Rational® Unified Process™

Included in IBM® Rational® Method Composer

Proven. Practical. Flexible.

Improving project performance with proven, adaptable process

Implement Increase code quality

Define & Analyze Enable requirements based testing

Access Business Analysis

CONTINUOUS · COLLABORATIVE · COMPREHENSIVE

Build & Deploy Automate & trace the quality process

Test & Production Ensure functionality, system performance & compliance
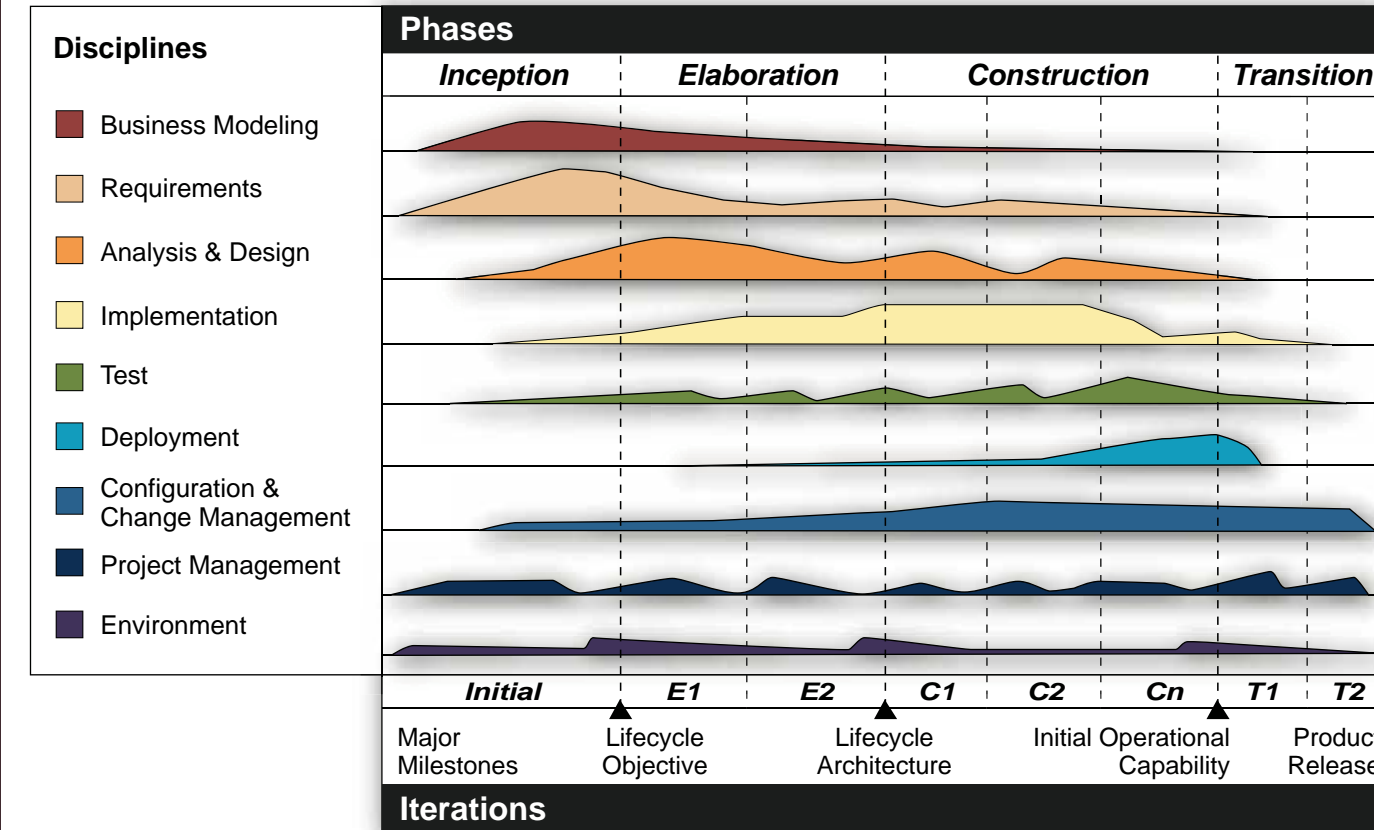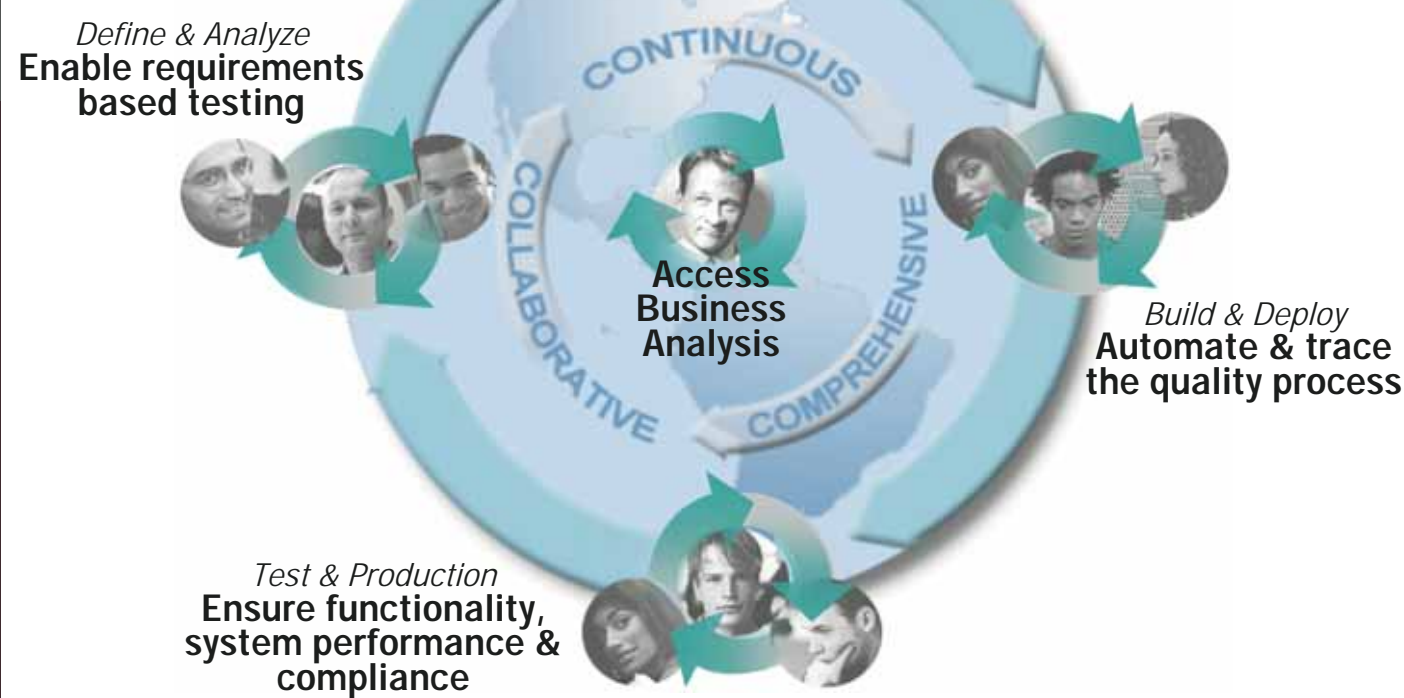

BUSINESS MODELING

Assess Business Status
- Assess Target Organization
- Set and Adjust Objectives
- Identify Business Goals and KPIs
- Business Architectural Analysis
- Capture a Common Business Vocabulary
- Maintain Business Rules

Potential Work Products
- TARGET-ORGANIZATION ASSESSMENT
- BUSINESS VISION
- BUSINESS GOAL
- BUSINESS ANALYSIS MODEL
- BUSINESS ARCHITECTURE DOCUMENT
- BUSINESS DEPLOYMENT MODEL
- BUSINESS DESIGN MODEL
- BUSINESS GLOSSARY
- BUSINESS RULE

Describe Current Business
- Assess Target Organization
- Set and Adjust Objectives
- Identify Business Goals and KPIs
- Find Business Actors and Use Cases
- Business Architectural Analysis
- Capture a Common Business Vocabulary
- Maintain Business Rules
- Functional Area Analysis

Potential Work Products
- BUSINESS VISION
- TARGET-ORGANIZATION ASSESSMENT
- BUSINESS GLOSSARY
- BUSINESS GOAL
- BUSINESS RULE
- SUPPLEMENTARY BUSINESS SPECIFICATION
- BUSINESS ANALYSIS MODEL
- BUSINESS ARCHITECTURE DOCUMENT
- BUSINESS DEPLOYMENT MODEL
- BUSINESS DESIGN MODEL
- BUSINESS USE CASE MODEL

Define Business
- Identify Business Processes
- Refine Business Process Definitions
- Design Business Process Realizations
- Define Business Operations
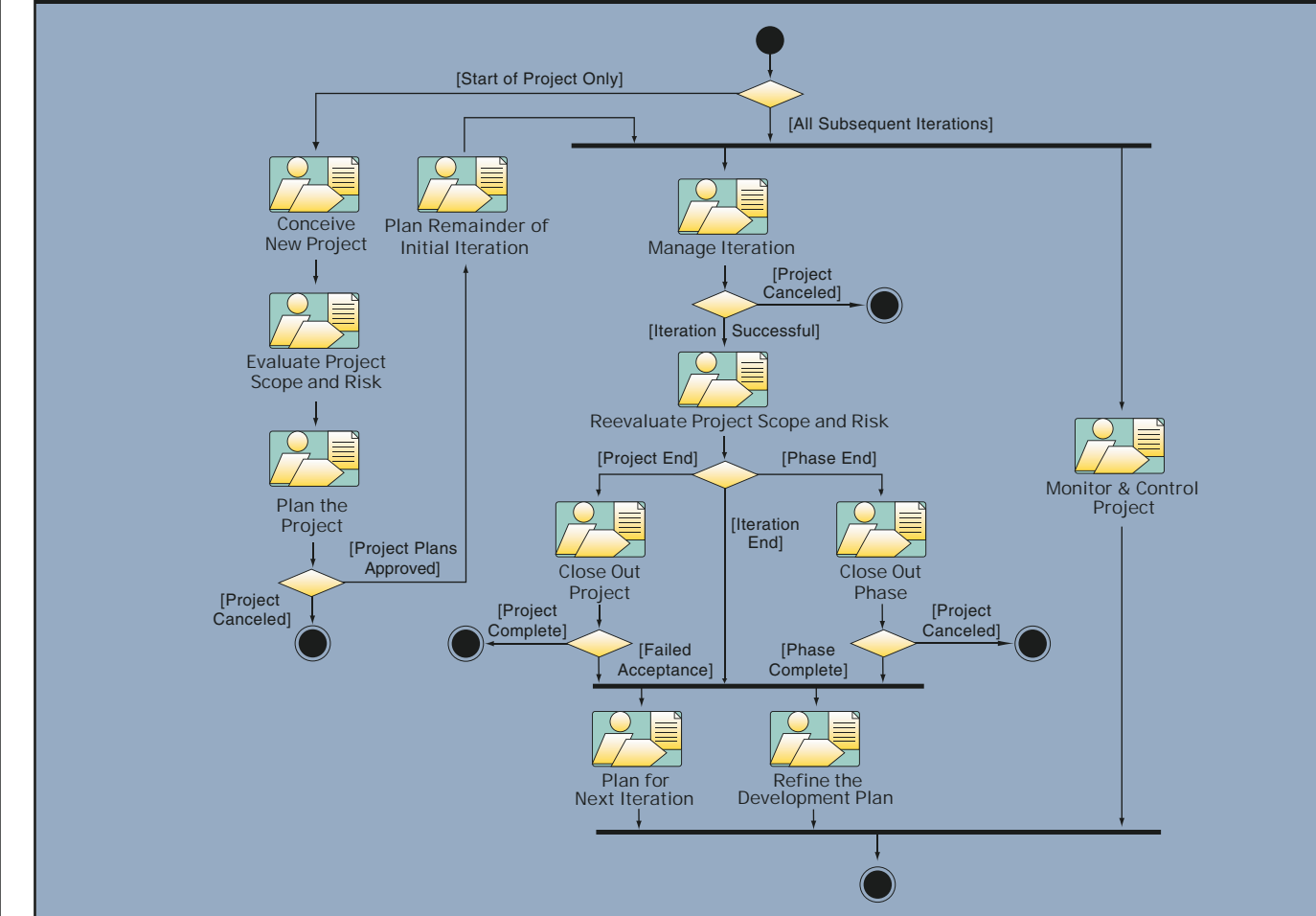- Refine Roles and Responsibilities

Explore Process Automation
- Set and Adjust Objectives
- Define Automation Requirements
- Construct Business Architectural Proof-of-Concept

Potential Work Products
- BUSINESS VISION
- ANALYSIS MODEL
- SUPPLEMENTARY SPECIFICATIONS
- USE-CASE MODEL
- BUSINESS ARCHITECTURAL PROOF-OF-CONCEPT

Develop Domain Model
- Capture a Common Business Vocabulary
- Maintain Business Rules
- Business Architecture Analysis
- Detail a Business Entity
- Review the Business Analysis Model

Potential Work Products
- BUSINESS GLOSSARY
- BUSINESS RULE
- BUSINESS ARCHITECTURE DOCUMENT
- BUSINESS DESIGN MODEL
- BUSINESS DEPLOYMENT MODEL
- BUSINESS ANALYSIS MODEL
- BUSINESS ENTITY
- BUSINESS EVENT
- REVIEW RECORD

[Early Inception]
Assess Business Status
[Domain Modeling Only]
[Business Modeling]
Describe Current Business · **Define Business** · **Explore Process Automation** · **Develop Domain Model**

REQUIREMENTS

Analyze the Problem
- Capture a Common Business Vocabulary
- Find Actors and Use Cases
- Develop Vision
- Develop Requirements Management Plan

Potential Work Products
- GLOSSARY
- USE-CASE MODEL
- REQUIREMENTS ATTRIBUTES
- VISION
- REQUIREMENTS MANAGEMENT PLAN

Understand Stakeholder Needs
- Capture a Common Business Vocabulary
- Elicit Stakeholder Requests
- Develop Vision
- Find Actors and Use Cases
- Develop Supplementary Specification
- Manage Dependencies

Potential Work Products
- GLOSSARY
- USE-CASE MODEL
- REQUIREMENTS ATTRIBUTES
- VISION
- REQUIREMENTS MANAGEMENT PLAN
- STAKEHOLDER REQUESTS
- STORYBOARD
- SUPPLEMENTARY SPECIFICATION

Define the System
- Develop Vision
- Capture a Common Business Vocabulary
- Find Actors and Use Cases
- Develop Supplementary Specifications
- Manage Dependencies

Potential Work Products
- GLOSSARY
- USE-CASE MODEL
- REQUIREMENTS ATTRIBUTES
- VISION
- REQUIREMENTS MANAGEMENT PLAN
- SUPPLEMENTARY SPECIFICATION

Manage the Scope of the System
- Develop Vision
- Manage Dependencies
- Prioritize Use Cases

Refine the System Definition
- Detail a Use Case
- Develop Supplementary Specifications
- Detail the Software Requirements

Potential Work Products
- USE CASE
- REQUIREMENTS ATTRIBUTES
- SOFTWARE REQUIREMENTS SPECIFICATION
- SOFTWARE REQUIREMENT
- SUPPLEMENTARY SPECIFICATION

Manage Changing Requirements
- Structure the Use-Case Model
- Manage Dependencies
- Review Requirements

Potential Work Products
- GLOSSARY
- USE-CASE MODEL
- REQUIREMENTS MANAGEMENT PLAN
- REQUIREMENTS ATTRIBUTES
- VISION
- SUPPLEMENTARY SPECIFICATION
- REVIEW RECORD

Potential Work Products
- REQUIREMENTS ATTRIBUTES
- VISION
- REQUIREMENTS MANAGEMENT PLAN
- SOFTWARE ARCHITECTURE DOCUMENT
- SOFTWARE REQUIREMENTS

[New System] · *[Existing System]*
Analyze the Problem · **Understand Stakeholder Needs**
[Incorrect Problem] · *[Addressing Correct Problem]*
Define the System · **Manage the Scope of the System**
[Can't Do All the Work] · *[Work in Scope]*
Manage Changing Requirements
Refine the System Definition

ANALYSIS & DESIGN

Perform Architectural Synthesis
- Define a System Context
- Architectural Analysis
- Construct Architectural Proof-of-Concept
- Assess Viability of Architectural Proof-of-Concept

Potential Work Products
- ANALYSIS MODEL
- OPERATION
- USE-CASE MODEL
- DESIGN MODEL
- DEPLOYMENT MODEL
- SOFTWARE ARCHITECTURE DOCUMENT
- ARCHITECTURAL PROOF-OF-CONCEPT
- REVIEW RECORD
- REFERENCE ARCHITECTURE

Define a Candidate Architecture
- Define a System Context
- Architectural Analysis
- Use-Case Analysis
- Operation Analysis
- Identify Security Patterns

Potential Work Products
- ANALYSIS MODEL
- OPERATION
- USE-CASE MODEL
- DESIGN MODEL
- DEPLOYMENT MODEL
- SOFTWARE ARCHITECTURE DOCUMENT
- USE-CASE REALIZATION
- OPERATION REALIZATION

Service Identification
- Domain Decomposition
- Goal Service Modeling
- Existing Asset Analysis

Potential Work Products
- BUSINESS ANALYSIS MODEL
- BUSINESS ARCHITECTURE DOCUMENT
- BUSINESS USE-CASE MODEL
- SUPPLEMENTARY BUSINESS SPECIFICATION
- SERVICE MODEL
- BUSINESS GOAL
- GOAL SERVICE MODEL
- ARCHITECTURAL PROOF-OF-CONCEPT

Refine the Architecture
- Identify Design Mechanisms
- Identify Design Elements
- Operation Analysis
- Incorporate Existing Design Elements
- Structure the Implementation Model
- Describe the Run-time Architecture
- Describe Distribution
- Review the Architecture

Potential Work Products
- SOFTWARE ARCHITECTURE DOCUMENT
- DESIGN MODEL
- SERVICE MODEL
- IMPLEMENTATION MODE
- DEPLOYMENT MODEL
- ANALYSIS MODEL
- OPERATION
- OPERATION REALIZATION
- USE-CASE MODEL
- REVIEW RECORD

Analyze Behavior
- Identify Design Elements
- Use-Case Analysis
- Operation Analysis
- Design the User Interface
- Prototype the User Interface
- Review the Design

Potential Work Products
- DESIGN MODEL
- SERVICE MODEL
- USE-CASE REALIZATION
- ANALYSIS MODEL
- USE-CASE MODEL
- OPERATION
- OPERATION REALIZATION
- NAVIGATION MAP
- USER-INTERFACE PROTOTYPE
- REVIEW RECORD

Design the Database
- Class Design
- Specify Data Migration
- Database Design
- Review the Design

Potential Work Products
- DESIGN MODEL
- DATA MIGRATION SPECIFICATION
- DATA MODEL
- REVIEW RECORD

Design Components
- Use-Case Design
- Subsystem Design
- Operation Design
- Class Design
- Identify Testability Elements
- Design Testability Elements
- Capsule Design
- Review the Design
- Perform Service Specification
- Perform Subsystem Analysis
- Perform Component Specification

Potential Work Products
- DESIGN MODEL
- DEPLOYMENT MODEL
- TESTABILITY CLASS
- DESIGN PACKAGE
- TEST DESIGN
- TEST AUTOMATION ARCHITECTURE
- TEST INTERFACE SPECIFICATION
- DESIGN CLASS
- CAPSULE
- PROTOCOL
- REVIEW RECORD

Service Specification
Potential Work Products
- SERVICE MODEL
- GOAL SERVICE MODEL
- DESIGN MODEL
- SOFTWARE ARCHITECTURE DOCUMENT
- SERVICE COMPONENT

[Early Elaboration Iteration] · *[Inception Iteration (Optional)]*
Define a Candidate Architecture · **Perform Architectural Synthesis**
Refine the Architecture · **Service Identification** · **Analyze Behavior**
Design Components · **Design the Database** · **Service Specification**

Phases / Disciplines

Disciplines	Inception	Elaboration	Construction	Transition
Business Modeling				
Requirements				
Analysis & Design				
Implementation				
Test				
Deployment				
Configuration & Change Management				
Project Management				
Environment				

Iterations: Initial · E1 · E2 · C1 · C2 · Cn · T1 · T2

Major Milestones: Lifecycle Objective · Lifecycle Architecture · Initial Operational Capability · Product Release

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KEY PRINCIPLES FOR BUSINESS-DRIVEN DEVELOPMENT

A dapt the process
B alance stakeholder priorities
C ollaborate across teams
D emonstrate value iteratively
E levate the level of abstraction
F ocus continuously on quality

PROJECT MANAGEMENT

[Start of Project Only] · *[All Subsequent Iterations]*

Conceive New Project · **Plan Remainder of Initial Iteration** · **Manage Iteration**
[Project Cancelled] · *[Iteration Successful]*
Evaluate Project Scope and Risk
Reevaluate Project Scope and Risk
[Project End] · *[Phase End]*
Plan the Project
[Project Plans Approved]
Close Out Project · **Close Out Phase** · **Monitor & Control Project**
[Project Cancelled] · *[Failed Acceptance]* · *[Phase Complete]* · *[Project Cancelled]*
[Project Complete]
Plan for Next Iteration · **Refine the Development Plan**

Conceive New Project
- Identify and Assess Risks
- Develop Business Case
- Initiate Project
- Project Approval Review

Potential Work Products
- RISK LIST
- BUSINESS CASE
- SOFTWARE DEVELOPMENT PLAN
- REVIEW RECORD

Evaluate Project Scope and Risk
- Identify and Assess Risks
- Develop Business Case

Potential Work Products
- RISK LIST
- BUSINESS CASE

Plan the Project
- Develop Measurement Plan
- Develop Risk Management Plan
- Develop Product Acceptance Plan
- Develop Problem Resolution Plan
- Develop Quality Assurance Plan
- Define Project Organization and Staffing
- Define Monitor and Control Processes
- Plan Phases and Iterations
- Compile Software Development Plan
- Project Planning Review

Potential Work Products
- MEASUREMENT PLAN
- RISK MANAGEMENT PLAN
- PRODUCT ACCEPTANCE PLAN
- PROBLEM RESOLUTION PLAN
- QUALITY ASSURANCE PLAN
- SOFTWARE DEVELOPMENT PLAN
- REVIEW RECORD

Plan Reminder of Initial Iteration
- Develop Iteration Plan
- Develop Business Case
- Iteration Plan Review

Potential Work Products
- ITERATION PLAN
- BUSINESS CASE
- REVIEW RECORD

Monitor & Control Project
- Schedule and Assign Work
- Monitor Project Status
- Report Status
- Handle Exceptions and Problems
- Project Review Authority (PRA) Project Review
- Organize Review
- Conduct Review

Potential Work Products
- SOFTWARE DEVELOPMENT PLAN
- ITERATION PLAN
- WORK ORDER
- PROJECT MEASUREMENTS
- RISK LIST
- ISSUES LIST
- STATUS ASSESSMENT
- REVIEW RECORD

Manage Iteration
- Acquire Staff
- Initiate Iteration
- Iteration Evaluation Criteria Review
- Identify and Assess Risks
- Assess Iteration
- Iteration Acceptance Review

Potential Work Products
- SOFTWARE DEVELOPMENT PLAN
- WORK ORDER
- RISK LIST
- ITERATION ASSESSMENT
- REVIEW RECORD

Reevaluate Project Scope and Risk
- Identify and Assess Risks
- Develop Business Case

Potential Work Products
- ISSUES LIST
- SOFTWARE DEVELOPMENT PLAN
- STATUS ASSESSMENT
- REVIEW RECORD

Plan for Next Iteration
- Develop Iteration Plan
- Develop Business Case
- Iteration Plan Review

Potential Work Products
- ITERATION PLAN
- BUSINESS CASE
- REVIEW RECORD

Refine the Development Plan
- Develop Measurement Plan
- Develop Risk Management Plan
- Develop Product Acceptance Plan
- Develop Problem Resolution Plan
- Develop Quality Assurance Plan
- Define Project Organization and Staffing
- Define Monitor and Control Processes
- Plan Phases and Iterations
- Compile Software Development Plan
- Project Planning Review

Potential Work Products
- MEASUREMENT PLAN
- RISK MANAGEMENT PLAN
- PRODUCT ACCEPTANCE PLAN
- PROBLEM RESOLUTION PLAN
- QUALITY ASSURANCE PLAN
- SOFTWARE DEVELOPMENT PLAN
- REVIEW RECORD

Close Out Phase
- Prepare for Phase Close-Out
- Lifecycle Milestone Review

Potential Work Products
- SOFTWARE DEVELOPMENT PLAN
- ISSUES LIST
- ITERATION ASSESSMENT
- STATUS ASSESSMENT
- REVIEW RECORD

Close Out Project
- Prepare for Project Close-Out
- Project Acceptance Review

Potential Work Products
- ISSUES LIST
- SOFTWARE DEVELOPMENT PLAN
- STATUS ASSESSMENT
- REVIEW RECORD

ENVIRONMENT

Prepare Environment for Project
- Tailor the Process for the Project
- Develop Development Case
- Prepare Templates for the Project
- Prepare Guidelines for the Project
- Select and Acquire Tools

Potential Work Products
- DEVELOPMENT PROCESS
- DEVELOPMENT CASE
- PROJECT-SPECIFIC TEMPLATES
- PROJECT-SPECIFIC GUIDELINES

Prepare Environment for an Iteration
- Develop Development Case
- Prepare Guidelines for the Project
- Develop Manual Styleguide
- Prepare Templates for the Project

Prepare Environment for an Iteration *continued*
- Launch Development Process
- Set up Tools
- Verify Tool Configuration & Installation

Potential Work Products
- DEVELOPMENT CASE
- PROJECT-SPECIFIC TEMPLATES
- PROJECT-SPECIFIC GUIDELINES
- CHANGE REQUEST
- MANUAL STYLEGUIDE
- TOOLS

Support Environment for an Iteration
- Support Development

Potential Work Products
- DEVELOPMENT INFRASTRUCTURE

[Inception Iterations]
Prepare Environment for Project
Prepare Environment for an Iteration
Support Environment During an Iteration

IMPLEMENTATION

Structure the Implementation Model
- Structure the Implementation Model

Potential Work Products
- IMPLEMENTATION MODEL
- SOFTWARE ARCHITECTURE DOCUMENT

Plan the Integration
- Plan System Integration

Potential Work Products
- INTEGRATION BUILD PLAN

Service Realization
- Realize Decisions

Potential Work Products
- DESIGN MODEL
- SERVICE COMPONENT
- ARCHITECTURAL PROOF-OF-CONCEPT
- REVIEW RECORD
- REFERENCE ARCHITECTURE

Implement Components
- Plan Subsystem Integration
- Implement Design Elements
- Analyze Runtime Behavior
- Implement Testability Elements
- Implement Developer Test
- Execute Developer Tests
- Review Code

Potential Work Products
- INTEGRATION BUILD PLAN
- IMPLEMENTATION ELEMENT
- IMPLEMENTATION SUBSYSTEM
- TEST RESULTS
- TESTABILITY ELEMENT
- TEST STUB
- DEVELOPER TEST
- TEST LOG
- REVIEW RECORD

Integrate Each Subsystem
- Implement Developer Test
- Execute Developer Test
- Integrate Subsystem

Potential Work Products
- DEVELOPER TEST
- TEST LOG
- IMPLEMENTATION SUBSYSTEM

Integrate the System
- Integrate System

Potential Work Products
- BUILD

[More Components to Implement for this Iteration]
Structure the Implementation Model
Plan the Integration
Service Realization
Implement Components
[More Subsystem Integration for this Iteration] · *[Components Implemented and Vited]*
Integrate each Subsystem
[Subsystems implemented and Validated]
Integrate the System
[More System Builds for this Iteration] · *[Done]*

TEST

Define Evaluation Mission
- Identify Test Motivators
- Agree on the Mission
- Identify Targets of Test
- Define Assessment and Traceability Needs
- Identify Test Ideas
- Define Test Approach

Potential Work Products
- TEST PLAN
- TEST STRATEGY
- TEST-IDEAS LIST
- TEST ENVIRONMENT CONFIGURATION

Verify Test Approach
- Define Test Environment Configurations
- Identify Testability Mechanisms
- Define Testability Elements
- Define Test Details
- Implement Test
- Implement Test Suite
- Obtain Testability Commitment

Potential Work Products
- TEST ENVIRONMENT CONFIGURATION
- TEST AUTOMATION ARCHITECTURE
- TEST INTERFACE SPECIFICATION
- TEST DESIGN
- TEST CASE
- TEST DATA
- TEST SCRIPT
- WORKLOAD ANALYSIS MODEL
- TEST SUITE

Validate Build Stability
- Define Test Details
- Implement Test
- Execute Test Suite
- Analyze Test Failure
- Determine Test Results
- Assess and Advocate Quality

Potential Work Products
- TEST CASE
- TEST DATA
- TEST SCRIPT
- WORKLOAD ANALYSIS MODEL

Test and Evaluate
- Define Test Details
- Implement Test
- Implement Test Suite
- Execute Test Suite
- Analyze Test Failure
- Structure the Test Implementation
- Identify Test Ideas
- Determine Test Results

Potential Work Products
- TEST CASE
- TEST DATA
- TEST SCRIPT
- WORKLOAD ANALYSIS MODEL
- TEST-IDEAS LIST
- TEST RESULTS
- TEST LOG
- TEST EVALUATION SUMMARY
- TEST SUITE
- CHANGE REQUEST

Achieve Acceptable Mission
- Assess and Improve Test Effort
- Assess and Advocate Quality
- Determine Test Results

Potential Work Products
- TEST EVALUATION SUMMARY
- TEST PLAN
- TEST RESULTS

Improve Test Assets
- Prepare Guidelines for the Project
- Define Test Approach
- Define Testability Elements
- Structure the Test Implementation
- Identify Test Ideas
- Define Test Details
- Define Assessment and Traceability Needs
- Implement Test
- Implement Test Suite

Potential Work Products
- TEST CASE
- TEST DATA
- TEST SCRIPT
- WORKLOAD ANALYSIS MODEL

Define Evaluation Mission
continued
- TEST RESULTS
- TEST LOG
- TEST EVALUATION SUMMARY
- CHANGE REQUEST

Potential Work Products
- PROJECT-SPECIFIC GUIDELINES
- TEST STRATEGY
- TEST PLAN
- TEST ENVIRONMENT CONFIGURATION
- TEST DESIGN
- TEST AUTOMATION ARCHITECTURE
- TEST INTERFACE SPECIFICATION
- TEST SUITE
- TEST SCRIPT
- TEST-IDEAS LIST
- TEST CASE
- TEST DATA
- WORKLOAD ANALYSIS MODEL

Define Evaluation Mission
Verify Test Approach · **Validate Build Stability**
Test and Evaluate · **Achieve Acceptable Mission**
Improve Test Assets
[Another Technique] · *[Done]* · *[Another Test Cycle]*

CONFIGURATION & CHANGE MANAGEMENT

Manage Change Requests
- Submit Change Request
- Update Change Request
- Review Change Request
- Confirm Duplicate or Reject CR
- Schedule and Assign Work
- Verify Changes in Build

Potential Work Products
- CHANGE REQUEST
- SOFTWARE DEVELOPMENT PLAN
- ITERATION PLAN
- WORK ORDER
- TEST RESULTS

Plan Project Configuration & Change Control
- Establish Configuration Management (CM) Policies
- Write Configuration Management (CM) Plan
- Establish Change Control Process

Potential Work Products
- CONFIGURATION MANAGEMENT PLAN

Create Project Configuration Management (CM) Environments
- Set Up Configuration Management (CM) Environment
- Create Integration Workspaces

Potential Work Products
- PROJECT REPOSITORY
- WORKSPACE

Monitor & Report Configuration Status
- Report on Configuration Status
- Perform Configuration Audit

Potential Work Products
- PROJECT MEASUREMENTS
- CONFIGURATION AUDIT FINDINGS

Change & Deliver Configuration Items
- Create Development Workspace
- Make Changes
- Deliver Changes
- Update Workspace
- Create Baseline
- Promote Baselines

Potential Work Products
- PROJECT REPOSITORY
- WORKSPACE

Manage Baselines & Releases
- Create Deployment Unit
- Create Baselines
- Promote Baselines

Potential Work Products
- DEPLOYMENT UNIT
- PROJECT REPOSITORY
- WORKSPACE

Plan Project Configuration and Change Control
Manage Change Requests · **Create Project Configuration Management (CM) Environments**
Change and Deliver Configuration Items
Monitor and Report Configuration Status · **Manage Baselines and Releases**

DEPLOYMENT

Plan Deployment
- Develop Deployment Plan
- Define Bill of Materials

Potential Work Products
- DEPLOYMENT PLAN
- BILL OF MATERIALS

Develop Supporting Material
- Develop Training Material
- Develop Support Material
- Create Product Artwork
- Develop Installation Work Products

Potential Work Products
- TRAINING MATERIAL
- USER SUPPORT MATERIAL
- CREATE PRODUCT ARTWORK
- INSTALLATION ARTIFACTS

Manage Acceptance Test
- Manage Acceptance Test
- Support Development
- Execute Test Suite
- Determine Test Results

Potential Work Products
- CHANGE REQUEST
- TEST ENVIRONMENT CONFIGURATION
- DEVELOPMENT INFRASTRUCTURE
- TEST LOG
- TEST RESULTS
- TEST EVALUATION SUMMARY

Produce Deployment Unit
- Write Release Notes
- Create Deployment Unit

Potential Work Products
- RELEASE NOTES
- DEPLOYMENT UNIT

Beta Test Product
- Manage Beta Test

Potential Work Products
- CHANGE REQUEST

Manage Acceptance Test for Custom Install
- Manage Acceptance Test
- Support Development
- Execute Test Suite
- Determine Test Results

Potential Work Products
- CHANGE REQUEST
- TEST ENVIRONMENT CONFIGURATION
- DEVELOPMENT INFRASTRUCTURE
- TEST LOG
- TEST RESULTS
- TEST EVALUATION SUMMARY

Package Product
- Verify Manufactured Product
- Release to Manufacturing

Potential Work Products
- PRODUCT

Provide Access to Download Site
- Provide Access to Download Site

Potential Work Products
- DEPLOYMENT UNIT

Plan Deployment
Develop Support Material · **Manage Acceptance Test**
[Approved] · *[Change Requests]*
Produce Deployment Unit
[Beta Release] · *[Customer Release]* · *[Custom Install]* · *[Downloadable Software]* · *[Shrinkwrap Product]*
Manage Acceptance Test for Custom Install · **Package Product** · **Provide Access to Download Site** · **Beta Test Product**

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