

Effectively Managing Process Compliance



Systems Engineering in the Face of
Multiple Models, Standards and Best Practices.

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Agenda

- Current Challenges
- Goals
- Proposed Solution
- Tool Support and Interfaces
- Benefits

Current Challenges

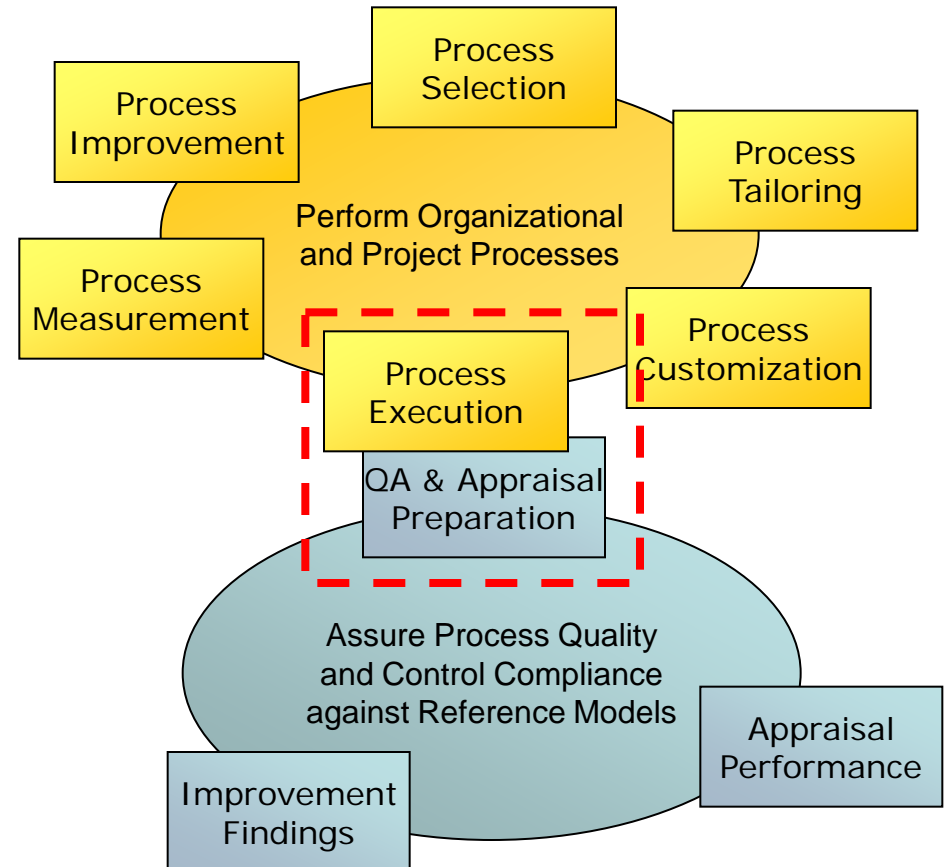
- Heavy time and cost pressure affects product quality
- Frequent audits or appraisals
- Up to 25% of work hours for audit preparation and performance
- Assure compliance with specific models or standards for safety, security, quality, reliability, etc. in parallel

Goals

- Allow organizations to focus on the definition and implementation of processes
- Provide automated support to facilitate enactment of the processes
- Provide support for continuously monitoring adherence to the processes
- Support appraisal preparation and performance by automating evidence collection
- Effectively collect, manage and track non-conformances to closure in order to improve processes and secure future audit success

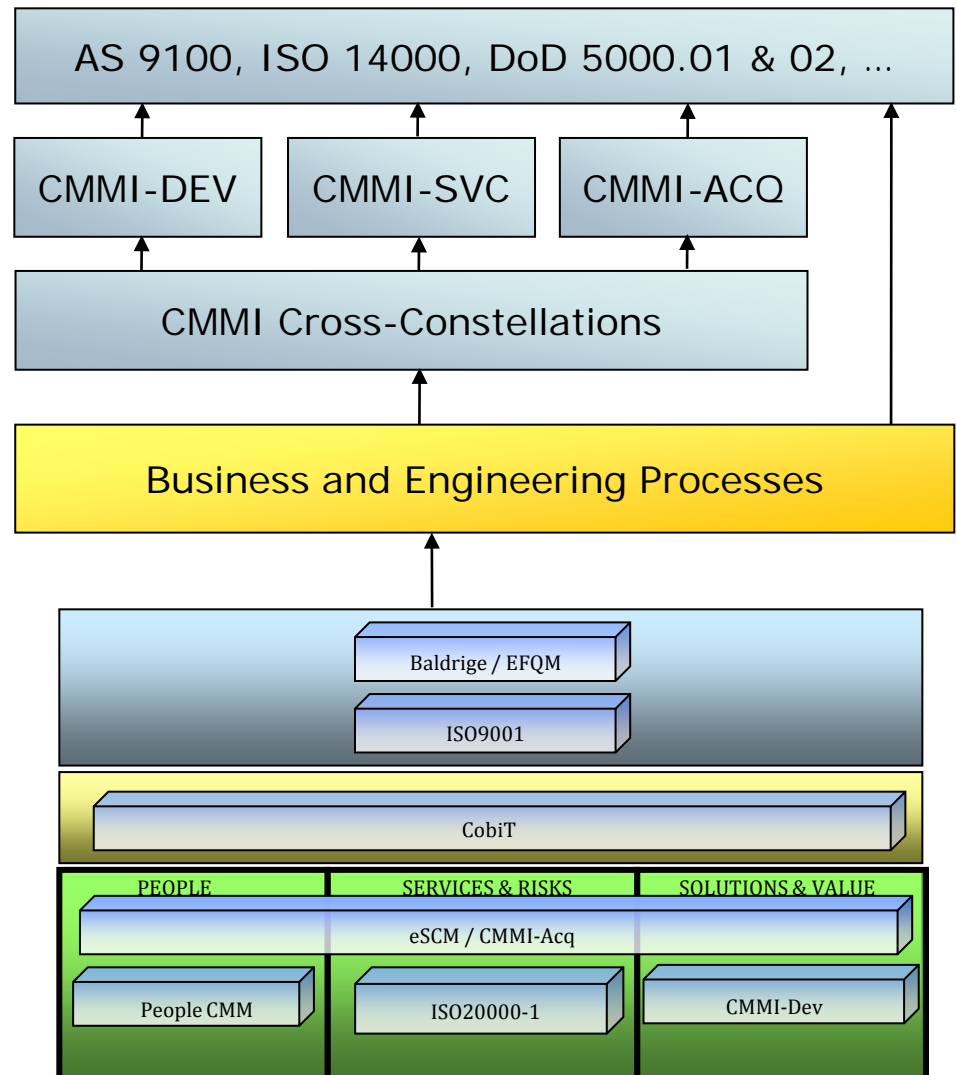
Key Idea

- Actively use the development processes in projects, i.e. by creating work products in projects
- Link the actively used development processes to the models or standards that need to be fulfilled (e.g. CMMI, ISO)
- Continuously perform PPQA activities
- Result: evidence data will automatically be collected in the background



Multi-model Support

- Multiple reference models can be linked into multi-models
- Multimodel links are weighted
- Multimodels are specific to organization (i.e. dependent on type of business)

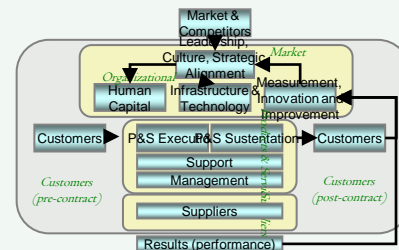




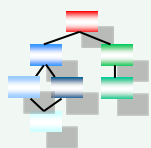
Process Composition and Definition

- ◆ Establish and maintain Organization Standard Process model(s) in Model Wizard or Stages or tooling with similar capability.
 - Create or import a model of your enterprise processes that incorporates the desired best practices of applicable standards and model(s). Update when needed.
 - *This step is performed once for each level at which the process is tailored within the enterprise. (e.g. Enterprise, Division, Department, Product Line)*
 - *Ultimately it is tailored to a particular project . At that point it becomes a representation of the Project's Defined Process.*
 - *It can then be used as the basis for identifying and analyzing information and evidence supporting:*
 - *Project QA activity and monitoring,*
 - *Internal compliance audits, and*
 - *External benchmarking appraisals or compliance audits.*

Relationship Enterprise Architecture, Best Practices, Process Improvement



Business Architecture



Activity A – Missing Process

Activity B – Needs Process Improvement

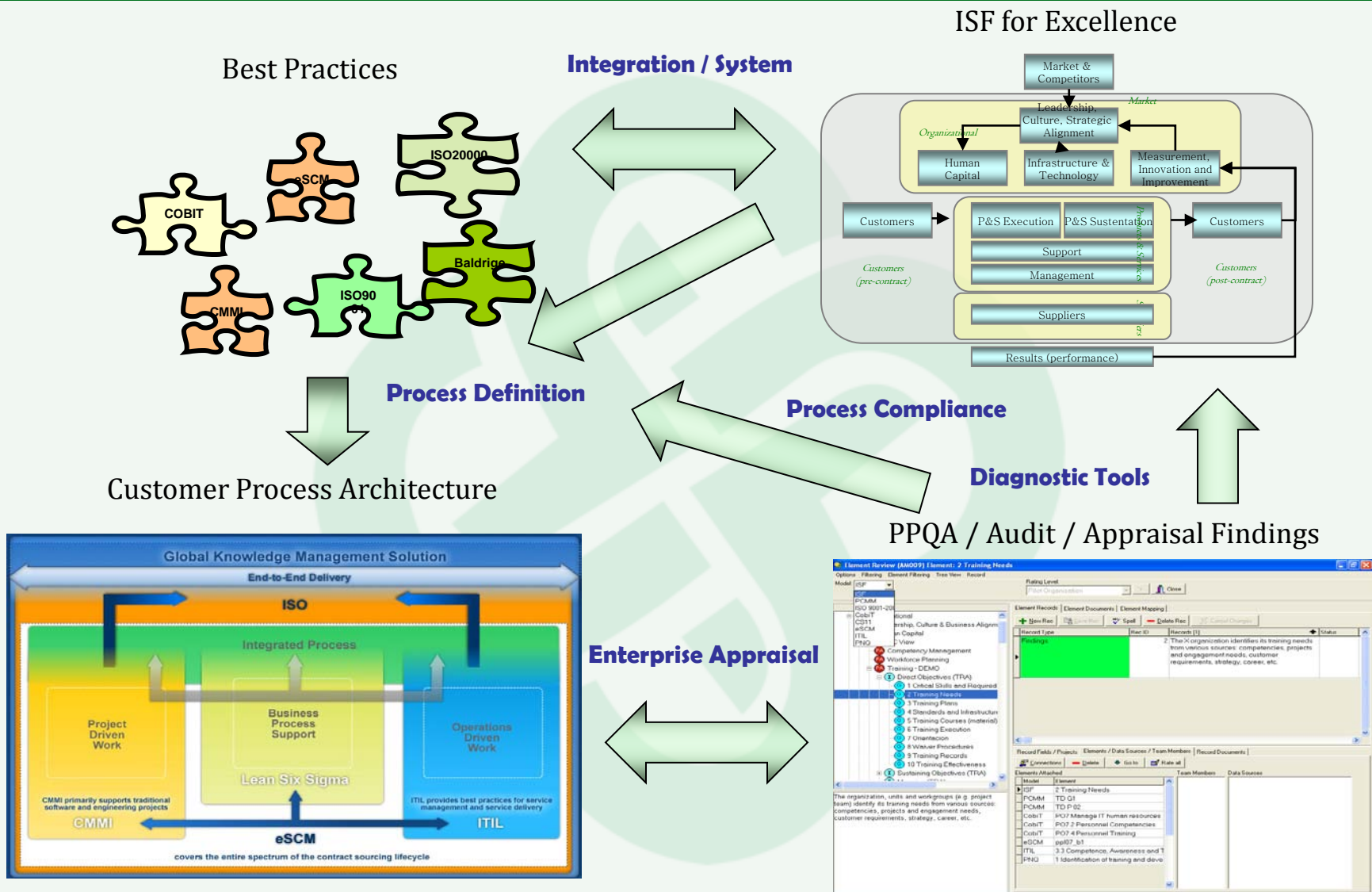
ISF CPP X Objective Z
ISO Clause X
PCCM Practice Y

ISF CPP X Objective Z
ISO Clause B
CMMI Practice SP #. #

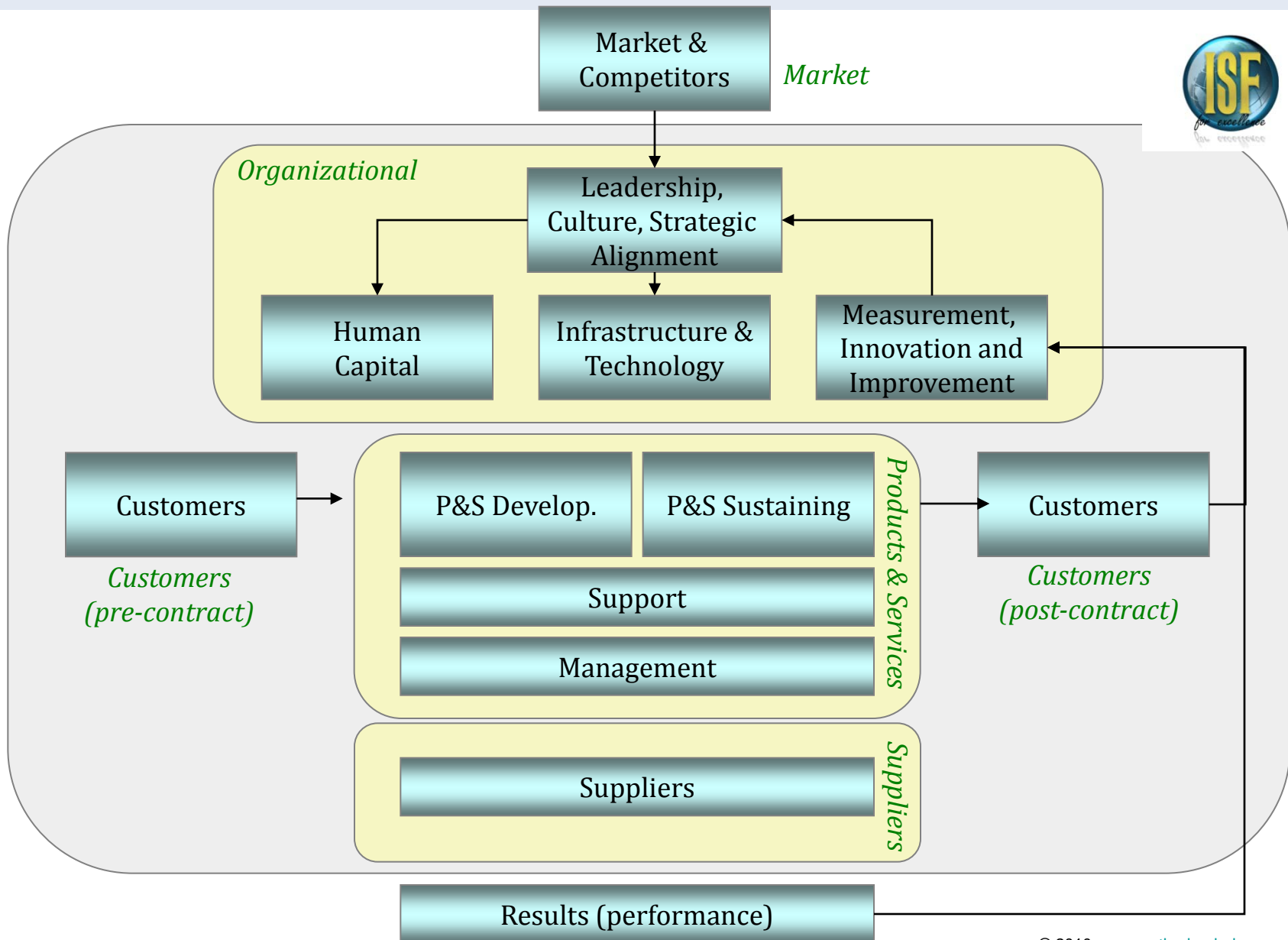
Process Improvement
Implementation Guidance

Best Practices

Relationships: Process Architecture, Best Practices, Audits

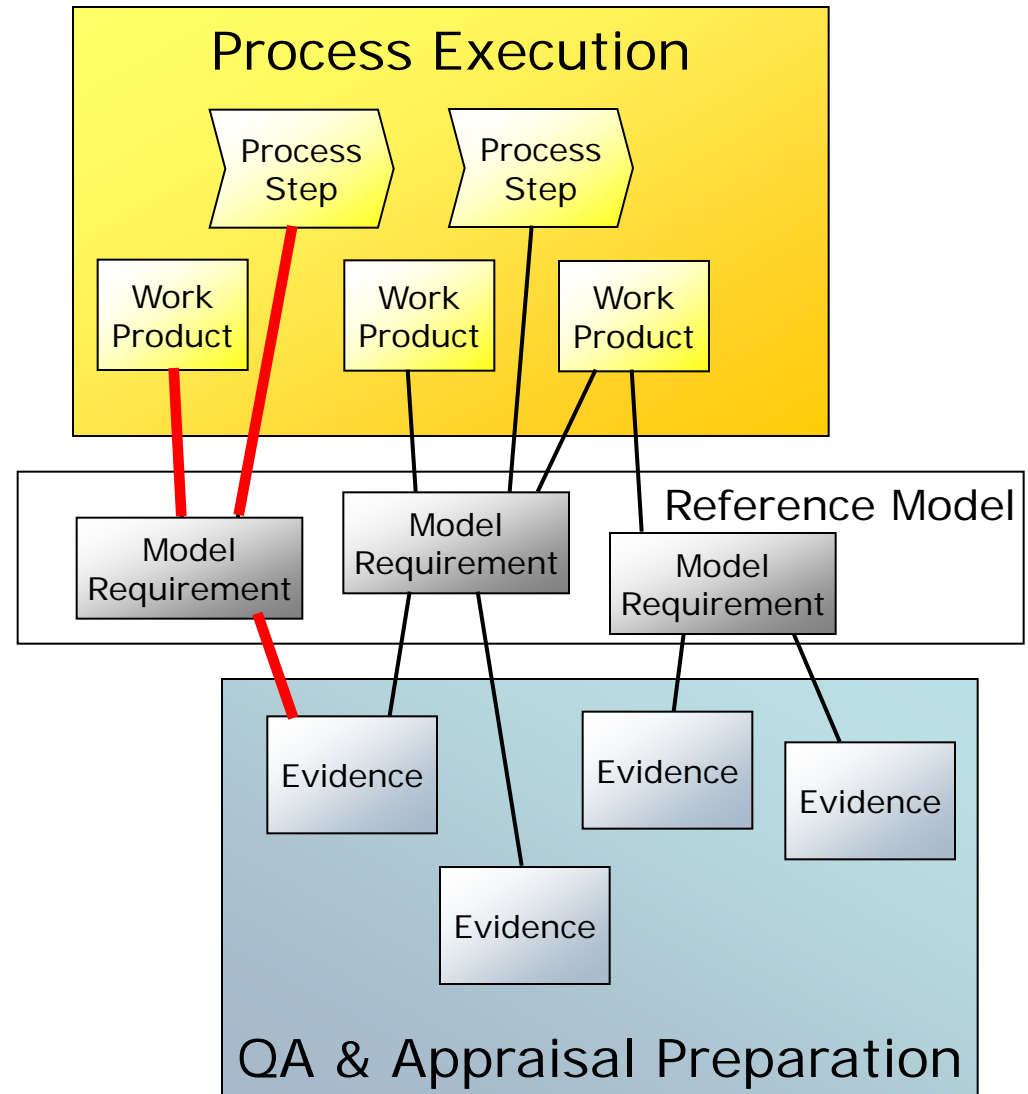


ISF *for Excellence* – Systemic View Integration Framework

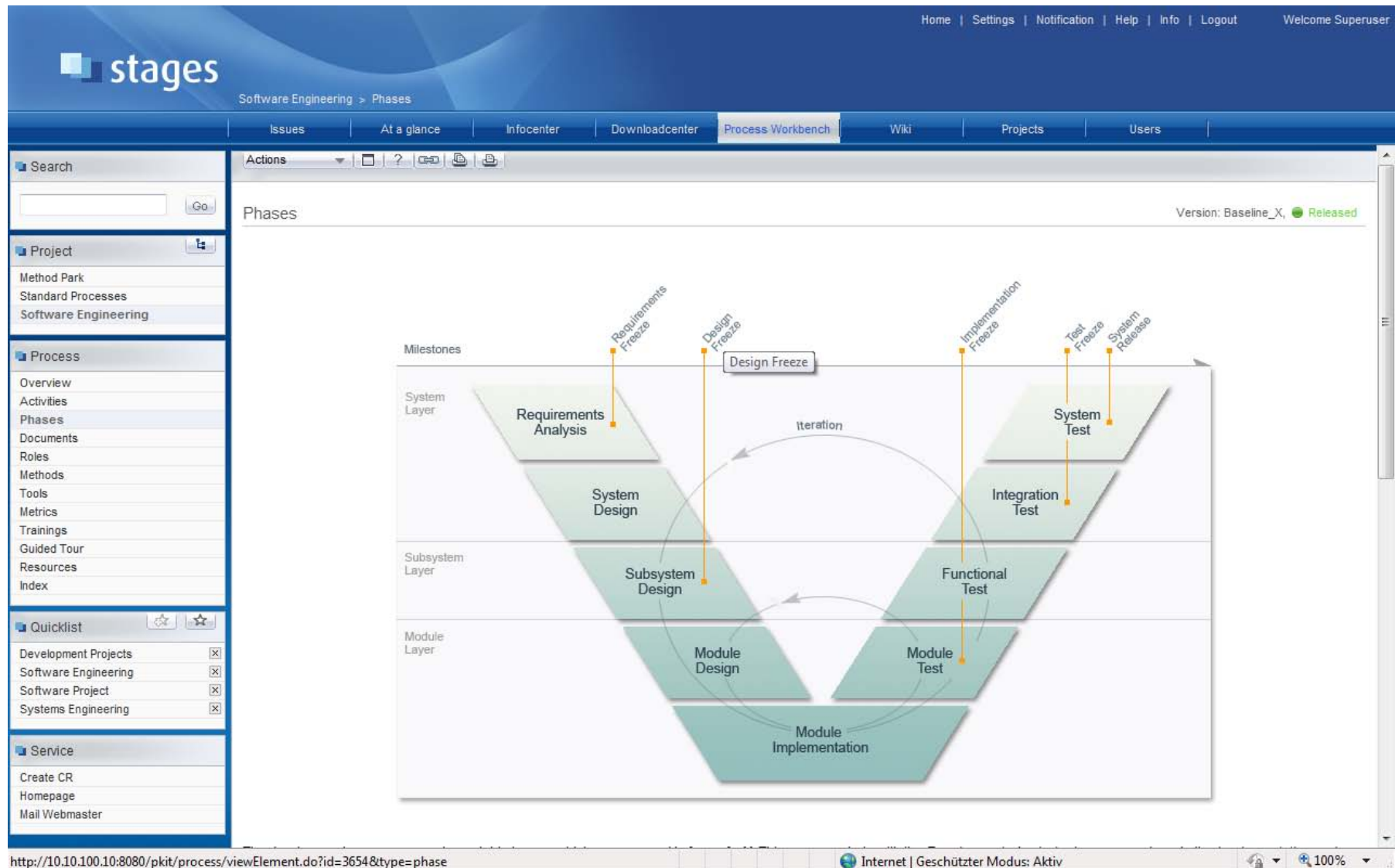


Solution Details

- Reference models are broken into different model requirements
- Process elements are linked with model requirements
- Model requirements are mapped to evidences
- **Evidence data maps can be generated**



Example: Process Lifecycle



Example: Process Compliance Mapping

The screenshot displays the 'stages' software interface, which is used for process compliance mapping. The interface is divided into several sections:

- Header:** Includes navigation links (Home, Settings, Notification, Help, Info, Logout) and a user greeting (Welcome Superuser).
- Left Sidebar:** Contains a search bar and a navigation menu with categories like Project, Process, Quicklist, and Service.
- Main Content Area:** Displays a tree view of the 'CMMI-DEV continuous representation' structure. The tree is organized into 'Activities' (Project Management, PP: Project Planning, SG 1: Establish Estimates, SG 2: Develop a Project Plan) and 'Documents'. Each item has a 'Rating' column with star icons.
- Right Panel:** Provides detailed information for the selected item, 'SP 2.1: Establish the Budget and Schedule'. It includes a description, a list of subpractices (e.g., '1. Identify major milestones.'), and an 'Assignments' table.

The 'Assignments' table shows the following data:

%	Name	ET	Commentary
50	Establish Project Plan	D	
	Review Project Plan		
	Create Status Report		
	System & Software Design		
	Quality Management		
	Verification & Validation		
	Configuration Management		
	Project Quality Assurance		

A context menu is visible over the 'Assignments' table, offering options: 'View description', 'Edit properties', and 'Cancel assignment'.

Example: Compliance Gap Analysis

The screenshot displays the 'stages' software interface. The top navigation bar includes links for Home, Settings, Notification, Help, Info, Logout, and a welcome message for 'Superuser'. The main menu on the left is organized into sections: Project (Method Park, Development Projects, Project A, Software Project), Process (Overview, Activities, Phases, Documents, Roles, Methods, Tools, Metrics, Trainings, Guided Tour, Resources, Index), Quicklist (Development Projects, Software Engineering, Software Project, Systems Engineering), and Service (Create CR, Homepage, Mail Webmaster). The main content area is titled 'Perform Gap Analysis' and shows a table of gaps between CMMI-DEV continuous representation and the Software Project. The table has columns for Name, %, and Rating. The data is categorized under Activities, Project Management, and Documents. The Project Management section includes Project Planning (PP) and its sub-items (SG 1, SG 2, SG 3, SG 4, SG 5), each with a percentage and a star rating. The Documents section is currently empty.

Software Project

Home | Settings | Notification | Help | Info | Logout Welcome Superuser

Issues | At a glance | Infocenter | Downloadcenter | **Process Workbench** | Wiki | Projects | Users

Search

Project

- Method Park
- Development Projects
- Project A
- Software Project

Process

- Overview
- Activities
- Phases
- Documents
- Roles
- Methods
- Tools
- Metrics
- Trainings
- Guided Tour
- Resources
- Index

Quicklist

- Development Projects
- Software Engineering
- Software Project
- Systems Engineering

Service

- Create CR
- Homepage
- Mail Webmaster

Perform Gap Analysis

Gaps between CMMI-DEV continuous representation and Software Project

Name	%	Rating
Activities		
Project Management		
PP: Project Planning	0%	☆☆☆☆
SG 1: Establish Estimates	0%	☆☆☆☆
SG 1.2: Establish Estimates of Work Product and Task Attributes	50%	☆☆☆☆
Activity: Establish Project Plan	50%	☆☆☆☆
SG 2: Develop a Project Plan	0%	☆☆☆☆
SP 2.1: Establish the Budget and Schedule	50%	☆☆☆☆
SP 2.3: Plan for Data Management	0%	☆☆☆☆
SP 2.4: Plan for Project Resources	50%	☆☆☆☆
SP 2.5: Plan for Needed Knowledge and Skills	0%	☆☆☆☆
SP 2.6: Plan Stakeholder Involvement	0%	☆☆☆☆
SP 2.7: Establish the Project Plan	50%	☆☆☆☆
SG 3: Obtain Commitment to the Plan	0%	☆☆☆☆
SP 3.3: Obtain Plan Commitment	0%	☆☆☆☆
GG 1: Achieve Specific Goals	0%	☆☆☆☆
GG 2: Institutionalize a Managed Process	0%	☆☆☆☆
GG 3: Institutionalize a Defined Process	0%	☆☆☆☆
GG 4: Institutionalize a Quantitatively Managed Process	0%	☆☆☆☆
GG 5: Institutionalize an Optimizing Process	0%	☆☆☆☆
Documents		

[Back to Compliance Workbench](#)

Fertig

Internet | Geschützter Modus: Aktiv

100%

Example: Evidence Data Generation

Microsoft Excel - piid[1]

Frage hier eingeben

Snagit Window

A	B	C	D	E	F	G	H	I	J	K	L
#	PA	GoalID	PracticeID	Practice	Project	Evidence Type	Document Title	Link	Doc-record Comments	Comments	
2	1	PP	SG 1	SP 1.1	SP 1.1: Estimate the Scope of the Project	Software Project	D	Software Project Plan	Process		
3	2	PP	SG 1	SP 1.1	SP 1.1: Estimate the Scope of the Project	Software Project	D	Project Plan	File		
4	3	PP	SG 1	SP 1.1	SP 1.1: Estimate the Scope of the Project	Software Project	D	Software Project Plan			
5	4	PP	SG 1	SP 1.1	SP 1.1: Estimate the Scope of the Project	Software Project	D	Establish Project Plan	Process		
6	5	PP	SG 1	SP 1.2	SP 1.2: Establish Estimates of Work Product and Task Attributes	Software Project	D	Establish Project Plan	Process		
7	6	PP	SG 1	SP 1.3	SP 1.3: Define Project Lifecycle	Software Project	D	Stages Process Definition		See lifecycle definition of the project itself in Stages.	
8	7	PP	SG 1	SP 1.4	SP 1.4: Determine Estimates of Effort and Cost	Software Project	D	Create Quality Plan	Process		
9	8	PP	SG 1	SP 1.4	SP 1.4: Determine Estimates of Effort and Cost	Software Project	D	Review Quality Plan	Process		
10	9	PP	SG 2	SP 2.1	SP 2.1: Establish the Budget and Schedule	Software Project	D	Establish Project Plan	Process		
11	10	PP	SG 2	SP 2.2	SP 2.2: Identify Project Risks	Software Project	D	Risk Analysis	Process		
12	11	PP	SG 2	SP 2.2	SP 2.2: Identify Project Risks	Software Project	D	Risk Analysis			
13	12	PP	SG 2	SP 2.2	SP 2.2: Identify Project Risks	Software Project	D	Software Project Plan	Process		
14	13	PP	SG 2	SP 2.2	SP 2.2: Identify Project Risks	Software Project	D	Project Plan	File		
15	14	PP	SG 2	SP 2.2	SP 2.2: Identify Project Risks	Software Project	D	Software Project Plan			
16	15	PP	SG 2	SP 2.2	SP 2.2: Identify Project Risks	Software Project	D	Establish Risk Analysis	Process		
17	16	PP	SG 2	SP 2.2	SP 2.2: Identify Project Risks	Software Project	D	Establish Project Plan	Process		
18	17	PP	SG 2	SP 2.2	SP 2.2: Identify Project Risks	Software Project	D	Review Project Plan	Process		
19	18	PP	SG 2	SP 2.4	SP 2.4: Plan for Project Resources	Software Project	D	Establish Project Plan	Process		
20	19	PP	SG 2	SP 2.7	SP 2.7: Establish the Project Plan	Software Project	D	Risk Analysis	Process		
21	20	PP	SG 2	SP 2.7	SP 2.7: Establish the Project Plan	Software Project	D	Risk Analysis			
22	21	PP	SG 2	SP 2.7	SP 2.7: Establish the Project Plan	Software Project	D	Establish Project Plan	Process		
23	22	PP	SG 3	SP 3.1	SP 3.1: Review Plans that Affect the Project	Software Project	D	Review Project Plan	Process		
24	23	PP	SG 3	SP 3.1	SP 3.1: Review Plans that Affect the Project	Software Project	D	Review Protocol	Process		
25	24	PP	SG 3	SP 3.1	SP 3.1: Review Plans that Affect the Project	Software Project	D	Review Analysis	File		
26	25	PP	SG 3	SP 3.1	SP 3.1: Review Plans that Affect the Project	Software Project	D	Review Record			
27	26	PP	SG 3	SP 3.2	SP 3.2: Reconcile Work and Resource Levels	Software Project	D	Review Project Plan	Process		
28											
29											
30											
31											
32											
33											
34											
35											

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1

Use **Model Wizard** to create or import a model that represents your Organizational Standard Model and/or the desired QA Reference Model.



2

Use **Appraisal Wizard (AW)** to setup Appraisal Wizard Audit Template(s) for each type of Audit you want to perform (e.g. setup unique record types, status values, and document types, etc.)

- Create Audit Question records to build audit checklist for set of audit checkpoints.
- Use the Record Documents tab and the document list to identify the expected objective evidence for each audit question.



3

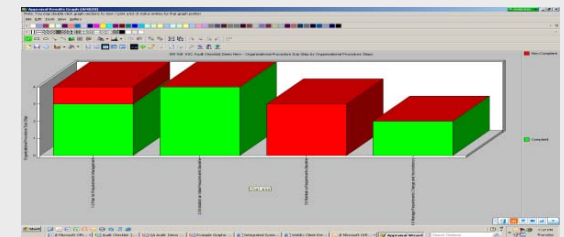
Use the AW tool during the audit to document the audit finding(s) (e.g. "Compliance, "Non-Compliance (N/C)", "Information Needed" record types).

- Write up N/C Action Item records
- Determine compliance ratings



4

Use the AW tool to build various reports of the audit finding(s) (e.g. Reports of % compliant/% non-compliant findings; List N/C Action Items; etc.) to prepare for follow-on audits.



5

- Use **Model Mapper** to map QA Reference model to a standard or model (e.g. CMMI) for use in appraisals.
- Import new "*Mapped Model*" into AW to use audit results and organization's existing data to support Readiness Reviews and Appraisals.



QA Reference Model in Model Wizard

Model Elements (MM002) - Copy of Kingland Systems Corp (Demo)_081106

File Edit Model Element View Text

Copy of Kingland Systems Corp (Demo)_081106

- Policy
- Organizational Procedures
 - Requirements Management
 - 1.0 Plan for Requirements Management
 - 1.1 Assign Resources
 - 1.2 Establish Customer Understanding Expectations
 - 1.3 Plan for Requirements Changes
 - 1.4 Finalize Requirements Management Planning
 - 2.0 Establish an Initial Requirements Baseline
 - 2.1 Determine Requirements Needs
 - 2.2 Propose Initial Requirements Baseline
 - 2.3 Achieve Initial Customer Understanding
 - 2.4 Establish Initial Requirements Baseline
 - 3.0 Maintain a Requirements Baseline
 - 3.1 Complete Requirements Baseline
 - 3.2 Confirm Customer Understanding
 - 3.3 Establish Requirements Baseline
 - 4.0 Manage Requirements Change and Inconsistency
 - 4.1 Review Requirements Change Requests
 - 4.2 Monitor for Requirements Inconsistencies

Element Name: 4.2 Monitor for Requirements Inconsistencies

Element Abbreviation: 4.2 Monitor for Requirements Inconsistencies

Element Type: Organizational Procedure Sub-Step

Full Description Short Description Mapping

Step 4.2.1: To prepare for monitoring activities, review current Internal and Customer Requirements Baselines to ensure an accurate and Method: N/A

Step 4.2.2: Meet with individuals who maintain the requirements traceability matrix to identify any inconsistencies between

- Business Requirements and Solution Requirements
- Requirements and WBS assignment
- Requirements and Solution Design
- Requirements and Test Cases
- Requirements and Functions/Features

The goal of this meeting is to ensure that the requirements traceability matrix is accurate. Examples of inconsistencies include:

- A new requirement was added yet no design was created
- A requirement changed and a test case was not updated
- A function/feature is being modified as a part of the project, yet is not traced to a requirement

Generate a requirements change request for any inconsistencies identified during this meeting.

Method: *CMMI Direct Evidence*

- Meeting minutes w/ attendees and notes specifying requirementsinconsistencies review activities
- Requirements change requests

Step 4.2.3: Meet with Project leadership to review Project Plans to identify any inconsistencies between Requirements Baselines and Project

Start

QA Audit AW... Using Apprais... Audit Checklis... Diagram temp P... 4 Microsoft ... CorporateDoc... Appraisal Wizard Microsoft Pow... Model Wizard Search Desktop

12:42 PM Thursday



Setup Audit Templates Using QA Reference Model

Element Review (AM009) Element: 1.2 Establish Customer Understanding Expectations

Options Tree View Record View Document Filtering Document List

Model KSC Element Type [ALL] Rating Level TBD Element Color: PPQA Audit

Record Filter NONE State View

PPQA

Element Name

- Kingland Systems Corp (REQM Demo)_081106
 - Policy
 - Organizational Procedures
 - Requirements Management
 - 1.0 Plan for Requirements Management
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 - 4.0 Manage Requirements Change and Inconsistency

Step 1.2.1: Document all parties that will serve in the Customer role. Requirements are considered valid if they are understood from the Customer.
Method: Stakeholder Analysis

Step 1.2.2: For step 1.2.3 through 1.2.4, communicate with the Customer(s).
Method: N/A

Element Records Element Documents Document List

Drag a column header here to group by that column

Rec ID	Record Type	Status	Verification	Record Text
13	Audit Checkpoint	Noncompliant		1. Determine the communication planned or that establish an understanding of requirements with 2. Collect the expected direct evidence from the
14	Audit Checkpoint	Compliant		1. Has the level of requirements review/approval determined for the project? 2. Collect the expected direct evidence from the
15	Audit Checkpoint	Compliant		1. Has a specific method for achieving an under

Record Fields Record Documents

Record Type: Audit Checkpoint
Status: Noncompliant
Verification:
GLBL: ☒
Summary R: ☒

Go to Rate all

Elements Attached to Record

Model	Element
XXX	1.2 Establish Cu
KSC	1.2 Establish Cu

☒ Project Name 1
☐ CMMI PIID Example
☐ Organization
☐ Project Name 2
☐ Project Name 3
☐ Project Name 4
☐ Project Name 5

☐ TL
☐ TM1
☐ TM2
☐ TM3
☐ TM4
☐ TM5
☐ TM6
☐ TM7
☐ TM8

☐ 01-Sen Div Mgmt
☐ 03 - Proj SE Leaders
☐ 02 - Program Managers
☐ 04A - Proj Sys Engrs
☐ 04B - Proj Sys Engrs
☐ 05A - Proj CM/DM
☐ 05B - Proj CM/DM
☐ 06 - Proj QA
☐ 07 - Eng Mgrs
☐ 08 - Proj SW Leaders

Start

QA Audit AW_sd... Using Appraisal ... Audit Checklist [...] QA Audit Demo ... Integrated System Diagnostics WebEx Client Ent... You are viewing: ... Appraisal Wizard

Search Desktop

6:46 PM Thursday



Audit Spreadsheet Generate and Re-import

Audit Checklist [Compatibility Mode] - Microsoft Excel

ID	Audit Checklist	Type	Rec Status	Doc ID	Ev Type	Title
1495	1. Review and confirm assignment of the Requirements Lead role with the project representative. 2. Collect the expected direct evidence from the project representative or their project library. 3. Identify the objective evidence provided as direct or indirect.	Audit Checklist Item	Candidate	0001	Expected Direct Evidence	Project Planning Timeline
1497	1. Determine if the Customer responsible for requirements interface has been identified. 2. Collect the expected direct evidence from the project representative or their project library. 3. Identify the objective evidence provided as direct or indirect.	Audit Checklist Item	Candidate	0005	Expected Direct Evidence	Stakeholder Analysis
1499	1. Has the project documented the way it captures requirements change requests from the Customer and other stakeholders? 2. Collect the expected direct evidence from the project representative or their project library. 3. Identify the objective evidence provided as direct or indirect.	Audit Checklist Item	Candidate	0002	Expected Direct Evidence	Requirements Management Plan
1509	1. Determine who on the team is responsible for maintaining the respective portions of the traceability matrix. 2. Collect the expected direct evidence from the project representative or their project library. 3. Identify the objective evidence provided as direct or indirect.	Audit Checklist Item	Candidate	0002	Expected Direct Evidence	Requirements Management Plan
				0004	Expected Indirect Evidence	Requirements Traceability Matrix
1510	1. Confirm assigned resources have the requisite skills or are planned for training required to perform the roles and responsibilities. 2. Collect the expected direct evidence from the project representative or their project library. 3. Identify the objective evidence provided as direct or indirect.	Audit Checklist Item	Candidate	0003	Expected Direct Evidence	CDP Assessments GeoLearning training rec
1511	1. Determine the communication that planned or those that have occurred for establishing an understanding of requirements with customers. 2. Collect the expected direct evidence from the project representative or their project library. 3. Identify the objective evidence provided as direct or indirect.	Audit Checklist Item	Candidate	0002	Expected Direct Evidence	Requirements Management Plan
1512	1. Has the level of requirements review/approval by the customer been determined for the project? 2. Collect the expected direct evidence from the project representative or their project library. 3. Identify the objective evidence provided as direct or indirect.	Audit Checklist Item	Candidate	0002	Expected Direct Evidence	Requirements Management Plan
1513	1. Has a specific method for achieving an understanding of requirements been identified by the project? 2. Collect the expected direct evidence from the project representative or their project library. 3. Identify the objective evidence provided as direct or indirect.	Audit Checklist Item	Candidate	0002	Expected Direct Evidence	Requirements Management Plan
				0007	Expected Indirect Evidence	Notes from Customer(s)
				0006	Expected Indirect Evidence	Meeting Minutes



Determine Status of Records/Documents

Element Review (AM009) Element: 1.2 Establish Customer Understanding Expectations

Options Tree View Record View Document Filtering Document List

Model KSC Element Type [ALL] Rating Level TBD Element Color: PPQA Audit

Record Filter NONE State View

PPQA

Element Name

- Kingland Systems Corp (REQM Demo)_081106
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Element Records Element Documents Document List

Drag a column header here to group by that column

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Record Fields Record Documents

Record Type: Audit Checkpoint
Noncompliant

Verification: GLOBL ☒
Summary R ☒

Go to Rate all

Elements Attached to Record

Model	Element
XXX	1.2 Establish Cu
KSC	1.2 Establish Cu

Project Name 1 ☒
CMMI PIID Example ☐
Organization ☐
Project Name 2 ☐
Project Name 3 ☐
Project Name 4 ☐
Project Name 5 ☐
TL ☐
TM1 ☐
TM2 ☐
TM3 ☐
TM4 ☐
TM5 ☐
TM6 ☐
TM7 ☐
TM8 ☐
01-Sen Div Mgmt ☐
03 - Proj SE Leaders ☐
02 - Program Managers ☐
04A - Proj Sys Engrs ☐
04B - Proj Sys Engrs ☐
05A - Proj CM/DM ☐
05B - Proj CM/DM ☐
06 - Proj QA ☐
07 - Eng Mgrs ☐
08 - Proj SW Leaders ☐

Step 1.2.1: Document all parties that will serve in the Customer role. Requirements are considered valid if they are understood from the Customer.
Method: Stakeholder Analysis

Step 1.2.2: For step 1.2.3 through 1.2.4, communicate with the Customer(s).
Method: N/A

Start

QA Audit AW_ad... Using Appraisal ... Audit Checklist ... QA Audit Demo ... Integrated Syste... WebEx Client Ent... You are viewing: ... Appraisal Wizard

Search Desktop

6:46 PM Thursday



Determine Element Compliance Ratings

Element Review (AM009) Element: 1.1 Assign Resources

Model: KSC | Element Type: [ALL] | Rating Level: TBD | Element Color: PPQA Audit

Record Filter: [NONE] | State: [] | View: []

PPQA Non-Compliant

Element Name

- Kingland Systems Corp (REQM Demo)_081106
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 - 4.2 Monitor for Requirements Inconsistencies

Record ID | **Record Type** | **Status** | **Verification** | **Record Text**

11	Audit Checkpoint	Noncompliant		1. Determine who on the team is responsible for maintaining the respective portions of the traceability matrix. 2. Collect the expected direct evidence from the project library.
12	Audit Checkpoint	Compliant		1. Confirm assigned resources have the requisite skills for training required to perform the roles and responsibilities. 2. Collect the expected direct evidence from the project library.

Record Fields | **Record Documents**

Record Type	Status	Verification	GLBL	Summary R
Audit Checkpoint	Noncompliant		<input type="checkbox"/>	<input type="checkbox"/>

Elements Attached to Record

Model	Element
XXX	1.1 Assign Resc
KSC	1.1 Assign Resc

Project Name 1
☐ CMMI PIID Example
☐ Organization
☐ Project Name 2
☐ Project Name 3
☐ Project Name 4
☐ Project Name 5

TL
☐ TM1
☐ TM2
☐ TM3
☐ TM4
☐ TM5
☐ TM6
☐ TM7
☐ TM8

01-Sen Div Mgmt
☐ 03 - Proj SE Leaders
☐ 02 - Program Managers
☐ 04A - Proj Sys Engrs
☐ 04B - Proj Sys Engrs
☐ 05A - Proj CM/DM
☐ 05B - Proj CM/DM
☐ 06 - Proj QA
☐ 07 - Eng Mgrs

Step 1.1.1: [Integration Point: Project Initiation v5] Review and confirm assignment of the Requirements Lead role
Method: QAMI Direct Evidence Project Planning

Step 1.1.2: Document who on the team will be responsible for maintaining the



Audit Results and organization's existing data supports appraisals and ties to other standards/ models

Element Review (AM009) Element: 12.3 Define customers requirements

Options Tree View Record View Document Filtering Document List

Model Enterprise Arch Element Type [ALL] Rating Level XYZ Corp at SEPG NA 2008 Element Color: None

Record Filter NONE State View

Element Name

- Enterprise Architecture - 20080309
 - Enterprise Architecture @2008, ISD Brasil
 - Organizational - On-going
 - Pre-Contract
 - 9.0 Manage Incidents and Requests
 - 10.0 Negotiate and Establish Contracts
 - 11.0 Design and Deployment Services
 - Contract
 - Engineering
 - 12.0 Elicit and Develop Requirements
 - 12.1 Elicit customers needs and constraints
 - 12.2 Develop preliminary strategy
 - 12.3 Define customers requirements
 - 12.4 Validate customers requirements
 - 12.5 Define product requirements
 - 12.6 Inspect requirements
 - 13.0 Design Solution
 - 14.0 Build and Integrate Solution
 - 15.0 Execute Tests
 - 16.0 Implement Solution

12.3 Define customers requirements

Drag a column header here to group by that column

Rec ID	Record Type	Status	Verification	Record Text
26	DCE PIID	OE Examined	Yes	How do you identify and collect stakeholder needs, constraints, and interfaces for all phases of the
27	DCE PIID	OE Examined	Yes	How do you elicit stakeholder needs, expectations, constraints, and interfaces for all phases of the product's life cycle?
89	GA(New) PIID	OE Examined	Yes	How do you maintain bi-directional traceability among requirements and the project plans and work products?
204	GA(New) PIID	OE Examined	Yes	How do you identify and collect stakeholder needs, expectations, constraints, and interfaces for all phases of the product's life cycle?

Record Fields Record Documents

Record Type: DCE PIID
Status: OE Examined
Verification: Yes
GLBL: ☐
Summary R: ☐

How do you identify and collect stakeholder needs, expectations, constraints, and interfaces for all phases of the product's life cycle?

When the customer does not provide a CONOPS or system spec we work with the customer and relevant stakeholders to develop them, using white papers, CONOPS, and functional performance specifications. In this way, all stakeholders share in the

Go to Rate all

Elements Attached to Record

Model	Element
ISO 900	7.2.1.b
ISO 900	7.2.1.c
ISO 900	7.2.1.d
CMMI 1	RD SP 1.1

☒ DCE
☐ GA (New)
☐ ORG
☐ PCS
☐ SKD

☒ RV
☐ CEM
☐ EPH
☐ JCC
☐ JFM
☐ JLL
☐ PDB
☐ TRK

☐ 01 - Senior Management
☐ 02A - Prog/Dept Managers
☐ 02B - Prog/Dept Managers
☐ 03A - Proj Engr/Mid Mgr
☐ 03B - Proj Engr/Mid Mgr
☐ 04 - Supplier Mgmt



CMMI-DEV 1.2 Mapped to QA Reference Model

Map Elements (MM007) - Inverse of: PRM to CMMI1.2

Tree View Find Map

VAL GP 2.7
VAL GP 2.8
VAL GP 2.9
VAL GP 2.10
VAL GP 3.1
VAL GP 3.2
PA Organizational Process Focus
OPF SG 1
OPF SP 1.1
OPF SP 1.2
OPF SP 1.3
OPF SG 2
OPF SP 2.1
OPF SP 2.2
OPF SG 3
OPF SP 3.1
OPF SP 3.2
OPF SP 3.3
OPF SP 3.4
OPF GG 3
OPF GP 2.1
OPF GP 2.2
OPF GP 2.3
OPF GP 2.4
OPF GP 2.5
OPF GP 2.6
OPF GP 2.7

Model Element

Model Element	Certainty	Comments
PRM new		
Assurance Process Management		
APM SG 1.1		
APM SP 1.1.1		
APM Sub Pr 1.1.1.1	0	
APM Sub Pr 1.1.1.2	0	
APM Sub Pr 1.1.1.3	0	
APM Sub Pr 1.1.1.4	0	
APM Sub Pr 1.1.1.5	0	
APM SP 1.1.2		
APM SP 1.1.3		
APM SP 1.1.4		
APM SP 1.1.5		
APM Sub Pr 1.1.5.1		
APM Sub Pr 1.1.5.2		
APM Sub Pr 1.1.5.3		
APM Sub Pr 1.1.5.4		
APM SG 1.2		
APM SP 1.2.1	0	
APM Sub Pr 1.2.1.1		
APM SP 1.2.2		
APM SP 1.2.3		
APM SP 1.2.4		
APM SP 1.2.5		
APM SG 1.3		
APM SP 1.3.1		

SP 1.1 Establish Organizational Process Needs

Establish and maintain the description of the process needs and objectives for the organization.

IPPD Addition

Integrated processes that emphasize parallel rather than serial development are a cornerstone of IPPD implementation. The processes for developing the product and for developing product-related lifecycle processes, such as the manufacturing process and the support process processes, are integrated and conducted

Element Text Mapped Elements for OPF SP 1.1

Sub Practice 1.1.1.1 Identify the assurance stakeholders including their expectations and rights.

Start

QA Audit AW... Using Apprais... Audit Checklis... Diagram temp P... Inbox - Micros... KSC QA Audits... CorporateDoc... Microsoft Pow... Model Mapper

Search Desktop

1:02 PM Thursday



Summary Report Generation (AM121)

Options Records

Report Name:

Step 1: Choose Model and Data Grouping | Step 2: Record Filter | Step 3: Record Order / Suppression | Step 4: Duplicate Rec. Appearances | Step 5: Output Options / Generate Report

This page shows all of the report sections. You may elect to suppress printing of certain records. You may also select the order that records will be presented in.

☒ Global records first

Element Name	Record Type	Suppress	Rec#
GLOBAL	Strength	<input type="checkbox"/>	2
Requirement	Strength	<input type="checkbox"/>	28
Requirement	Weakness	<input type="checkbox"/>	113
Project Plan	Strength	<input type="checkbox"/>	183
Project Plan	Weakness		
Project Mon	Strength		
Project Mon	Alternate Practice		
Project Mon	Weakness		
Supplier Agt	Strength		

Microsoft PowerPoint - [Final Findings Presentation 041210_0850]

File Edit View Insert Format Tools Slide Show Quickpoint Window Help Adobe PDF

66%

Risk Management

Redden Analysis & Resolution aka "The BAR"

Practice Characterizations

- Practices are characterized by the following scale:
 - Fully Implemented (F)
 - Largely Implemented (L)
 - Partially Implemented (P)
 - Not Implemented (N)
- Each program is reviewed against each practice and characterized by the scale.
- Any characteristics other than F or L are noted in the table.
- These characterizations are "red-flagged" into categories with characterizations such as:
- Practices that are "red-flagged" into categories with characterizations such as:
- Practices that are "red-flagged" into categories with characterizations such as:

OU Practice Characterizations

OU Practice Characterizations

Ratings

Ratings Category Definitions

- **Not Rated** - Indicates that CTRIS practice is deemed to be not rated in practice.
- **Not Rated** - Indicates that CTRIS practice is deemed not to be implemented in practice.
- **Not Applicable** - Indicates the nonexistence of the practice in the organization or program.
- **Not Rated** - Indicates the nonexistence of the practice in the organization or program.

Practice Characterizations

Goal Ratings

Benefits

- Reduce complexity
 - Process descriptions become consistent and lean
 - No „CMMI or ISO speak“
 - Fulfill multiple standards in parallel
- Reduce efforts and costs
 - Companies reported up to 60% less efforts for audit preparations
 - No interruption of operational work because of audit preparations
- **Concentrate on process improvement, not process administration**



Thank you
for your interest.

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