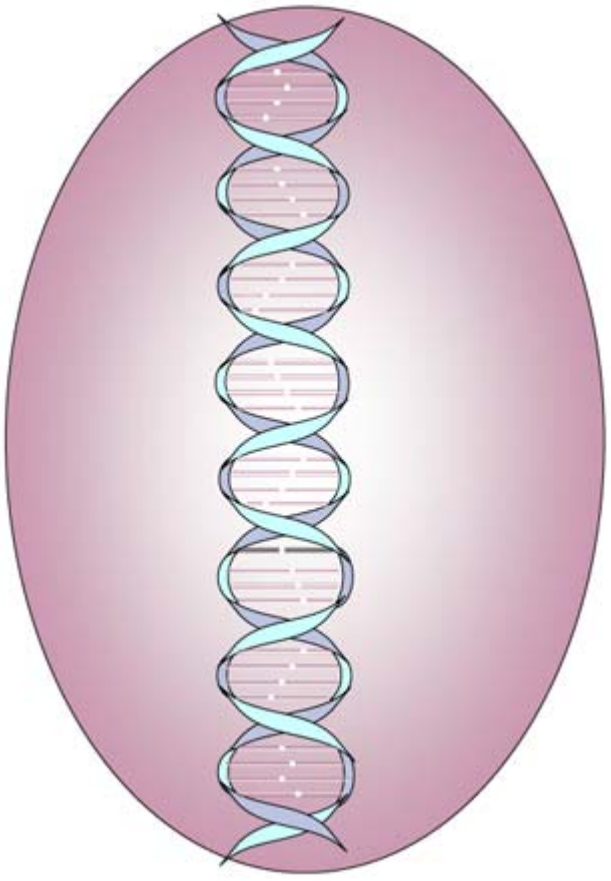
PRM-IT V3 Reference Library - A4 Realization

PRM-IT Version 3.0

April, 2008

PRM - IT
IBM Process Reference Model for IT

Sequencing the DNA of IT Management



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Preface

The IBM Process Reference Model for Information Technology (PRM-IT) is a generic representation of the processes involved across the complete IT management domain. It contains a foundational examination of the IT process topic. It is for this reason the graphical image of the DNA double helix over the basic building block of a cell is used.

About this book

This is the sixth book in the PRM-IT Reference Library. As a reference manual, this book provides the complete description of all aspects of the process category..

Each reference manual begins with a summarization of the category, and then further considers each process in turn and the activities within each process.

Details are provided for:

- The definition of each activity
- Each control, input and output
- The sources and destinations of each control, input, and output (thereby showing the model linkages)

The full IDEF0 diagram for each category and each process is included.

The final page is a breakdown of the PRM-IT node tree for this category.

The PRM-IT Reference Library books

The PRM-IT Reference Library consists of thirteen books. The first book is the *General Information Manual*, it is a brief examination of the subject of IT processes, and provides a tour of the model.

The nine reference manuals are A0 through A8. The *A0 Manage IT* book examines the context of the processes for IT, exploring the key external agents — stakeholders and their interactions with IT. The reference manuals A1 through A8 provide the complete description of all spects of the process categories.

The reference manual *IDEFØ Diagrams* presents the full model in IDEFØ notation, and *IDEFØ Node Tree* shows the ordered list of process categories, processes, and activities.

The final book, the *Glossary*, contains the definition of every process interface object for the model and provides references to where the objects are used.

PRM-IT Reference Library	
■ General Information	■ A6 Operations
■ A0 Manage IT	■ A7 Resilience
■ A1 Governance and Management System	■ A8 Administration
■ A2 Customer Relationships	■ IDEFØ Node Tree
■ A3 Direction	■ IDEFØ Diagrams
■ A4 Realization	■ PRM-IT Glossary
■ A5 Transition	

Intended audience

An understanding of the full range of the processes relevant to IT in any business is of value to those within the IT function responsible for the specification, creation, and delivery of IT services (whether at the CIO or IT executive level), and who consider the direction and overall management of IT. Or, individuals who work within any of its competencies, needing to interface with other parts of the IT value chain or value net.

Equally, the stakeholders in the business of this IT capability will benefit from greater insight into how IT serves them. This insight will enable them to better influence IT decisions and activities, to their ultimate benefit.

Next steps

PRM-IT is a powerful management tool for purposes of investigating and identifying areas for improvement. PRM-IT also provides a proven starting-point for the design and implementation of new and upgraded IT management capabilities.

IBM IT consultants, architects, and specialists in global services who, working from this common base, are equipped with a full range of methods, techniques, and tools to assist its customers achieve their purposes.

[A4] Realization

Description

Purpose

The Realization process category exists to create solutions that will satisfy the requirements of IT customers and stakeholders, including both the development of new solutions and the enhancements or maintenance of existing ones. Development includes options to build or buy the components of that solution, and the integration of them for functional capability.

This process category encompasses the engineering and manufacturing of information technology products and services and includes the making or buying of solutions, systems, integration, and extensions to existing solutions. Maintenance and end-of-life shutdown activities (requiring solution adjustment) are also addressed in this category.

The basic unit of work is assumed to be a project. However, these projects can vary from quite small and of short duration to very large and long-term. The processes act together, often iteratively and in parallel, in a project-driven context to create information technology solutions for specific sets of stakeholder requirements.

Many engineering disciplines are relevant to the achievement of successful outcomes for these projects. Examples of such disciplines include:

- Performance engineering
- Test engineering
- Requirements engineering

Rationale

The Realization process category addresses a broad range of systems and service synthesis activities, including integration of hardware components, software and network components, applications development, and other modifications to the computing infrastructure. This process category accommodates all levels of the solution's configuration (individual parts, subassemblies, distributed components, among others) and component types (hardware, software, printed documentation, skills, architectures and designs, training).

Value

- Lays the foundation for the business to receive value from its investment in IT by creating solutions that meet customer requirements
- Ensures that standards and principles (such as buy or build guidelines) are followed
- Provides fully integrated solutions with predictable performance characteristics
- Obtains full stakeholder agreement that solutions are ready for deployment
- Produces high quality work products

Controls

- Architecture Baselines and Roadmaps (From: A3 A33 A334)
- IT Plan (From: A3 A36 A365)
- IT Portfolio (From: A3 A36 A365)
- IT Strategy (From: A3 A31 A315)
- SLAs, OLAs, UCs (From: A2 A24 A243)
- IT Management Ecosystem (From: A1)

- Business Strategy
- Security Policy (From: A7 A72 A722)

Inputs

- Project Charter (From: A3 A324 A354 A36 A365)
- Business and IT Models (From: A3 A33 A333)
- Project Plan (From: A3 A37 A374)
- Stakeholder Requirements (From: A2 A21 A213)
- Service Level Package (From: A2 A25 A255)
- Compliance Plans and Controls (From: A7 A71 A714)
- Solution_ Deployed (From: A5 A53 A536)
- Configuration Information (From: A5 A54 A544)
- Asset Deployment Items and Data (From: A5 A55)
- CIs (From: A5 A54 A543)
- Solution Realization Results and Issues (From: A4)

Outputs

- Change Request (To: A5 A51 A512)
- Solution_ Accepted (To: A5 A52 A523 A53 A533)
- CI Requisition (To: A5 A54 A543)
- CI Data Update Package (To: A5 A54 A542 A543)
- Solution Design (To: A3 A33 A336 A34 A343 A344 A45 A454 A5 A51 A514 A52 A523 A54 A542 A6 A61 A611 A62 A621 A63 A632 A64 A641 A65 A651 A66 A661 A662 A67 A671 A7 A72 A723 A73 A734 A736 A75 A752 A76 A764 A8 A84 A844)
- Solution Plans and Commitments (To: A2 A25 A255 A256 A26 A265 A3 A33 A336 A35 A353 A354 A37 A374 A375 A42 A422 A43 A432 A44 A442 A45 A452 A454 A5 A52 A522 A6 A62 A621 A7 A73 A732 A74 A742)
- Solution Realization Results and Issues (To: A354 A4 A41 A412 A413 A414 A415 A42 A422 A423 A424 A425 A43 A432 A433 A434 A435 A436 A437 A44 A442 A443 A444 A445 A45 A452 A454 A455)

Processes

This process category is composed of these processes:

- A41 Solution Requirements
- A42 Solution Analysis and Design
- A43 Solution Development and Integration
- A44 Solution Test
- A45 Solution Acceptance

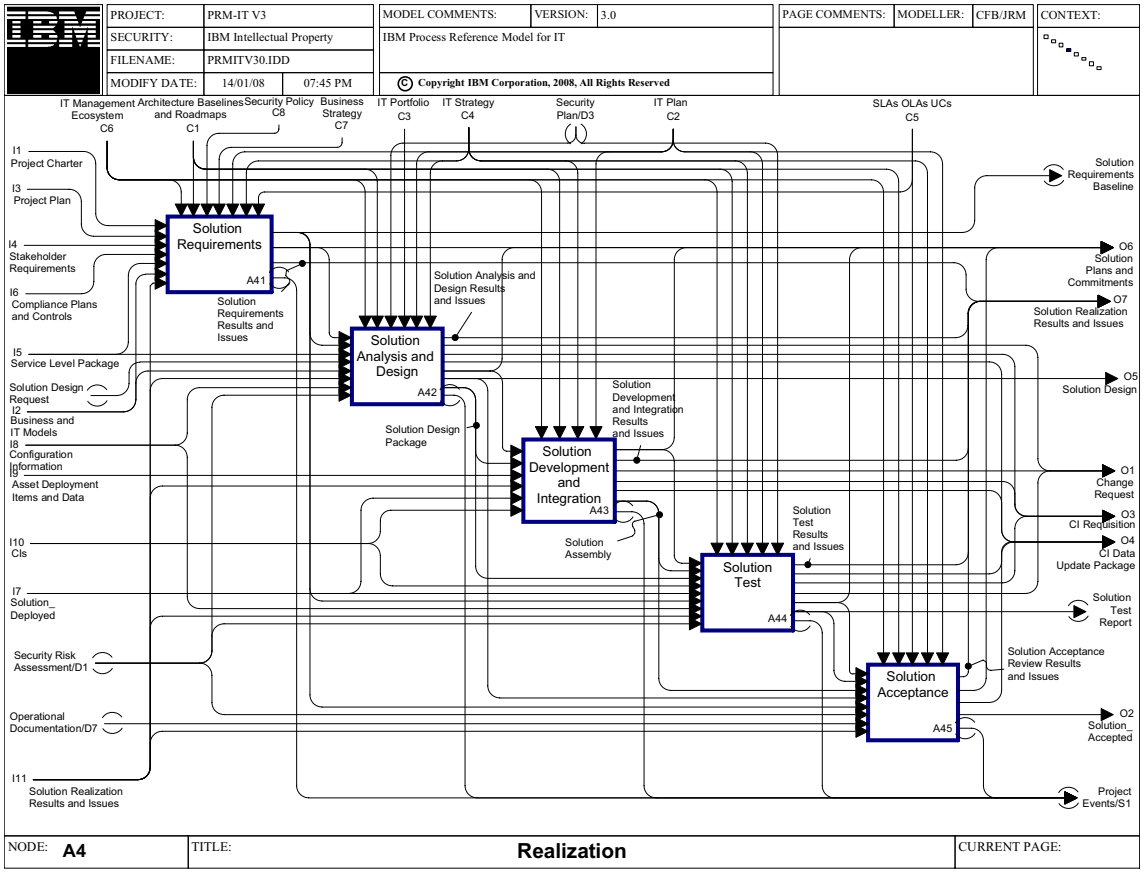

Figure 1. A4 Realization Diagram

[A41] Solution Requirements

Purpose

The purpose of the Solution Requirements process is to provide “a systematic approach to finding, documenting, organizing, and tracking a system's changing requirements,”[1] so that an agreed understanding is reached as to what the solution should do.

Definition of solution requirement: “A condition or capability to which the system must conform.”[2]

Outcomes

As a result of successful implementation of this process:

- Stakeholder agreement on high-level requirements is achieved before the solution is designed, developed, and deployed
- Detailed requirements are evolved iteratively with solution design, development, and testing
- Trade-offs between requirements and solution are managed to maximize stakeholder value
- An accurate understanding of solution requirements exists, enhancing the probability that the correct solution will be created
- Customer, stakeholder, and user requirements are clearly defined and documented
- Traceability is maintained between requirements and solution specifications derived from them
- Rework due to incorrect or misunderstood requirements is minimized

Scope

This process focuses on translating or elaborating agreed customer (business) requirements and IT stakeholder-generated requirements or constraints into solution-specific terms, within the context of a defined solution project or program.

It includes establishing operational requirements engineering approaches. Examples often cited include IEEE 830 Recommended practice for software requirements specifications, IEEE Software Engineering Body of Knowledge, CMMI and the ITIL V-model (ITIL Service Transition). [3]

Includes

- Business context modeling
- Collecting, understanding, validating, formalizing and documenting solution requirements
- Clarifying, analyzing, and refining the requirements from the Stakeholder Requirements Management process
- Ongoing management of requirements for this solution
- The complete Solution Requirements taxonomy, including:
  - Functional requirements
  - Non-functional requirements, under headings such as Service Management and Compliance

1. IBM Rational Unified Process
2. IBM Rational Unified Process
3. See *ITIL Service Design,* p167

  - Deployment requirements (packaging, education, and training)
  - Usability requirements
  - Change cases and scalability requirements
  - Testing requirements
  - Stakeholder acceptance criteria
  - Solution life cycle requirements, including solution shutdown and retirement
- Risk and feasibility analysis of requirements
- Requirements baseline generation and traceability audits
- Service management considerations
- Business modeling discipline and requirements management discipline

Excludes

- Translation from requirements to design specification (Solution Analysis and Design)
- The life cycle management of customer wants and needs through agreed, prioritized business requirements (Stakeholder Requirements Management)
- Configuration Management

Controls

- IT Management Ecosystem (From: A1)

  To paraphrase a dictionary definition: the complex of management system elements, their physical implementation, and all their interrelationships in the unit of space that is the domain of the IT function. Its fundamental purpose is to provide an environment that is supportive of the carrying out of all of the IT activities defined elsewhere in this model.
- Architecture Baselines and Roadmaps (From: A3 A33 A334)

  Provides an agreed, published statement of the required architecture at a moment in time. Includes statements to assist in selection and evaluation of appropriate implementations of specified architecture building blocks.
- Security Policy (From: A7 A72 A722)

  The statement of the types and levels of security over information technology resources and capabilities that must be established and operated in order for those items to be considered *secure*. It provides management direction into the allowable behaviors of the actors working with the resources and exercising the capabilities. It defines the scope of management and specifies the requirements for the security controls.
- Business Strategy

  The business strategy stated in terms of strategic intent, roadmap, drivers, objectives and policies.
- IT Plan (From: A3 A36 A365)

  The set of approved projects and associated schedule, operating plan, service level management commitments, and resource allocation commitments and adjustments for a defined fiscal or planning cycle.
- IT Strategy (From: A3 A31 A315)

  A consolidated statement of IT initiatives. Includes a summary of changes to IT capabilities and a summary of each strategic IT initiative. Also includes a statement of planned and required changes to the IT Portfolio and IT Plan. The IT Sourcing Strategy would be included.
- SLAs, OLAs, UCs (From: A2 A24 A243)

  The agreements that represent the interlinked set of commitments for the service utility and warranty that is to be provided to one or more customers. The agreement between the

customer and the organizational unit that directly provides the service is known as a service level agreement (SLA) and is visible to the customer. The agreements that represent the commitments of the collective set of internal organizational units and external entities to provide identified sub-components of the overall service are known as operational level agreements (OLAs). OLAs are not usually visible to the customer. Contractual statements of the commitments by external entities are known as underpinning contracts (UCs).

ITIL definition of these terms:

- SLA: “An Agreement between an IT Service Provider and a Customer. The SLA describes the IT Service, documents Service Level Targets, and specifies the responsibilities of the IT Service Provider and the Customer. A single SLA may cover multiple IT Services or multiple Customers.”[4]
- OLA: “An Agreement between an IT Service Provider and another part of the same Organisation. An OLA supports the IT Service Provider's delivery of IT Services to Customers. The OLA defines the goods or Services to be provided and the responsibilities of both parties.”[5]
- UC: “A Contract between an IT Service Provider and a Third Party. The Third Party provides goods or Services that support delivery of an IT Service to a Customer. The Underpinning Contract defines targets and responsibilities that are required to meet agreed Service Level Targets in an SLA.”[6]

These agreements can be in a draft or finalized status.

Inputs

- Project Charter (From: A3 A324 A354 A36 A365)

  A document issued by or created on behalf of the sponsor to describe the project's objectives. It provides the project manager with the authority to apply organizational resources to project activities.

- Project Plan (From: A3 A37 A374)

  The set of the work plans, plus other plans including management plan, human resource plan, technical environment, project quality, communications management, and others.

- Stakeholder Requirements (From: A2 A21 A213)

  The qualified needs for IT services that are to be progressed through the Portfolio process for decision making.

  These needs might be in a form suitable for direct translation into solution requirements and should include stakeholders' acceptance criteria.

- Compliance Plans and Controls (From: A7 A71 A714)

  The authoritative and comprehensive statement of:

  - The items for which compliance is required
  - The means (policies, data specifications, procedures, techniques, tools) to achieve compliance
  - The definition of required compliance metrics and reports by which conformance will be able to be demonstrated for required scrutiny

  It will be the major vehicle for communications and guidance on compliance efforts.

- Service Level Package (From: A2 A25 A255)

  Details of the expected implications to the service utility and warranty which will result from agreement with the relevant business units on the demand management approaches under

4. ITIL V3 Glossary
5. ITIL V3 Glossary
6. ITIL V3 Glossary

which the service will be provided. ITIL definition: “A defined level of Utility and Warranty for a particular Service Package. Each SLP is designed to meet the needs of a particular Pattern of Business Activity.” [7]

- Business and IT Models (From: A3 A33 A333)

  Representations of relevant aspects of the business' activities, in model formats, and with or without the inclusion of related IT factors.

- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

Outputs

- Solution Requirements Baseline (To: A42 A422 A423 A44 A442 A444 A45 A453 A712)

  Established according to prescribed organizational standards, it is a baseline of all the Solution Requirements work products currently under Configuration Management.

- Solution Plans and Commitments (To: A2 A25 A255 A256 A26 A265 A3 A33 A336 A35 A353 A354 A37 A374 A375 A42 A422 A43 A432 A44 A442 A45 A452 A454 A5 A52 A522 A6 A62 A621 A7 A73 A732 A74 A742)

  The collective overall information on both the development plan for the solution and the content of the solution as it progresses from concept to reality.

  - Plans: Sets of committed solution phases, activities, tasks and milestones together with timeframe.
  - Commitments: Sets of requirements, designs and other deliverables, such as test cases.

- Solution Requirements Results and Issues (To: A412 A413 A414)

  The collection of summary level history and status of Solution Requirements activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

- Project Events (To: A375)

  The notification of events that, in the project manager's opinion, are important to support the management of the project.

Activities

This process is composed of these activities:

- A411 Establish Solution Requirements Framework
- A412 Refine and Verify Business Context
- A413 Document and Analyze Solution Requirements
- A414 Validate Solution Requirements with Stakeholders
- A415 Manage Solution Requirements Baseline
- A416 Evaluate Solution Requirements Performance

7. ITIL V3 Glossary

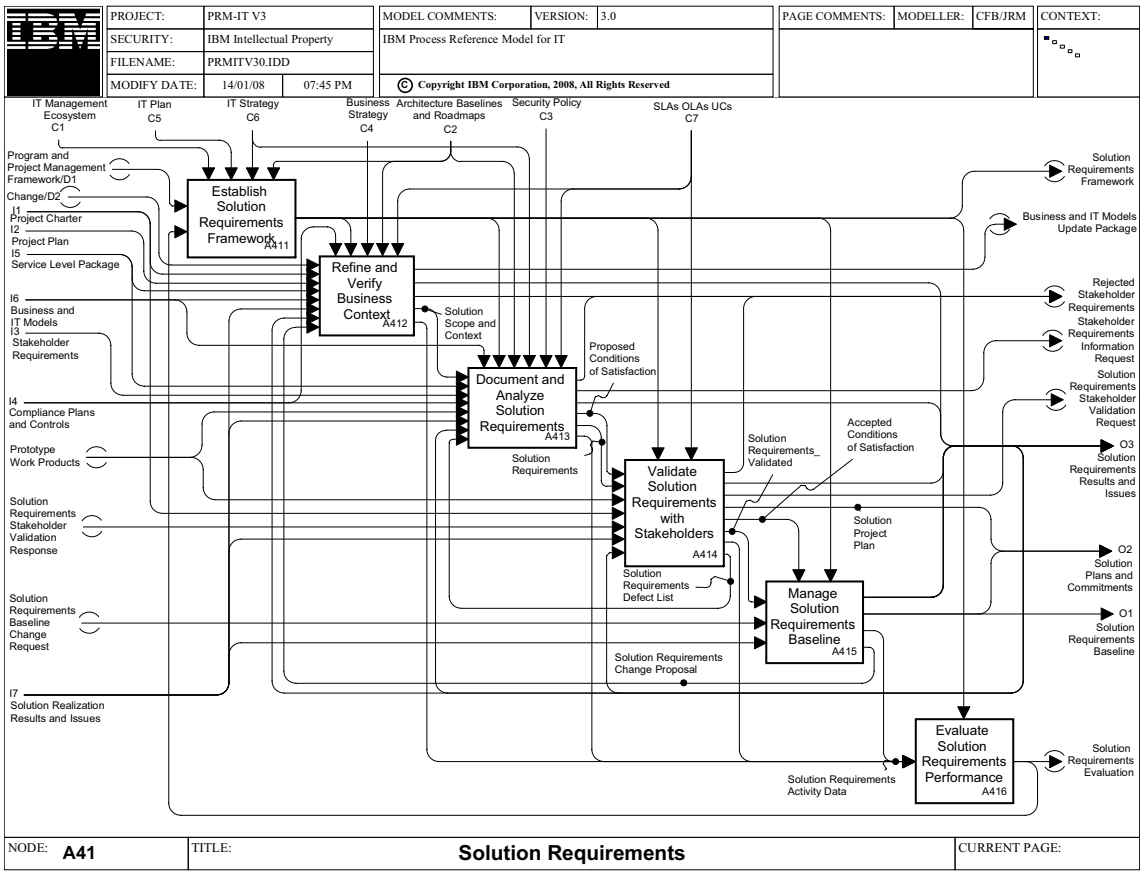

Figure 2. A41 Solution Requirements

[A411] Establish Solution Requirements Framework

Description

The purpose of this activity is to establish the project specific Solution Requirements Framework by tailoring, in a prescribed way, the organization-wide framework (organization-wide set of procedures, standards and templates related to Solution Requirements management and engineering), and to define specific performance goals, measurements and targets.

Controls

- IT Management Ecosystem (From: A1)

  To paraphrase a dictionary definition: the complex of management system elements, their physical implementation, and all their interrelationships in the unit of space that is the domain of the IT function. Its fundamental purpose is to provide an environment that is supportive of the carrying out of all of the IT activities defined elsewhere in this model.
- IT Plan (From: A3 A36 A365)

  The set of approved projects and associated schedule, operating plan, service level management commitments, and resource allocation commitments and adjustments for a defined fiscal or planning cycle.
- IT Strategy (From: A3 A31 A315)

  A consolidated statement of IT initiatives. Includes a summary of changes to IT capabilities and a summary of each strategic IT initiative. Also includes a statement of planned and required changes to the IT Portfolio and IT Plan. The IT Sourcing Strategy would be included.
- Architecture Baselines and Roadmaps (From: A3 A33 A334)

  Provides an agreed, published statement of the required architecture at a moment in time. Includes statements to assist in selection and evaluation of appropriate implementations of specified architecture building blocks.

Inputs

- Program and Project Management Framework (From: A371)

  The logical structure describing the strategic (vision, mission, value proposition), organizational (organizational mechanisms, roles, accountabilities), process (activities, work flows, inputs, outputs), and technology (software, hardware) practices for managing projects and programs.
- Solution Requirements Evaluation (From: A416)

  The collection of summary level history and status of Solution Requirements Framework. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

Outputs

- Solution Requirements Framework (To: A412 A413 A414 A415 A416)

  Common, organization-wide Solution Requirements set of standards, procedures, and templates.

[A412] Refine and Verify Business Context

Description

The purpose of this activity is to refine the overall business context into the project-related solution context and understanding, and to verify (verification ensures that you created it right) this refined context with all solution stakeholders.

Controls

- Compliance Plans and Controls (From: A7 A71 A714)

  The authoritative and comprehensive statement of:

  - The items for which compliance is required
  - The means (policies, data specifications, procedures, techniques, tools) to achieve compliance
  - The definition of required compliance metrics and reports by which conformance will be able to be demonstrated for required scrutiny

  It will be the major vehicle for communications and guidance on compliance efforts.

- Solution Requirements Framework (From: A411)

  Common, organization-wide Solution Requirements set of standards, procedures, and templates.

- Business Strategy

  The business strategy stated in terms of strategic intent, roadmap, drivers, objectives and policies.

- Architecture Baselines and Roadmaps (From: A3 A33 A334)

  Provides an agreed, published statement of the required architecture at a moment in time. Includes statements to assist in selection and evaluation of appropriate implementations of specified architecture building blocks.

- SLAs, OLAs, UCs (From: A2 A24 A243)

  The agreements that represent the interlinked set of commitments for the service utility and warranty that is to be provided to one or more customers. The agreement between the customer and the organizational unit that directly provides the service is known as a service level agreement (SLA) and is visible to the customer. The agreements that represent the commitments of the collective set of internal organizational units and external entities to provide identified sub-components of the overall service are known as operational level agreements (OLAs). OLAs are not usually visible to the customer. Contractual statements of the commitments by external entities are known as underpinning contracts (UCs).

  ITIL definition of these terms:

  - SLA: “An Agreement between an IT Service Provider and a Customer. The SLA describes the IT Service, documents Service Level Targets, and specifies the responsibilities of the IT Service Provider and the Customer. A single SLA may cover multiple IT Services or multiple Customers.”[8]

8. ITIL V3 Glossary

- OLA: “An Agreement between an IT Service Provider and another part of the same Organisation. An OLA supports the IT Service Provider's delivery of IT Services to Customers. The OLA defines the goods or Services to be provided and the responsibilities of both parties.”[9]
- UC: “A Contract between an IT Service Provider and a Third Party. The Third Party provides goods or Services that support delivery of an IT Service to a Customer. The Underpinning Contract defines targets and responsibilities that are required to meet agreed Service Level Targets in an SLA.”[10]

These agreements can be in a draft or finalized status.

Inputs

- Change (From: A51 A515)

  A change, triggered by a change request, which has successfully completed assessment and has subsequently been authorized for implementation. The authorization includes details of schedule options and any implementation conditions, such as the decision to include the change within the scope of a planned release.

- Project Charter (From: A3 A324 A354 A36 A365)

  A document issued by or created on behalf of the sponsor to describe the project's objectives. It provides the project manager with the authority to apply organizational resources to project activities.

- Project Plan (From: A3 A37 A374)

  The set of the work plans, plus other plans including management plan, human resource plan, technical environment, project quality, communications management, and others.

- Service Level Package (From: A2 A25 A255)

  Details of the expected implications to the service utility and warranty which will result from agreement with the relevant business units on the demand management approaches under which the service will be provided. ITIL definition: “A defined level of Utility and Warranty for a particular Service Package. Each SLP is designed to meet the needs of a particular Pattern of Business Activity.” [11]

- Business and IT Models (From: A3 A33 A333)

  Representations of relevant aspects of the business' activities, in model formats, and with or without the inclusion of related IT factors.

- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

- Solution Requirements Results and Issues (From: A41 A412 A413 A414 A415)

  The collection of summary level history and status of Solution Requirements activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

- Solution Requirements Change Proposal (From: A415)

  Proposed changes to the business context resulting from changes in solution requirements baseline.

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10. ITIL V3 Glossary
11. ITIL V3 Glossary

Outputs

- Business and IT Models Update Package (To: A334)

  Additional information about business and IT models obtained as a by-product of detailed investigation under the Solutions Requirements process.
- Solution Requirements Results and Issues (To: A412 A413 A414)

  The collection of summary level history and status of Solution Requirements activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.
- Rejected Stakeholder Requirements

  The part of solution requirements formally rejected by the solution provider, with or without prior approval of the stakeholders.
- Solution Scope and Context (To: A413)

  Solution framing and surroundings defined by the business and system environments.
- Solution Requirements Activity Data (To: A416)

  The collection of detailed and summary level history and status of Solution Requirements activities. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to the Solution Requirement process.

[A413] Document and Analyze Solution Requirements

Description

The purpose of this activity is to create the initial set of Solution Requirements by identifying sources and stakeholders, soliciting input from them, and capturing it for the purpose of classifying and categorizing the obtained information into requirements categories.

Controls

- Business and IT Models (From: A3 A33 A333)

  Representations of relevant aspects of the business' activities, in model formats, and with or without the inclusion of related IT factors.
- Solution Requirements Framework (From: A411)

  Common, organization-wide Solution Requirements set of standards, procedures, and templates.
- Architecture Baselines and Roadmaps (From: A3 A33 A334)

  Provides an agreed, published statement of the required architecture at a moment in time. Includes statements to assist in selection and evaluation of appropriate implementations of specified architecture building blocks.
- IT Strategy (From: A3 A31 A315)

  A consolidated statement of IT initiatives. Includes a summary of changes to IT capabilities and a summary of each strategic IT initiative. Also includes a statement of planned and required changes to the IT Portfolio and IT Plan. The IT Sourcing Strategy would be included.
- Security Policy (From: A7 A72 A722)

  The statement of the types and levels of security over information technology resources and capabilities that must be established and operated in order for those items to be considered *secure*. It provides management direction into the allowable behaviors of the actors working with the resources and exercising the capabilities. It defines the scope of management and specifies the requirements for the security controls.

- SLAs, OLAs, UCs (From: A2 A24 A243)

  The agreements that represent the interlinked set of commitments for the service utility and warranty that is to be provided to one or more customers. The agreement between the customer and the organizational unit that directly provides the service is known as a service level agreement (SLA) and is visible to the customer. The agreements that represent the commitments of the collective set of internal organizational units and external entities to provide identified sub-components of the overall service are known as operational level agreements (OLAs). OLAs are not usually visible to the customer. Contractual statements of the commitments by external entities are known as underpinning contracts (UCs).

  ITIL definition of these terms:

  - SLA: “An Agreement between an IT Service Provider and a Customer. The SLA describes the IT Service, documents Service Level Targets, and specifies the responsibilities of the IT Service Provider and the Customer. A single SLA may cover multiple IT Services or multiple Customers.”[12]
  - OLA: “An Agreement between an IT Service Provider and another part of the same Organisation. An OLA supports the IT Service Provider's delivery of IT Services to Customers. The OLA defines the goods or Services to be provided and the responsibilities of both parties.”[13]
  - UC: “A Contract between an IT Service Provider and a Third Party. The Third Party provides goods or Services that support delivery of an IT Service to a Customer. The Underpinning Contract defines targets and responsibilities that are required to meet agreed Service Level Targets in an SLA.”[14]

  These agreements can be in a draft or finalized status.

Inputs

- Solution Scope and Context (From: A412)

  Solution framing and surroundings defined by the business and system environments.

- Service Level Package (From: A2 A25 A255)

  Details of the expected implications to the service utility and warranty which will result from agreement with the relevant business units on the demand management approaches under which the service will be provided. ITIL definition: “A defined level of Utility and Warranty for a particular Service Package. Each SLP is designed to meet the needs of a particular Pattern of Business Activity.”[15]

- Stakeholder Requirements (From: A2 A21 A213)

  The qualified needs for IT services that are to be progressed through the Portfolio process for decision making.

  These needs might be in a form suitable for direct translation into solution requirements and should include stakeholders' acceptance criteria.

- Compliance Plans and Controls (From: A7 A71 A714)

  The authoritative and comprehensive statement of:

  - The items for which compliance is required
  - The means (policies, data specifications, procedures, techniques, tools) to achieve compliance

12. ITIL V3 Glossary
13. ITIL V3 Glossary
14. ITIL V3 Glossary
15. ITIL V3 Glossary

- The definition of required compliance metrics and reports by which conformance will be able to be demonstrated for required scrutiny

It will be the major vehicle for communications and guidance on compliance efforts.

- Prototype Work Products

  Reduced scale or function deliverables used to explore feasibility or suitability of some aspect of the solution.

- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

- Solution Requirements Results and Issues (From: A41 A412 A413 A414 A415)

  The collection of summary level history and status of Solution Requirements activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

- Solution Requirements Defect List (From: A414)

  Formal list of discrepancies between documented and formalized solution requirements and solution intentions as perceived by the key stakeholders (customer).

Outputs

- Rejected Stakeholder Requirements

  The part of solution requirements formally rejected by the solution provider, with or without prior approval of the stakeholders.

- Stakeholder Requirements Information Request

  Solicitation of requirements information from the stakeholders, usually for clarification or expansion of stakeholder requirements already registered.

- Solution Requirements Results and Issues (To: A412 A413 A414)

  The collection of summary level history and status of Solution Requirements activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

- Proposed Conditions of Satisfaction (To: A414)

  Documented Conditions of Satisfaction as understood and formally proposed by the solution provider.

- Solution Requirements (To: A414)

  Documented, analyzed and expanded (formalized) solution requirements.

- Solution Requirements Activity Data (To: A416)

  The collection of detailed and summary level history and status of Solution Requirements activities. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to the Solution Requirement process.

[A414] Validate Solution Requirements with Stakeholders

Description

The purpose of this activity is to validate (validation ensures that you have created the right thing) the Solution Requirements with all solution stakeholders.

The requirements should be complete, comprehensive, testable, and include the conditions of satisfaction while noting any observed defects.

This activity also produces an early iteration of the solution project plan.

Controls

- Solution Requirements Framework (From: A411)

  Common, organization-wide Solution Requirements set of standards, procedures, and templates.

- SLAs, OLAs, UCs (From: A2 A24 A243)

  The agreements that represent the interlinked set of commitments for the service utility and warranty that is to be provided to one or more customers. The agreement between the customer and the organizational unit that directly provides the service is known as a service level agreement (SLA) and is visible to the customer. The agreements that represent the commitments of the collective set of internal organizational units and external entities to provide identified sub-components of the overall service are known as operational level agreements (OLAs). OLAs are not usually visible to the customer. Contractual statements of the commitments by external entities are known as underpinning contracts (UCs).

  ITIL definition of these terms:

  - SLA: “An Agreement between an IT Service Provider and a Customer. The SLA describes the IT Service, documents Service Level Targets, and specifies the responsibilities of the IT Service Provider and the Customer. A single SLA may cover multiple IT Services or multiple Customers.”[16]
  - OLA: “An Agreement between an IT Service Provider and another part of the same Organisation. An OLA supports the IT Service Provider's delivery of IT Services to Customers. The OLA defines the goods or Services to be provided and the responsibilities of both parties.”[17]
  - UC: “A Contract between an IT Service Provider and a Third Party. The Third Party provides goods or Services that support delivery of an IT Service to a Customer. The Underpinning Contract defines targets and responsibilities that are required to meet agreed Service Level Targets in an SLA.”[18]

  These agreements can be in a draft or finalized status.

Inputs

- Proposed Conditions of Satisfaction (From: A413)

  Documented Conditions of Satisfaction as understood and formally proposed by the solution provider.

- Solution Requirements (From: A413)

  Documented, analyzed and expanded (formalized) solution requirements.

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17. ITIL V3 Glossary
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- Prototype Work Products

  Reduced scale or function deliverables used to explore feasibility or suitability of some aspect of the solution.

- Project Charter (From: A3 A324 A354 A36 A365)

  A document issued by or created on behalf of the sponsor to describe the project's objectives. It provides the project manager with the authority to apply organizational resources to project activities.

- Solution Requirements Stakeholder Validation Response

  Solution validation responses as communicated by the stakeholders. Covers both the positive and negative cases, with the latter being considered a *defect*.

- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

- Solution Requirements Results and Issues (From: A41 A412 A413 A414 A415)

  The collection of summary level history and status of Solution Requirements activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

Outputs

- Rejected Stakeholder Requirements

  The part of solution requirements formally rejected by the solution provider, with or without prior approval of the stakeholders.

- Solution Requirements Results and Issues (To: A412 A413 A414)

  The collection of summary level history and status of Solution Requirements activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

- Solution Requirements Stakeholder Validation Request

  A request to stakeholders for review, confirmation and formal sign-off of solution requirements.

- Solution Project Plan

  The overall project plan augmented by solution-specific content as a result of completion of requirements validation.

- Accepted Conditions of Satisfaction (To: A415)

  Established earlier Conditions of Satisfaction formally accepted and signed off by the key stakeholders (especially the customer).

- Solution Requirements_ Validated (To: A415)

  Solution scope, context and entire taxonomy of requirements formally validated and approved (signed off) by the key stakeholders.

- Solution Requirements Activity Data (To: A416)

  The collection of detailed and summary level history and status of Solution Requirements activities. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to the Solution Requirement process.

- Solution Requirements Defect List (To: A413)

  Formal list of discrepancies between documented and formalized solution requirements and solution intentions as perceived by the key stakeholders (customer).

[A415] Manage Solution Requirements Baseline

Description

The purpose of this activity is to assure that the Solution Requirements come under Configuration Management, and are controlled as a collection (a baseline) for all status changes throughout the duration of the project. Techniques used should be in agreement with the overall organization procedures and standards for general Configuration Management.

Controls

- Accepted Conditions of Satisfaction (From: A414)

  Established earlier Conditions of Satisfaction formally accepted and signed off by the key stakeholders (especially the customer).
- Solution Requirements Framework (From: A411)

  Common, organization-wide Solution Requirements set of standards, procedures, and templates.

Inputs

- Solution Requirements_ Validated (From: A414)

  Solution scope, context and entire taxonomy of requirements formally validated and approved (signed off) by the key stakeholders.
- Solution Requirements Baseline Change Request

  Established according to prescribed organizational standards, it is a baseline of all the Solution Requirements work products currently under Configuration Management.
- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

Outputs

- Solution Requirements Results and Issues (To: A412 A413 A414)

  The collection of summary level history and status of Solution Requirements activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.
- Solution Requirements Baseline (To: A42 A422 A423 A44 A442 A444 A45 A453 A712)

  Established according to prescribed organizational standards, it is a baseline of all the Solution Requirements work products currently under Configuration Management.
- Solution Requirements Activity Data (To: A416)

  The collection of detailed and summary level history and status of Solution Requirements activities. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to the Solution Requirement process.
- Solution Requirements Change Proposal (To: A412)

  Proposed changes to the business context resulting from changes in solution requirements baseline.

[A416] Evaluate Solution Requirements Performance

Description

The purpose of this activity is to evaluate performance of the project-specific Solution Requirements Framework against early defined performance criteria and measurements, to provide input into the organization-wide framework (for overall evaluation purposes), and to identify potential improvements to the Solution Requirements process.

Controls

- Solution Requirements Framework (From: A411)

  Common, organization-wide Solution Requirements set of standards, procedures, and templates.

Inputs

- Solution Requirements Activity Data (From: A412 A413 A414 A415)

  The collection of detailed and summary level history and status of Solution Requirements activities. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to the Solution Requirement process.

Outputs

- Solution Requirements Evaluation (To: A411)

  The collection of summary level history and status of Solution Requirements Framework. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

[A42] Solution Analysis and Design

Purpose

The Solution Analysis and Design process exists to create a fully documented design from the agreed solution requirements, describing the behavior of solution elements, the acceptance criteria, and agreed measurements.

Outcomes

As a result of successful implementation of this process:

- Solution designs optimize the trade-offs between requirements and constraints
- Stakeholder agreement on high-level solution design is achieved before major investments in solution development is done
- Reuse of existing solution designs and components minimizes time-to-implementation and improves solution quality
- Flexible and effective designs reduce the total cost of ownership over the complete solution life cycle

Scope

Design of all aspects of the solution necessary to meet stakeholder requirements

Includes

- Creating and managing design baselines (specifications baseline, component architecture baseline) throughout the full range of the solution life cycle including solution shutdown and retirement
- Ensuring solution design compliance with the business and IT architectures
- Identification and consideration of constraints, such as budget, and making cases for constraint relief or seeking guidance when a sound solution design is not achievable against those constraints
- Creating different solution architectural views (component model, operational model, deployment model, data model)
- Evaluating trade-offs (such as financial cost alternatives) and making design and sourcing approach decisions (make versus buy versus reuse)
- Making architecture exception requests
- Modeling, simulation, and prototyping
- Design of all required solution elements (application, infrastructure, process, organization, data, training, deployment, technology, testing)
- Systems operation and management design, such as significant event definition, monitoring data definitionHigh and low level design
- Ensuring cross-functional participation in design acceptance from service management disciplines

Excludes

- Enterprise architecture (Architecture Management)

- Requirements management (Stakeholder Requirements Management, Solution Requirements)
- Procurement (Supplier Management)
- Solution Development and Integration

Controls

- IT Management Ecosystem (From: A1)

  To paraphrase a dictionary definition: the complex of management system elements, their physical implementation, and all their interrelationships in the unit of space that is the domain of the IT function. Its fundamental purpose is to provide an environment that is supportive of the carrying out of all of the IT activities defined elsewhere in this model.

- Architecture Baselines and Roadmaps (From: A3 A33 A334)

  Provides an agreed, published statement of the required architecture at a moment in time. Includes statements to assist in selection and evaluation of appropriate implementations of specified architecture building blocks.

- Security Plan (From: A72 A725)

  A consolidated view and documentation of the resources, approach, procedures and assets to be protected together with a definition of the security practices and controls which will be enacted in order to fulfill the security policy. It covers both technical capabilities (for example, firewalls, encryption) and non-technical considerations (such as segregation of duties, training needs, user responsibilities).

- IT Portfolio (From: A3 A36 A365)

  A central repository containing all the IT resources and assets, projects, and services controlled and managed by the IT organization, departments, and functions.

- IT Plan (From: A3 A36 A365)

  The set of approved projects and associated schedule, operating plan, service level management commitments, and resource allocation commitments and adjustments for a defined fiscal or planning cycle.

- IT Strategy (From: A3 A31 A315)

  A consolidated statement of IT initiatives. Includes a summary of changes to IT capabilities and a summary of each strategic IT initiative. Also includes a statement of planned and required changes to the IT Portfolio and IT Plan. The IT Sourcing Strategy would be included.

Inputs

- Solution Plans and Commitments (From: A4 A41 A42 A422 A425 A43 A432 A44 A442 A45 A452)

  The collective overall information on both the development plan for the solution and the content of the solution as it progresses from concept to reality.

  - Plans: Sets of committed solution phases, activities, tasks and milestones together with timeframe.
  - Commitments: Sets of requirements, designs and other deliverables, such as test cases.

- Solution Requirements Baseline (From: A41 A415)

  Established according to prescribed organizational standards, it is a baseline of all the Solution Requirements work products currently under Configuration Management.

- Service Level Package (From: A2 A25 A255)

  Details of the expected implications to the service utility and warranty which will result from agreement with the relevant business units on the demand management approaches under which the service will be provided. ITIL definition: “A defined level of Utility and Warranty for

a particular Service Package. Each SLP is designed to meet the needs of a particular Pattern of Business Activity." [19]

- Solution Design Request (From: A52 A523 A53 A533)

  A formal communication that authorizes and triggers the Solution Analysis and Design process (usually beginning at the conceptual design level).

- Business and IT Models (From: A3 A33 A333)

  Representations of relevant aspects of the business' activities, in model formats, and with or without the inclusion of related IT factors.

- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

- Configuration Information (From: A5 A54 A544)

  The information on any individual configuration item (CI) or collection of CIs, which is made available using standard reports or to meet individual requests.

- Security Risk Assessment (From: A723)

  A detailed analysis of the current and projected security risk factors facing the enterprise.

Outputs

- Solution Analysis and Design Results and Issues (To: A422 A423 A424)

  The collection of summary level history and status of Solution Design activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Development processes.

- Change Request (To: A5 A51 A512)

  Change requests (also known as RFCs) are the means for submitting proposed change and actual change activity in the environment. Change requests can be triggered for a wide variety of reasons, from a broad spectrum of sources. They can be concerned with any part of the environment or with any service or activity.

- CI Requisition (To: A5 A54 A543)

  A request for one or more CIs to be made available so that they can be worked upon. In a development environment, this might be a request to check-out solution components from a version-controlled configuration library.

- CI Data Update Package (To: A5 A54 A542 A543)

  The details of modifications to any existing CIs that must be validated and captured in the CI master data. The modifications can include:

  - Attributes
  - Relationships

- Solution Plans and Commitments (To: A2 A25 A255 A256 A26 A265 A3 A33 A336 A35 A353 A354 A37 A374 A375 A42 A422 A43 A432 A44 A442 A45 A452 A454 A5 A52 A522 A6 A62 A621 A7 A73 A732 A74 A742)

  The collective overall information on both the development plan for the solution and the content of the solution as it progresses from concept to reality.

  - Plans: Sets of committed solution phases, activities, tasks and milestones together with timeframe.
  - Commitments: Sets of requirements, designs and other deliverables, such as test cases.

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- Solution Design (To: A3 A33 A336 A34 A343 A344 A45 A454 A5 A51 A514 A52 A523 A54 A542 A6 A61 A611 A62 A621 A63 A632 A64 A641 A65 A651 A66 A661 A662 A67 A671 A7 A72 A723 A73 A734 A736 A75 A752 A76 A764 A8 A84 A844)

  Solution design, including conceptual, macro, and micro designs, together with identified issues and risks, and formally validated and approved (signed off) by the key stakeholders. It not only covers all the functional and non-functional requirements of the solution, but also the design for meeting the compliance reporting requirements applicable to the solution.
- Solution Design Package (To: A425 A43 A432 A434 A435 A436 A437 A44 A442)

  The collection of all the work products created during solution design.
- Project Events (To: A375)

  The notification of events that, in the project manager's opinion, are important to support the management of the project.

Activities

This process is composed of these activities:

- A421 Establish Solution Analysis and Design Framework
- A422 Create Conceptual Solution Design
- A423 Identify and Select Solution Components
- A424 Create Detailed Solution Design
- A425 Validate Solution Design With Stakeholders
- A426 Evaluate Solution Analysis and Design Performance

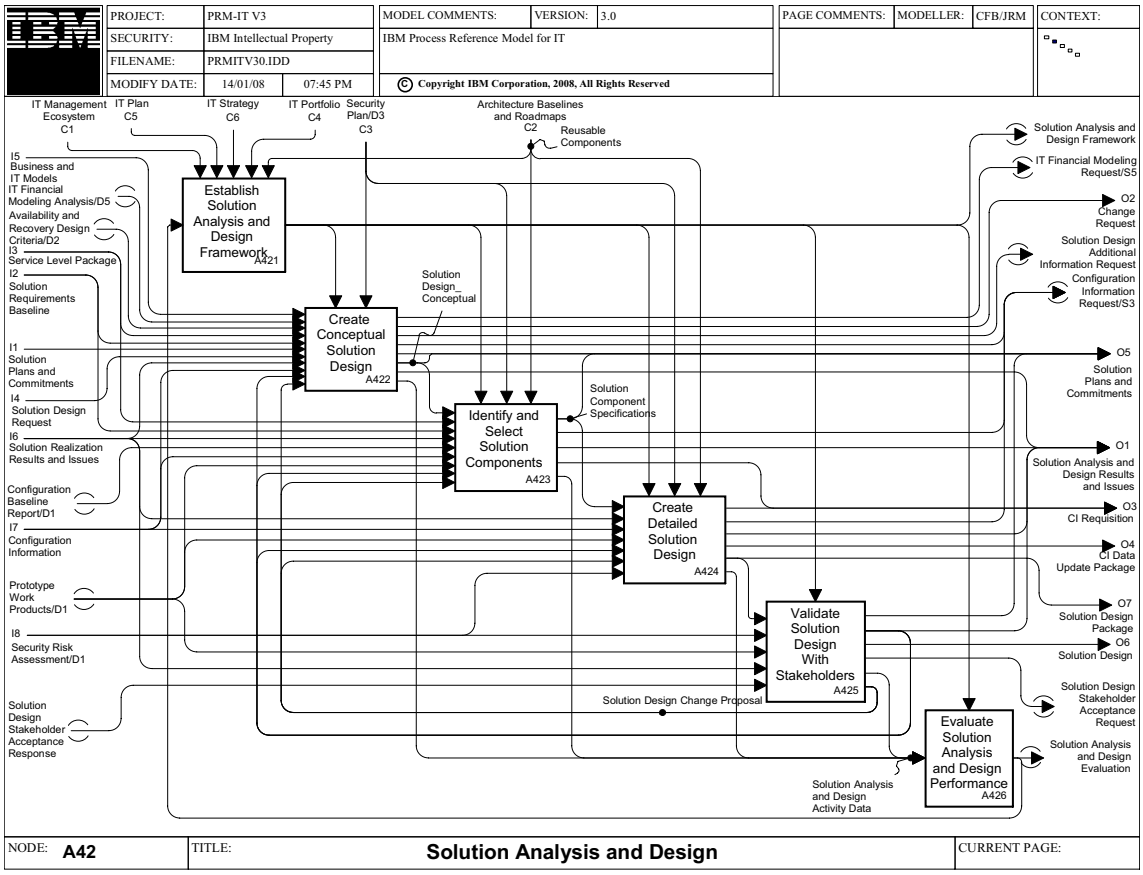

Figure 3. A42 Solution Analysis and Design

[A421] Establish Solution Analysis and Design Framework

Description

Establish the project-specific framework for Solution Analysis and Design, and define specific performance goals, measurements, and targets. The procedure for establishing this framework is by tailoring the organization-wide framework of procedures, standards, and templates related to analysis and design management and engineering.

Controls

- IT Management Ecosystem (From: A1)

  To paraphrase a dictionary definition: the complex of management system elements, their physical implementation, and all their interrelationships in the unit of space that is the domain of the IT function. Its fundamental purpose is to provide an environment that is supportive of the carrying out of all of the IT activities defined elsewhere in this model.

- IT Plan (From: A3 A36 A365)

  The set of approved projects and associated schedule, operating plan, service level management commitments, and resource allocation commitments and adjustments for a defined fiscal or planning cycle.

- IT Strategy (From: A3 A31 A315)

  A consolidated statement of IT initiatives. Includes a summary of changes to IT capabilities and a summary of each strategic IT initiative. Also includes a statement of planned and required changes to the IT Portfolio and IT Plan. The IT Sourcing Strategy would be included.

- IT Portfolio (From: A3 A36 A365)

  A central repository containing all the IT resources and assets, projects, and services controlled and managed by the IT organization, departments, and functions.

- Reusable Components

  Parts (engineering parts) from the set of components identified for future reuse by the Architecture Management process.

Inputs

- Solution Analysis and Design Evaluation (From: A426)

  The collection of summary level history and status of the Solution Analysis and Design Framework. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Development processes.

Outputs

- Solution Analysis and Design Framework (To: A422 A423 A424 A425 A426 A733)

  The logical structure describing the strategic (vision, mission, value proposition), organizational (organizational mechanisms, roles, accountabilities), process (activities, work flows, inputs, outputs), and technology (software, hardware) practices for solution analysis and design.

[A422] Create Conceptual Solution Design

Description

The purpose of this activity is to create a high level view (architectural view) of the solution design for the purpose of determining the overall shape of the solution.

Controls

- Solution Analysis and Design Framework (From: A421)

  The logical structure describing the strategic (vision, mission, value proposition), organizational (organizational mechanisms, roles, accountabilities), process (activities, work flows, inputs, outputs), and technology (software, hardware) practices for solution analysis and design.
- Security Plan (From: A72 A725)

  A consolidated view and documentation of the resources, approach, procedures and assets to be protected together with a definition of the security practices and controls which will be enacted in order to fulfill the security policy. It covers both technical capabilities (for example, firewalls, encryption) and non-technical considerations (such as segregation of duties, training needs, user responsibilities).

Inputs

- Business and IT Models (From: A3 A33 A333)

  Representations of relevant aspects of the business' activities, in model formats, and with or without the inclusion of related IT factors.
- IT Financial Modeling Analysis (From: A812)

  The outcome of the request for modeling the financial implications of any aspect of the IT undertakings.
- Availability and Recovery Design Criteria (From: A733)

  General solution design principles that enhance service availability and recovery. This information is used to create or update solutions so that they are more resilient.
- Service Level Package (From: A2 A25 A255)

  Details of the expected implications to the service utility and warranty which will result from agreement with the relevant business units on the demand management approaches under which the service will be provided. ITIL definition: “A defined level of Utility and Warranty for a particular Service Package. Each SLP is designed to meet the needs of a particular Pattern of Business Activity.” [20]
- Solution Requirements Baseline (From: A41 A415)

  Established according to prescribed organizational standards, it is a baseline of all the Solution Requirements work products currently under Configuration Management.
- Solution Plans and Commitments (From: A4 A41 A42 A422 A425 A43 A432 A44 A442 A45 A452)

  The collective overall information on both the development plan for the solution and the content of the solution as it progresses from concept to reality.
  - Plans: Sets of committed solution phases, activities, tasks and milestones together with timeframe.
  - Commitments: Sets of requirements, designs and other deliverables, such as test cases.

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- Solution Design Request (From: A52 A523 A53 A533)

  A formal communication that authorizes and triggers the Solution Analysis and Design process (usually beginning at the conceptual design level).

- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

- Configuration Information (From: A5 A54 A544)

  The information on any individual configuration item (CI) or collection of CIs, which is made available using standard reports or to meet individual requests.

- Solution Analysis and Design Results and Issues (From: A42 A422 A423 A424 A425)

  The collection of summary level history and status of Solution Design activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Development processes.

- Solution Design Change Proposal (From: A425)

  Proposed changes to the solution design resulting from review of solution design work products with stakeholders against the solution requirements.

Outputs

- IT Financial Modeling Request (To: A812)

  A request for financial modeling to be performed so that the financial implications of a potential proposal relating to IT resources and capabilities can be understood. Any process can originate this type of request.

- Change Request (To: A5 A51 A512)

  Change requests (also known as RFCs) are the means for submitting proposed change and actual change activity in the environment. Change requests can be triggered for a wide variety of reasons, from a broad spectrum of sources. They can be concerned with any part of the environment or with any service or activity.

- Solution Design Additional Information Request

  Solicitation to the stakeholders for additional information required to complete the solution design (further clarification of requirements).

- Configuration Information Request (To: A54 A544)

  Any request for information about one or more configuration items. Many IT processes will make such requests.

- Solution Plans and Commitments (To: A2 A25 A255 A256 A26 A265 A3 A33 A336 A35 A353 A354 A37 A374 A375 A42 A422 A43 A432 A44 A442 A45 A452 A454 A5 A52 A522 A6 A62 A621 A7 A73 A732 A74 A742)

  The collective overall information on both the development plan for the solution and the content of the solution as it progresses from concept to reality.

  - Plans: Sets of committed solution phases, activities, tasks and milestones together with timeframe.
  - Commitments: Sets of requirements, designs and other deliverables, such as test cases.

- Solution Design_ Conceptual (To: A423)

  High level view (architectural view) of the solution, including initial versions of component model, operational model, high-level architectural overview, and architectural decisions.

- Solution Analysis and Design Results and Issues (To: A422 A423 A424)

  The collection of summary level history and status of Solution Design activities and work products. Typically used to establish and update organizational performance benchmarks

(estimates versus actual), transmit quality information, and other heuristics related to Solution Development processes.

- Solution Analysis and Design Activity Data (To: A426)

  The collection of summary level history and status of Solution Analysis and Design activities. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Development processes.

[A423] Identify and Select Solution Components

Description

The purpose of this activity is to create a detailed, component-by-component view (engineering view) of the solution design. The overall functionality of the solution is assigned to discrete, identifiable functional engineering elements. Solution components are selected to meet those specifications, in conjunction with approved architectures. Any outstanding issues are also identified and communicated.

Controls

- Solution Analysis and Design Framework (From: A421)

  The logical structure describing the strategic (vision, mission, value proposition), organizational (organizational mechanisms, roles, accountabilities), process (activities, work flows, inputs, outputs), and technology (software, hardware) practices for solution analysis and design.

- Security Plan (From: A72 A725)

  A consolidated view and documentation of the resources, approach, procedures and assets to be protected together with a definition of the security practices and controls which will be enacted in order to fulfill the security policy. It covers both technical capabilities (for example, firewalls, encryption) and non-technical considerations (such as segregation of duties, training needs, user responsibilities).

- Reusable Components

  Parts (engineering parts) from the set of components identified for future reuse by the Architecture Management process.

Inputs

- Solution Design_ Conceptual (From: A422)

  High level view (architectural view) of the solution, including initial versions of component model, operational model, high-level architectural overview, and architectural decisions.

- Service Level Package (From: A2 A25 A255)

  Details of the expected implications to the service utility and warranty which will result from agreement with the relevant business units on the demand management approaches under which the service will be provided. ITIL definition: “A defined level of Utility and Warranty for a particular Service Package. Each SLP is designed to meet the needs of a particular Pattern of Business Activity.” [21]

- Solution Requirements Baseline (From: A41 A415)

  Established according to prescribed organizational standards, it is a baseline of all the Solution Requirements work products currently under Configuration Management.

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- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

- Configuration Baseline Report (From: A54 A542 A543)

  A point-in-time snapshot of a portion of a CMDB which is relevant to one or more purposes from other IT management processes. This can include past, current and future-projected instances.

- Configuration Information (From: A5 A54 A544)

  The information on any individual configuration item (CI) or collection of CIs, which is made available using standard reports or to meet individual requests.

- Prototype Work Products

  Reduced scale or function deliverables used to explore feasibility or suitability of some aspect of the solution.

- Solution Analysis and Design Results and Issues (From: A42 A422 A423 A424 A425)

  The collection of summary level history and status of Solution Design activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Development processes.

- Solution Design Change Proposal (From: A425)

  Proposed changes to the solution design resulting from review of solution design work products with stakeholders against the solution requirements.

Outputs

- Solution Component Specifications (To: A424)

  Formal specification for all the solution components prepared in a prescribed way in agreement with organization-wide procedures and standards.

- Configuration Information Request (To: A54 A544)

  Any request for information about one or more configuration items. Many IT processes will make such requests.

- Solution Analysis and Design Results and Issues (To: A422 A423 A424)

  The collection of summary level history and status of Solution Design activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Development processes.

- CI Requisition (To: A5 A54 A543)

  A request for one or more CIs to be made available so that they can be worked upon. In a development environment, this might be a request to check-out solution components from a version-controlled configuration library.

- Solution Analysis and Design Activity Data (To: A426)

  The collection of summary level history and status of Solution Analysis and Design activities. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Development processes.

[A424] Create Detailed Solution Design

Description

Create a low level view (engineering view) of the Solution Design for the purpose of further breaking down the overall functionality of the solution into functional engineering elements and determining relationships between them.

Controls

- Solution Analysis and Design Framework (From: A421)

  The logical structure describing the strategic (vision, mission, value proposition), organizational (organizational mechanisms, roles, accountabilities), process (activities, work flows, inputs, outputs), and technology (software, hardware) practices for solution analysis and design.

- Security Plan (From: A72 A725)

  A consolidated view and documentation of the resources, approach, procedures and assets to be protected together with a definition of the security practices and controls which will be enacted in order to fulfill the security policy. It covers both technical capabilities (for example, firewalls, encryption) and non-technical considerations (such as segregation of duties, training needs, user responsibilities).

- Reusable Components

  Parts (engineering parts) from the set of components identified for future reuse by the Architecture Management process.

Inputs

- Solution Component Specifications (From: A423)

  Formal specification for all the solution components prepared in a prescribed way in agreement with organization-wide procedures and standards.

- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

- Configuration Information (From: A5 A54 A544)

  The information on any individual configuration item (CI) or collection of CIs, which is made available using standard reports or to meet individual requests.

- Prototype Work Products

  Reduced scale or function deliverables used to explore feasibility or suitability of some aspect of the solution.

- Solution Analysis and Design Results and Issues (From: A42 A422 A423 A424 A425)

  The collection of summary level history and status of Solution Design activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Development processes.

- Solution Design Change Proposal (From: A425)

  Proposed changes to the solution design resulting from review of solution design work products with stakeholders against the solution requirements.

- Security Risk Assessment (From: A723)

  A detailed analysis of the current and projected security risk factors facing the enterprise.

Outputs

- CI Requisition (To: A5 A54 A543)

  A request for one or more CIs to be made available so that they can be worked upon. In a development environment, this might be a request to check-out solution components from a version-controlled configuration library.

- Configuration Information Request (To: A54 A544)

  Any request for information about one or more configuration items. Many IT processes will make such requests.

- Solution Analysis and Design Results and Issues (To: A422 A423 A424)

  The collection of summary level history and status of Solution Design activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Development processes.

- CI Data Update Package (To: A5 A54 A542 A543)

  The details of modifications to any existing CIs that must be validated and captured in the CI master data. The modifications can include:

  - Attributes
  - Relationships

- Solution Design Package (To: A425 A43 A432 A434 A435 A436 A437 A44 A442)

  The collection of all the work products created during solution design.

- Solution Analysis and Design Activity Data (To: A426)

  The collection of summary level history and status of Solution Analysis and Design activities. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Development processes.

[A425] Validate Solution Design with Stakeholders

Description

Validate the solution design (conceptual, macro, and micro) with all the relevant stakeholders. To validate ensures that you created the right thing.

Controls

- Solution Analysis and Design Framework (From: A421)

  The logical structure describing the strategic (vision, mission, value proposition), organizational (organizational mechanisms, roles, accountabilities), process (activities, work flows, inputs, outputs), and technology (software, hardware) practices for solution analysis and design.

Inputs

- Solution Design Package (From: A42 A424)

  The collection of all the work products created during solution design.
- Security Risk Assessment (From: A723)

  A detailed analysis of the current and projected security risk factors facing the enterprise.
- Prototype Work Products

  Reduced scale or function deliverables used to explore feasibility or suitability of some aspect of the solution.
- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.
- Solution Design Stakeholder Acceptance Response

  A formal acceptance and sign off or rejection by stakeholders of solution design.

Outputs

- Solution Plans and Commitments (To: A2 A25 A255 A256 A26 A265 A3 A33 A336 A35 A353 A354 A37 A374 A375 A42 A422 A43 A432 A44 A442 A45 A452 A454 A5 A52 A522 A6 A62 A621 A7 A73 A732 A74 A742)

  The collective overall information on both the development plan for the solution and the content of the solution as it progresses from concept to reality.

  - Plans: Sets of committed solution phases, activities, tasks and milestones together with timeframe.
  - Commitments: Sets of requirements, designs and other deliverables, such as test cases.
- Solution Analysis and Design Results and Issues (To: A422 A423 A424)

  The collection of summary level history and status of Solution Design activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Development processes.
- Solution Design (To: A3 A33 A336 A34 A343 A344 A45 A454 A5 A51 A514 A52 A523 A54 A542 A6 A61 A611 A62 A621 A63 A632 A64 A641 A65 A651 A66 A661 A662 A67 A671 A7 A72 A723 A73 A734 A736 A75 A752 A76 A764 A8 A84 A844)

  Solution design, including conceptual, macro, and micro designs, together with identified issues and risks, and formally validated and approved (signed off) by the key stakeholders.

It not only covers all the functional and non-functional requirements of the solution, but also the design for meeting the compliance reporting requirements applicable to the solution.

- Solution Design Stakeholder Acceptance Request

  A request to stakeholders for review, confirmation and formal sign-off of solution design.

- Solution Analysis and Design Activity Data (To: A426)

  The collection of summary level history and status of Solution Analysis and Design activities. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Development processes.

- Solution Design Change Proposal (To: A422 A423 A424)

  Proposed changes to the solution design resulting from review of solution design work products with stakeholders against the solution requirements.

[A426] Evaluate Solution Analysis and Design Performance

Description

The performance evaluation of the process aims at identifying areas of the overall process that require improvement. For example, the foundation and interfaces of the process, all activities, their accomplishment, their degree of automation, as well as the roles and responsibilities including the respective skills. The bases for the improvements are the insights and the lessons learned from the observations and analysis of activity accomplishments and results.

Controls

- Solution Analysis and Design Framework (From: A421)

  The logical structure describing the strategic (vision, mission, value proposition), organizational (organizational mechanisms, roles, accountabilities), process (activities, work flows, inputs, outputs), and technology (software, hardware) practices for solution analysis and design.

Inputs

- Solution Analysis and Design Activity Data (From: A422 A423 A424 A425)

  The collection of summary level history and status of Solution Analysis and Design activities. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Development processes.

Outputs

- Solution Analysis and Design Evaluation (To: A421)

  The collection of summary level history and status of the Solution Analysis and Design Framework. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Development processes.

[A43] Solution Development and Integration

Purpose

The Solution Development and Integration process exists to bring together all of the elements specified by the solution design, regardless of whether they are to be created or acquired, and to complete their customization, configuration, and integration.

Outcomes

As a result of the successful implementation of this process:

- Agreed solutions are produced to approved specifications, on time, within budget and generally maximizing stakeholder value
- Frequent demonstrations of capabilities to stakeholders are done to provide feedback on requirements, other specifications, and implemented assets
- Lessons learned are fed to key stakeholders so requirements and other specifications can be evolved as necessary
- Solutions are ready for testing and examination of solution capabilities
- All necessary elements exist to support Solution Management (life cycle, maintenance, known errors, documentation, best practice guidance, and others)
- All solution components are identified and tracked
- Solution characteristics are fully verified before Solution Acceptance activities

Scope

Includes

- Establishing development standards
- Development of new functionality
- Integration of new and existing functionality
- Use of all design elements
- Prototyping
- Creating alpha, beta, and general availability versions of solutions
- Making any procured elements available to the solution development and integration team. These can come from external or internal providers
- Working in conformance with agreed version control policies and procedures for solution elements, at whatever level of assembly or integration

Excludes

- Testing (unit testing is considered to be in the Solution Test process, even if performed by the implementer or builder)
- Solution pilot and deployment (Deployment Management)
- Procurement (Supplier Management)
- Asset Management
- Administration of version control (includes Configuration Management of elements within the solution during the development phase)
  - Called change management version control (CMVC) in CMMI

Controls

- IT Management Ecosystem (From: A1)

  To paraphrase a dictionary definition: the complex of management system elements, their physical implementation, and all their interrelationships in the unit of space that is the domain of the IT function. Its fundamental purpose is to provide an environment that is supportive of the carrying out of all of the IT activities defined elsewhere in this model.

- Architecture Baselines and Roadmaps (From: A3 A33 A334)

  Provides an agreed, published statement of the required architecture at a moment in time. Includes statements to assist in selection and evaluation of appropriate implementations of specified architecture building blocks.

- IT Strategy (From: A3 A31 A315)

  A consolidated statement of IT initiatives. Includes a summary of changes to IT capabilities and a summary of each strategic IT initiative. Also includes a statement of planned and required changes to the IT Portfolio and IT Plan. The IT Sourcing Strategy would be included.

- IT Plan (From: A3 A36 A365)

  The set of approved projects and associated schedule, operating plan, service level management commitments, and resource allocation commitments and adjustments for a defined fiscal or planning cycle.

Inputs

- Solution Plans and Commitments (From: A4 A41 A42 A422 A425 A43 A432 A44 A442 A45 A452)

  The collective overall information on both the development plan for the solution and the content of the solution as it progresses from concept to reality.

  - Plans: Sets of committed solution phases, activities, tasks and milestones together with timeframe.
  - Commitments: Sets of requirements, designs and other deliverables, such as test cases.

- Solution Design Package (From: A42 A424)

  The collection of all the work products created during solution design.

- Asset Deployment Items and Data (From: A5 A55)

  Information about specific asset availability and requisition status, and also the actual asset items being offered up for deployment.

- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

- Solution_ Deployed (From: A5 A53 A536)

  The new or adjusted solution in *live* status, ready for useful work within its target environment, and reflecting the outcome of the deployment activities.

  The deployed solution includes documentation, procedures, training materials, support guidance as well as the primary solution contents.

- CIs (From: A5 A54 A543)

  CIs are the technical (in its broadest sense) components, including assemblies of more granular components, upon which IT service is based. The relevant extract from the ITIL definition of Configuration Item is: “Any Component that needs to be managed in order to deliver an IT Service. ... CIs typically include IT Services, hardware, software, buildings, people, and formal documentation such as Process documentation and SLAs." [22]

Outputs

- Solution Plans and Commitments (To: A2 A25 A255 A256 A26 A265 A3 A33 A336 A35 A353 A354 A37 A374 A375 A42 A422 A43 A432 A44 A442 A45 A452 A454 A5 A52 A522 A6 A62 A621 A7 A73 A732 A74 A742)

  The collective overall information on both the development plan for the solution and the content of the solution as it progresses from concept to reality.

  - Plans: Sets of committed solution phases, activities, tasks and milestones together with timeframe.
  - Commitments: Sets of requirements, designs and other deliverables, such as test cases.
- Solution Development and Integration Results and Issues (To: A432 A433 A434 A435 A436)

  The collection of summary level history and status of Solution Development and Integration activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Realization processes.
- Change Request (To: A5 A51 A512)

  Change requests (also known as RFCs) are the means for submitting proposed change and actual change activity in the environment. Change requests can be triggered for a wide variety of reasons, from a broad spectrum of sources. They can be concerned with any part of the environment or with any service or activity.
- CI Requisition (To: A5 A54 A543)

  A request for one or more CIs to be made available so that they can be worked upon. In a development environment, this might be a request to check-out solution components from a version-controlled configuration library.
- CI Data Update Package (To: A5 A54 A542 A543)

  The details of modifications to any existing CIs that must be validated and captured in the CI master data. The modifications can include:

  - Attributes
  - Relationships
- Solution Assembly (To: A44 A443 A444 A45 A456 A542 A543)

  The collection of all the work products created during solution development and integration, including prototypes or implementation of parts of a solution for evaluation and analysis purposes.
- Project Events (To: A375)

  The notification of events that, in the project manager's opinion, are important to support the management of the project.

Activities

This process is composed of these activities:

- A431 Establish Solution Development and Integration Framework
- A432 Define Solution Development and Integration Plan
- A433 Prepare Solution Development and Integration Environment
- A434 Acquire or Create Solution Components
- A435 Integrate Solution Components
- A436 Refine and Tune Integrated Solution
- A437 Verify Integrated Solution
- A438 Evaluate Solution Development and Integration Performance

22. ITIL V3 Glossary

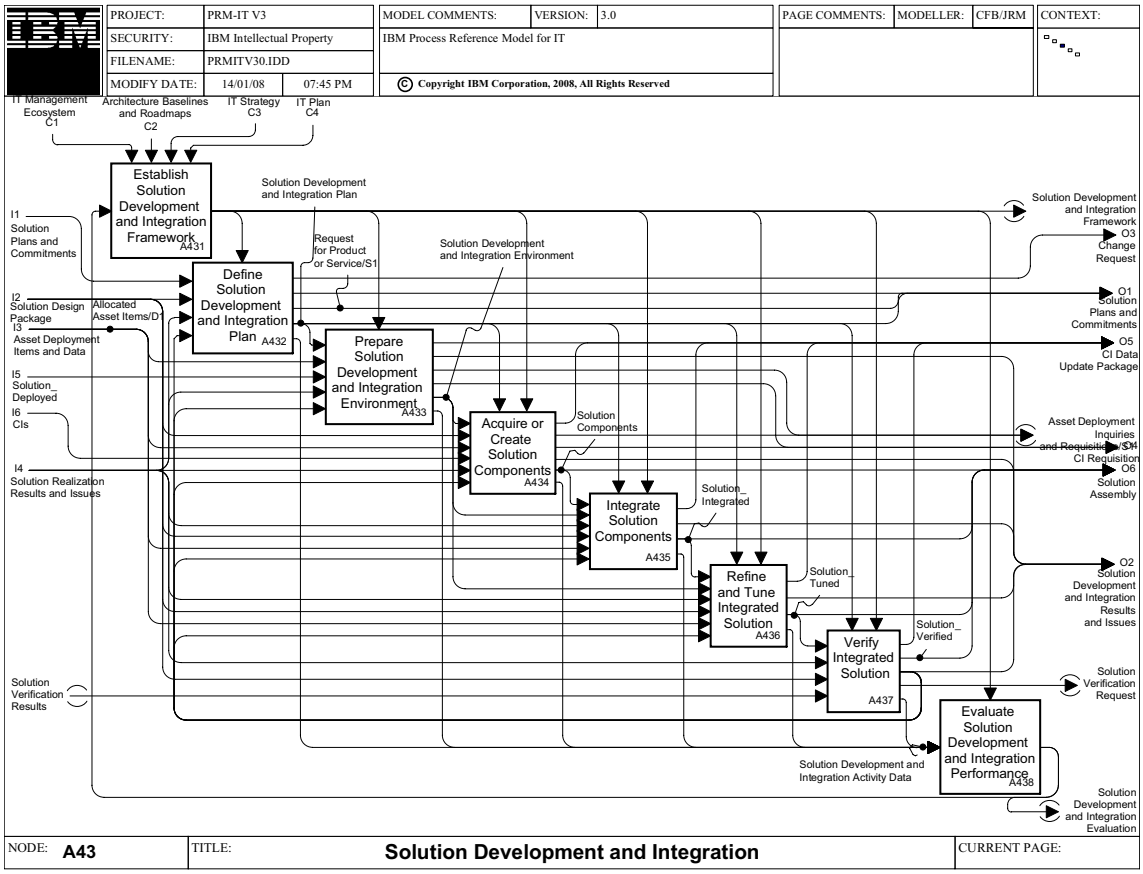

Figure 4. A43 Solution Development and Integration

[A431] Establish Solution Development and Integration Framework

Description

Establishes the general and the project specific Solution Development and Integration Framework by tailoring, in a prescribed way, the organization-wide framework (organization-wide set of procedures, standards, and templates related to Solution Development and Integration Management and Engineering), and to define specific performance goals, measurements and targets.

Controls

- IT Management Ecosystem (From: A1)

  To paraphrase a dictionary definition: the complex of management system elements, their physical implementation, and all their interrelationships in the unit of space that is the domain of the IT function. Its fundamental purpose is to provide an environment that is supportive of the carrying out of all of the IT activities defined elsewhere in this model.

- Architecture Baselines and Roadmaps (From: A3 A33 A334)

  Provides an agreed, published statement of the required architecture at a moment in time. Includes statements to assist in selection and evaluation of appropriate implementations of specified architecture building blocks.

- IT Strategy (From: A3 A31 A315)

  A consolidated statement of IT initiatives. Includes a summary of changes to IT capabilities and a summary of each strategic IT initiative. Also includes a statement of planned and required changes to the IT Portfolio and IT Plan. The IT Sourcing Strategy would be included.

- IT Plan (From: A3 A36 A365)

  The set of approved projects and associated schedule, operating plan, service level management commitments, and resource allocation commitments and adjustments for a defined fiscal or planning cycle.

Inputs

- Solution Development and Integration Evaluation (From: A438)

  Formal evaluation of the performance of the project specific activities against the defined performance criteria and measurements within the Solution Build Framework.

Outputs

- Solution Development and Integration Framework (To: A432 A433 A434 A435 A436 A437 A438)

  Common, organization-wide Solution Development and Integration policies, standards, procedures and templates.

[A432] Define Solution Development and Integration Plan

Description

The purpose of this activity is to develop a Solution Development and Integration Plan that details the standards, methods, techniques, technologies, environments, and development and integration tasks related to a specific Solution Design Package. These are employed to create iterations of solution assemblies (builds) as the solution is constructed and integrated. The activity includes planning time frames and resources required.

Controls

- Solution Development and Integration Framework (From: A431)

  Common, organization-wide Solution Development and Integration policies, standards, procedures and templates.

Inputs

- Solution Plans and Commitments (From: A4 A41 A42 A422 A425 A43 A432 A44 A442 A45 A452)

  The collective overall information on both the development plan for the solution and the content of the solution as it progresses from concept to reality.

  - Plans: Sets of committed solution phases, activities, tasks and milestones together with timeframe.
  - Commitments: Sets of requirements, designs and other deliverables, such as test cases.
- Solution Design Package (From: A42 A424)

  The collection of all the work products created during solution design.
- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.
- Solution Development and Integration Results and Issues (From: A43 A433 A434 A435 A436 A437)

  The collection of summary level history and status of Solution Development and Integration activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Realization processes.

Outputs

- Change Request (To: A5 A51 A512)

  Change requests (also known as RFCs) are the means for submitting proposed change and actual change activity in the environment. Change requests can be triggered for a wide variety of reasons, from a broad spectrum of sources. They can be concerned with any part of the environment or with any service or activity.
- Solution Plans and Commitments (To: A2 A25 A255 A256 A26 A265 A3 A33 A336 A35 A353 A354 A37 A374 A375 A42 A422 A43 A432 A44 A442 A45 A452 A454 A5 A52 A522 A6 A62 A621 A7 A73 A732 A74 A742)

  The collective overall information on both the development plan for the solution and the content of the solution as it progresses from concept to reality.

  - Plans: Sets of committed solution phases, activities, tasks and milestones together with timeframe.
  - Commitments: Sets of requirements, designs and other deliverables, such as test cases.

- Request for Product or Service (To: A822 A823 A824)

  Information about required products and services that are needed by any IT process - but especially Solution Build and Solution Test. It will be used within the activities of selecting and managing the right portfolio of suppliers and respective supplier contracts, or to initiate actual procurement.

- Solution Development and Integration Plan (To: A433 A434 A435 A436 A437)

  Formally defined following a prescribed, organization-wide procedure, set of tasks and activities together with a time frame required to perform solution development and integration. Usually a part of a larger project plan.

- Solution Development and Integration Activity Data (To: A438)

  The collection of detailed history and status of Solution Development and Integration activities. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Realization processes.

[A433] Prepare Solution Development and Integration Environment

Description

The purpose of this activity is to prepare the solution development environment and integration environment by either creating it from scratch or by modifying an existing one. It includes generating solution element and development and integration element information as necessary for seamless integration.

Controls

- Solution Development and Integration Framework (From: A431)

  Common, organization-wide solution development and integration policies, standards, procedures and templates.

Inputs

- Solution Development and Integration Plan (From: A432)

  Formally defined following a prescribed, organization-wide procedure, set of tasks and activities together with a time frame required to perform solution development and integration. Usually a part of a larger project plan.

- Allocated Asset Items (From: A552)

  The assignment and delivery (if appropriate) of identified IT assets to fulfill asset requisitions.

- Solution_ Deployed (From: A5 A53 A536)

  The new or adjusted solution in *live* status, ready for useful work within its target environment, and reflecting the outcome of the deployment activities.

  The deployed solution includes documentation, procedures, training materials, support guidance as well as the primary solution contents.

- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

- Solution Development and Integration Results and Issues (From: A43 A433 A434 A435 A436 A437)

  The collection of summary level history and status of Solution Development and Integration activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Realization processes.

Outputs

- CI Data Update Package (To: A5 A54 A542 A543)

  The details of modifications to any existing CIs that must be validated and captured in the CI master data. The modifications can include:

  - Attributes
  - Relationships

- Solution Development and Integration Results and Issues (To: A432 A433 A434 A435 A436)

  The collection of summary level history and status of Solution Development and Integration activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Realization processes.

- Asset Deployment Inquiries and Requisitions (To: A55)

  Requests for information about assets needed as part of deploying solutions, requisitions for allocation of assets and notifications to trigger the delivery or distribution of these resources.

- CI Requisition (To: A5 A54 A543)

  A request for one or more CIs to be made available so that they can be worked upon. In a development environment, this might be a request to check-out solution components from a version-controlled configuration library.

- Solution Development and Integration Environment (To: A434 A435 A436)

  The entire infrastructure required to complete the solution build process, including the tools, supporting work products (scaffolding), and physical configuration control repository for the solution work products.

- Solution Development and Integration Activity Data (To: A438)

  The collection of detailed history and status of Solution Development and Integration activities. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Realization processes.

[A434] Acquire or Create Solution Components

Description

The purpose of this activity is to obtain all the elements (or their substitutes) of the solutions from predetermined sources within a specific time frame. It can achieve this by purchasing or leasing pre-existing components from an external source, by in-house development, or by custom development from a specific developer. It includes putting the components into the build environment and updating Configuration Management.

Controls

- Solution Development and Integration Plan (From: A432)

  Formally defined following a prescribed, organization-wide procedure, set of tasks and activities together with a time frame required to perform solution development and integration. Usually a part of a larger project plan.

- Solution Development and Integration Framework (From: A431)

  Common, organization-wide Solution Development and Integration policies, standards, procedures and templates.

Inputs

- Solution Development and Integration Environment (From: A433)

  The entire infrastructure required to complete the solution build process, including the tools, supporting work products (scaffolding), and physical configuration control repository for the solution work products.

- Solution Design Package (From: A42 A424)

  The collection of all the work products created during solution design.

- Allocated Asset Items (From: A552)

  The assignment and delivery (if appropriate) of identified IT assets to fulfill asset requisitions.

- CIs (From: A5 A54 A543)

  CIs are the technical (in its broadest sense) components, including assemblies of more granular components, upon which IT service is based. The relevant extract from the ITIL definition of Configuration Item is: “Any Component that needs to be managed in order to deliver an IT Service. ... CIs typically include IT Services, hardware, software, buildings, people, and formal documentation such as Process documentation and SLAs."[23]

- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

- Solution Development and Integration Results and Issues (From: A43 A433 A434 A435 A436 A437)

  The collection of summary level history and status of Solution Development and Integration activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Realization processes.

Outputs

- CI Data Update Package (To: A5 A54 A542 A543)

  The details of modifications to any existing CIs that must be validated and captured in the CI master data. The modifications can include:

  - Attributes
  - Relationships

- Asset Deployment Inquiries and Requisitions (To: A55)

  Requests for information about assets needed as part of deploying solutions, requisitions for allocation of assets and notifications to trigger the delivery or distribution of these resources.

23. ITIL V3 Glossary

- CI Requisition (To: A5 A54 A543)

  A request for one or more CIs to be made available so that they can be worked upon. In a development environment, this might be a request to check-out solution components from a version-controlled configuration library.
- Solution Development and Integration Results and Issues (To: A432 A433 A434 A435 A436)

  The collection of summary level history and status of Solution Development and Integration activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Realization processes.
- Solution Components (To: A435)

  All the work products, acquired or built in-house, required to complete the solution build, which will remain as integrated parts of the solution (opposite to supporting parts).
- Solution Development and Integration Activity Data (To: A438)

  The collection of detailed history and status of Solution Development and Integration activities. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Realization processes.

[A435] Integrate Solution Components

Description

The purpose of this activity is to assemble all of the components into the solution in a predetermined way, within the specific time frames called for in the solution plans and commitments. The integration work performed in this activity includes the broad range of components necessary for solution acceptance, such as:

- Hardware components
- Software modules
- Installation scripts
- Operating procedures
- Education

It further includes putting the newly integrated components into the cumulative development environment and updating Configuration Management records to reflect the results of integration and migration.

Controls

- Solution Development and Integration Plan (From: A432)

  Formally defined following a prescribed, organization-wide procedure, set of tasks and activities together with a time frame required to perform solution development and integration. Usually a part of a larger project plan.
- Solution Development and Integration Framework (From: A431)

  Common, organization-wide Solution Development and Integration policies, standards, procedures and templates.

Inputs

- Solution Components (From: A434)

  All the work products, acquired or built in-house, required to complete the solution build, which will remain as integrated parts of the solution (opposite to supporting parts).

- Solution Development and Integration Environment (From: A433)

  The entire infrastructure required to complete the solution build process, including the tools, supporting work products (scaffolding), and physical configuration control repository for the solution work products.

- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

- Solution Design Package (From: A42 A424)

  The collection of all the work products created during solution design.

- Allocated Asset Items (From: A552)

  The assignment and delivery (if appropriate) of identified IT assets to fulfill asset requisitions.

- Solution Development and Integration Results and Issues (From: A43 A433 A434 A435 A436 A437)

  The collection of summary level history and status of Solution Development and Integration activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Realization processes.

Outputs

- CI Data Update Package (To: A5 A54 A542 A543)

  The details of modifications to any existing CIs that must be validated and captured in the CI master data. The modifications can include:

  - Attributes
  - Relationships

- Solution Development and Integration Results and Issues (To: A432 A433 A434 A435 A436)

  The collection of summary level history and status of Solution Development and Integration activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Realization processes.

- Solution_ Integrated (To: A436)

  Completely assembled solution ready to be moved from the development and integration environment into the test environment. Usually includes work products and features required to support solution testing and acceptance.

- Solution Development and Integration Activity Data (To: A438)

  The collection of detailed history and status of Solution Development and Integration activities. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Realization processes.

[A436] Refine and Tune Integrated Solution

Description

The purpose of this activity is to further improve the assembled and integrated solution by refining and fine-tuning the overall solution; both the individual solution components and connections between them.

It includes putting the tuned solution into the cumulative development environment and updating Configuration Management records to reflect the results of tuning and iterative builds.

Controls

- Solution Development and Integration Plan (From: A432)

  Formally defined following a prescribed, organization-wide procedure, set of tasks and activities together with a time frame required to perform solution development and integration. Usually a part of a larger project plan.
- Solution Development and Integration Framework (From: A431)

  Common, organization-wide Solution Development and Integration policies, standards, procedures and templates.

Inputs

- Solution_ Integrated (From: A435)

  Completely assembled solution ready to be moved from the development and integration environment into the test environment. Usually includes work products and features required to support solution testing and acceptance.
- Solution Development and Integration Environment (From: A433)

  The entire infrastructure required to complete the solution build process, including the tools, supporting work products (scaffolding), and physical configuration control repository for the solution work products.
- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.
- Solution Design Package (From: A42 A424)

  The collection of all the work products created during solution design.
- Allocated Asset Items (From: A552)

  The assignment and delivery (if appropriate) of identified IT assets to fulfill asset requisitions.
- Solution Development and Integration Results and Issues (From: A43 A433 A434 A435 A436 A437)

  The collection of summary level history and status of Solution Development and Integration activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Realization processes.

Outputs

- CI Data Update Package (To: A5 A54 A542 A543)

  The details of modifications to any existing CIs that must be validated and captured in the CI master data. The modifications can include:

  - Attributes

  - Relationships
- Solution Development and Integration Results and Issues (To: A432 A433 A434 A435 A436)

  The collection of summary level history and status of Solution Development and Integration activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Realization processes.
- Solution_ Tuned (To: A437)

  Integrated solution after refining and fine tuning the overall solution as well as solution components and connections between them. Performed according to a prescribed, organization-wide procedure.
- Solution Development and Integration Activity Data (To: A438)

  The collection of detailed history and status of Solution Development and Integration activities. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Realization processes.

[A437] Verify Integrated Solution

Description

The purpose of this activity is to verify (verification ensures that you built it right) the Integrated Solution with all solution stakeholders. Verification includes using techniques such as code review and static analysis.

Once verification is obtained, it includes putting the newly integrated components into the cumulative development environment and updating Configuration Management records to reflect stakeholder concurrence with the solution.

Controls

- Solution Development and Integration Plan (From: A432)

  Formally defined following a prescribed, organization-wide procedure, set of tasks and activities together with a time frame required to perform solution development and integration. Usually a part of a larger project plan.
- Solution Development and Integration Framework (From: A431)

  Common, organization-wide Solution Development and Integration policies, standards, procedures and templates.

Inputs

- Solution_ Tuned (From: A436)

  Integrated solution after refining and fine tuning the overall solution as well as solution components and connections between them. Performed according to a prescribed, organization-wide procedure.
- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.
- Solution Design Package (From: A42 A424)

  The collection of all the work products created during solution design.

- Solution Verification Results

  Formal list of the entire positive (successful) and negative (deviations) from the standards and procedures identified during the verification process.

Outputs

- CI Data Update Package (To: A5 A54 A542 A543)

  The details of modifications to any existing CIs that must be validated and captured in the CI master data. The modifications can include:

  - Attributes
  - Relationships

- Solution_ Verified

  Integrated solution after verification by all the relevant stakeholders with all the verification issues (deviations from standards and procedures) formally resolved.

- Solution Development and Integration Results and Issues (To: A432 A433 A434 A435 A436)

  The collection of summary level history and status of Solution Development and Integration activities and work products. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Realization processes.

- Solution Verification Request

  Formal request to verify (verification ensures that *you built it right*) the integrated solution by all the relevant stakeholders.

- Solution Development and Integration Activity Data (To: A438)

  The collection of detailed history and status of Solution Development and Integration activities. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Realization processes.

[A438] Evaluate Solution Development and Integration Performance

Description

The purpose of this activity is to evaluate performance of the project-specific activities against the defined performance criteria and measurements within the Solution Build Framework, and to provide input into the organization-wide framework.

The evaluation of process performance identifies areas that need improvement, such as the foundation and interfaces of the process, activity definitions, key performance metrics, the state of supporting automation, as well as the roles and responsibilities and skills required. Insights and lessons learned from direct observation and data collected on process performance are the basis for improvement recommendations.

Controls

- Solution Development and Integration Framework (From: A431)

  Common, organization-wide Solution Development and Integration policies, standards, procedures and templates.

Inputs

- Solution Development and Integration Activity Data (From: A432 A433 A434 A435 A436 A437)

  The collection of detailed history and status of Solution Development and Integration activities. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Realization processes.

Outputs

- Solution Development and Integration Evaluation (To: A431)

  Formal evaluation of the performance of the project specific activities against the defined performance criteria and measurements within the Solution Build Framework.

[A44] Solution Test

Purpose

The Solution Test process exists to validate prior to deployment that the solution and its features conform to design specifications and requirements. It also verifies that interim work products exist and conform to standards.

Testing is performed throughout the entire life cycle of the solution, including post-deployment.

Outcomes

As a result of successful implementation of this process:

- Solution functionality is verified and documented
- The actual characteristics and behavior of the solution are well known. Any differences with the solution requirements and agreed design specifications are reported.
- Solution defects are identified before the decision is made to migrate to the production environment
- Developers and stakeholders receive thorough quantitative and qualitative assessments of solution quality. (It is intended that the developers and stakeholders take some action as a result of having received this information.)
- Stakeholder expectations match solution characteristics.

Scope

The *ITIL Service Transition* book provides useful discussion and examples. See the discussions around the service V-model.[24]

Includes

- All types of testing, such as:
  - Unit testing
  - Integration testing
  - Acceptance testing
  - Usability testing
  - Operability testing
  - Security testing
  - Regression testing
- Test case development
- Generating test results
- Managing the documentation of the test results
- Satisfying the requirements of the test management checklist

Excludes

- Fixing errors (depending on the nature of the error, this could involve any combination of Solution Requirements, Solution Analysis and Design, Solution Development and Integration)

24. *ITIL Service Transition*, figures 4.21 and 4.30

- Design for testability (Solution Analysis and Design)
- Knowledge management
- Gaining acceptance (Solution Acceptance)
- Piloting (Deployment Management)
- Auditing (Solution Acceptance)

Controls

- IT Management Ecosystem (From: A1)

  To paraphrase a dictionary definition: the complex of management system elements, their physical implementation, and all their interrelationships in the unit of space that is the domain of the IT function. Its fundamental purpose is to provide an environment that is supportive of the carrying out of all of the IT activities defined elsewhere in this model.
- Architecture Baselines and Roadmaps (From: A3 A33 A334)

  Provides an agreed, published statement of the required architecture at a moment in time. Includes statements to assist in selection and evaluation of appropriate implementations of specified architecture building blocks.
- IT Strategy (From: A3 A31 A315)

  A consolidated statement of IT initiatives. Includes a summary of changes to IT capabilities and a summary of each strategic IT initiative. Also includes a statement of planned and required changes to the IT Portfolio and IT Plan. The IT Sourcing Strategy would be included.
- IT Plan (From: A3 A36 A365)

  The set of approved projects and associated schedule, operating plan, service level management commitments, and resource allocation commitments and adjustments for a defined fiscal or planning cycle.
- Security Plan (From: A72 A725)

  A consolidated view and documentation of the resources, approach, procedures and assets to be protected together with a definition of the security practices and controls which will be enacted in order to fulfill the security policy. It covers both technical capabilities (for example, firewalls, encryption) and non-technical considerations (such as segregation of duties, training needs, user responsibilities).

Inputs

- Solution Plans and Commitments (From: A4 A41 A42 A422 A425 A43 A432 A44 A442 A45 A452)

  The collective overall information on both the development plan for the solution and the content of the solution as it progresses from concept to reality.
  - Plans: Sets of committed solution phases, activities, tasks and milestones together with timeframe.
  - Commitments: Sets of requirements, designs and other deliverables, such as test cases.
- Solution Assembly (From: A43)

  The collection of all the work products created during solution development and integration, including prototypes or implementation of parts of a solution for evaluation and analysis purposes.
- Solution Design Package (From: A42 A424)

  The collection of all the work products created during solution design.

- CIs (From: A5 A54 A543)

  CIs are the technical (in its broadest sense) components, including assemblies of more granular components, upon which IT service is based. The relevant extract from the ITIL definition of Configuration Item is: “Any Component that needs to be managed in order to deliver an IT Service. ... CIs typically include IT Services, hardware, software, buildings, people, and formal documentation such as Process documentation and SLAs."[25]

- Solution_ Deployed (From: A5 A53 A536)

  The new or adjusted solution in *live* status, ready for useful work within its target environment, and reflecting the outcome of the deployment activities.

  The deployed solution includes documentation, procedures, training materials, support guidance as well as the primary solution contents.

- Solution Requirements Baseline (From: A41 A415)

  Established according to prescribed organizational standards, it is a baseline of all the Solution Requirements work products currently under Configuration Management.

- Configuration Information (From: A5 A54 A544)

  The information on any individual configuration item (CI) or collection of CIs, which is made available using standard reports or to meet individual requests.

- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

- Security Risk Assessment (From: A723)

  A detailed analysis of the current and projected security risk factors facing the enterprise.

Outputs

- Solution Test Results and Issues

  The collected set of documentation that describes the *fit-for-purpose* characteristics of all of the Solution Test activity work products, and any issues identified as a result of executing the Solution Test process.

- CI Data Update Package (To: A5 A54 A542 A543)

  The details of modifications to any existing CIs that must be validated and captured in the CI master data. The modifications can include:

  - Attributes
  - Relationships

- CI Requisition (To: A5 A54 A543)

  A request for one or more CIs to be made available so that they can be worked upon. In a development environment, this might be a request to check-out solution components from a version-controlled configuration library.

- Change Request (To: A5 A51 A512)

  Change requests (also known as RFCs) are the means for submitting proposed change and actual change activity in the environment. Change requests can be triggered for a wide variety of reasons, from a broad spectrum of sources. They can be concerned with any part of the environment or with any service or activity.

25. ITIL V3 Glossary

- Solution Plans and Commitments (To: A2 A25 A255 A256 A26 A265 A3 A33 A336 A35 A353 A354 A37 A374 A375 A42 A422 A43 A432 A44 A442 A45 A452 A454 A5 A52 A522 A6 A62 A621 A7 A73 A732 A74 A742)

  The collective overall information on both the development plan for the solution and the content of the solution as it progresses from concept to reality.

  - Plans: Sets of committed solution phases, activities, tasks and milestones together with timeframe.
  - Commitments: Sets of requirements, designs and other deliverables, such as test cases.
- Solution Test Report (To: A45 A454)

  The collected test data, results and analysis of the solution and environment under consideration. Includes test cases and defective test cases.
- Project Events (To: A375)

  The notification of events that, in the project manager's opinion, are important to support the management of the project.

Activities

This process is composed of these activities:

- A441 Establish Solution Test Framework
- A442 Develop Solution Test Strategy and Plans
- A443 Prepare and Manage Solution Test Environment
- A444 Perform Solution Test
- A445 Analyze and Report Solution Test Results
- A446 Evaluate Solution Test Performance

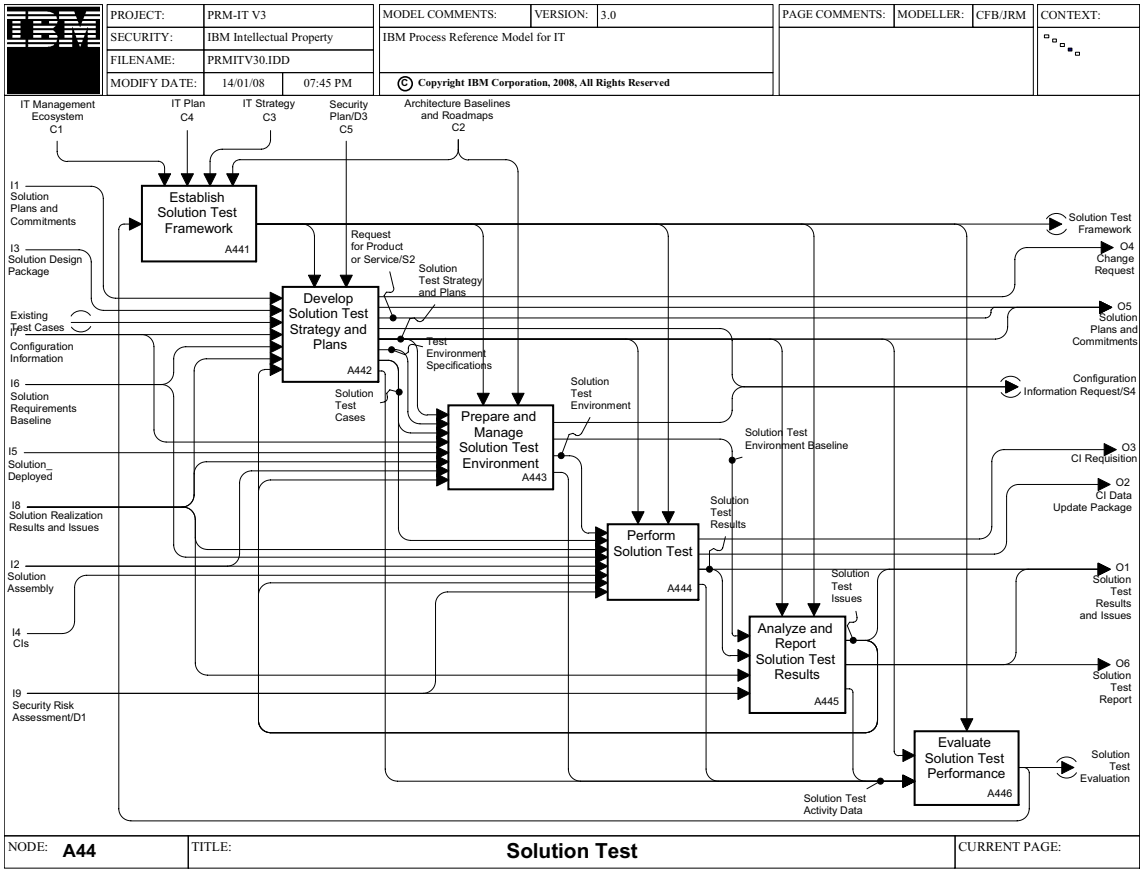

Figure 5. A44 Solution Test

[A441] Establish Solution Test Framework

Description

The purpose of this activity is to tailor in a prescribed way the organization-wide IT Management Framework (policies, standards, procedures, templates related to Solution Test Management and engineering) and to define specific goals, measurements, and targets.

Controls

- IT Management Ecosystem (From: A1)

  To paraphrase a dictionary definition: the complex of management system elements, their physical implementation, and all their interrelationships in the unit of space that is the domain of the IT function. Its fundamental purpose is to provide an environment that is supportive of the carrying out of all of the IT activities defined elsewhere in this model.
- IT Plan (From: A3 A36 A365)

  The set of approved projects and associated schedule, operating plan, service level management commitments, and resource allocation commitments and adjustments for a defined fiscal or planning cycle.
- IT Strategy (From: A3 A31 A315)

  A consolidated statement of IT initiatives. Includes a summary of changes to IT capabilities and a summary of each strategic IT initiative. Also includes a statement of planned and required changes to the IT Portfolio and IT Plan. The IT Sourcing Strategy would be included.
- Architecture Baselines and Roadmaps (From: A3 A33 A334)

  Provides an agreed, published statement of the required architecture at a moment in time. Includes statements to assist in selection and evaluation of appropriate implementations of specified architecture building blocks.

Inputs

- Solution Test Evaluation (From: A446)

  The effectiveness and efficiency of the practices performed in executing the Solution Test process.

Outputs

- Solution Test Framework (To: A442 A443 A444 A445 A446)

  The conceptional structure describing the strategic (vision, mission, value proposition), organizational (organizational mechanisms, roles, accountabilities), process (activities, workflows, inputs, outputs), and technology (software, hardware) practices to be used in achieving the objectives of the Solution Test process.

[A442] Develop Solution Test Strategy and Plans

Description

The purpose of this activity is to develop a project solution-specific approach to Solution Testing (consistent with overall IT practices) and to create the Solution Test (quality control) Project Plan. This activity creates the specifications for all test environments that will be used to test the solution (or solution components), as well as the test cases to be used.

When necessary, this activity also identifies new products or services required to support and complete the test strategies and plans.

Controls

- Solution Test Framework (From: A441)

  The conceptional structure describing the strategic (vision, mission, value proposition), organizational (organizational mechanisms, roles, accountabilities), process (activities, workflows, inputs, outputs), and technology (software, hardware) practices to be used in achieving the objectives of the Solution Test process.
- Security Plan (From: A72 A725)

  A consolidated view and documentation of the resources, approach, procedures and assets to be protected together with a definition of the security practices and controls which will be enacted in order to fulfill the security policy. It covers both technical capabilities (for example, firewalls, encryption) and non-technical considerations (such as segregation of duties, training needs, user responsibilities).

Inputs

- Solution Plans and Commitments (From: A4 A41 A42 A422 A425 A43 A432 A44 A442 A45 A452)

  The collective overall information on both the development plan for the solution and the content of the solution as it progresses from concept to reality.
  - Plans: Sets of committed solution phases, activities, tasks and milestones together with timeframe.
  - Commitments: Sets of requirements, designs and other deliverables, such as test cases.
- Solution Design Package (From: A42 A424)

  The collection of all the work products created during solution design.
- Existing Test Cases

  Any relevant, previously-defined and exercised test case that is identified as relevant to the particular solution for which testing is being planned. These test cases are managed under the Knowledge Management process.
- Configuration Information (From: A5 A54 A544)

  The information on any individual configuration item (CI) or collection of CIs, which is made available using standard reports or to meet individual requests.
- Solution Requirements Baseline (From: A41 A415)

  Established according to prescribed organizational standards, it is a baseline of all the Solution Requirements work products currently under Configuration Management.
- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

- Solution Test Issues (From: A445)

  Any additional issues identified during test results analysis that need to be recognized and perhaps addressed.

Outputs

- Change Request (To: A5 A51 A512)

  Change requests (also known as RFCs) are the means for submitting proposed change and actual change activity in the environment. Change requests can be triggered for a wide variety of reasons, from a broad spectrum of sources. They can be concerned with any part of the environment or with any service or activity.

- Solution Plans and Commitments (To: A2 A25 A255 A256 A26 A265 A3 A33 A336 A35 A353 A354 A37 A374 A375 A42 A422 A43 A432 A44 A442 A45 A452 A454 A5 A52 A522 A6 A62 A621 A7 A73 A732 A74 A742)

  The collective overall information on both the development plan for the solution and the content of the solution as it progresses from concept to reality.

  - Plans: Sets of committed solution phases, activities, tasks and milestones together with time frame.
  - Commitments: Sets of requirements, designs and other deliverables, such as test cases.

- Request for Product or Service (To: A822 A823 A824)

  Information about required products and services that are needed by any IT process - but especially Solution Build and Solution Test. It will be used within the activities of selecting and managing the right portfolio of suppliers and respective supplier contracts, or to initiate actual procurement.

- Configuration Information Request (To: A54 A544)

  Any request for information about one or more configuration items. Many IT processes will make such requests.

- Solution Test Strategy and Plans (To: A443 A444 A445 A446)

  A description of the strategies to be employed and the (sub) project plan which identifies the approach, activities and tasks, responsibilities, and schedule for testing various aspects of the solution as it is designed, built and integrated.

- Test Environment Specifications (To: A443)

  Based on the requirements and design of each solution and on the selected, customized test strategy and plans, this is a specification of the test environment that will support the required testing.

- Solution Test Cases (To: A443 A444)

  The collection of test cases; that is, the description of what is to be tested, why, how (including sample data), and the expected outcomes from the testing.

- Solution Test Activity Data (To: A446)

  Performance and quality data regarding activities performed in executing the Solution Test process.

[A443] Prepare and Manage Solution Test Environment

Description

The purpose of this activity is to prepare the Solution Test Environment by either creating it from scratch or by modifying an existing one. It includes Configuration Management of solution elements, Build Environment elements, and test cases.

Controls

- Solution Test Framework (From: A441)

  The conceptional structure describing the strategic (vision, mission, value proposition), organizational (organizational mechanisms, roles, accountabilities), process (activities, workflows, inputs, outputs), and technology (software, hardware) practices to be used in achieving the objectives of the Solution Test process.
- Architecture Baselines and Roadmaps (From: A3 A33 A334)

  Provides an agreed, published statement of the required architecture at a moment in time. Includes statements to assist in selection and evaluation of appropriate implementations of specified architecture building blocks.

Inputs

- Solution Test Strategy and Plans (From: A442)

  A description of the strategies to be employed and the (sub) project plan which identifies the approach, activities and tasks, responsibilities, and schedule for testing various aspects of the solution as it is designed, built and integrated.
- Test Environment Specifications (From: A442)

  Based on the requirements and design of each solution and on the selected, customized test strategy and plans, this is a specification of the test environment that will support the required testing.
- Solution Test Cases (From: A442)

  The collection of test cases; that is, the description of what is to be tested, why, how (including sample data), and the expected outcomes from the testing.
- Configuration Information (From: A5 A54 A544)

  The information on any individual configuration item (CI) or collection of CIs, which is made available using standard reports or to meet individual requests.
- Solution_ Deployed (From: A5 A53 A536)

  The new or adjusted solution in *live* status, ready for useful work within its target environment, and reflecting the outcome of the deployment activities.

  The deployed solution includes documentation, procedures, training materials, support guidance as well as the primary solution contents.
- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.
- Solution Assembly

  The collection of all the work products created during solution development and integration, including prototypes or implementation of parts of a solution for evaluation and analysis purposes.(From: A43)
- Solution Test Issues (From: A445)

  Any additional issues identified during test results analysis that need to be recognized and perhaps addressed.

Outputs

- Configuration Information Request (To: A54 A544)

  Any request for information about one or more configuration items. Many IT processes will make such requests.
- Solution Test Environment Baseline (To: A445)

  A reference point specification of the functional environment used to support testing of a specific solution.
- Solution Test Environment (To: A444)

  The functional environment constructed and allocated to support testing of a specific solution.
- Solution Test Activity Data (To: A446)

  Performance and quality data regarding activities performed in executing the Solution Test process.

[A444] Perform Solution Test

Description

The purpose of this activity is to test the partially or fully assembled solution in a way according to the Solution Test Strategy and Plans within the specified time frame, and to document the results. It includes putting the integrated solution into the test environment and providing updated Configuration Management data.

Controls

- Solution Test Strategy and Plans (From: A442)

  A description of the strategies to be employed and the (sub) project plan which identifies the approach, activities and tasks, responsibilities, and schedule for testing various aspects of the solution as it is designed, built and integrated.
- Solution Test Framework (From: A441)

  The conceptional structure describing the strategic (vision, mission, value proposition), organizational (organizational mechanisms, roles, accountabilities), process (activities, workflows, inputs, outputs), and technology (software, hardware) practices to be used in achieving the objectives of the Solution Test process.

Inputs

- Solution Test Environment (From: A443)

  The functional environment constructed and allocated to support testing of a specific solution.
- Solution Test Cases (From: A442)

  The collection of test cases; that is, the description of what is to be tested, why, how (including sample data), and the expected outcomes from the testing.
- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.
- Solution Requirements Baseline (From: A41 A415)

  Established according to prescribed organizational standards, it is a baseline of all the Solution Requirements work products currently under Configuration Management.

- Solution Assembly (From: A43)

  The collection of all the work products created during solution development and integration, including prototypes or implementation of parts of a solution for evaluation and analysis purposes.

- CIs (From: A5 A54 A543)

  CIs are the technical (in its broadest sense) components, including assemblies of more granular components, upon which IT service is based. The relevant extract from the ITIL definition of Configuration Item is: “Any Component that needs to be managed in order to deliver an IT Service. ... CIs typically include IT Services, hardware, software, buildings, people, and formal documentation such as Process documentation and SLAs."[26]

- Solution Test Issues (From: A445)

  Any additional issues identified during test results analysis that need to be recognized and perhaps addressed.

- Security Risk Assessment (From: A723)

  A detailed analysis of the current and projected security risk factors facing the enterprise.

Outputs

- CI Requisition (To: A5 A54 A543)

  A request for one or more CIs to be made available so that they can be worked upon. In a development environment, this might be a request to check-out solution components from a version-controlled configuration library.

- CI Data Update Package (To: A5 A54 A542 A543)

  The details of modifications to any existing CIs that must be validated and captured in the CI master data. The modifications can include:

  - Attributes
  - Relationships

- Solution Test Results (To: A445)

  The outcomes (results) of applying the selected test cases to the Solution Build Package.

- Solution Test Activity Data (To: A446)

  Performance and quality data regarding activities performed in executing the Solution Test process.

[A445] Analyze and Report Solution Test Results

Description

The purpose of this activity is to review the documented results of testing activities and to formally report the findings, conclusions, and any additional issues identified during testing along with any recommendations.

These results become part of the solution's overall collection of documentation and project records.

Controls

- Solution Test Strategy and Plans (From: A442)

  A description of the strategies to be employed and the (sub) project plan which identifies the approach, activities and tasks, responsibilities, and schedule for testing various aspects of the solution as it is designed, built and integrated.

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- Solution Test Framework (From: A441)

  The conceptional structure describing the strategic (vision, mission, value proposition), organizational (organizational mechanisms, roles, accountabilities), process (activities, workflows, inputs, outputs), and technology (software, hardware) practices to be used in achieving the objectives of the Solution Test process.

Inputs

- Solution Test Environment Baseline (From: A443)

  A reference point specification of the functional environment used to support testing of a specific solution.
- Solution Test Results (From: A444)

  The outcomes (results) of applying the selected test cases to the Solution Build Package.
- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.
- Security Risk Assessment (From: A723)

  A detailed analysis of the current and projected security risk factors facing the enterprise.

Outputs

- Solution Test Issues (To: A442 A443 A444)

  Any additional issues identified during test results analysis that need to be recognized and perhaps addressed.
- Solution Test Report (To: A45 A454)

  The collected test data, results and analysis of the solution and environment under consideration. Includes test cases and defective test cases.
- Solution Test Activity Data (To: A446)

  Performance and quality data regarding activities performed in executing the Solution Test process.

[A446] Evaluate Solution Test Performance

Description

The purpose of this activity is to evaluate performance of the project-specific Solution Test (quality control) activities against defined performance criteria and measures, and to provide input to the IT Management System Framework.

The evaluation of process performance identifies areas that need improvement, such as the foundation and interfaces of the process, activity definitions, key performance metrics, the state of supporting automation, as well as the roles and responsibilities and skills required. Insights and lessons learned from direct observation and data collected on process performance are the basis for improvement recommendations.

Controls

- Solution Test Framework (From: A441)

  The conceptional structure describing the strategic (vision, mission, value proposition), organizational (organizational mechanisms, roles, accountabilities), process (activities, workflows, inputs, outputs), and technology (software, hardware) practices to be used in achieving the objectives of the Solution Test process.

Inputs

- Solution Test Strategy and Plans (From: A442)

  A description of the strategies to be employed and the (sub) project plan which identifies the approach, activities and tasks, responsibilities, and schedule for testing various aspects of the solution as it is designed, built and integrated.

- Solution Test Activity Data (From: A442 A443 A444 A445)

  Performance and quality data regarding activities performed in executing the Solution Test process.

Outputs

- Solution Test Evaluation (To: A441)

  The effectiveness and efficiency of the practices performed in executing the Solution Test process.

[A45] Solution Acceptance

Purpose

The purpose of the Solution Acceptance process is to validate that the proposed solution, either as individual artifacts or in its complete form, meets acceptance criteria at defined checkpoints

Outcomes

As a result of successful implementation of this process:

- Stakeholders agree before deployment that all requirements have been met
- The solution's capability to meet service level agreements is validated
- Transition of the solution into live service presents minimum risk
- The production environment remains stable and predictable after incorporating this solution
- Those responsible for delivering service and support are properly prepared to do so

Scope

ITIL defines acceptance as: “Formal agreement that an IT Service, Process, Plan, or other Deliverable is complete, accurate, Reliable and meets its specified Requirements. Acceptance is usually preceded by Evaluation or Testing and is often required before proceeding to the next stage of a Project or Process.” [27]

This process operates throughout and beyond the lifetime of a solution realization project. An instance of examining the acceptance of a service can be triggered post-deployment, perhaps as part of a pilot rollout.

Includes

- Periodic review of solution project performance to date and status in respect of solution acceptance criteria
- Involvement of all relevant stakeholders, such as:
  - Solution customer
  - Solution developer
  - Provider of service for the solution once deployed—this includes operational staff as well as management
  - Interested parties in relation to non-functional concerns, like security, compliance, conformance to architectural and development guidelines)
  - Users
- Assisting in the development of approved solution plans and commitments
- Obtaining the customer perspective on prototype work products and accepted solutions
- Working with the customer to facilitate acceptance of the solution
- Working with the customer to facilitate acceptance of solution shutdown and retirement
- Documenting how the confirmed requirements are met in the accepted solution and in interim milestones
- Identifying and tracking of all acceptance review results and issues

27. ITIL V3 Glossary

Excludes

- Testing (Solution Test)
- Providing education and training (Deployment Management)
- Establishing service levels (Service Level Management)

Controls

- IT Management Ecosystem (From: A1)

  To paraphrase a dictionary definition: the complex of management system elements, their physical implementation, and all their interrelationships in the unit of space that is the domain of the IT function. Its fundamental purpose is to provide an environment that is supportive of the carrying out of all of the IT activities defined elsewhere in this model.

- Architecture Baselines and Roadmaps (From: A3 A33 A334)

  Provides an agreed, published statement of the required architecture at a moment in time. Includes statements to assist in selection and evaluation of appropriate implementations of specified architecture building blocks.

- SLAs, OLAs, UCs (From: A2 A24 A243)

  The agreements that represent the interlinked set of commitments for the service utility and warranty that is to be provided to one or more customers. The agreement between the customer and the organizational unit that directly provides the service is known as a service level agreement (SLA) and is visible to the customer. The agreements that represent the commitments of the collective set of internal organizational units and external entities to provide identified sub-components of the overall service are known as operational level agreements (OLAs). OLAs are not usually visible to the customer. Contractual statements of the commitments by external entities are known as underpinning contracts (UCs).

  ITIL definition of these terms:

  - SLA: “An Agreement between an IT Service Provider and a Customer. The SLA describes the IT Service, documents Service Level Targets, and specifies the responsibilities of the IT Service Provider and the Customer. A single SLA may cover multiple IT Services or multiple Customers.”[28]
  - OLA: “An Agreement between an IT Service Provider and another part of the same Organisation. An OLA supports the IT Service Provider's delivery of IT Services to Customers. The OLA defines the goods or Services to be provided and the responsibilities of both parties.”[29]
  - UC: “A Contract between an IT Service Provider and a Third Party. The Third Party provides goods or Services that support delivery of an IT Service to a Customer. The Underpinning Contract defines targets and responsibilities that are required to meet agreed Service Level Targets in an SLA.”[30]

  These agreements can be in a draft or finalized status.

- IT Strategy (From: A3 A31 A315)

  A consolidated statement of IT initiatives. Includes a summary of changes to IT capabilities and a summary of each strategic IT initiative. Also includes a statement of planned and required changes to the IT Portfolio and IT Plan. The IT Sourcing Strategy would be included.

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29. ITIL V3 Glossary
30. ITIL V3 Glossary

- IT Plan (From: A3 A36 A365)

  The set of approved projects and associated schedule, operating plan, service level management commitments, and resource allocation commitments and adjustments for a defined fiscal or planning cycle.

Inputs

- Solution Plans and Commitments (From: A4 A41 A42 A422 A425 A43 A432 A44 A442 A45 A452)

  The collective overall information on both the development plan for the solution and the content of the solution as it progresses from concept to reality.

  - Plans: Sets of committed solution phases, activities, tasks and milestones together with timeframe.
  - Commitments: Sets of requirements, designs and other deliverables, such as test cases.

- Solution Test Report (From: A44 A445)

  The collected test data, results and analysis of the solution and environment under consideration. Includes test cases and defective test cases.

- Solution Assembly (From: A43)

  The collection of all the work products created during solution development and integration, including prototypes or implementation of parts of a solution for evaluation and analysis purposes.

- Solution Design (From: A4 A42 A425)

  Solution design, including conceptual, macro, and micro designs, together with identified issues and risks, and formally validated and approved (signed off) by the key stakeholders. It not only covers all the functional and non-functional requirements of the solution, but also the design for meeting the compliance reporting requirements applicable to the solution.

- Solution Requirements Baseline (From: A41 A415)

  Established according to prescribed organizational standards, it is a baseline of all the Solution Requirements work products currently under Configuration Management.

- Security Risk Assessment (From: A723)

  A detailed analysis of the current and projected security risk factors facing the enterprise.

- Operational Documentation (From: A855)

  The subset of knowledge assets that represent the set of material, both externally provided and internally generated, required to support the development, deployment, operation, and maintenance of solutions and services.

  - ITIL uses the term Operational Document Library to refer to an implementation of this output.

- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

Outputs

- Solution Acceptance Review Results and Issues (To: A452 A453 A455)

  The collected set of documentation describing the *fit-for-purpose* characteristics of the Solution Acceptance work products, and any issues identified as a result of executing solution acceptance reviews.

- Solution Plans and Commitments (To: A2 A25 A255 A256 A26 A265 A3 A33 A336 A35 A353 A354 A37 A374 A375 A42 A422 A43 A432 A44 A442 A45 A452 A454 A5 A52 A522 A6 A62 A621 A7 A73 A732 A74 A742)

  The collective overall information on both the development plan for the solution and the content of the solution as it progresses from concept to reality.

  - Plans: Sets of committed solution phases, activities, tasks and milestones together with timeframe.
  - Commitments: Sets of requirements, designs and other deliverables, such as test cases.
- CI Data Update Package (To: A5 A54 A542 A543)

  The details of modifications to any existing CIs that must be validated and captured in the CI master data. The modifications can include:

  - Attributes
  - Relationships
- Solution_ Accepted (To: A5 A52 A523 A53 A533)

  The Solution which has been approved by the stakeholder community, and is now ready to be deployed.
- Project Events (To: A375)

  The notification of events that, in the project manager's opinion, are important to support the management of the project.

Activities

This process is composed of these activities:

- A451 Establish Solution Acceptance Framework
- A452 Create Solution Acceptance Plan
- A453 Define Solution Acceptance Criteria
- A454 Perform Solution Acceptance Review
- A455 Certify Solution Acceptance
- A456 Package Certified Solution
- A457 Evaluate Solution Acceptance Performance

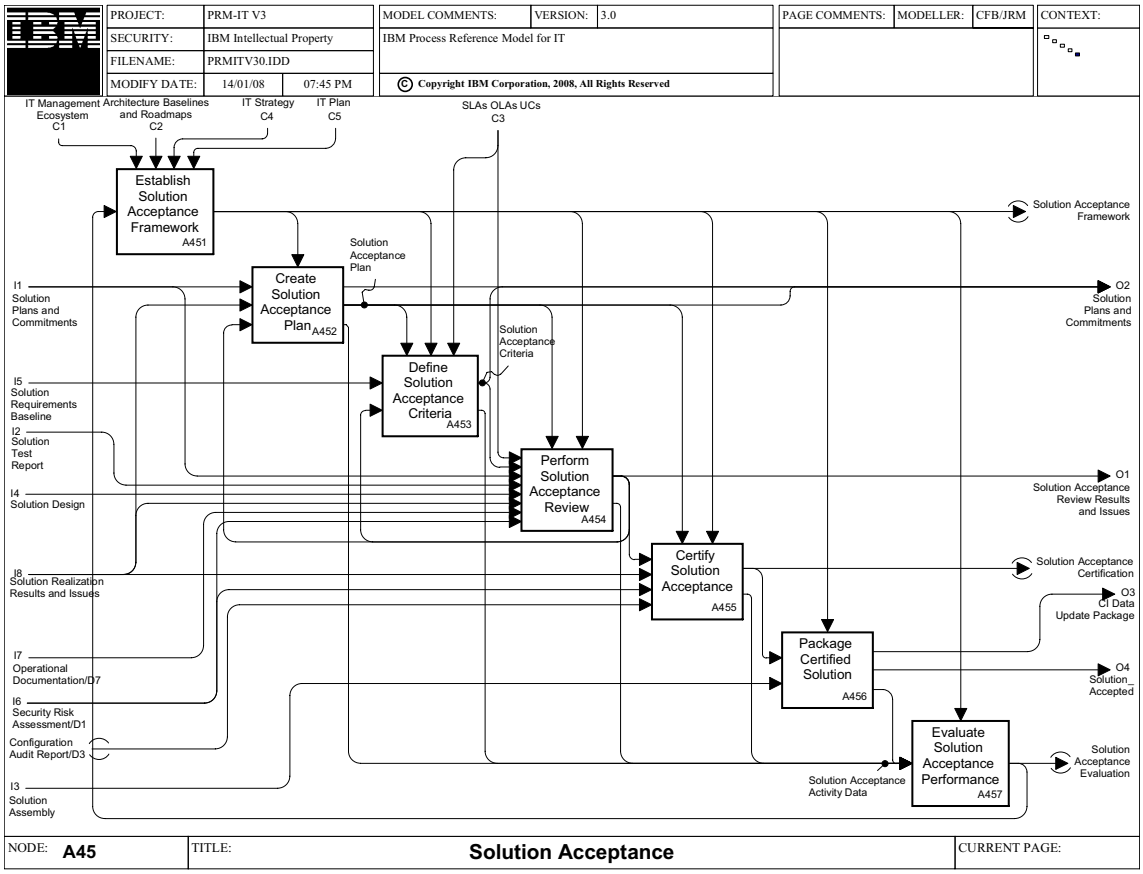

Figure 6. A45 Solution Acceptance

[A451] Establish Solution Acceptance Framework

Description

The purpose of this activity is to tailor in a prescribed way the organization-wide IT Management Framework (policies, standards, procedures, templates related to Solution Acceptance management and engineering), and to define specific goals, measurements and targets.

Controls

- IT Management Ecosystem (From: A1)

  To paraphrase a dictionary definition: the complex of management system elements, their physical implementation, and all their interrelationships in the unit of space that is the domain of the IT function. Its fundamental purpose is to provide an environment that is supportive of the carrying out of all of the IT activities defined elsewhere in this model.

- Architecture Baselines and Roadmaps (From: A3 A33 A334)

  Provides an agreed, published statement of the required architecture at a moment in time. Includes statements to assist in selection and evaluation of appropriate implementations of specified architecture building blocks.

- IT Strategy (From: A3 A31 A315)

  A consolidated statement of IT initiatives. Includes a summary of changes to IT capabilities and a summary of each strategic IT initiative. Also includes a statement of planned and required changes to the IT Portfolio and IT Plan. The IT Sourcing Strategy would be included.

- IT Plan (From: A3 A36 A365)

  The set of approved projects and associated schedule, operating plan, service level management commitments, and resource allocation commitments and adjustments for a defined fiscal or planning cycle.

Inputs

- Solution Acceptance Evaluation (From: A457)

  The effectiveness and efficiency of the practices performed in executing the Solution Acceptance process.

Outputs

- Solution Acceptance Framework (To: A452 A453 A454 A455 A456 A457)

  The conceptional structure describing the strategic (vision, mission, value proposition), organizational (organizational mechanisms, roles, accountabilities), process (activities, work flows, inputs, outputs), and technology (software, hardware) practices to be used in achieving acceptance of the proposed solution.

[A452] Create Solution Acceptance Plan

Description

The purpose of this activity is to develop a project solution-specific approach to solution acceptance and to create the Solution Acceptance Project Plan, in accordance with existing IT standards and approved methods.

The solution acceptance plan should include provisions to thoroughly address any residual solution development results and issues.

Controls

- Solution Acceptance Framework (From: A451)

  The conceptional structure describing the strategic (vision, mission, value proposition), organizational (organizational mechanisms, roles, accountabilities), process (activities, work flows, inputs, outputs), and technology (software, hardware) practices to be used in achieving acceptance of the proposed solution.

Inputs

- Solution Plans and Commitments (From: A4 A41 A42 A422 A425 A43 A432 A44 A442 A45 A452)

  The collective overall information on both the development plan for the solution and the content of the solution as it progresses from concept to reality.

  - Plans: Sets of committed solution phases, activities, tasks and milestones together with timeframe.
  - Commitments: Sets of requirements, designs and other deliverables, such as test cases.
- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.
- Solution Acceptance Review Results and Issues (From: A45 A454)

  The collected set of documentation describing the *fit-for-purpose* characteristics of the Solution Acceptance work products, and any issues identified as a result of executing solution acceptance reviews.

Outputs

- Solution Plans and Commitments (To: A2 A25 A255 A256 A26 A265 A3 A33 A336 A35 A353 A354 A37 A374 A375 A42 A422 A43 A432 A44 A442 A45 A452 A454 A5 A52 A522 A6 A62 A621 A7 A73 A732 A74 A742)

  The collective overall information on both the development plan for the solution and the content of the solution as it progresses from concept to reality.

  - Plans: Sets of committed solution phases, activities, tasks and milestones together with timeframe.
  - Commitments: Sets of requirements, designs and other deliverables, such as test cases.
- Solution Acceptance Plan (To: A453 A454 A455)

  The (sub) project plan which identifies the approach, activities and tasks, responsibilities, and schedule for presenting the proposed solution to the stakeholder community for evaluation and acceptance. Includes identification of stakeholders.

- Solution Acceptance Activity Data (To: A457)

  Performance and quality data regarding activities performed in executing the Solution Acceptance Process.

[A453] Define Solution Acceptance Criteria

Description

The purpose of this activity is to determine and document the final criteria to be used by the stakeholder community in evaluating the solution against the Solution Requirements Baseline and, if necessary, the ability to tolerate known defects in a production implementation.

Controls

- Solution Acceptance Plan (From: A452)

  The (sub) project plan which identifies the approach, activities and tasks, responsibilities, and schedule for presenting the proposed solution to the stakeholder community for evaluation and acceptance. Includes identification of stakeholders.

- Solution Acceptance Framework (From: A451)

  The conceptional structure describing the strategic (vision, mission, value proposition), organizational (organizational mechanisms, roles, accountabilities), process (activities, work flows, inputs, outputs), and technology (software, hardware) practices to be used in achieving acceptance of the proposed solution.

- SLAs, OLAs, UCs (From: A2 A24 A243)

  The agreements that represent the interlinked set of commitments for the service utility and warranty that is to be provided to one or more customers. The agreement between the customer and the organizational unit that directly provides the service is known as a service level agreement (SLA) and is visible to the customer. The agreements that represent the commitments of the collective set of internal organizational units and external entities to provide identified sub-components of the overall service are known as operational level agreements (OLAs). OLAs are not usually visible to the customer. Contractual statements of the commitments by external entities are known as underpinning contracts (UCs).

  ITIL definition of these terms:

  - SLA: “An Agreement between an IT Service Provider and a Customer. The SLA describes the IT Service, documents Service Level Targets, and specifies the responsibilities of the IT Service Provider and the Customer. A single SLA may cover multiple IT Services or multiple Customers.”[31]
  - OLA: “An Agreement between an IT Service Provider and another part of the same Organisation. An OLA supports the IT Service Provider's delivery of IT Services to Customers. The OLA defines the goods or Services to be provided and the responsibilities of both parties.”[32]
  - UC: “A Contract between an IT Service Provider and a Third Party. The Third Party provides goods or Services that support delivery of an IT Service to a Customer. The Underpinning Contract defines targets and responsibilities that are required to meet agreed Service Level Targets in an SLA.”[33]

  These agreements can be in a draft or finalized status.

31. ITIL V3 Glossary
32. ITIL V3 Glossary
33. ITIL V3 Glossary

Inputs

- Solution Requirements Baseline (From: A41 A415)

  Established according to prescribed organizational standards, it is a baseline of all the Solution Requirements work products currently under Configuration Management.

- Solution Acceptance Review Results and Issues (From: A45 A454)

  The collected set of documentation describing the *fit-for-purpose* characteristics of the Solution Acceptance work products, and any issues identified as a result of executing solution acceptance reviews.

Outputs

- Solution Acceptance Criteria (To: A454)

  The complete set of criteria that the stakeholder community will use to certify their acceptance of the solution produced.

  For the special case of 'Solution' that is a 'Service', ITIL defines Service Acceptance Criteria as: “A set of criteria used to ensure that an IT Service meets its functionality and Quality Requirements and that the IT Service Provider is ready to Operate the new IT Service when it has been Deployed.”[34]

- Solution Acceptance Activity Data (To: A457)

  Performance and quality data regarding activities performed in executing the Solution Acceptance Process.

[A454] Perform Solution Acceptance Review

Description

The purpose of this activity is to evaluate the tested solution against its acceptance criteria, and to produce a detailed and thorough analysis of both the resultant solution and its associated operational documentation.

Any recognized security vulnerabilities and risks should be highlighted in the review results.

Controls

- Solution Acceptance Plan (From: A452)

  The (sub) project plan which identifies the approach, activities and tasks, responsibilities, and schedule for presenting the proposed solution to the stakeholder community for evaluation and acceptance. Includes identification of stakeholders.

- Solution Acceptance Framework (From: A451)

  The conceptional structure describing the strategic (vision, mission, value proposition), organizational (organizational mechanisms, roles, accountabilities), process (activities, work flows, inputs, outputs), and technology (software, hardware) practices to be used in achieving acceptance of the proposed solution.

Inputs

- SLAs, OLAs, UCs (From: A2 A24 A243)

  The agreements that represent the interlinked set of commitments for the service utility and warranty that is to be provided to one or more customers. The agreement between the customer and the organizational unit that directly provides the service is known as a service level agreement (SLA) and is visible to the customer. The agreements that represent the commitments of the collective set of internal organizational units and external

34. ITIL V3 Glossary

entities to provide identified sub-components of the overall service are known as operational level agreements (OLAs). OLAs are not usually visible to the customer. Contractual statements of the commitments by external entities are known as underpinning contracts (UCs).

ITIL definition of these terms:

- SLA: “An Agreement between an IT Service Provider and a Customer. The SLA describes the IT Service, documents Service Level Targets, and specifies the responsibilities of the IT Service Provider and the Customer. A single SLA may cover multiple IT Services or multiple Customers.”[35]
- OLA: “An Agreement between an IT Service Provider and another part of the same Organisation. An OLA supports the IT Service Provider's delivery of IT Services to Customers. The OLA defines the goods or Services to be provided and the responsibilities of both parties.”[36]
- UC: “A Contract between an IT Service Provider and a Third Party. The Third Party provides goods or Services that support delivery of an IT Service to a Customer. The Underpinning Contract defines targets and responsibilities that are required to meet agreed Service Level Targets in an SLA.”[37]

These agreements can be in a draft or finalized status.

- Solution Acceptance Criteria (From: A453)

  The complete set of criteria that the stakeholder community will use to certify their acceptance of the solution produced.

  For the special case of 'Solution' that is a 'Service', ITIL defines Service Acceptance Criteria as: “A set of criteria used to ensure that an IT Service meets its functionality and Quality Requirements and that the IT Service Provider is ready to Operate the new IT Service when it has been Deployed.”[38]

- Solution Plans and Commitments (From: A4 A41 A42 A422 A425 A43 A432 A44 A442 A45 A452)

  The collective overall information on both the development plan for the solution and the content of the solution as it progresses from concept to reality.

  - Plans: Sets of committed solution phases, activities, tasks and milestones together with timeframe.
  - Commitments: Sets of requirements, designs and other deliverables, such as test cases.

- Solution Test Report (From: A44 A445)

  The collected test data, results and analysis of the solution and environment under consideration. Includes test cases and defective test cases.

- Solution Design (From: A4 A42 A425)

  Solution design, including conceptual, macro, and micro designs, together with identified issues and risks, and formally validated and approved (signed off) by the key stakeholders. It not only covers all the functional and non-functional requirements of the solution, but also the design for meeting the compliance reporting requirements applicable to the solution.

- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

35. ITIL V3 Glossary
36. ITIL V3 Glossary
37. ITIL V3 Glossary
38. ITIL V3 Glossary

- Operational Documentation (From: A855)

  The subset of knowledge assets that represent the set of material, both externally provided and internally generated, required to support the development, deployment, operation, and maintenance of solutions and services.

  - ITIL uses the term Operational Document Library to refer to an implementation of this output.
- Security Risk Assessment (From: A723)

  A detailed analysis of the current and projected security risk factors facing the enterprise.

Outputs

- Solution Acceptance Review Results and Issues (To: A452 A453 A455)

  The collected set of documentation describing the *fit-for-purpose* characteristics of the Solution Acceptance work products, and any issues identified as a result of executing solution acceptance reviews.
- Solution Acceptance Activity Data (To: A457)

  Performance and quality data regarding activities performed in executing the Solution Acceptance Process.

[A455] Certify Solution Acceptance

Description

The purpose of this activity is to create a formal checkpoint and documentation of stakeholder acceptance of the as-built solution.

Once consensus is achieved, the accepted solution can be packaged ready for handover and then begin its migration through Change Management processes to the next environment tier (for example, from development to test).

Controls

- Solution Acceptance Plan (From: A452)

  The (sub) project plan which identifies the approach, activities and tasks, responsibilities, and schedule for presenting the proposed solution to the stakeholder community for evaluation and acceptance. Includes identification of stakeholders.
- Solution Acceptance Framework (From: A451)

  The conceptional structure describing the strategic (vision, mission, value proposition), organizational (organizational mechanisms, roles, accountabilities), process (activities, work flows, inputs, outputs), and technology (software, hardware) practices to be used in achieving acceptance of the proposed solution.

Inputs

- Solution Acceptance Review Results and Issues (From: A45 A454)

  The collected set of documentation describing the *fit-for-purpose* characteristics of the Solution Acceptance work products, and any issues identified as a result of executing solution acceptance reviews.
- Solution Realization Results and Issues (From: A4)

  The collection of summary level history and status of Solution Realization activities and work products throughout their life cycle. Typically used to establish and update organizational performance benchmarks (estimates versus actual), transmit quality information, and other heuristics related to Solution Realization processes.

- Security Risk Assessment (From: A723)

  A detailed analysis of the current and projected security risk factors facing the enterprise.
- Configuration Audit Report (From: A545)

  The outcomes of a configuration audit. The outcomes cover both status of configuration items and audit trails of changes to configuration items, such as logs of identities of the persons making such changes.

Outputs

- Solution Acceptance Certification (To: A456)

  The record (document) containing the formal certification by authorized, designated stakeholders that the solution meets acceptance criteria.
- Solution Acceptance Activity Data (To: A457)

  Performance and quality data regarding activities performed in executing the Solution Acceptance Process.

[A456] Package Certified Solution

Description

This activity exists to bring together all the solution components (such as modules, builds, procedures, documentation) which comprise the certified solution in a single physical or logical package. Packaging ensures that the recipients of the accepted solution either directly receive all the solution components or are provided with a bill-of-material together with details of how to obtain the components, or some combination thereof.

Controls

- Solution Acceptance Framework (From: A451)

  The conceptional structure describing the strategic (vision, mission, value proposition), organizational (organizational mechanisms, roles, accountabilities), process (activities, work flows, inputs, outputs), and technology (software, hardware) practices to be used in achieving acceptance of the proposed solution.

Inputs

- Solution Acceptance Certification (From: A455)

  The record (document) containing the formal certification by authorized, designated stakeholders that the solution meets acceptance criteria.
- Solution Assembly (From: A43)

  The collection of all the work products created during solution development and integration, including prototypes or implementation of parts of a solution for evaluation and analysis purposes.

Outputs

- CI Data Update Package (To: A5 A54 A542 A543)

  The details of modifications to any existing CIs that must be validated and captured in the CI master data. The modifications can include:

  - Attributes
  - Relationships
- Solution_ Accepted (To: A5 A52 A523 A53 A533)

  The Solution which has been approved by the stakeholder community, and is now ready to be deployed.

- Solution Acceptance Activity Data (To: A457)

  Performance and quality data regarding activities performed in executing the Solution Acceptance Process.

[A457] Evaluate Solution Acceptance Performance

Description

The purpose of this activity is to evaluate the performance of the Solution Acceptance process activities against defined performance criteria and measures, and to provide input to the IT Management System Framework.

The evaluation of process performance identifies areas that need improvement, such as the foundation and interfaces of the process, activity definitions, key performance metrics, the state of supporting automation, as well as the roles and responsibilities and skills required. Insights and lessons learned from direct observation and data collected on process performance are the basis for improvement recommendations.

Controls

- Solution Acceptance Framework (From: A451)

  The conceptional structure describing the strategic (vision, mission, value proposition), organizational (organizational mechanisms, roles, accountabilities), process (activities, work flows, inputs, outputs), and technology (software, hardware) practices to be used in achieving acceptance of the proposed solution.

Inputs

- Solution Acceptance Activity Data (From: A452 A453 A454 A455 A456)

  Performance and quality data regarding activities performed in executing the Solution Acceptance Process.

Outputs

- Solution Acceptance Evaluation (To: A451)

  The effectiveness and efficiency of the practices performed in executing the Solution Acceptance process.

PRM-IT A4 Node Tree

A4 – REALIZATION	
A41	**Solution Requirements**
A411	Establish Solution Requirements Framework
A412	Refine and Verify Business Context
A413	Document and Analyze Solution Requirements
A414	Validate Solution Requirements with Stakeholders
A415	Manage Solution Requirements Baseline
A416	Evaluate Solution Requirements Performance
A42	**Solution Analysis and Design**
A421	Establish Solution Analysis and Design Framework
A422	Create Conceptual Solution Design
A423	Identify and Select Solution Components
A424	Create Detailed Solution Design
A425	Validate Solution Design with Stakeholders
A426	Evaluate Solution Analysis and Design Performance
A43	**Solution Development and Integration**
A431	Establish Solution Development and Integration Framework
A432	Define Solution Development and Integration Plan
A433	Prepare Solution Development and Integration Environment
A434	Acquire or Create Solution Components
A435	Integrate Solution Components
A436	Refine and Tune Integrated Solution
A437	Verify Integrated Solution
A438	Evaluate Solution Development and Integration Performance
A44	**Solution Test**
A441	Establish Solution Test Framework
A442	Develop Solution Test Strategy and Plans
A443	Prepare and Mange Solution Test Environment
A444	Perform Solution Test
A445	Analyze and Report Solution Test Results
A446	Evaluate Solution Test Performance
A45	**Solution Acceptance**
A451	Establish Solution Acceptance Framework
A452	Create Solution Acceptance Plan
A453	Define Solution Acceptance Criteria
A454	Perform Solution Acceptance Review
A455	Certify Solution Acceptance
A456	Package Certified Solution
A457	Evaluate Solution Acceptance Performance

Figure 7. A4 Realization Node Tree

