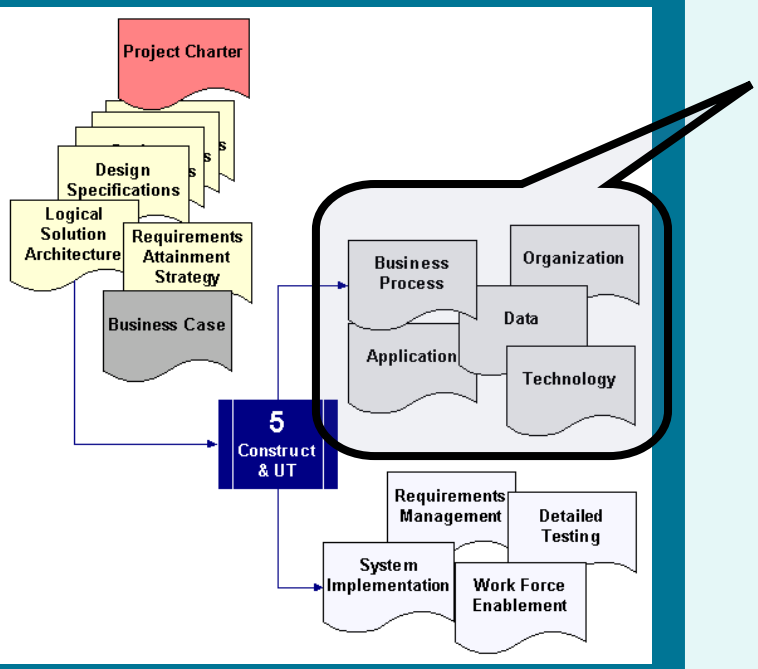
Solution Architecture Deliverables:

- Business Process
- Organization
- Application
- Data
- Technology

Requirements Attainment Strategy Deliverables:

- Requirements Management
- Detailed Testing
- System Implementation
- Work Force Enablement

Solution Architecture Deliverables



Business Process

Standard Operating Procedures and acquisition/set-up of related facilities.

Organization

Organization charts, organization charters, and job descriptions.

Application

Coded and unit-tested business software and related conversion software.

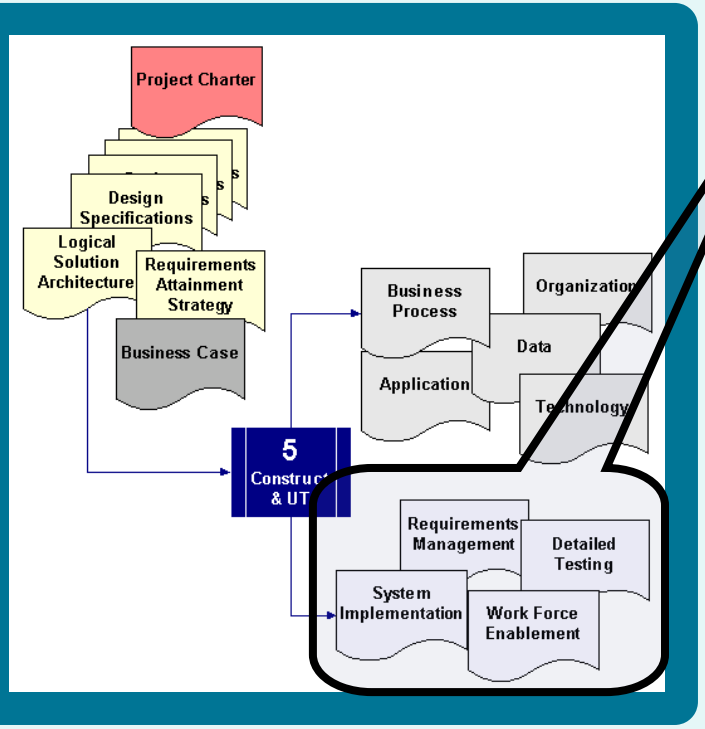
Data

A denormalized data model and physical databases for the development and production environments.

Technology

A configured infrastructure, development environment, and production environment.

Requirements Attainment Strategy Deliverables



Requirements Management

An up-to-date Requirements Traceability Matrix and Post-implementation procedures for monitoring solution results during the Implement and Test Sub-phase, which continue after Implementation.

Detailed Testing

Unit test results and test scripts for use during the Integrate and Test Sub-phase.

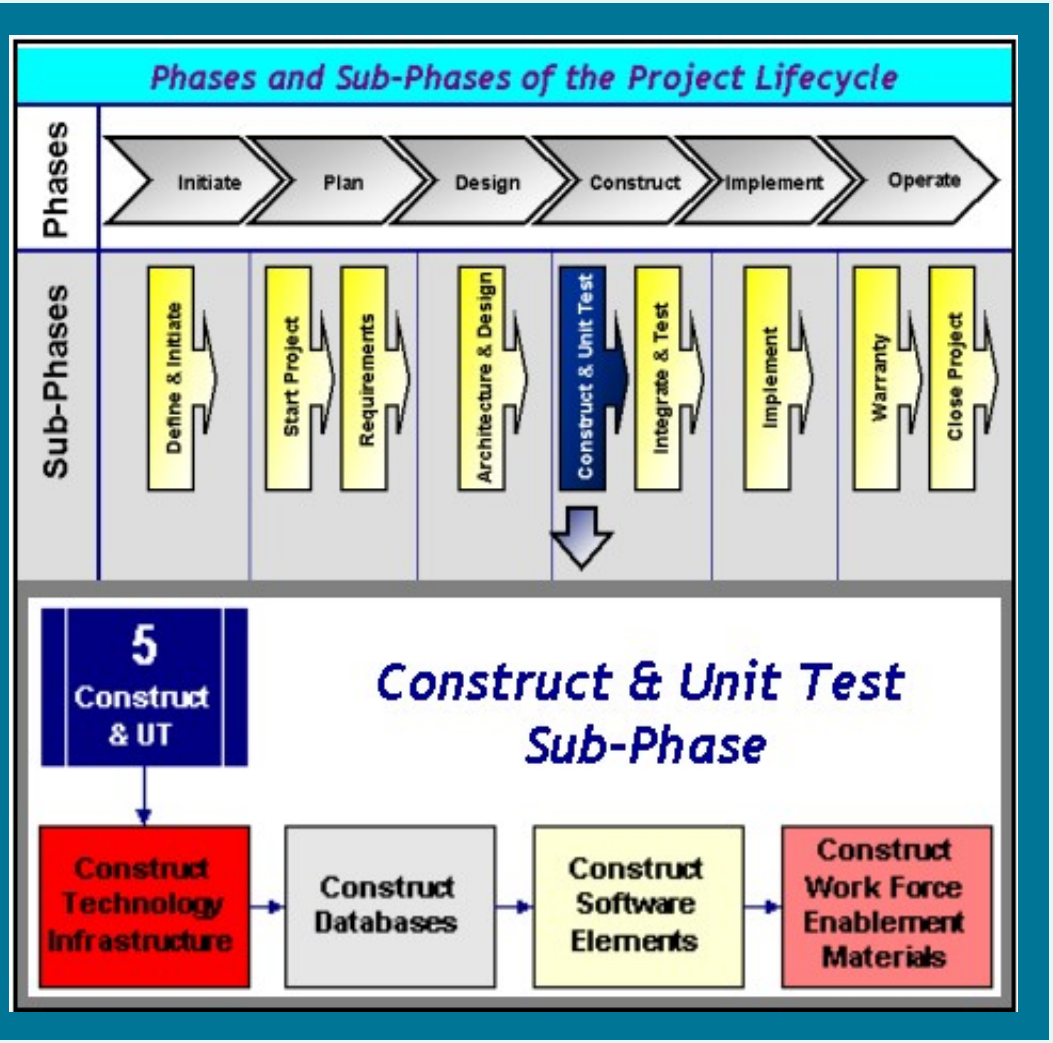
System Implementation

Initial program/module documentation and system run book for use during the Integrate and Test Sub-phase.

Work Force Enablement

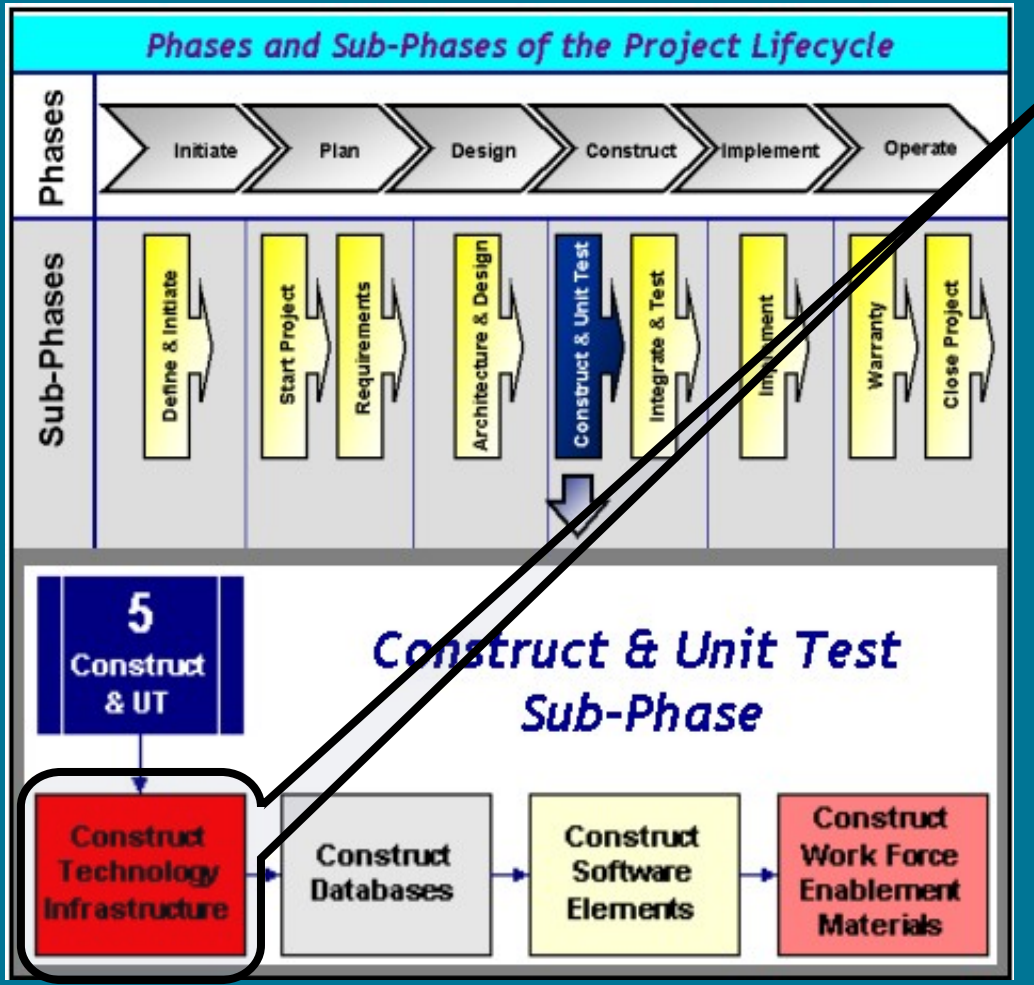
Training courses, preplanned communications ready for distributing, and materials for implementing changed or new incentive programs. If staffing changes are called for, materials for acquiring, reducing, and transferring staff are also created.

How Does the Sub-Phase Breakout?



- The *Construct & Unit Test* sub-phase is broken into four processes.
- Depending on your role, you participate in one or more of the processes.

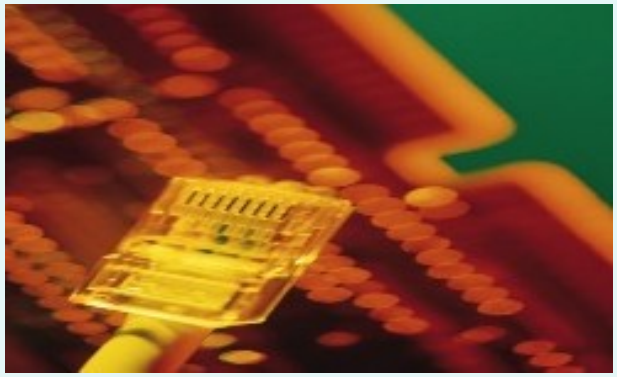
Construct Technology Infrastructure



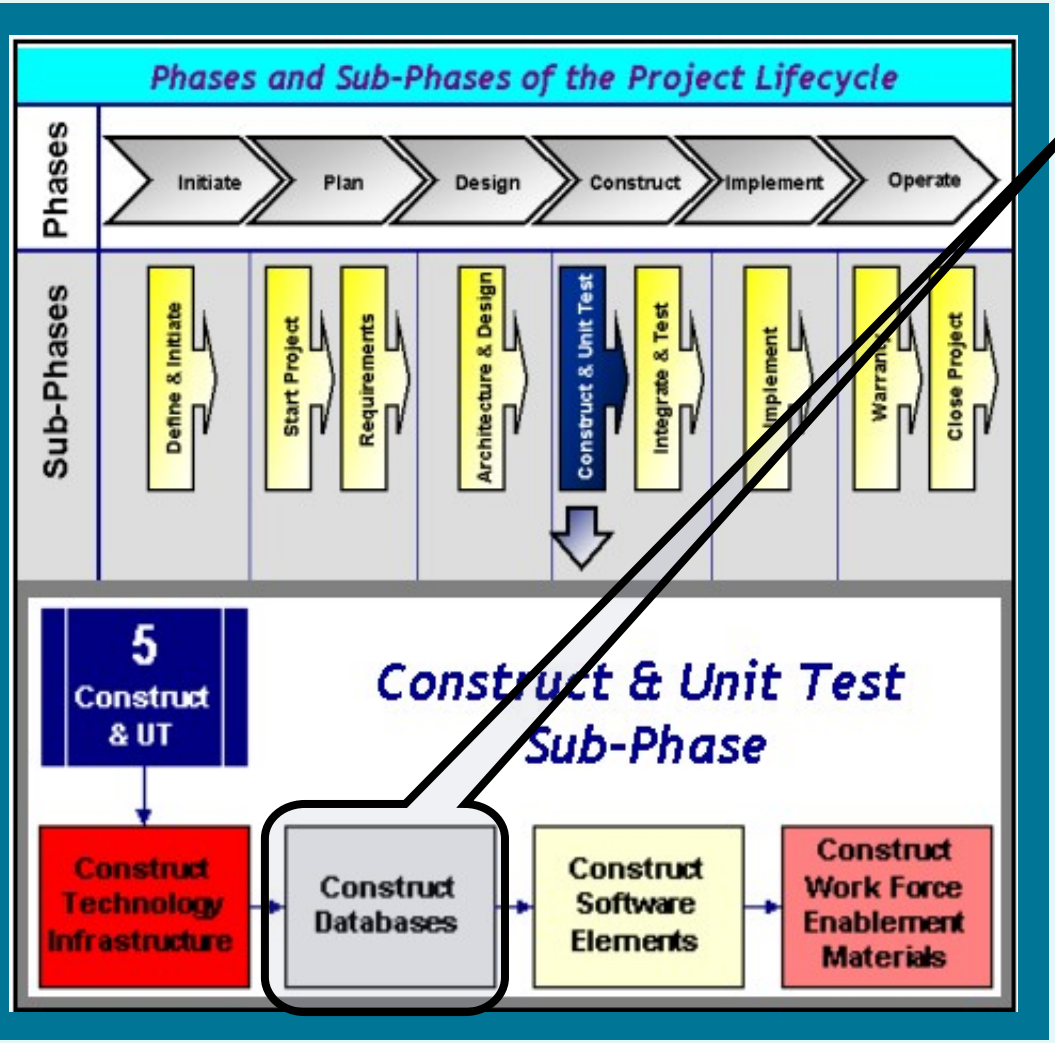
This process orchestrates the successful implementation of the systems related portions of the project solution. Team members involved will:

- Procure
- Configure
- Build

the systems software and hardware needed.

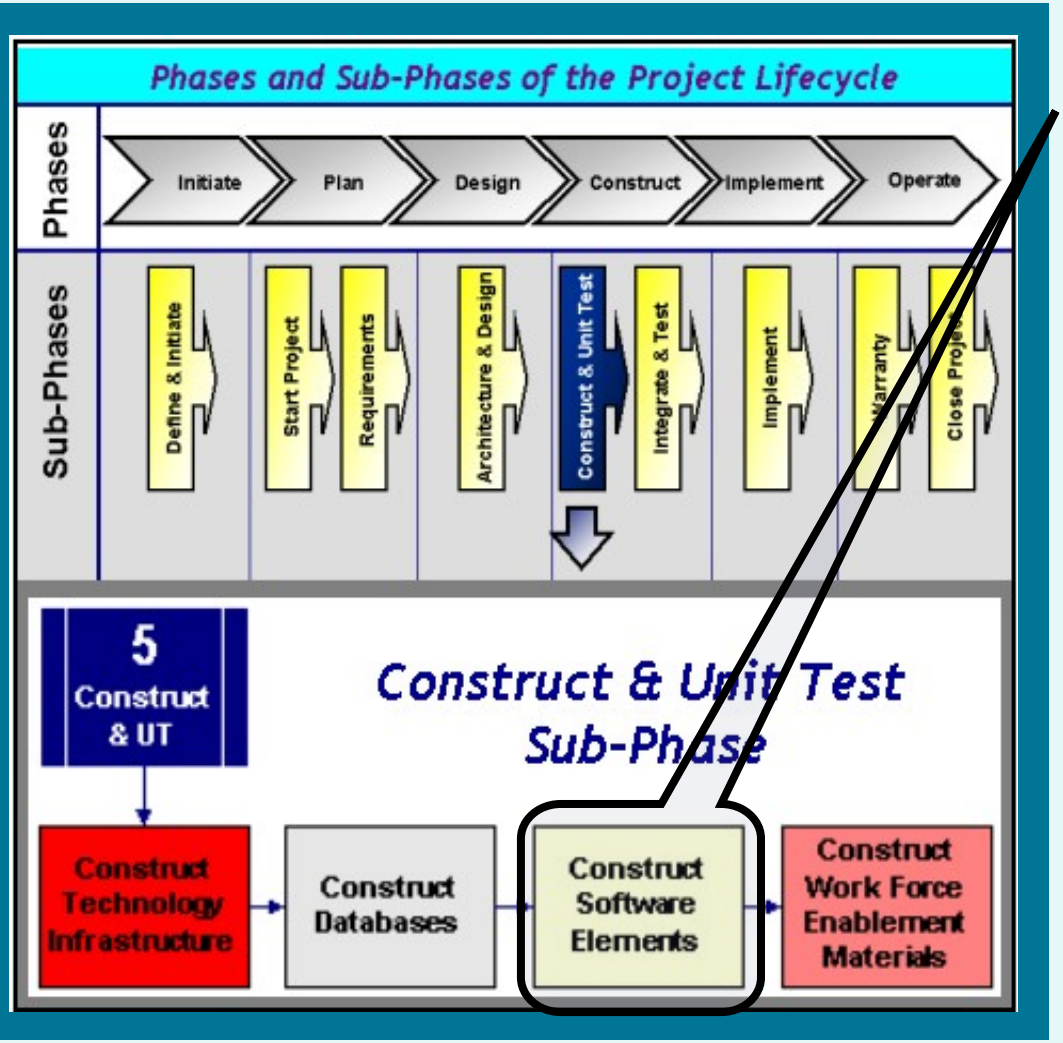


Construct Databases



- Constructs and/or modifies database objects and their supporting environment as specified by the Database Design Package.
- Provides the support to identify and correct inefficient database processing.

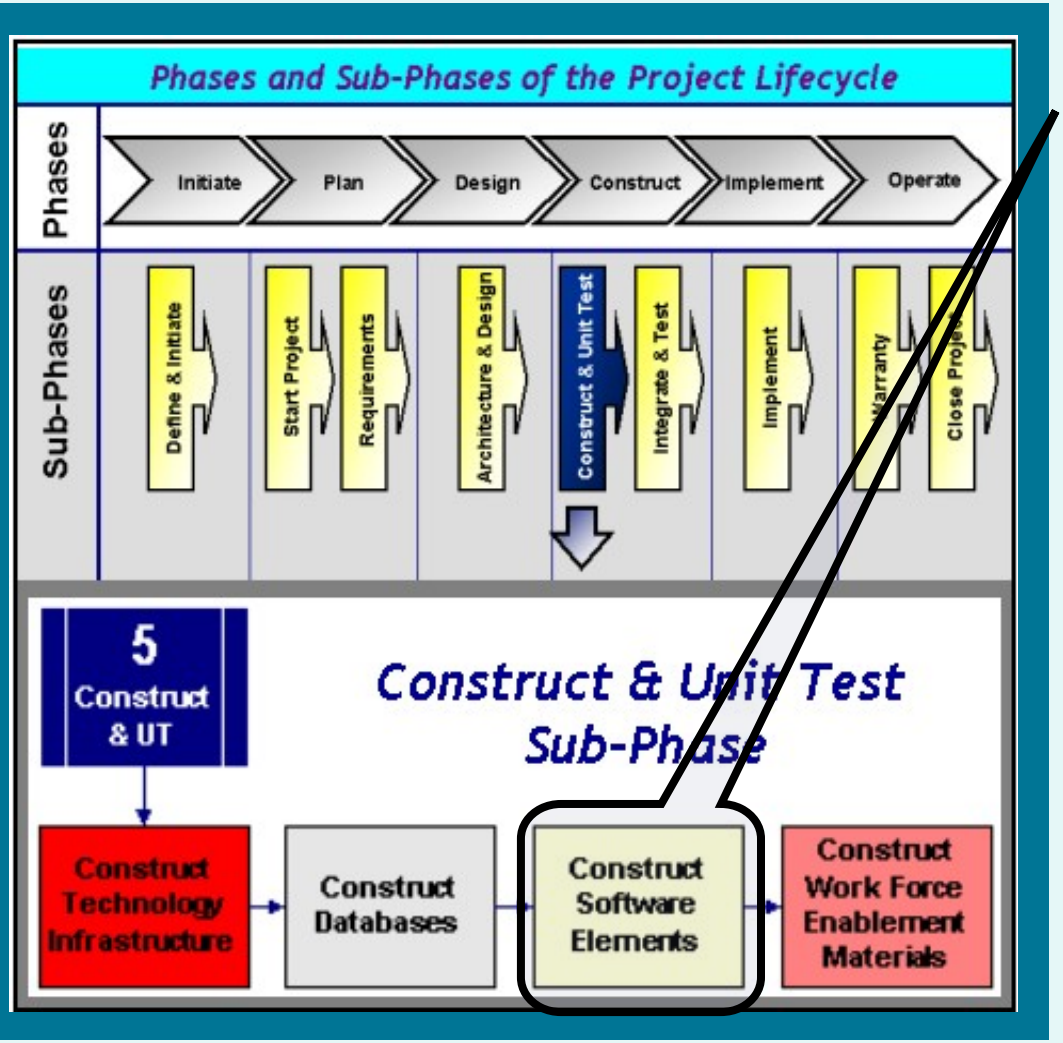
Construct Software Elements



Establishes the programming standards that will be used for this project.

- The Application Design section of the Design Specification document is transformed into Programming Specifications.
- These are used by developers to construct all the application programs, system interfaces, reports, queries and user interfaces.

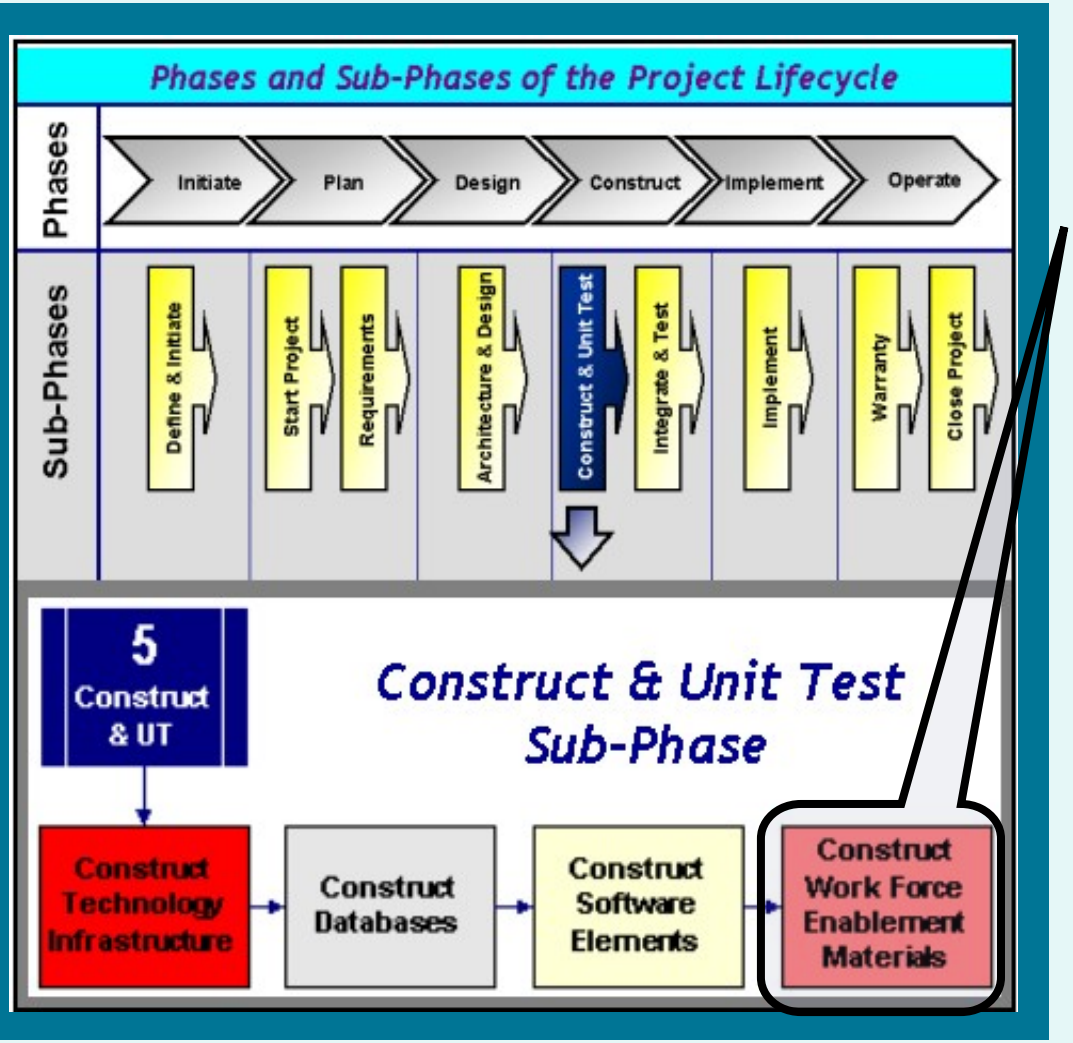
Construct Software Elements



This process is broken out into 10 sub-processes:

- Define Programming and Configuration Standards
- Design Unit Tests
- Catalog and Construct Common Services
- Construct Programs and Modules
- Construct System Interfaces
- Customize Packaged Software
- Review Application Code
- Unit Test Code
- Evaluate Test
- Create Preliminary System Documentation

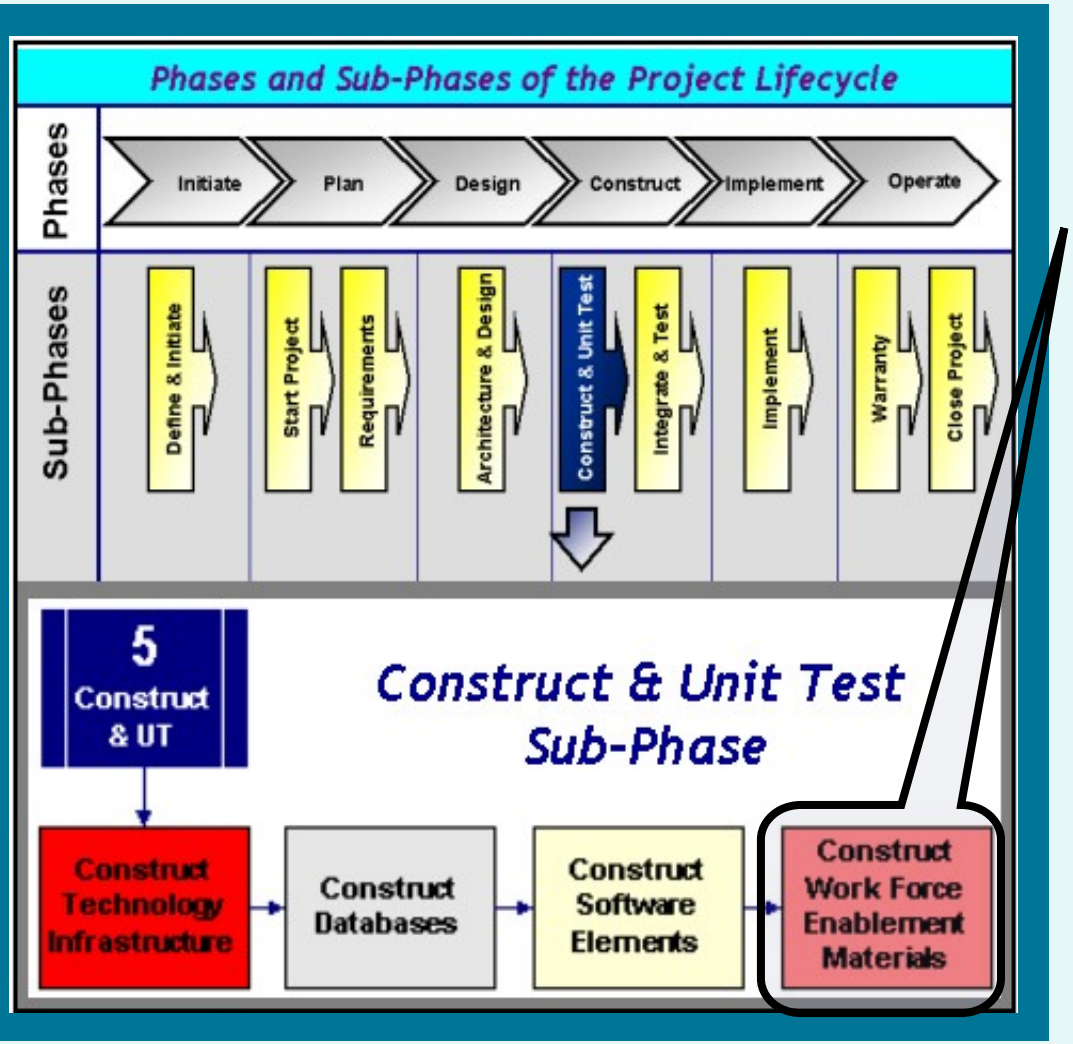
Construct Workforce Enablement Materials



This process produces all materials needed to enable change in the organization. It builds or acquires the infrastructure and then constructs deliverables for each of the following areas:

- Staffing: Materials facilitating the expansion or increase in number of employees.
- Training: Materials facilitating employee education and on-the-job guidance.
- Reward and Recognition: Materials facilitating change related incentives.
- Communications: Materials facilitating the dissemination of information to target stakeholders.
- Facilities: Materials facilitating change in employee locations and work areas.

Construct Workforce Enablement Materials



This process is broken out into 11 sub-processes:

- Build Staffing Infrastructure
- Prepare Staffing-Related Materials
- Build Reward and Recognition Infrastructure
- Ready Reward and Recognition Programs
- Build Training Infrastructure
- Construct Training
- Build Facilities Infrastructure
- Ready Facilities
- Develop/Purchase Infrastructure for Implementing the Communications Strategy
- Construct Communications
- Align Workforce Enablement Deliverables

Construct & Unit Test Summary

Purpose

- **The purpose of the Construct and Unit Test Sub-Phase is to build and individually test all project-related deliverables for a given release.**

Team Roles

- **Steering Committee, Project Sponsor, Project Manager, Support Areas, Project Office, Process and Application Team, Testing Team, Technical and Infrastructure Team, Data Design and Integration Team, Organization Design and Enablement Team, Training and Documentation Team, Implementation Team.**

Major Inputs

- **Project Charter**
- **Design Specifications**
- **Logical Solution Architecture**
- **Business Case**
- **Requirements Attainment Strategy.**

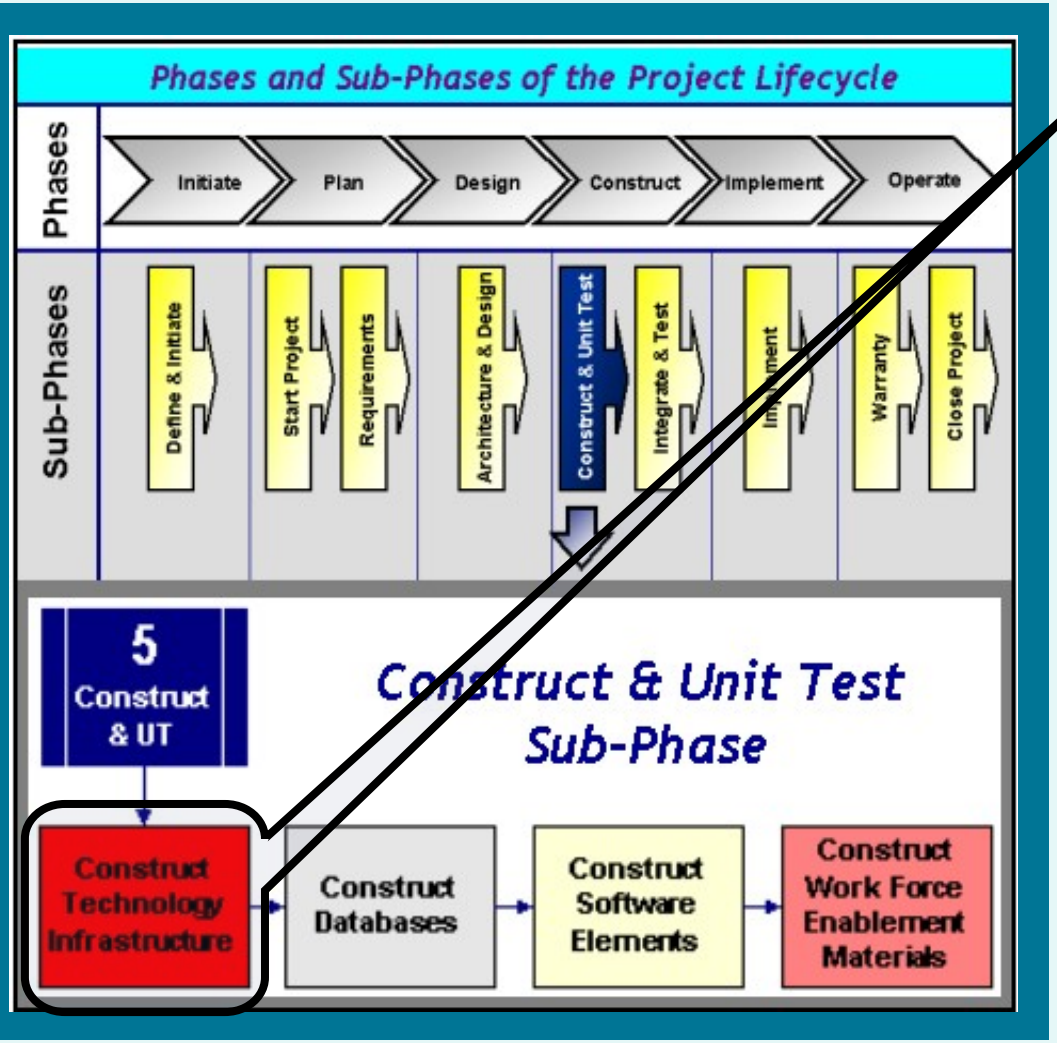
Major Outputs

- **Solution Architecture**
- **Requirements Attainment Strategy.**

Processes

- **Construct Technology Infrastructure**
- **Construct Databases**
- **Construct Software Elements**
- **Construct Workforce Enablement Materials.**

Details - Construct Technology Infrastructure



This process orchestrates the successful implementation of the systems related portions of the project solution. Team members involved will:

- Procure
- Configure
- Build

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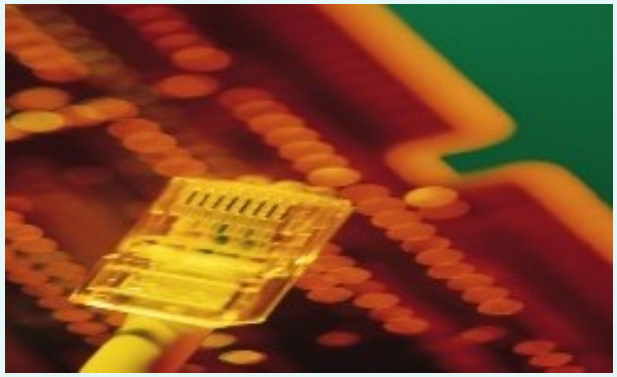
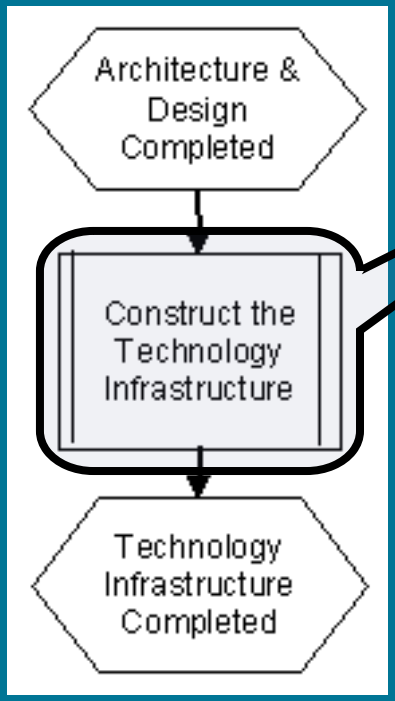


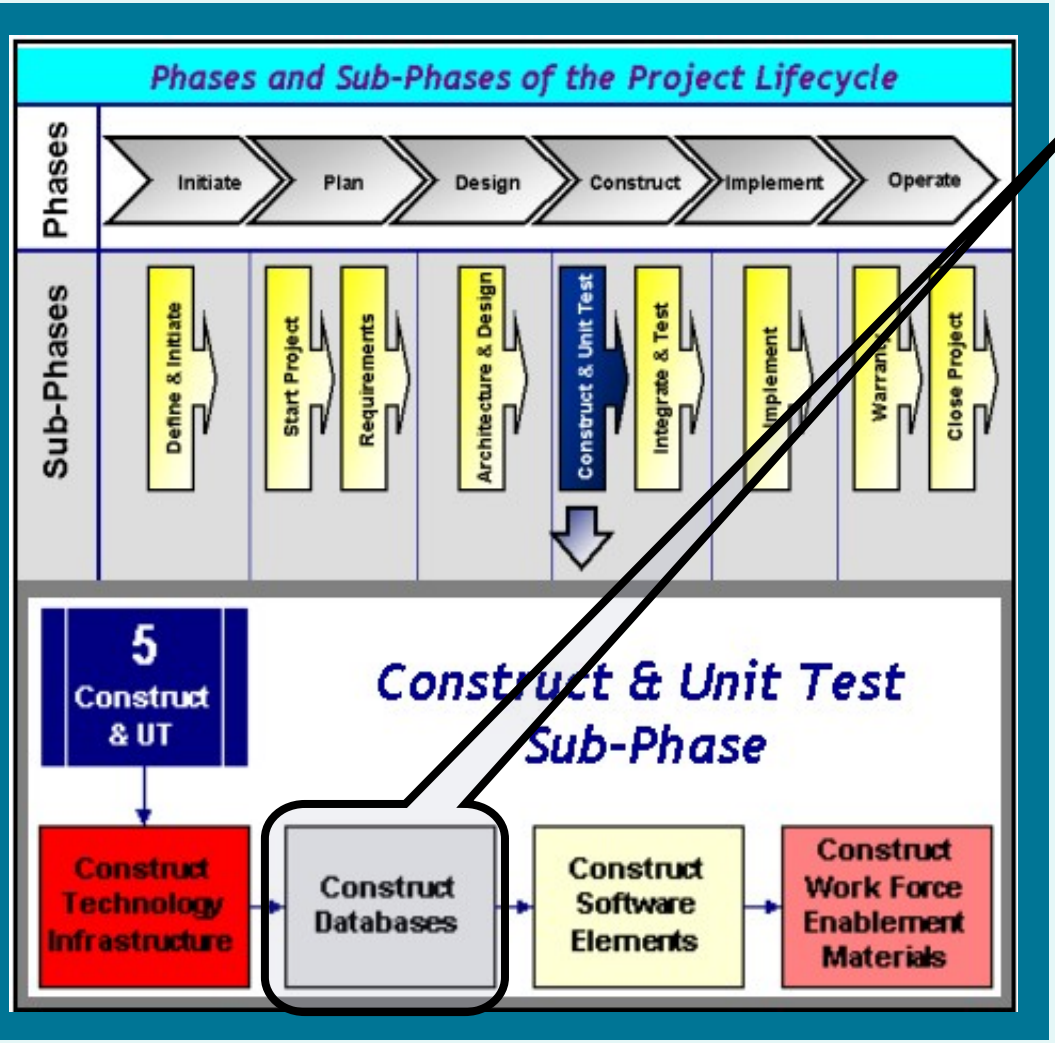
Construct Technology Infrastructure

Construct Technology Infrastructure



This activity's primary goals are to acquire or create the components specified in the Infrastructure Engineering Package (IEP).

Details - Construct Databases



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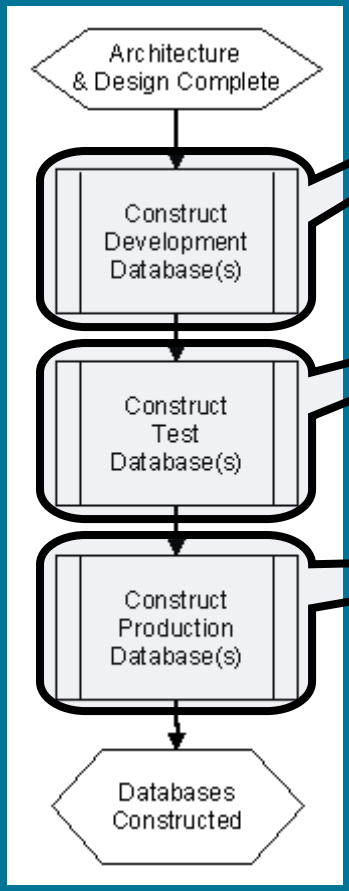
Construct Databases

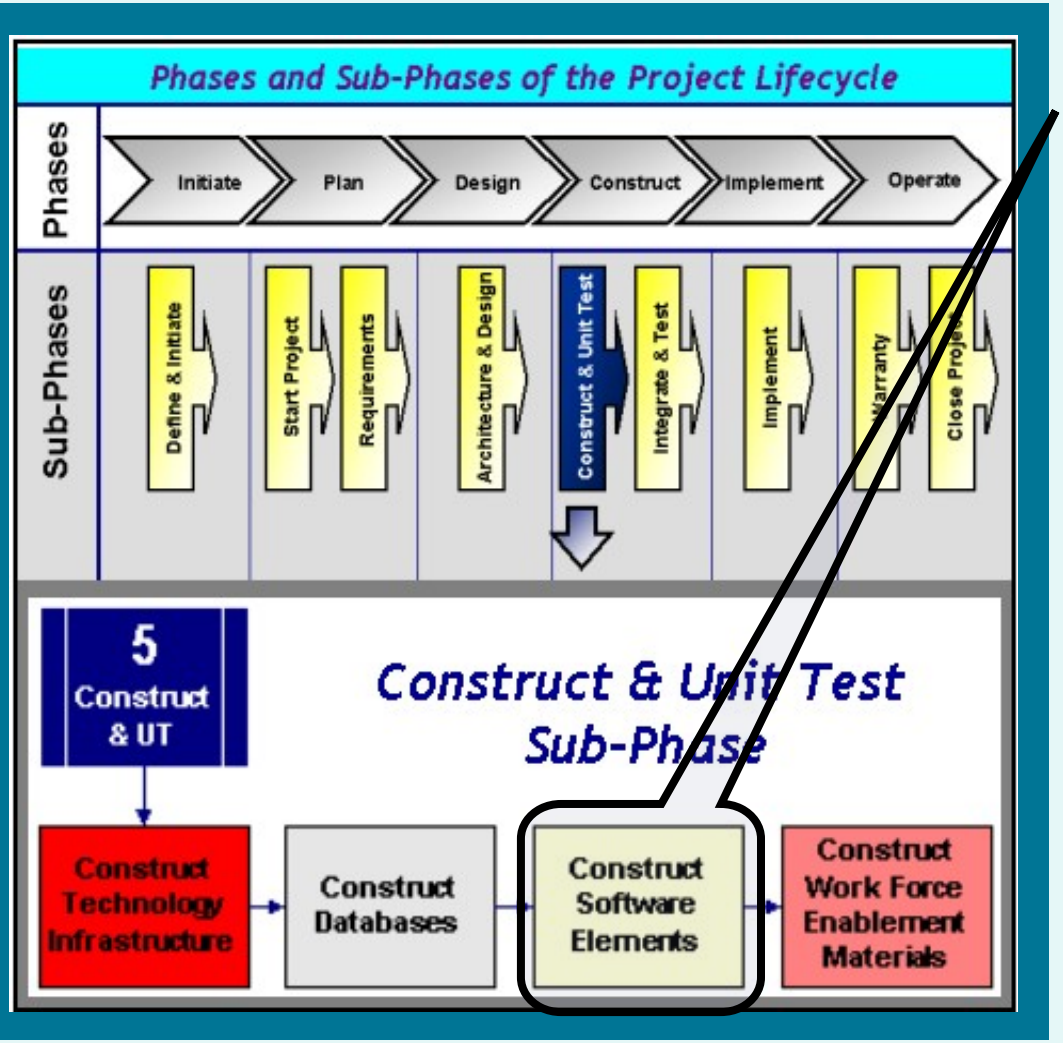


This process focuses on the building of an optimally designed development database for use by solution-related applications during unit testing.

This process focuses on the building of an optimally designed test database for use by solution-related applications during the Integrate & Test Sub-Phase.

This process focuses on the building of an optimally designed production database for use in the production environment.

Details - Construct Software Elements



Establishes the programming standards that will be used for this project.

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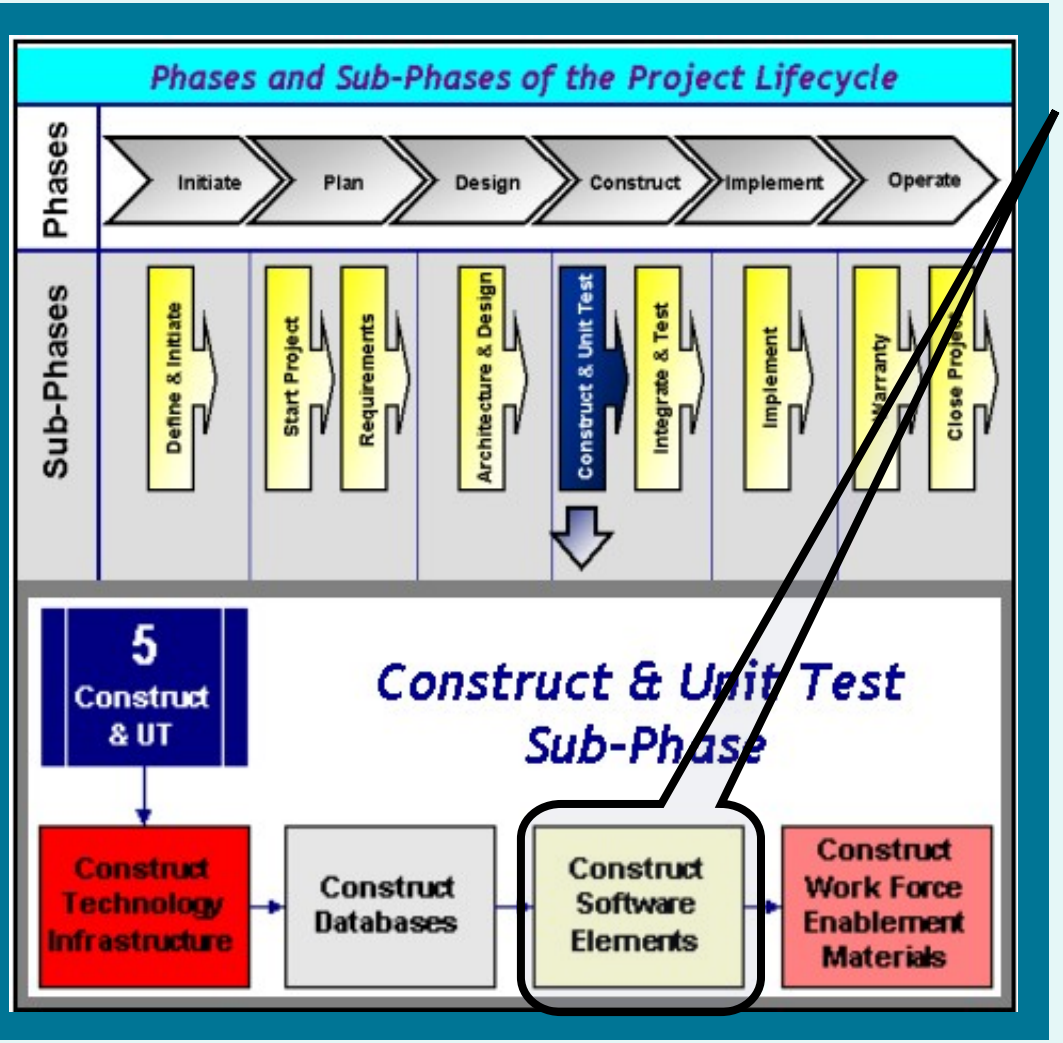
Details - Construct Software Elements



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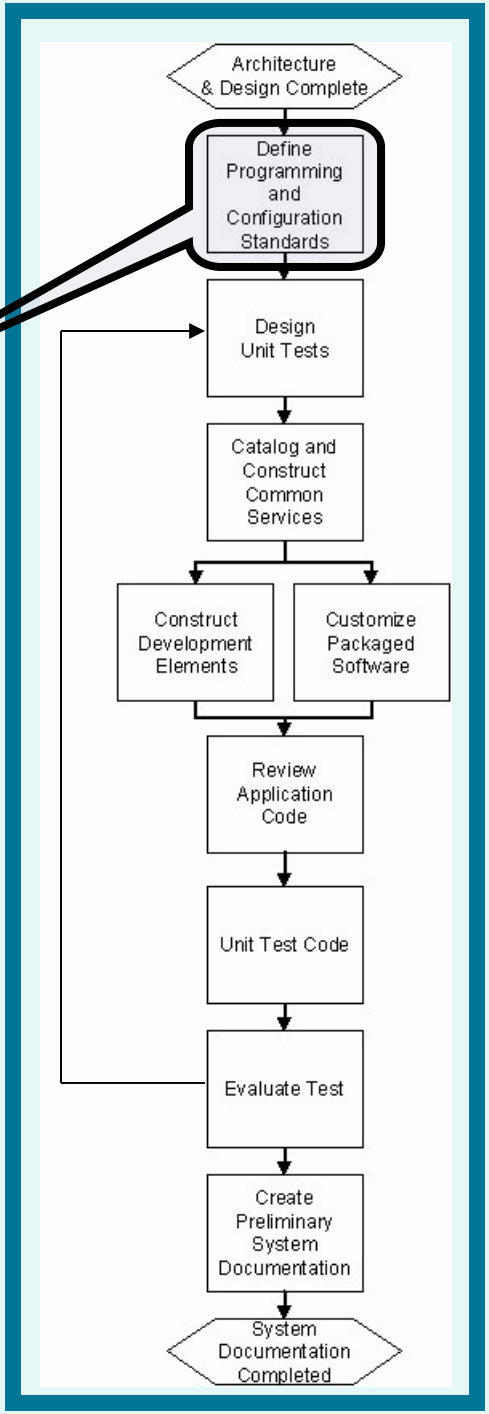
- Construct System Interfaces
- Customize Packaged Software
- Review Application Code
- Unit Test Code
- Evaluate Test
- Create Preliminary System Documentation

Construct Software Elements

Define Programming and Configuration Standards

The minimum set of standards that apply to the construction of the application are described, covering the following items:

- Naming conventions for reusable software modules, object classes, database objects, file directories, security objects, internal program documentation
- Package options to be installed or not used
- Security, user authorization, and encryption features
- Naming and handling conventions for error messages
- Naming and display conventions for help facilities
- Programming templates
- Software development tool "do's and don'ts"
- Distribution of data and processing.



Define Programming and Configuration Standards

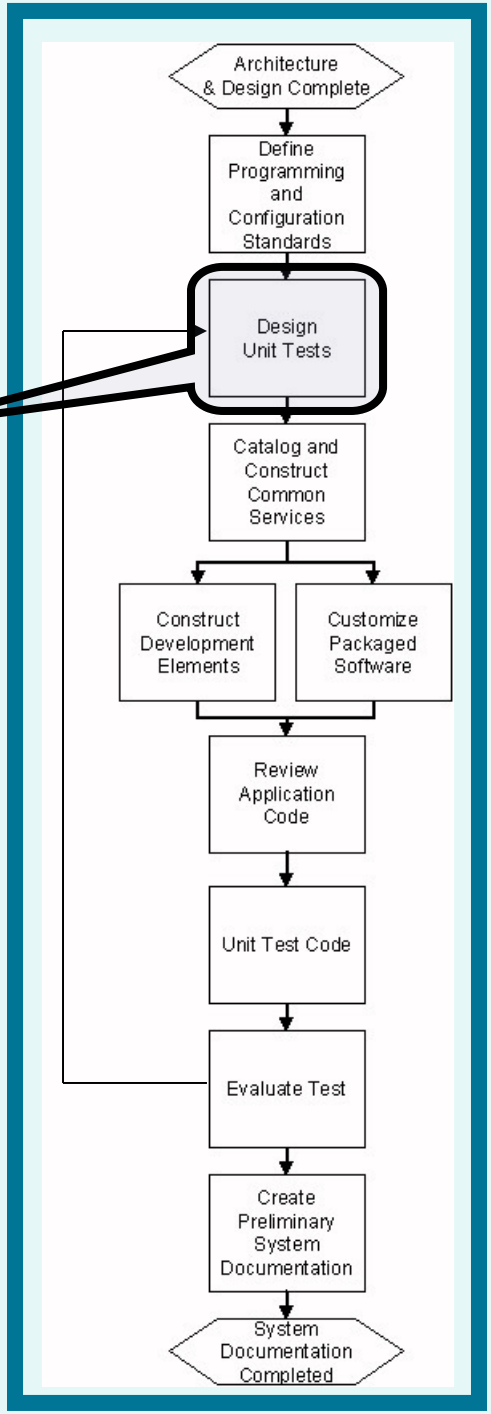
Inputs & Outputs	
Inputs	Existing Standards and Guidelines
Outputs	Programming Standards and Guidelines
Roles & Responsibilities	
Role	**Responsibility**
Application Team Lead	Executes this activity. Identifies the standards that apply to the construction of the application and documents them in the Programming Standards and Guidelines.

Construct Software Elements

Design Unit Tests

Each testing phase (unit, system, acceptance, release, or operational readiness) is designed and documented using a test plan document and supporting test templates. The Test Plan states the objectives of the test phase and outlines the types of tests performed in the test phase and the predicted outcomes of each test. The Test Plan and test templates become part of the system documentation and can be used when system enhancements are made. Test design is initiated once the Testing Strategy is final and the Testing Entrance - Quality Gate has been completed.

To design the test, the test objectives are reviewed, test cases are defined for the application or system being tested, and detailed test scripts are written that will be executed to satisfy the test objectives and cases. Test execution is scheduled and testers are assigned to run the tests. The output from the Design Test Sub-Process is the documents that will be used to execute the test phase (unit, system, acceptance, release, or operational readiness).

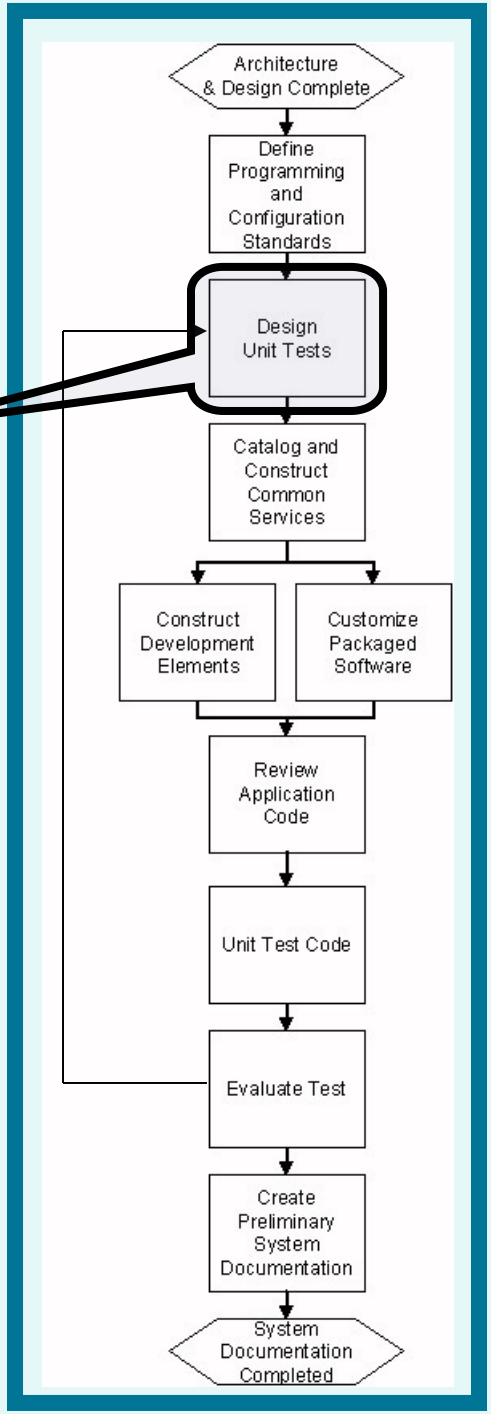


Design Unit Tests

The outputs from this process are:

- Refined Test Strategy
- Test Plan
- Supporting test templates:
  - Test cases/cycles, updated as necessary from the Architecture & Design Sub-Phase
  - Test scripts

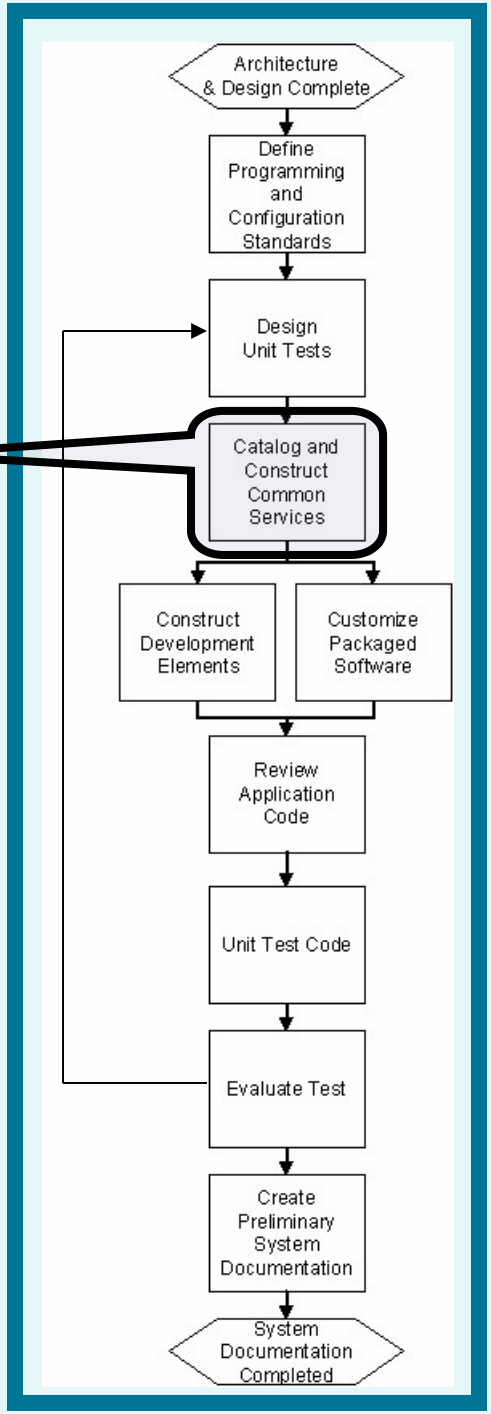
The Test Plan and all these templates are reviewed with the stakeholders for completeness.



Construct Software Elements

Catalog and Construct Common Services

- Review the Design Specification to determine the reusable code to be constructed or taken from an existing central common services repository.
- Construct new or changed common routines and subroutines so that they will be available as needed by controlling programs and modules.
- Make sure common code follows standards and procedures previously defined.
- Document each, along with pre-existing common services, in a central catalog.



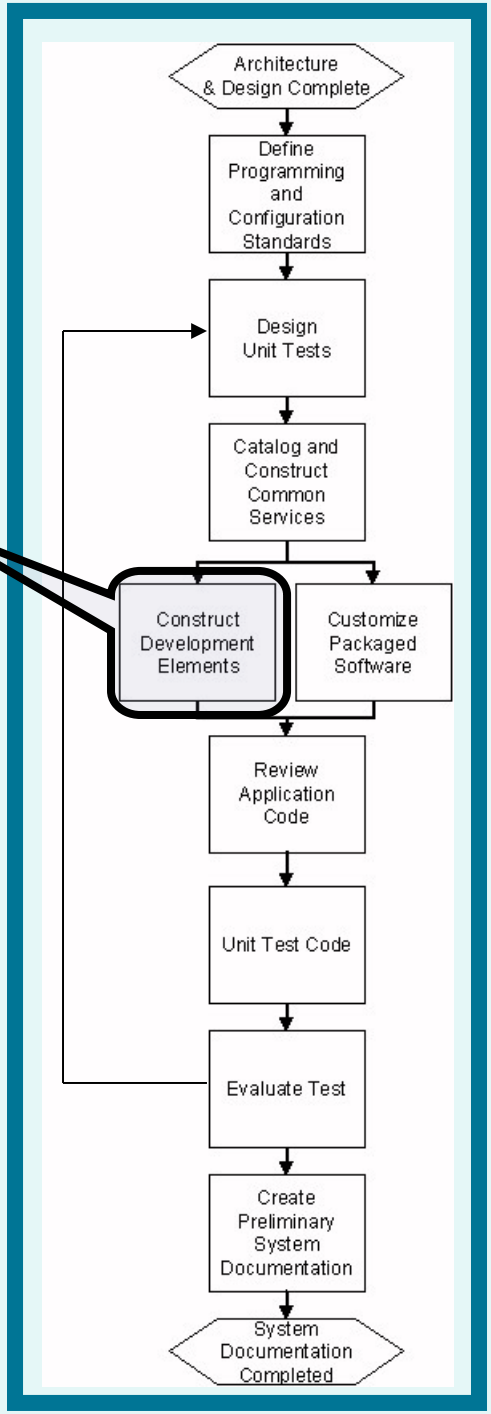
Catalog and Construct Common Services

Inputs & Outputs	
Inputs	Programming Standards and Guidelines Design Specification Pre-existing Source Code for Shared/Reused Software
Outputs	Central Catalog and Source Code for Shared/Reused Software
Roles & Responsibilities	
Role	**Responsibility**
Programmer/Analyst	Executes this activity. Identifies and builds reusable code and services per the established programming guidelines.

Construct Software Elements

Construct Development Elements

- Review the Design Specification to understand the breadth and relationship between all software to be constructed.
- Create all the user interface, online and batch source code modules and programs that are required by the system, obtaining a clean compilation of the source code for each. Provide an appropriate level of documentation inside each module and program in accordance with programming and documentation standards.
- Create all the system/application interface source code modules and programs that are required by the system, obtaining a clean compilation of the source code for each. Provide an appropriate level of documentation inside each module and program in accordance with programming and documentation standards.
- Create all the source code modules and programs for reports and queries that are required by the system, obtaining a clean compilation of the source code for each. Provide an appropriate level of documentation inside each module and program in accordance with programming and documentation standards.



Construct Software Elements

Construct Development Elements

Inputs & Outputs	
Inputs	Design Specification Programming Standards and Guidelines Source Code for Shared/Reused Software
Outputs	Source Code for Programs
Roles & Responsibilities	
Role	**Responsibility**
Programmer/Analyst	Executes this activity. Identifies and builds programs and modules per the established programming guidelines.

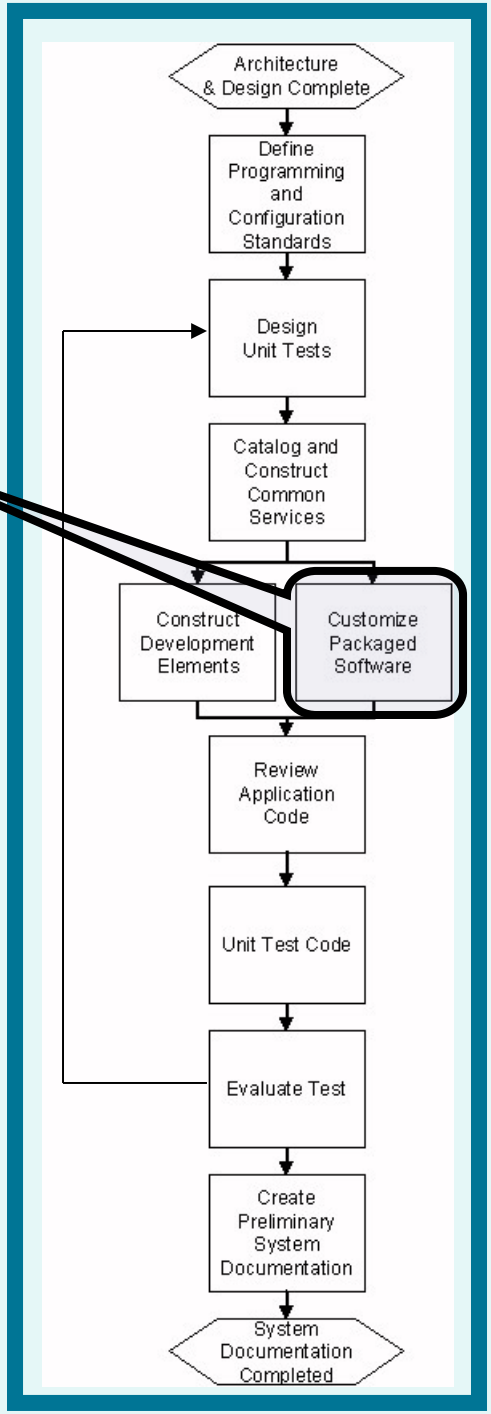
Construct Software Elements

Customize Packaged Software

Review the Design Specification for package configuration to understand what components need to be added or changed, and how. The types of changes or additions may include:

- Populating tables with organizational data required by the package
- Converting data to the format required by the package (may depend on or drive conversion strategy and related code)
- Creating additional reports, displays, or queries as part of the package (rather than independent of the package)
- Implementing security features
- Specifying algorithms, or data validation and derivation rules.

Modify or add to the vendor-supplied documentation to reflect the changes.



Customize Packaged Software

Inputs & Outputs	
Inputs	Design Specification Programming standards and guidelines Source Code for Shared/Reused Software
Outputs	Source Code for Programs

Roles & Responsibilities	
Role	**Responsibility**
Programmer/Analyst	Executes this activity. Modifies packaged software as needed per the Design Specification and established programming guidelines.

Construct Software Elements

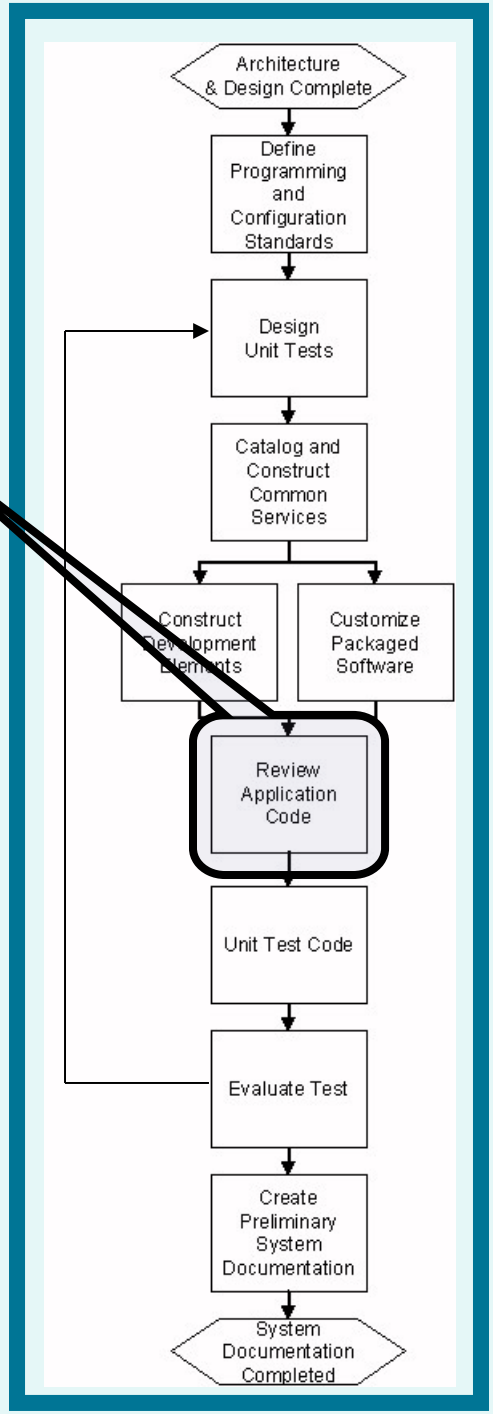
Review Application Code

This activity assesses the application design for conformance with programming standards. This is accomplished through It check for:

- Application design sessions
- Program specification reviews
- Code walkthroughs
- Database access path evaluations
- Performance testing analysis.

The review checks for:

- Effective commenting
- Efficient use of control structures (loops) and decision structures (If-Then-Else)
- Proper interfaces with shared components or packages
- Dead code (objects, variables, constants, routines)
- Correct scoping of objects, variables, constants, and routines
- Efficient instantiation of objects.



Review Application Code

Inputs & Outputs	
Inputs	Program Source Code Program Specifications Application Performance Result Reports
Outputs	Acceptance of Application Code Change Recommendations for Application Code

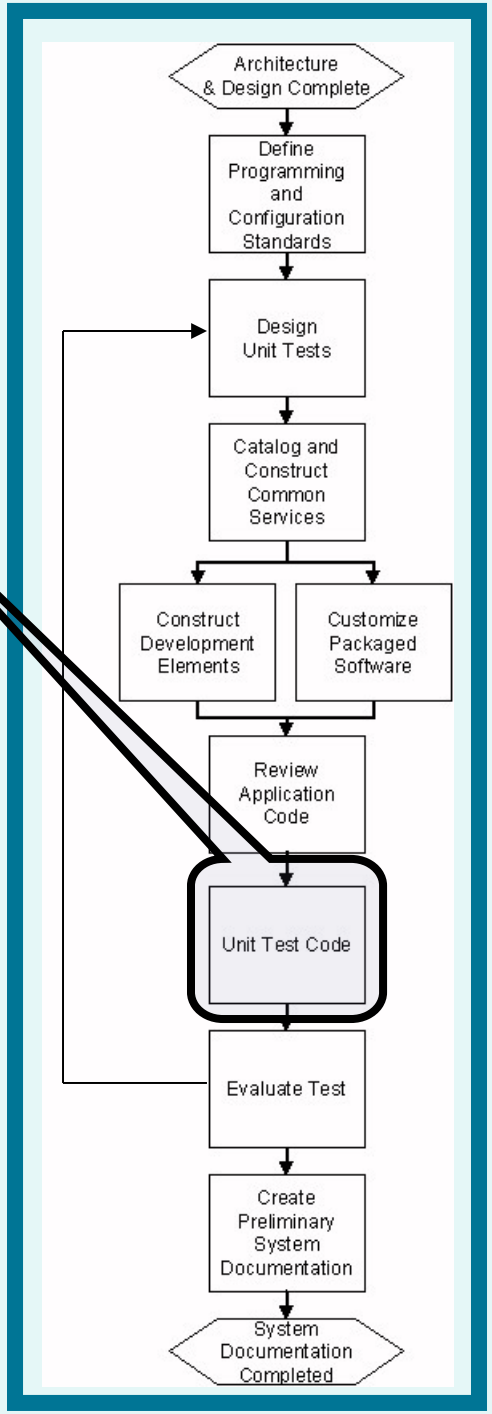
Roles & Responsibilities	
Role	**Responsibility**
Application Team Lead	Executes this activity. Assesses the application design for compatibility with the Database Design Package. Identifies recommendations based on review of the source code.
Application Team	Supports this activity. Participate in code reviews/walkthroughs, explaining thought and decisions that went into development of the source code.

Construct Software Elements

Unit Test Code

Unit test each modular section of each software program or module. Focus on the smallest pieces of testable software, isolate them from remaining related code, and determine whether they behave exactly as expected.

If you are testing modifications to a software package, first test the standard release version, then modify the package to support site-specific unique requirements. (A common example of a variant requirement is for sites where a second language is to be used. Another is for sites where there are different security requirements or where a subset of the complete package is all that is required.)

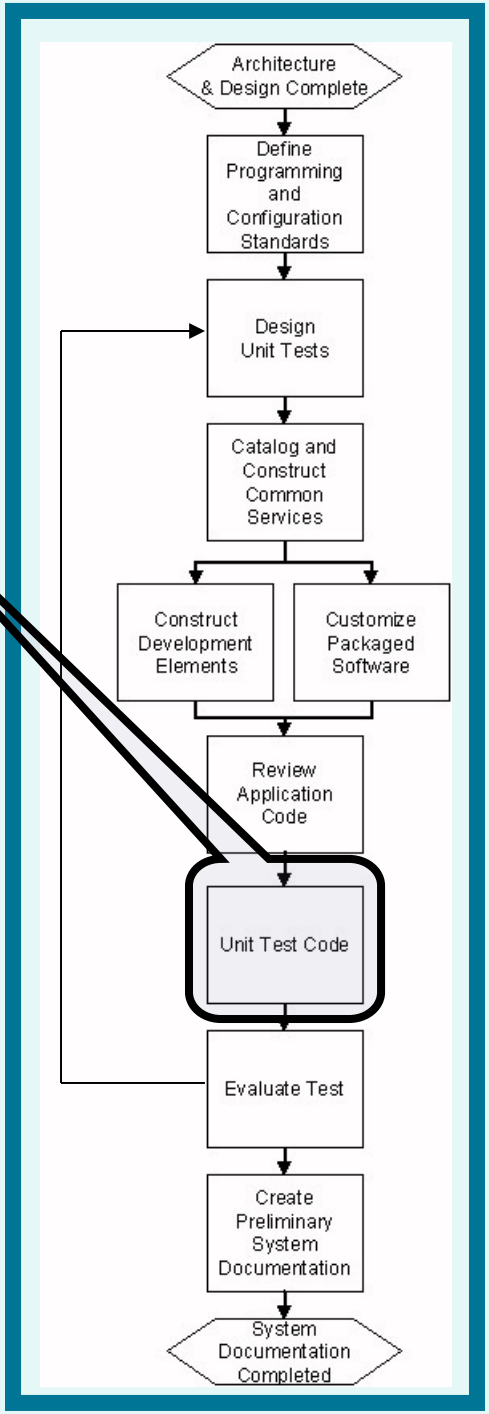


Unit Test Code

Good unit-tests will do the following:

- Check applicable requirements
- Exercise every line of code
- Check that the full range of possible input data works
- Check for bad input data
- Test for validity.

All logical statements should be exercised in the unit-test. When all units have been tested separately, integrate them into modules to test the interfaces between modules.



Construct Software Elements

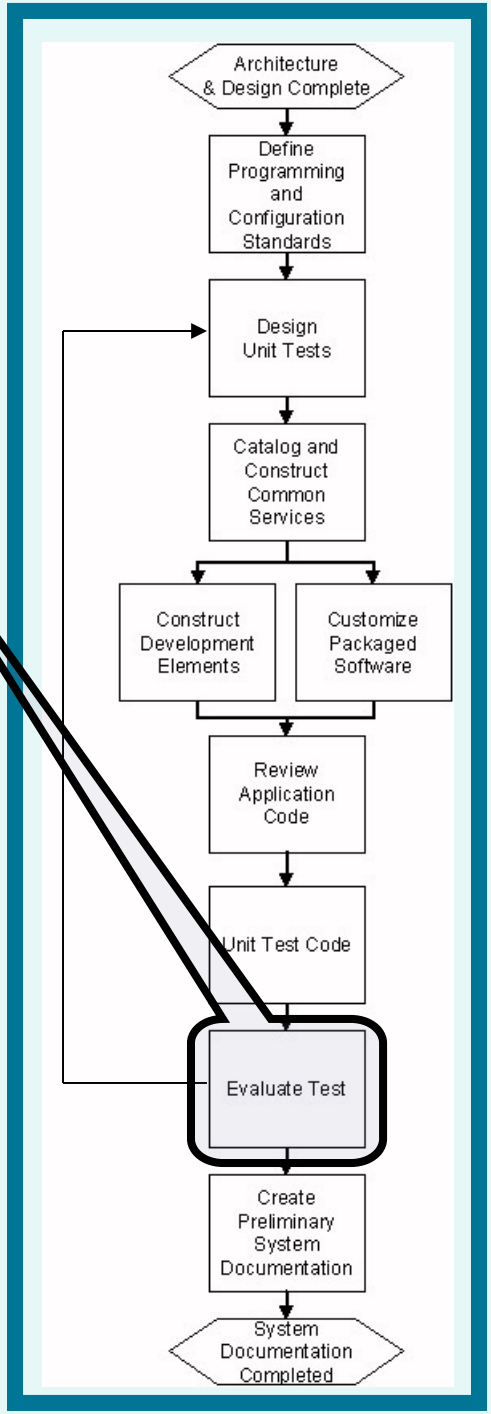
Evaluate Test

The Evaluate Test Sub-Process is initiated once the Execute Test Sub-Process is complete to determine if the test was successful.

A successful test allows the application or release to move to the next test phase.

An unsuccessful test requires errors to be fixed and the test re-executed.

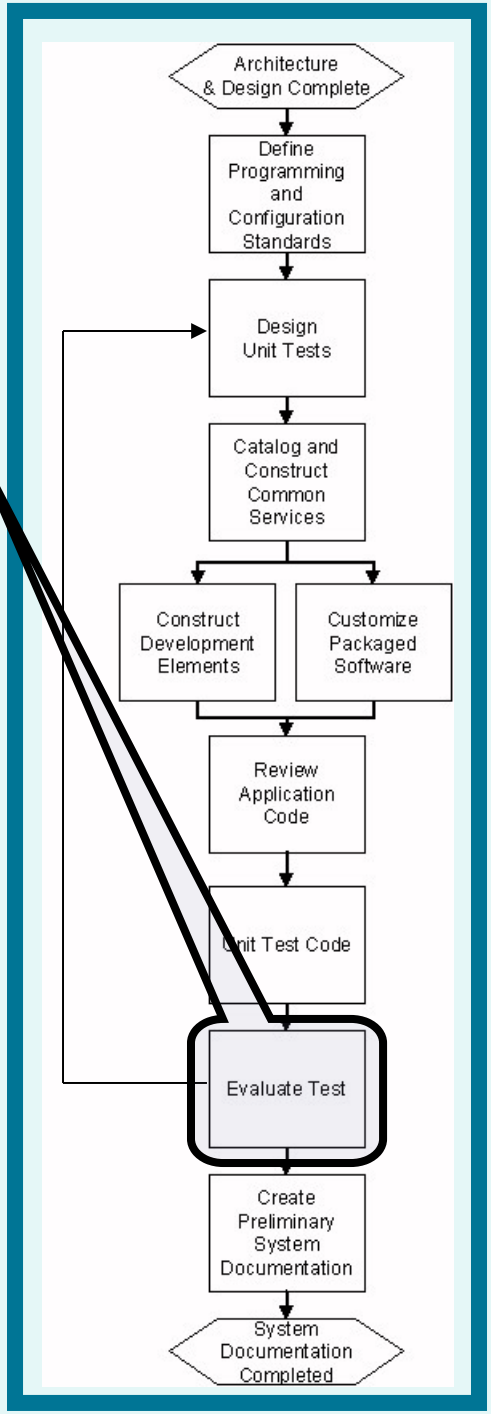
After the last phase of testing completes (i.e., Operational Readiness Testing), an Operations Certification is rendered to indicate whether the application or product is ready to move to production.



Evaluate Test

The Evaluate Test Sub-Process consists of the following steps:

- Compile and document test results
- Evaluate the success of the test
- Log defects for tracking purposes
- Determine if the application/release passed or failed the test. Consider the acceptance criteria defined in the test plan for this test phase. For a failure, the reason for the failure must be determined (e.g., script error, software error).
- Identify opportunities to improve the testing process.
- Complete testing Quality Gates assessments.
- Initiate version control or change and release management, if application/release is ready for production.



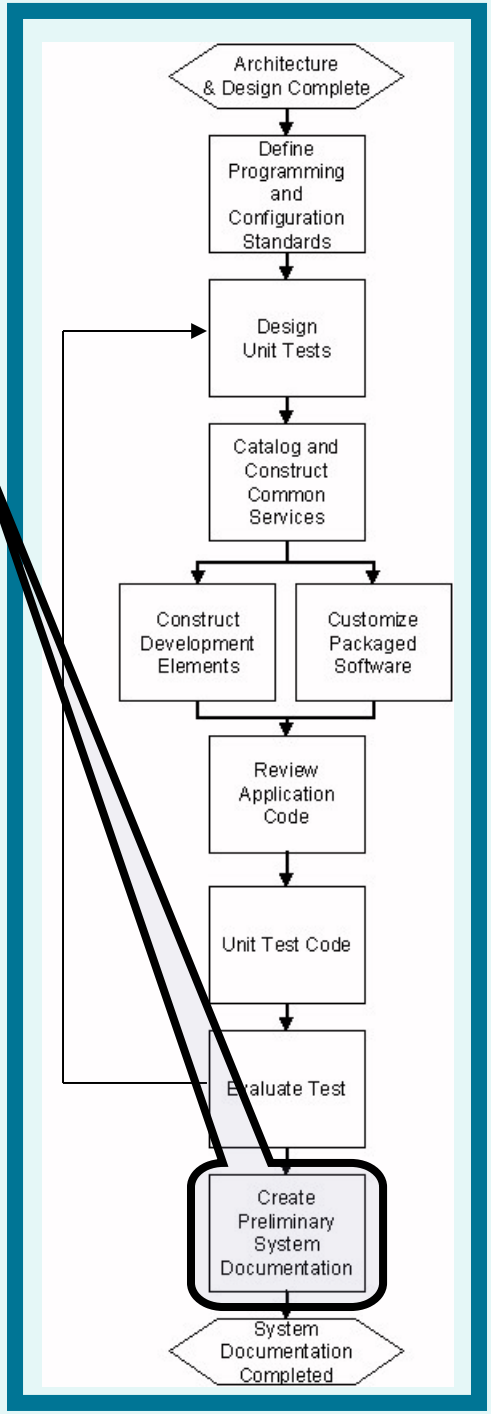
Construct Software Elements

Create Preliminary System Documentation

Review existing standards and guidelines for producing system documentation.

Determine the system documentation requirements with the users and personnel from the Applications Management Practice (AMP) and Infrastructure Operation Services (IOS).

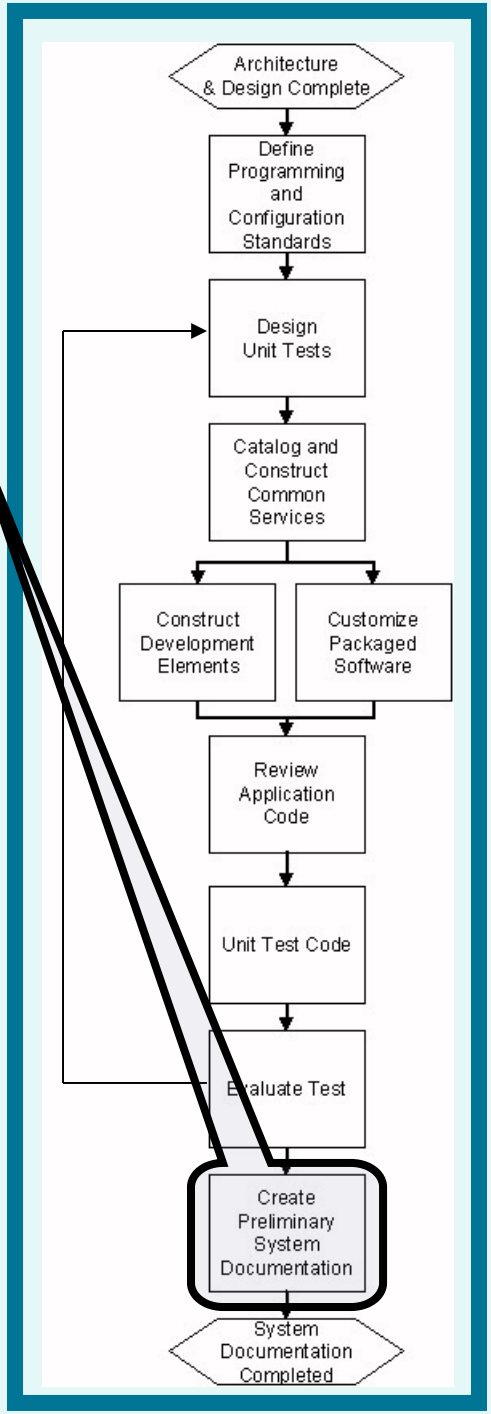
Also, identify special hardware and software tools and facilities that might be necessary to support the process of developing all required system documentation components.



Create Preliminary System Documentation

Create the initial prototypes and/or templates of the following documentation guides:

- **User Guide:** Documents the set of procedures that the users can use to interact with the system.
- **Online Help Guide:** Provides the users with an online description of the system functions and facilities, including suggestions on how to best use the graphical user interface, descriptions of the fields contained in each screen or form, how to deal with errors, generic search facilities, and so forth.
- **System Operations Guide:** Documents the set of technical procedures that are required to operate the system in the production environment, such as backup and recovery procedures, the performance monitoring procedures, and the security procedures.
- **Technical Reference Guide:** Documents the technical components of the system for those individuals who will maintain and evolve the system, once it is transferred into its final production environment.

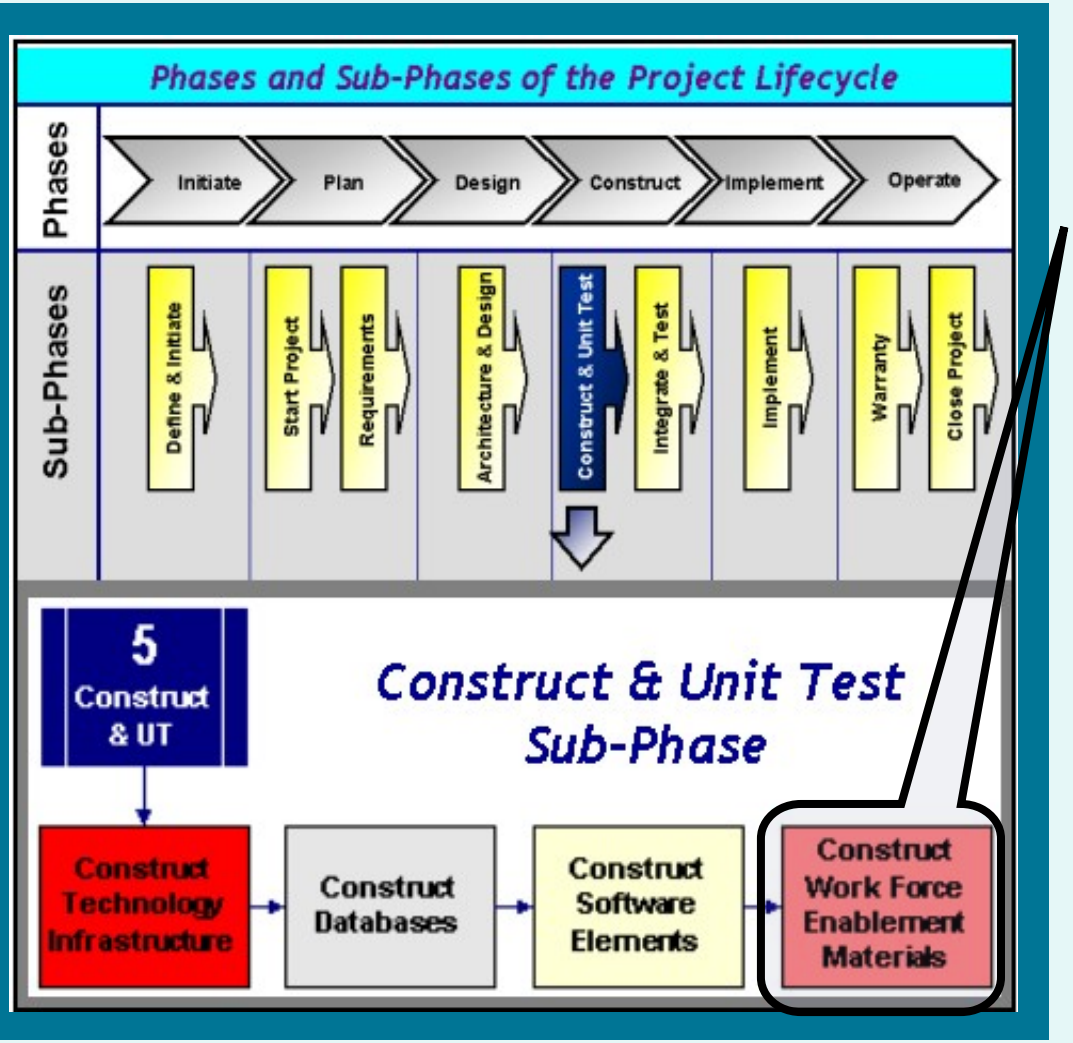


Construct Software Elements

Create Preliminary System Documentation

Inputs & Outputs	
Inputs	Design Specification System Documentation Standards and Guidelines Programming standards and guidelines
Outputs	System Documentation
Roles & Responsibilities	
Role	**Responsibility**
Documentation Developer	Executes this activity. Working with users, AMP, and IOS, determines system documentation requirements and creates the initial prototypes and/or templates.

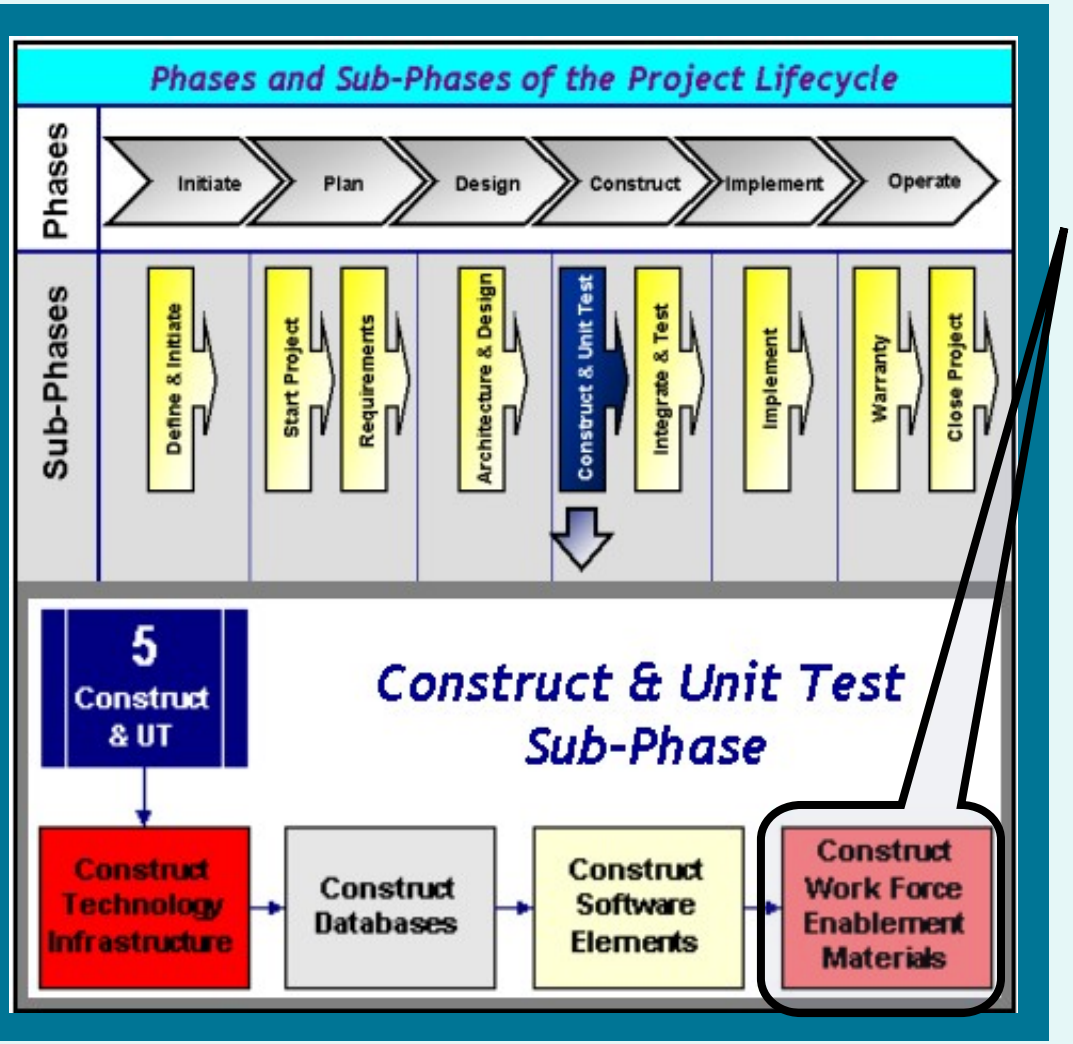
Details - Construct Workforce Enablement Materials



This process produces all materials needed to enable change in the organization. It builds or acquires the infrastructure and then constructs deliverables for each of the following areas:

- Staffing: Materials facilitating the expansion or increase in number of employees.
- Training: Materials facilitating employee education and on-the-job guidance.
- Reward and Recognition: Materials facilitating change related incentives.
- Communications: Materials facilitating the dissemination of information to target stakeholders.
- Facilities: Materials facilitating change in employee locations and work areas.

Details - Construct Workforce Enablement Materials

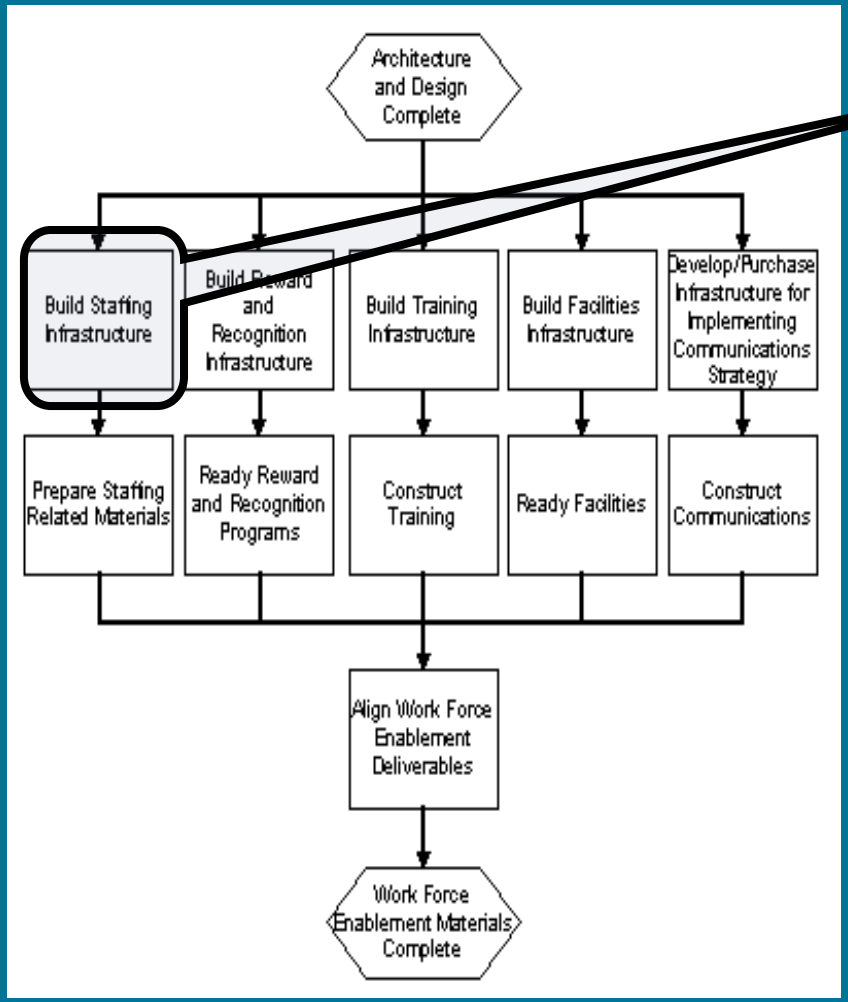


This process is broken out into 11 sub-processes:

- Build Staffing Infrastructure
- Prepare Staffing-Related Materials
- Build Reward and Recognition Infrastructure
- Ready Reward and Recognition Programs
- Build Training Infrastructure
- Construct Training
- Build Facilities Infrastructure
- Ready Facilities
- Develop/Purchase Infrastructure for Implementing the Communications Strategy
- Construct Communications
- Align Workforce Enablement Deliverables

Construct Work Force Enablement Materials

Build Staffing Infrastructure



The Organization Section of the Design Specification is reviewed to understand and construct new and changed organization charters and job descriptions.

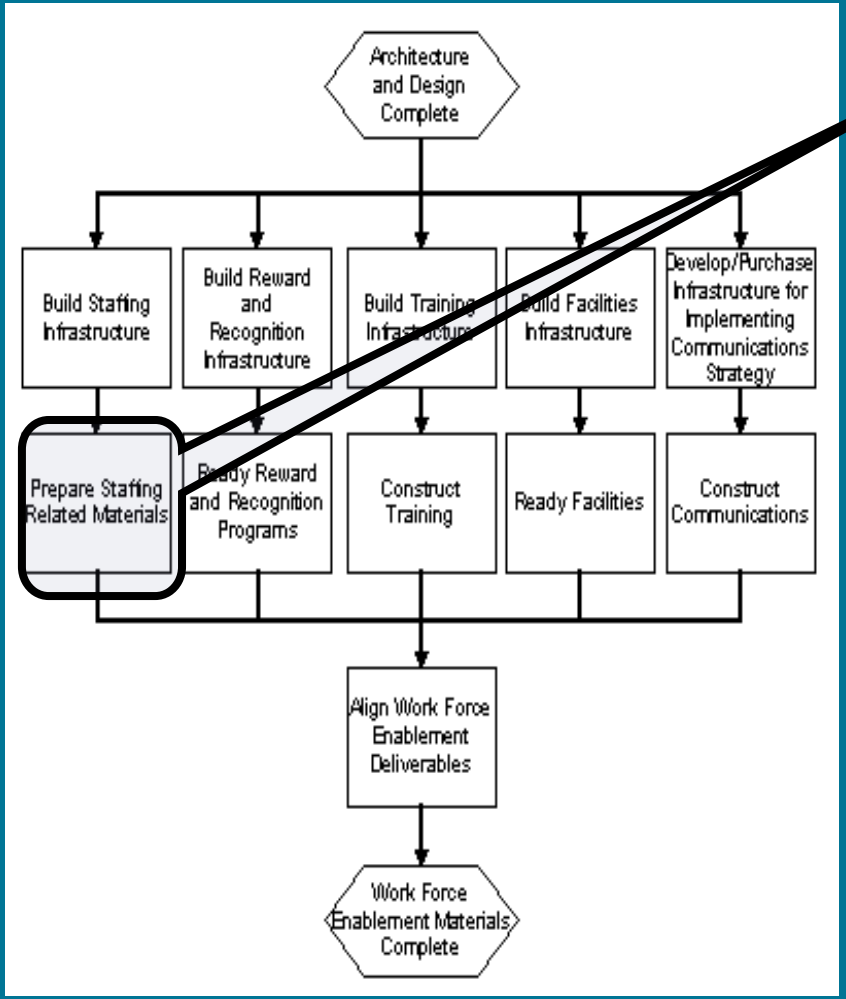
Construct Work Force Enablement Materials

Build Staffing Infrastructure

Inputs & Outputs	
Inputs	Design Specification
Outputs	Future Organization Charters Future Job Descriptions
Roles & Responsibilities	
Role	**Responsibility**
Staffing Team Leader	Executes this activity. Reviews the Organization Section of the Design Specification to develop the Future Organization Charters and Future Job Descriptions.
Project Manager	Supports this activity. Reviews the completed Future Organization Charters and Future Job Descriptions for accuracy and completeness.

Construct Work Force Enablement Materials

Prepare Staffing-Related Materials



- Review the Staffing section of the Work Force Enablement Strategy to understand the staffing approach.
- Review the Business Process Section of the Design Specification to understand staffing needs.
- Plan staffing related events to meet these needs, and produce preparatory materials needed to carry them out.
- Perform walk throughs and unit testing of related components to validate their effectiveness.

Construct Work Force Enablement Materials

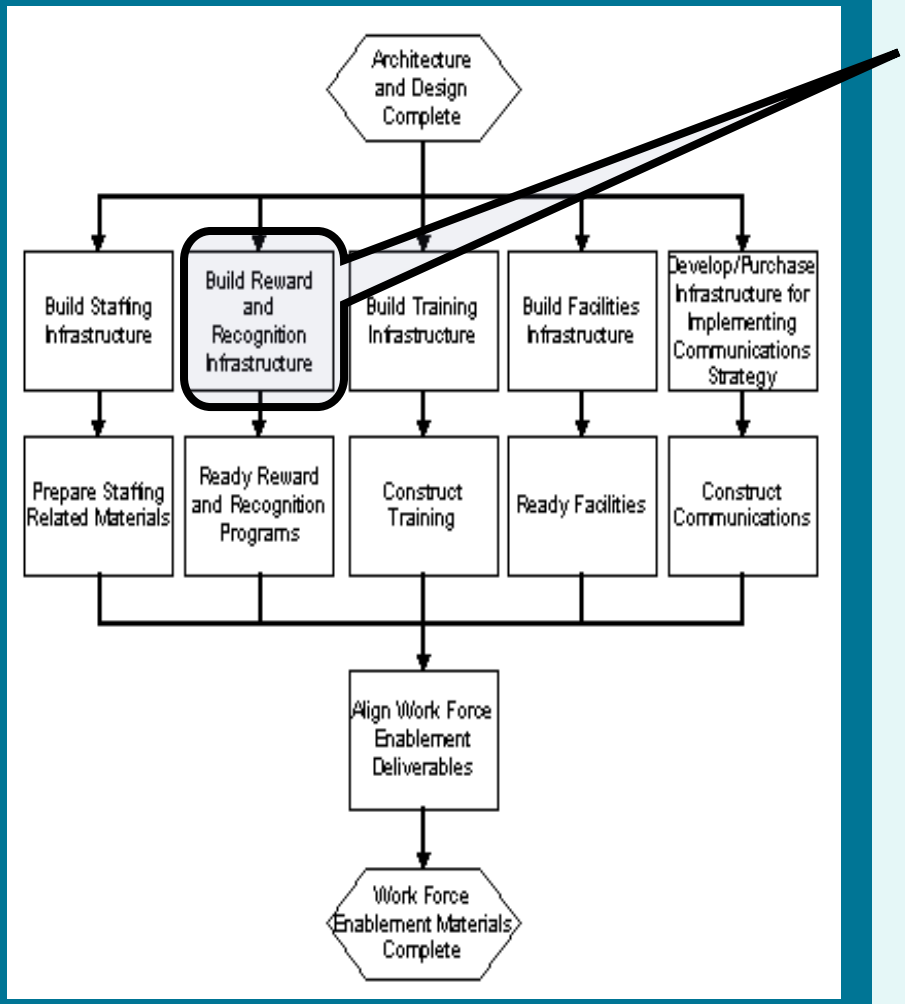
Prepare Staffing-Related Materials

Inputs & Outputs	
Inputs	Work Force Enablement Strategy Development Coordination Procedures Design Specification
Outputs	Staffing Materials

Roles & Responsibilities	
Role	**Responsibility**
Staffing Team Leader	Executes this activity. Understands staffing needs, plans staffing-related events to meet these needs, and produces preparatory materials needed to carry them out.
Subject Matter Expert	Supports this activity. Provides domain-specific knowledge.
Project Manager	Supports this activity. Reviews the completed staffing materials for accuracy and completeness.

Construct Work Force Enablement Materials

Build Reward and Recognition Infrastructure



Processes and data for implementing the Reward and Recognition strategy are designed/confirmed and include the following:

- Procedures
- Roles
- Responsibilities.

Outsourcing services, applications and/or facilities for implementing the Reward and Recognition strategy are developed/acquired.

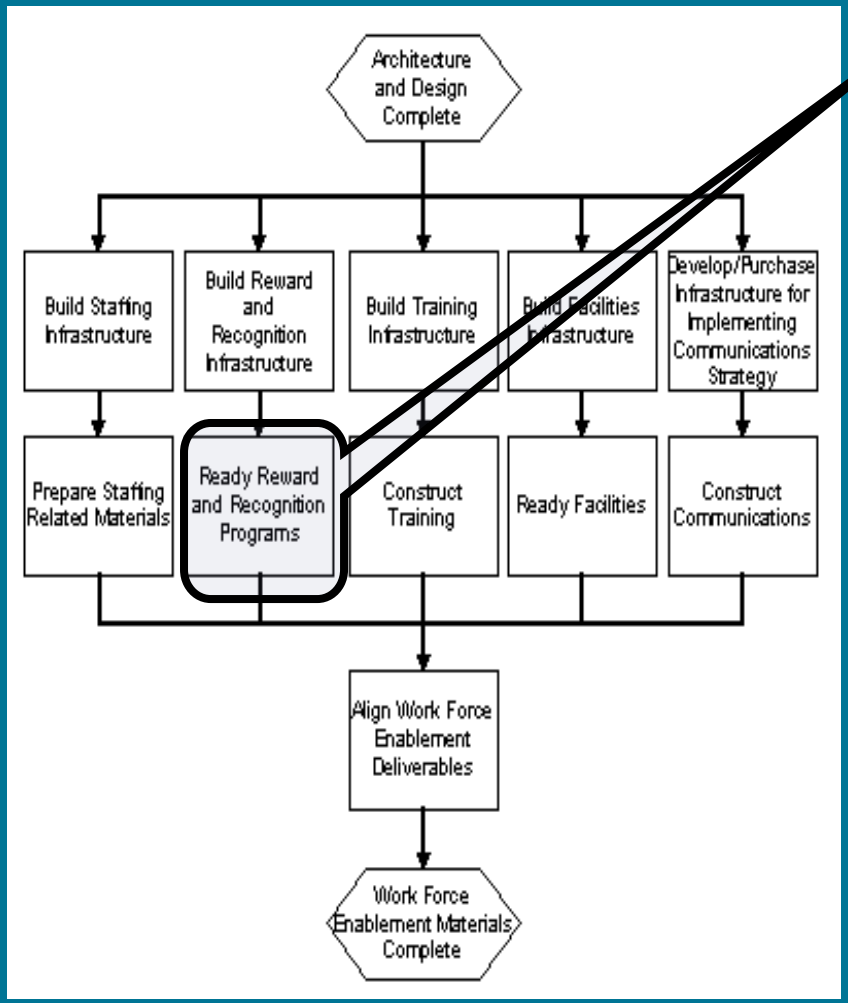
Construct Work Force Enablement Materials

Build Reward and Recognition Infrastructure

Inputs & Outputs	
Inputs	Work Force Enablement Strategy
Outputs	Reward and Recognition Infrastructure
Roles & Responsibilities	
Role	**Responsibility**
Reward and Recognition Team Leader	Executes this activity. Designs/confirms processes and data for implementing the Compensation and Recognition strategy, including procedures, roles, and responsibilities.
Project Manager	Supports this activity. Reviews the completed Reward and Recognition Infrastructure for accuracy and completeness.

Construct Work Force Enablement Materials

Ready Reward and Recognition Programs



Compensation and recognition related events are planned.

Preparatory materials needed to carry out the reward and recognition strategy and related follow-up materials are produced. These include:

- Materials for new or modified compensation formulas
- Special recognition events
- One-time rewards.

Walkthroughs and unit testing of program components are performed to validate their effectiveness.

Construct Work Force Enablement Materials

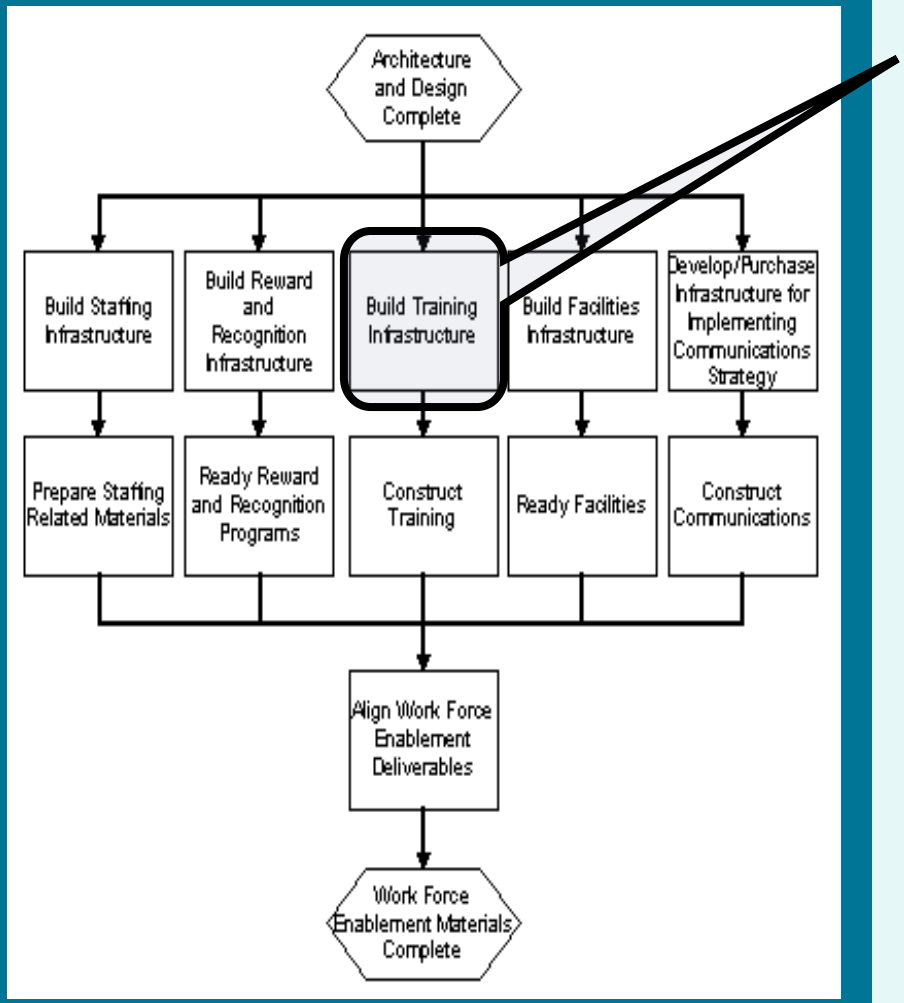
Ready Reward and Recognition Programs

Inputs & Outputs	
Inputs	Development Coordination Procedures Work Force Enablement Strategy
Outputs	Reward and Recognition Materials

Roles & Responsibilities	
Role	**Responsibility**
Reward and Recognition Team Leader	Executes this activity. Plans compensation and recognition-related events. Produces materials for carrying out the compensation and recognition strategy as well as follow-up materials.
Subject Matter Expert	Supports this activity. Provides domain-specific knowledge.
Project Manager	Supports this activity. Reviews the completed reward and recognition materials for accuracy and completeness.

Construct Work Force Enablement Materials

Build Training Infrastructure



The Training section of the Work Force Enablement Strategy is reviewed to understand the curriculum of learning planned for impacted stakeholders.

Processes and data for implementing the Training strategy are designed/confirmed, including the following (as described in the Strategy document):

- Procedures
- Roles
- Responsibilities.

Outsourcing services, applications and/or facilities for implementing the Training strategy are developed/acquired.

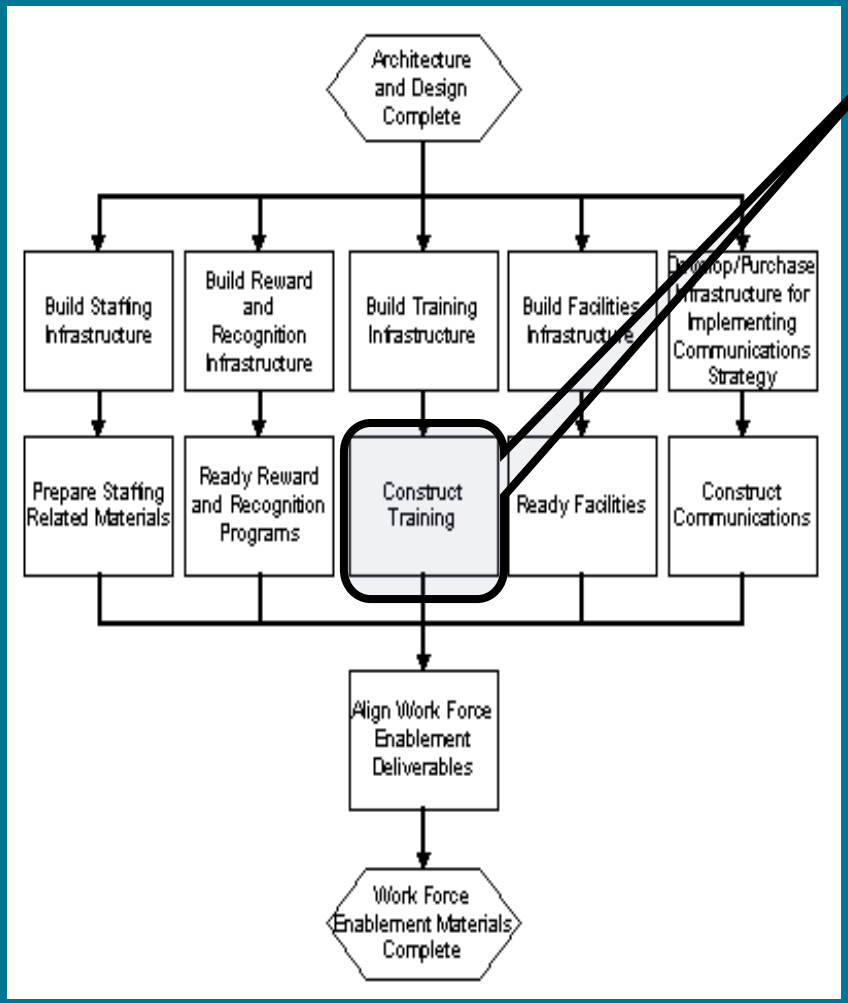
Construct Work Force Enablement Materials

Build Training Infrastructure

Inputs & Outputs	
Inputs	Work Force Enablement Strategy
Outputs	Training Infrastructure
Roles & Responsibilities	
Role	**Responsibility**
Training Team Leader	Executes this activity. Designs/confirms processes and data for implementing the Training strategy, including procedures, roles, and responsibilities as described in the Strategy document.
Project Manager	Supports this activity. Reviews the completed Training Infrastructure for accuracy and completeness.

Construct Work Force Enablement Materials

Construct Training



Preparatory materials needed to carry out, deliver, and follow-up on stakeholder training are produced. These include the following (described in the Training section of the Work Force Enablement Strategy):

- Formal courseware
- Help aids
- Standard operating procedures
- Documentation
- Coaching materials.

Walkthroughs and unit testing of training components are performed to validate their effectiveness.

Construct Work Force Enablement Materials

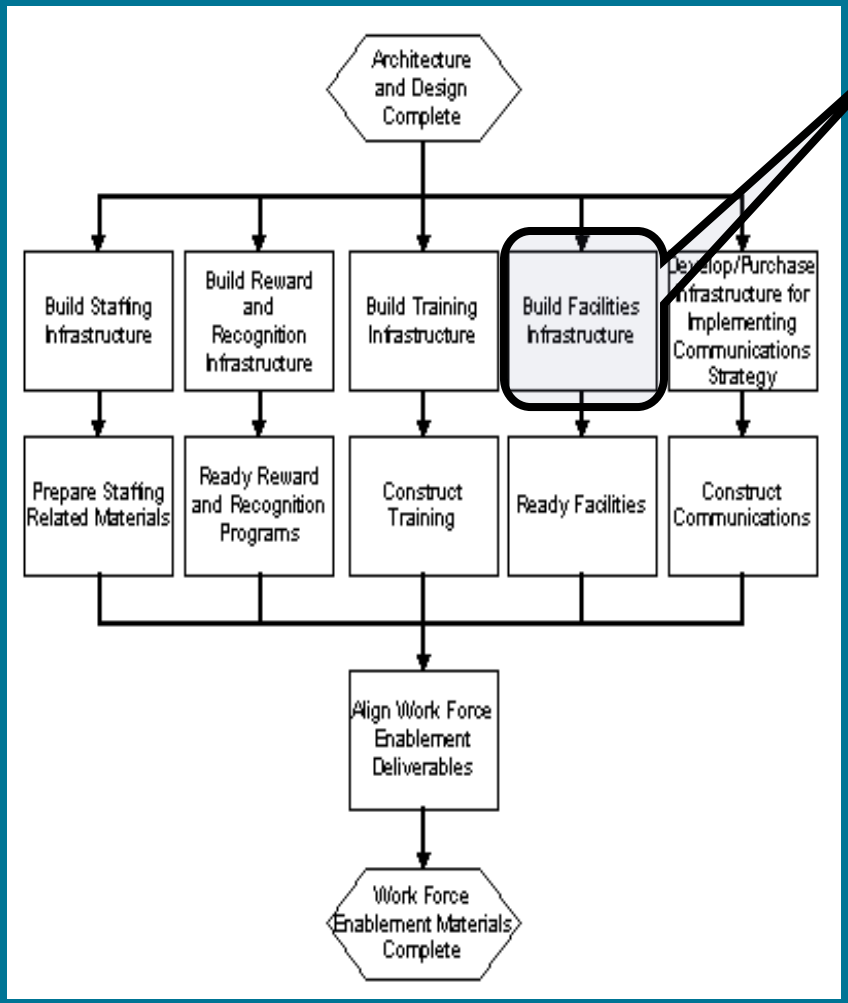
Construct Training

Inputs & Outputs	
Inputs	Work Force Enablement Strategy Development Coordination Procedures
Outputs	Training Materials

Roles & Responsibilities	
Role	**Responsibility**
Training Team Leader	Executes this activity. Produces preparatory and follow-up materials needed to deliver stakeholder training.
Project Manager	Supports this activity. Reviews the completed training materials for accuracy and completeness.
Subject Matter Expert	Supports this activity. Provides domain-specific knowledge as needed.

Construct Work Force Enablement Materials

Build Facilities Infrastructure



The Facilities section of the Work Force Enablement Strategy is reviewed to understand how much facilities must change.

Processes and data for implementing the Facilities Change strategy are designed/confirmed, including:

- Procedures
- Roles
- Responsibilities.

Outsourcing services, applications, and/or facilities are developed/acquired to implement the Facilities Change strategy.

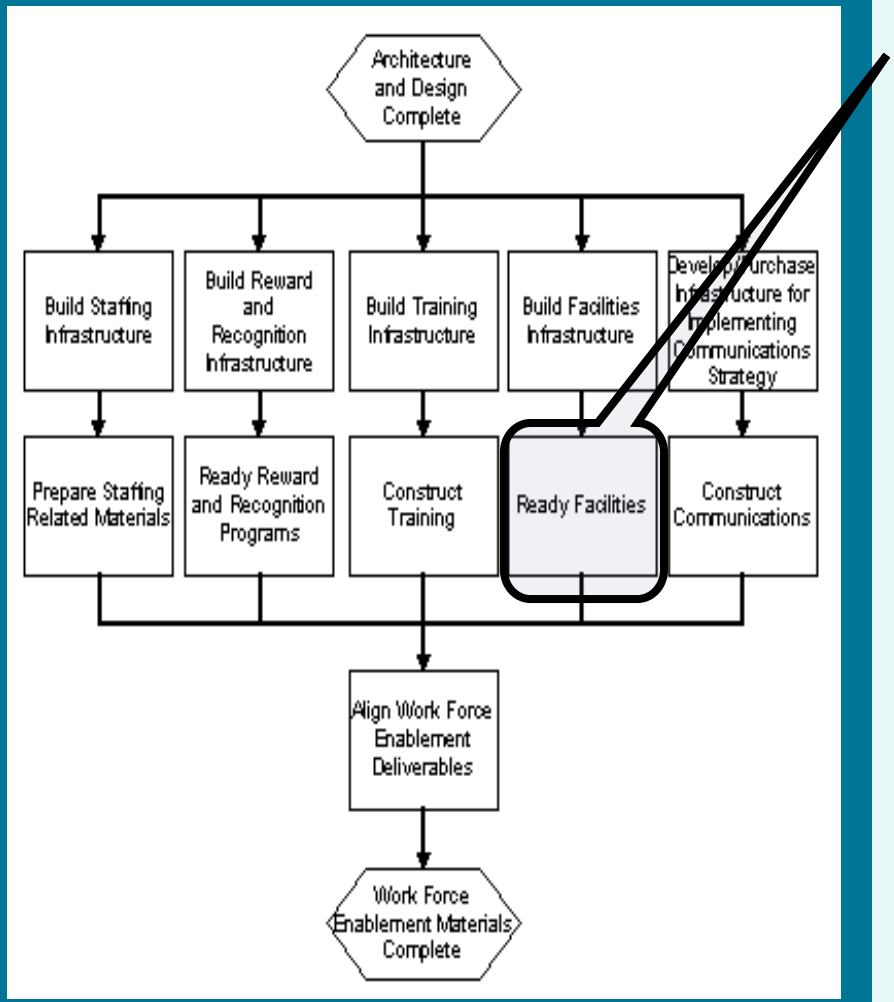
Construct Work Force Enablement Materials

Build Facilities Infrastructure

Inputs & Outputs	
Inputs	Work Force Enablement Strategy
Outputs	Facilities Change Infrastructure
Roles & Responsibilities	
Role	**Responsibility**
Facilities Team Leader	Executes this activity. Designs/confirms processes and data for implementing the Facilities Change strategy, including procedures, roles, and responsibilities.
Project Manager	Supports this activity. Reviews the completed Facilities Change Infrastructure for accuracy and completeness.

Construct Work Force Enablement Materials

Ready Facilities



Facilities related events are planned as described in the Facilities section of the Work Force Enablement Strategy.

Preparatory materials needed to carry out the facilities change strategy and related follow-up materials are produced. These include:

- Questionnaires
- Building plans
- Work area plans
- Space management materials.

Construct Work Force Enablement Materials

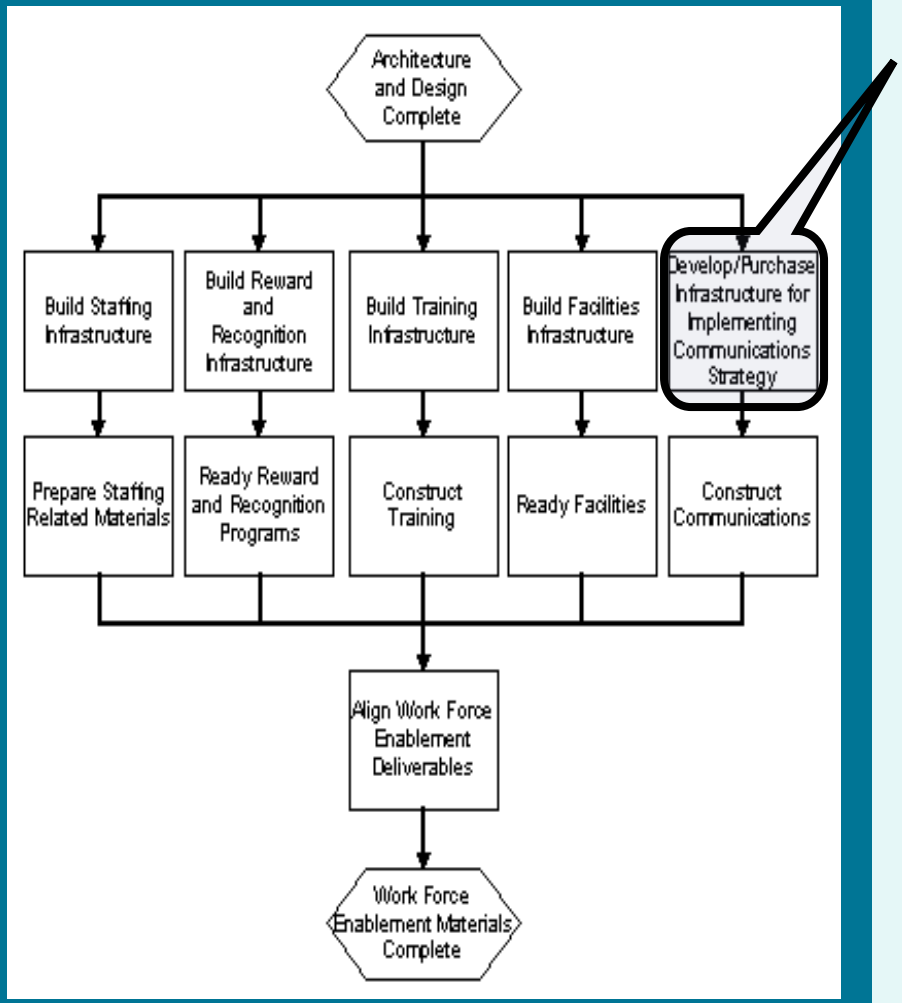
Ready Facilities

Inputs & Outputs	
Inputs	Work Force Enablement Strategy Development Coordination Procedures
Outputs	Facilities Change Materials

Roles & Responsibilities	
Role	**Responsibility**
Facilities Team Leader	Executes this activity. Produces preparatory and follow-up materials needed to execute the facilities change strategy.
Subject Matter Expert	Supports this activity. Provides domain-specific knowledge as needed.
Project Manager	Supports this activity. Reviews the completed facilities change materials for accuracy and completeness.

Construct Work Force Enablement Materials

Develop/Purchase Infrastructure for Implementing the Communications Strategy



The Communications section of the Work Force Enablement Strategy is reviewed to understand messages that must be communicated to stakeholders during the Project Life Cycle and the channels to be used.

Processes and data to implement the Communications strategy, such as those that follow, are designed/confirmed:

- Procedures
- Roles
- Responsibilities.

Outsourcing services, applications, and facilities for implementing the Communications strategy are developed/acquired.

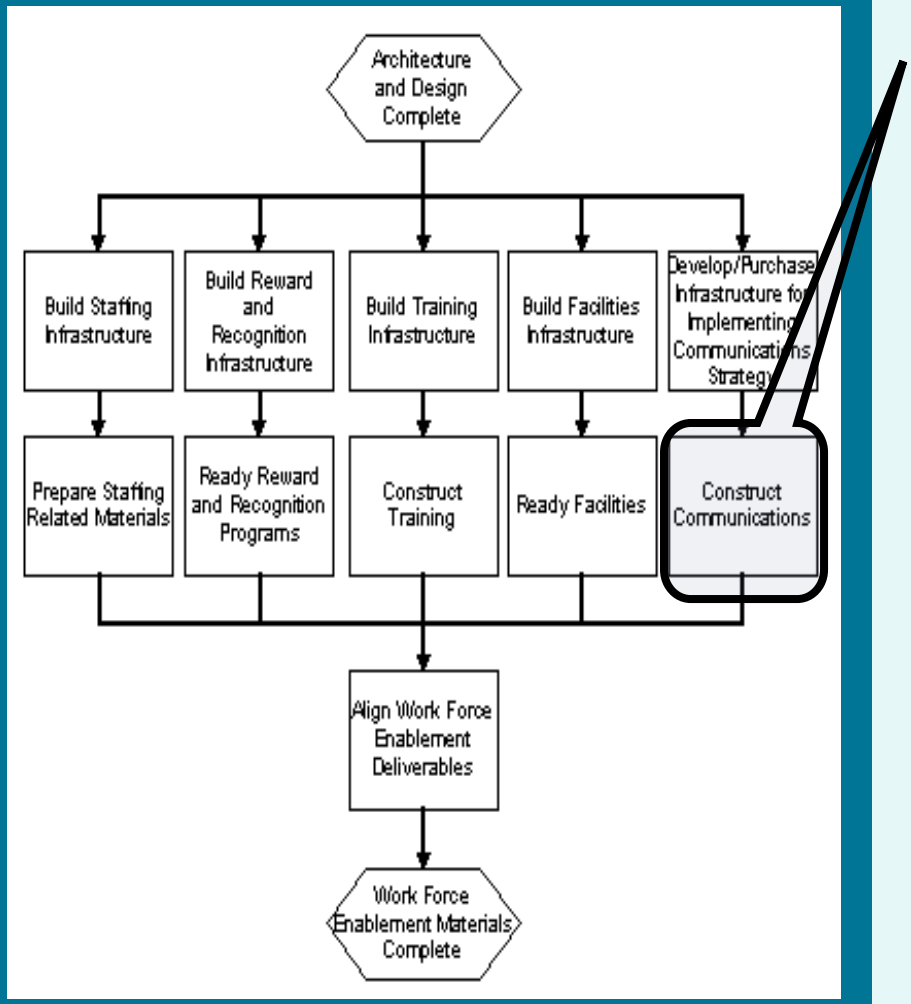
Construct Work Force Enablement Materials

Develop/Purchase Infrastructure for Implementing the Communications Strategy

Inputs & Outputs	
Inputs	Work Force Enablement Strategy
Outputs	Communications Infrastructure
Roles & Responsibilities	
Role	**Responsibility**
Communications Team Leader	Executes this activity. Designs/confirms processes and data to implement the Communications strategy, such as procedures, roles, and responsibilities.
Project Manager	Supports this activity. Reviews the completed Communications Infrastructure for accuracy and completeness.

Construct Work Force Enablement Materials

Construct Communications



The Communications section of the Work Force Enablement Strategy is reviewed to plan communications events. Preparatory materials for carrying out the communications strategy and related follow-up materials are produced. These include:

- Creating or modifying existing communication channels, such as newsletters
- Developing presentations, articles, and informal team overviews.

Critical messages are Unit tested to validate their effectiveness.

Construct Work Force Enablement Materials

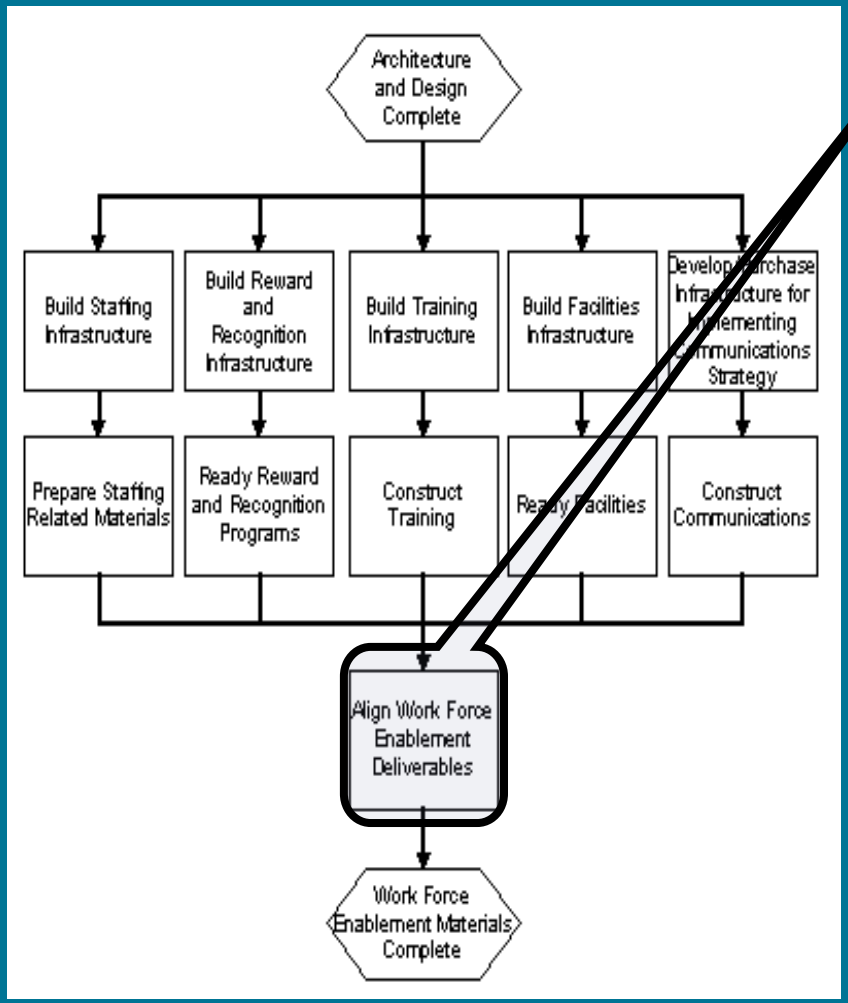
Construct Communications

Inputs & Outputs	
Inputs	Work Force Enablement Strategy Development Coordination Procedures
Outputs	Communication Materials

Roles & Responsibilities	
Role	**Responsibility**
Communications Team Leader	Executes this activity. Produces preparatory and follow-up materials needed to execute the communications strategy.
Subject Matter Expert	Supports this activity. Provides domain-specific knowledge as needed.
Project Manager	Supports this activity. Reviews the completed communications materials for accuracy and completeness.

Construct Work Force Enablement Materials

Align Workforce Enablement Deliverables



- All enablement deliverables are reviewed with feedback provided. The following are identified:
  - Areas of conflict
  - Inconsistencies requiring resolution
  - Issues.
- Alternatives to previously identified issues are determined with relevant enablement team leaders.
- Self-contained issues are resolved.
- Issues over which there is no control are elevated.
- The Work Force Enablement Strategy is modified as appropriate.

Construct Work Force Enablement Materials

Align Workforce Enablement Deliverables

Inputs & Outputs	
Inputs	Work Force Enablement Strategy Work Force Enablement Materials Development Coordination Procedures
Outputs	Work Force Enablement Materials Work Force Enablement Strategy Development Coordination Procedures

Roles & Responsibilities	
Role	**Responsibility**
Project Manager	Executes this activity. Working with relevant enablement team leaders, reviews all enablement deliverables and resolves areas of conflict and inconsistency. Also identifies issues and escalates them as needed.
Staffing Team Leader	Supports this activity. Works with the Project Manager to resolve inconsistencies and areas of conflict.
Facilities Team Leader	Supports this activity. Works with the Project Manager to resolve inconsistencies and areas of conflict.
Training Team Leader	Supports this activity. Works with the Project Manager to resolve inconsistencies and areas of conflict.
Reward and Recognition Team Leader	Supports this activity. Works with the Project Manager to resolve inconsistencies and areas of conflict.
Communications Team Leader	Supports this activity. Works with the Project Manager to resolve inconsistencies and areas of conflict.

Construct & Unit Test Summary

Purpose

- **The purpose of the Construct and Unit Test Sub-Phase is to build and individually test all project-related deliverables for a given release.**

Team Roles

- **Steering Committee, Project Sponsor, Project Manager, Support Areas, Project Office, Process and Application Team, Testing Team, Technical and Infrastructure Team, Data Design and Integration Team, Organization Design and Enablement Team, Training and Documentation Team, Implementation Team.**

Major Inputs

- **Project Charter**
- **Design Specifications**
- **Logical Solution Architecture**
- **Business Case**
- **Requirements Attainment Strategy.**

Major Outputs

- **Solution Architecture**
- **Requirements Attainment Strategy.**

Processes

- **Construct Technology Infrastructure**
- **Construct Databases**
- **Construct Software Elements**
- **Construct Workforce Enablement Materials.**

Construct & Unit Test Sub-Phase

Thank You