

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

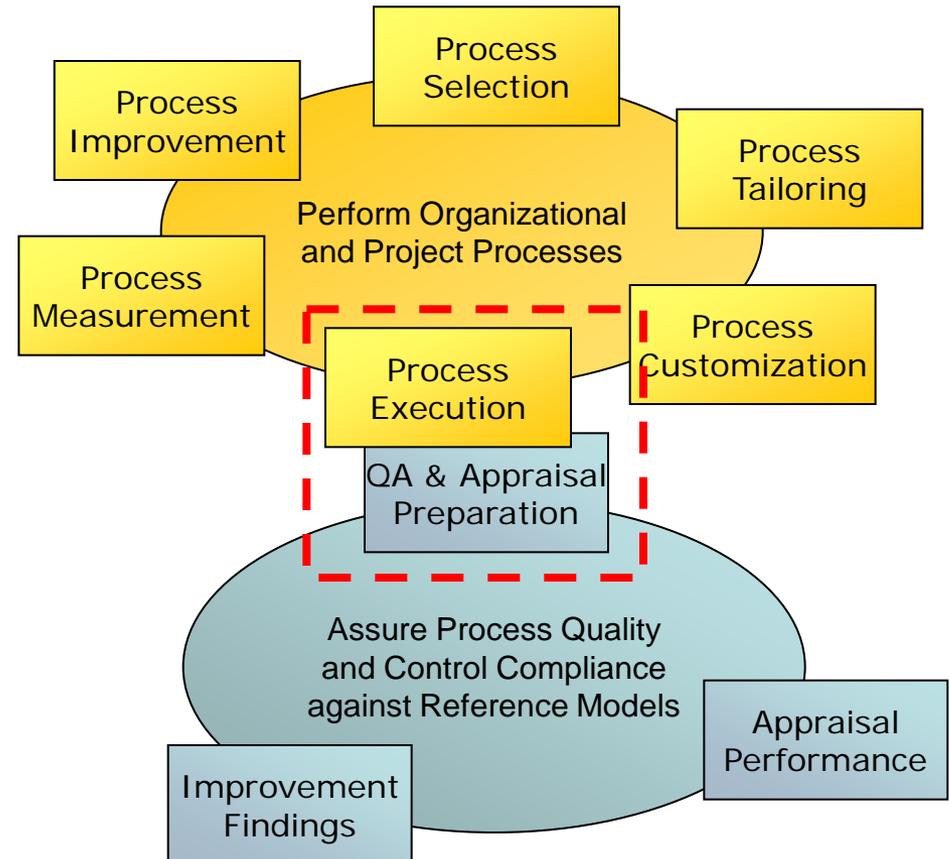
- Heavy time and cost pressure affects product quality
- Frequent audits or appraisals
- Up to 25% of work hours for audit preparation and performance
- Assure compliance with specific models or standards for safety, security, quality, reliability, etc. in parallel

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

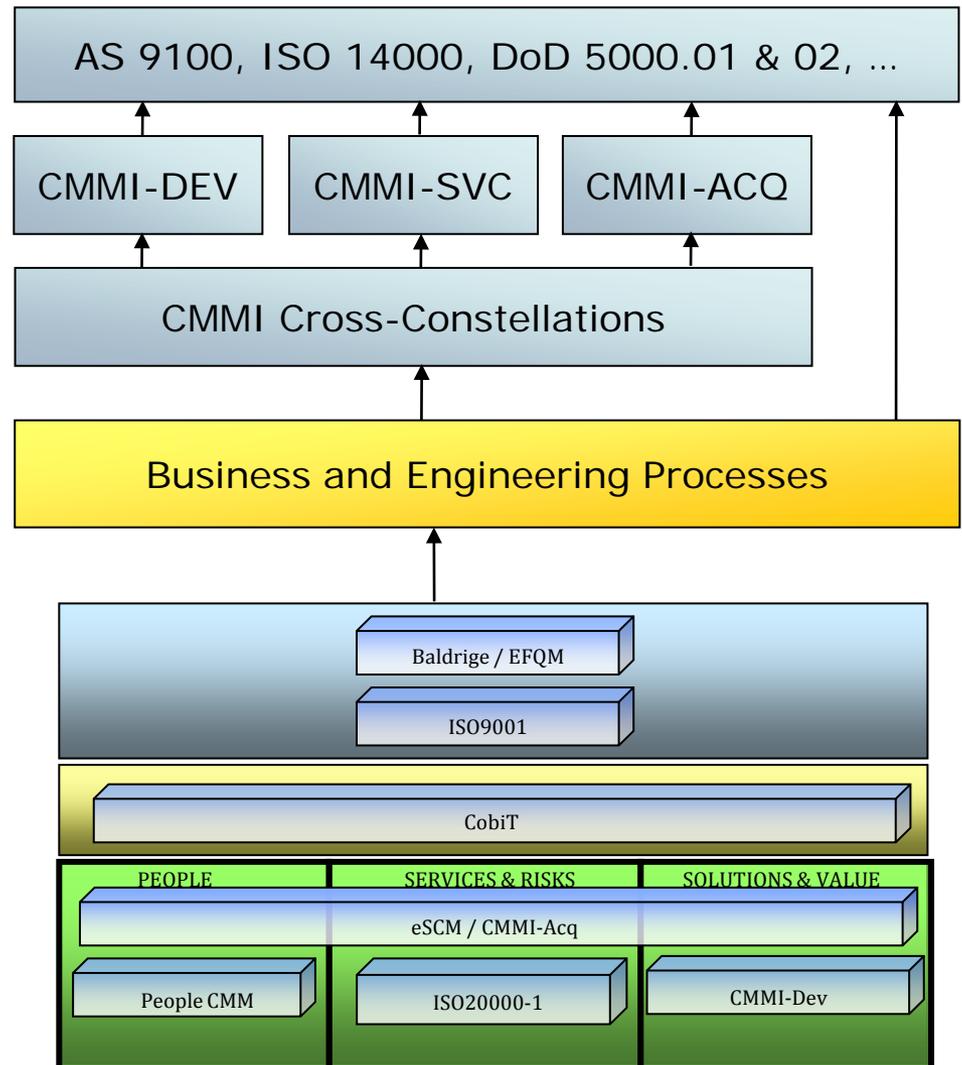
Key Idea

- 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

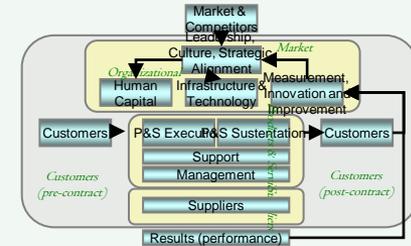
- Multiple reference models can be linked into multi-models
- Multimodel links are weighted
- Multimodels are specific to organization (i.e. dependent on type of business)



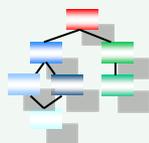


Process Composition and Definition

- ◆ 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.*



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 #.#

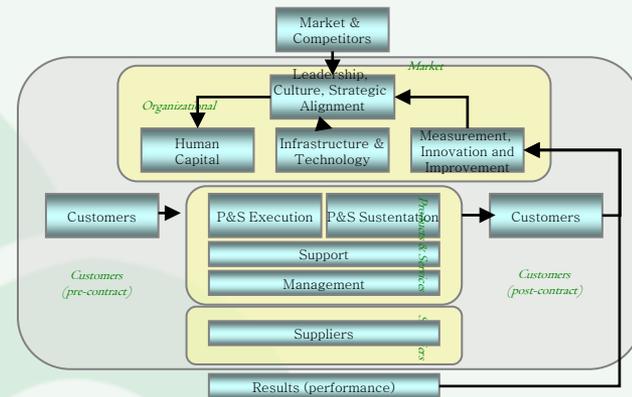
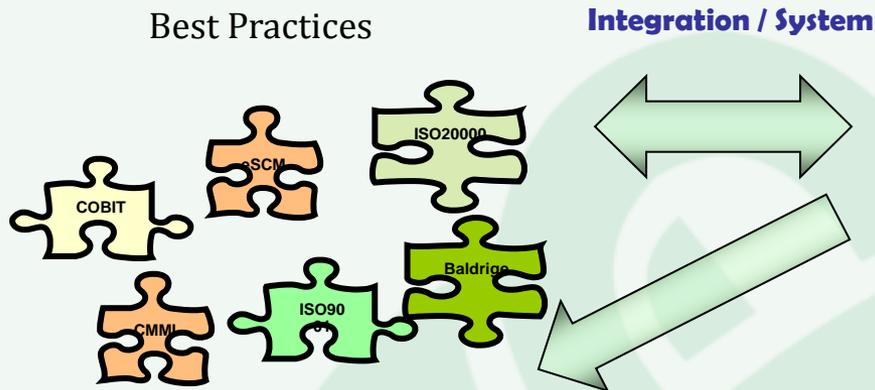
Process Improvement
Implementation Guidance

Best Practices



Relationships: Process Architecture, Best Practices, Audits

ISF for Excellence

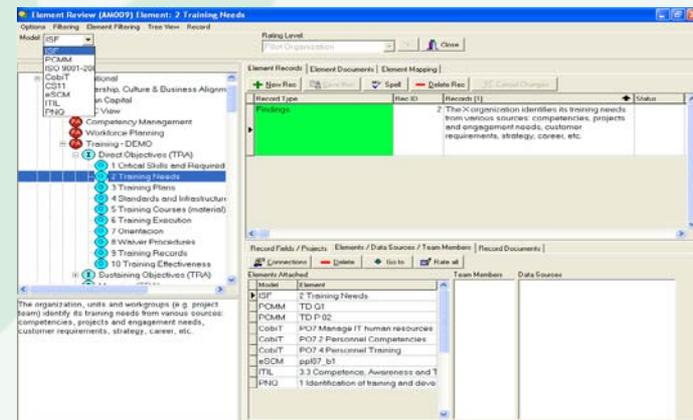


Process Compliance

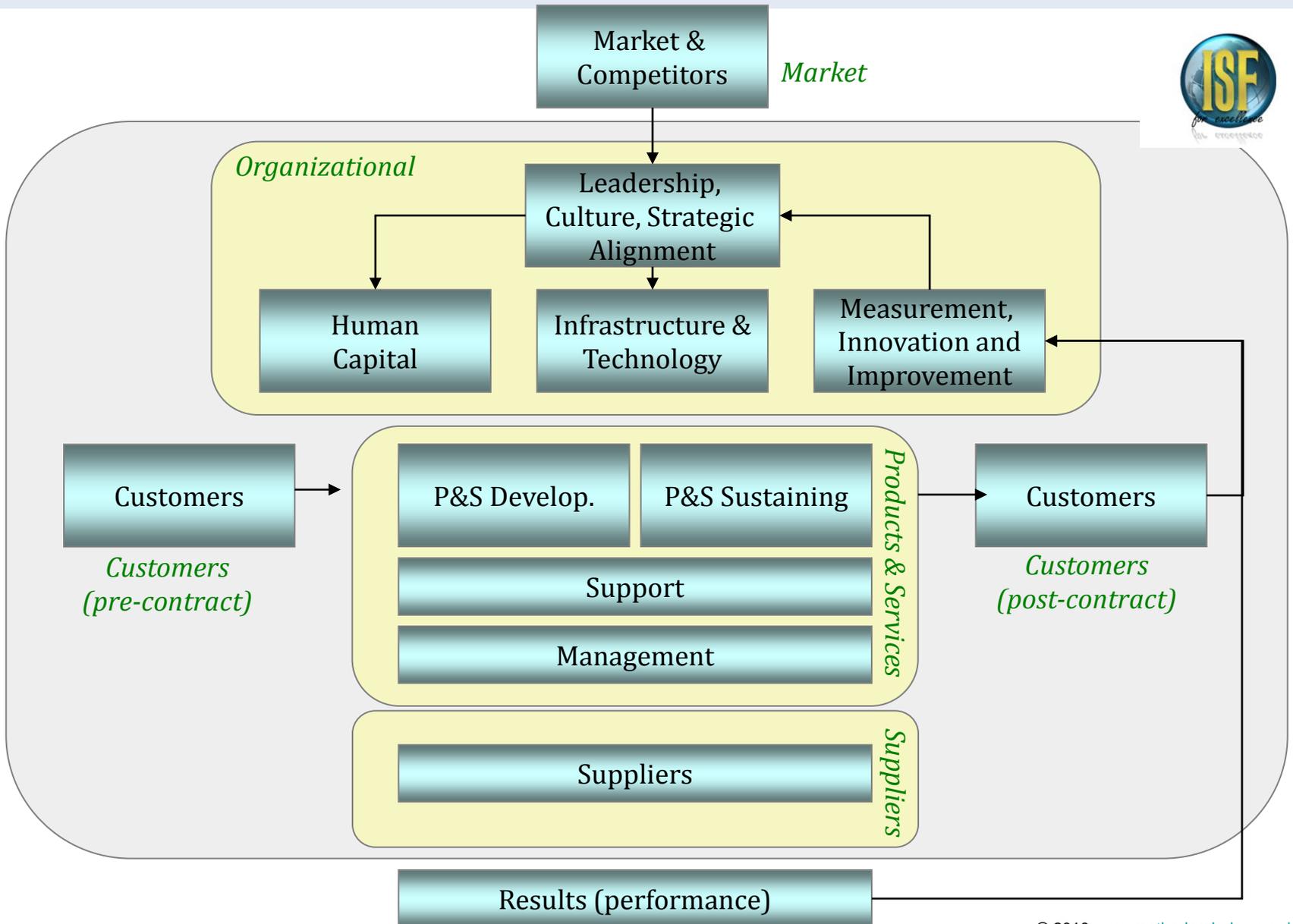
Diagnostic Tools

PPQA / Audit / Appraisal Findings

Enterprise Appraisal

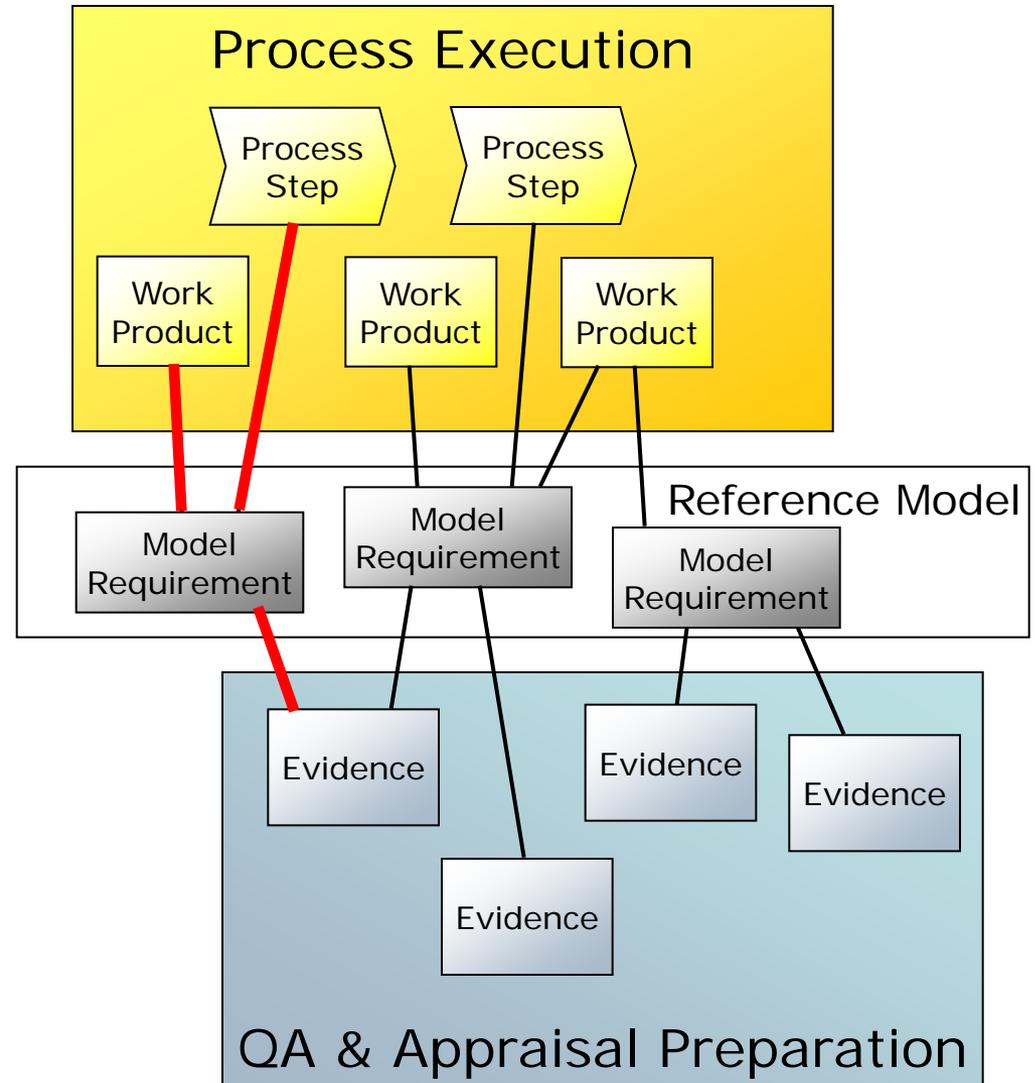


ISF for Excellence – Systemic View Integration Framework



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

The screenshot displays the 'stages' software engineering tool interface. At the top, there is a navigation bar with links for Home, Settings, Notification, Help, Info, and Logout, along with a user greeting 'Welcome Superuser'. Below this is a secondary navigation bar with tabs for Issues, At a glance, Infocenter, Downloadcenter, Process Workbench (selected), Wiki, Projects, and Users. The main content area is titled 'Phases' and shows a version 'Baseline_X' with a 'Released' status. On the left, there is a sidebar with search, project, process, and quicklist sections. The central diagram illustrates a V-model process lifecycle across three layers: System Layer, Subsystem Layer, and Module Layer. The left side of the V represents the design phases: Requirements Analysis, System Design, Subsystem Design, and Module Design. The right side represents the testing phases: System Test, Integration Test, and Module Test. The bottom of the V is labeled 'Module Implementation'. Milestones are marked at the top: Requirements Freeze, Design Freeze, Implementation Freeze, Test Freeze, and System Release. Arrows indicate the flow between phases and the presence of iteration loops between System Design and Subsystem Design, and between Subsystem Design and Module Design.

Example: Process Compliance Mapping

The screenshot displays the 'stages' software project interface. The top navigation bar includes links for Home, Settings, Notification, Help, Info, and Logout, along with a user greeting 'Welcome Superuser'. The main navigation menu features tabs for Issues, At a glance, Infocenter, Downloadcenter, Process Workbench (selected), Wiki, Projects, and Users.

The left sidebar contains a search box and several menu 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.
- Service:** Create CR, Homepage, Mail Webmaster.

The main content area is titled 'CMMI-DEV continuous representation' and shows a tree view of activities and documents. The 'Activities' section is expanded to show 'Project Management', which includes 'PP: Project Planning' and 'SG 2: Develop a Project Plan'. Under 'SG 2', several specific activities (SP 2.1 through SP 2.7) are listed, each with a star rating. 'SP 2.1: Establish the Budget and Schedule' is selected and highlighted.

The right-hand pane provides a detailed view of the selected activity:

- Description:** SP 2.1: Establish the Budget and Schedule. The description states: 'Establish and maintain the project's budget and schedule. The project's budget and schedule are based on the developed estimates and ensure that budget allocation, task complexity, and task dependencies are appropriately addressed. Event-driven, resource-limited schedules have proven to be effective in dealing with project risk. Identifying accomplishments to be demonstrated before initiation of the event provides some flexibility in the timing of the event, a common understanding of what is expected, a better vision of the state of the project, and a more accurate status of the project's tasks.'
- Subpractices:** 1. Identify major milestones.
- Assignments:** A table showing assignments for this activity. The table has columns for '%', 'Name', 'ET', and 'Commentary'. An assignment is shown for 'Establish Project Plan' with a percentage of 50 and a commentary 'D'. A context menu is open over this assignment, showing options: 'Percentage 30', 'View description', 'Edit properties', and 'Cancel assignment'.

The bottom status bar indicates 'Fertig' and 'Internet | Geschützter Modus: Aktiv'.

Example: Compliance Gap Analysis

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

stages
Software Project

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%	☆☆☆☆
SP 1.2: Establish Estimates of Work Product and Task Attributes	50%	☆☆☆☆
Assignments		
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

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
1	#	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												

Bereit

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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

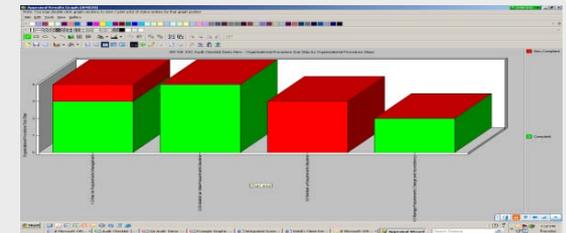
Use the AW tool during the audit to document the audit finding(s) (e.g. “Compliance”, “Non-Compliance (N/C)”, “Information Needed” record types).

- 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.



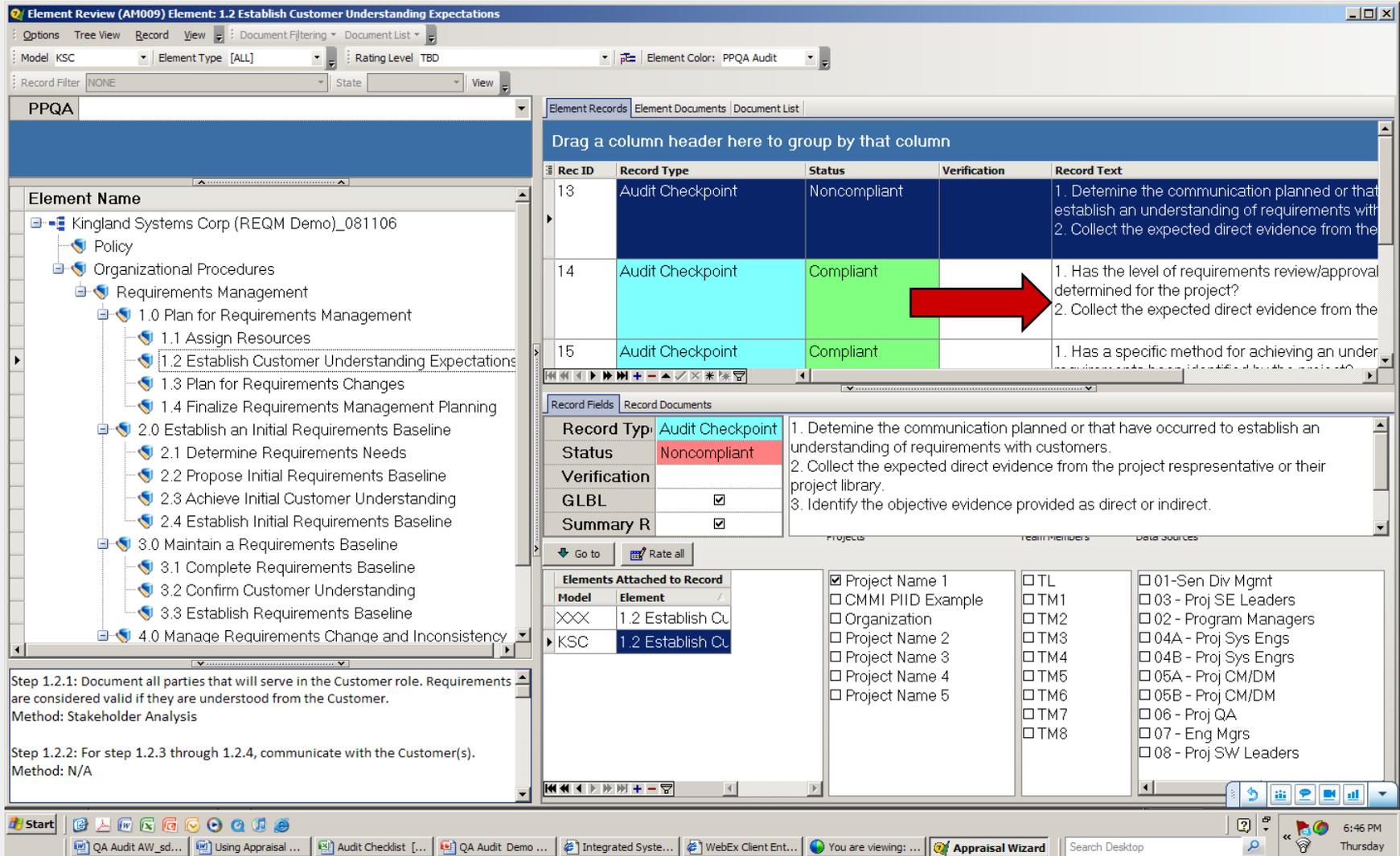
QA Reference Model in Model Wizard

The screenshot displays the Model Wizard application window titled "Model Elements (MM002) - Copy of Kingland Systems Corp (Demo)_081106". The interface is divided into several sections:

- Left Panel (Tree View):** Shows a hierarchical structure of model elements. The selected element is "4.2 Monitor for Requirements Inconsistencies" under "Organizational Procedures" > "Requirements Management".
- Top Right Panel (Form Fields):**
 - Element Name: 4.2 Monitor for Requirements Inconsistencies
 - Element Abbreviation: 4.2 Monitor for Requirements Inconsistencies
 - Element Type: Organizational Procedure Sub-Step
- Main Content Area (Full Description):**
 - Step 4.2.1: To prepare for monitoring activities, review current Internal and Customer Requirements Baselines to ensure an accurate and up-to-date traceability matrix. 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/FeaturesThe 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 requirementGenerate a requirements change request for any inconsistencies identified during this meeting. Method: *CMMI Direct Evidence*
 - Meeting minutes w/ attendees and notes specifying requirements inconsistencies 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 Plans.

- Right Panel (Action Buttons):** Includes buttons for "New Element", "New Child", "Delete", "Move Up", "Move Down", "Edit Text", "Save", "Cancel", and "Close".

Setup Audit Templates Using QA Reference Model



The screenshot displays the 'Element Review (AM009) Element: 1.2 Establish Customer Understanding Expectations' window. The interface is divided into several panes:

- Left Pane (Tree View):** Shows a hierarchical structure of requirements. The selected element is '1.2 Establish Customer Understanding Expectations' under 'Requirements Management'.
- Top Pane (Filters):** Includes 'Model: KSC', 'Element Type: [ALL]', 'Rating Level: TBD', and 'Element Color: PPQA Audit'.
- Center Pane (Table):** A table of audit records with columns: Rec ID, Record Type, Status, Verification, and Record Text.

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...
- Right Pane (Record Details):** Shows details for record 13, including 'Record Type: Audit Checkpoint', 'Status: Noncompliant', and 'Record Text'. A red arrow points from record 14 in the table to this pane.
- Bottom Pane (Elements Attached to Record):** A list of elements and their associated models. The selected element is '1.2 Establish Cu' with model 'KSC'.



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

Ready

Taskbar: QA Audit AW_sdg [Comp...], Using Appraisal Wizard 0..., Audit Checklist [Com...], Microsoft PowerPoint - [...], Integrated System Diagn..., WebEx Client Entry - Mic...

System Tray: Search Desktop, 6:01 PM Thursday



Determine Status of Records/Documents

The screenshot displays the 'Element Review (AM009) Element: 1.2 Establish Customer Understanding Expectations' window. The interface includes a tree view on the left, a table of records in the center, and a detailed view of a record on the right. Two red arrows highlight the 'Status' column in the table and the 'Record Type' dropdown menu.

Table of Records:

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 Details (Record ID 13):

- Record Type: Audit Checkpoint
- Status: Noncompliant
- Verification: GBLB
- Summary R: [checked]
- Record Text: 1. Determine the communication planned or that have occurred to establish 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.

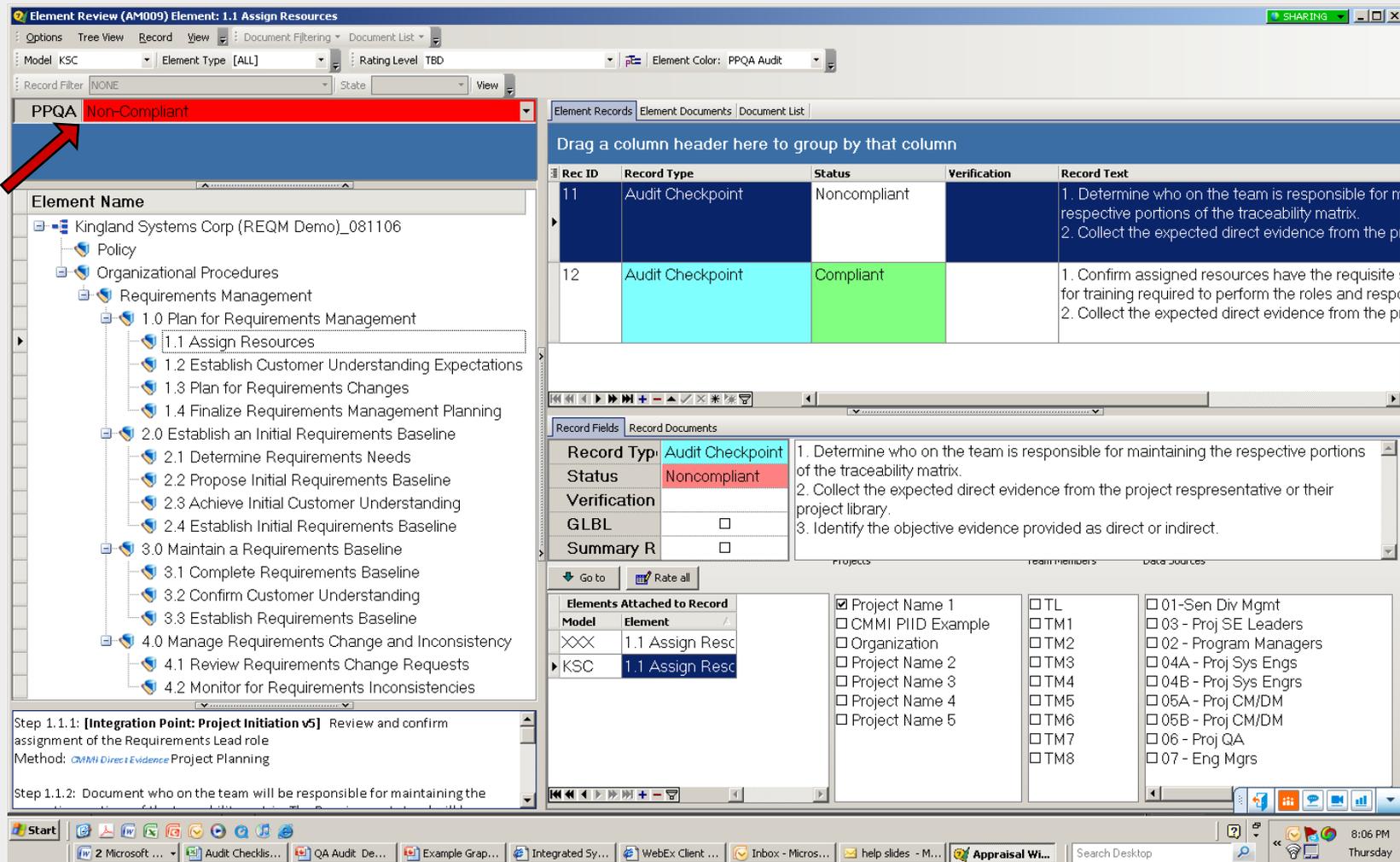
Elements Attached to Record:

Model	Element
XXX	1.2 Establish Cu
KSC	1.2 Establish Cu

Checkboxes:

- 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

Determine Element Compliance Ratings



The screenshot displays the 'Element Review (AM009)' application window. The top navigation bar shows 'Model: KSC', 'Element Type: [ALL]', and 'Rating Level: TBD'. A dropdown menu on the left indicates the current element is 'PPQA Non-Compliant', with a red arrow pointing to it. The main interface is divided into several panes:

- Left Pane (Tree View):** Shows a hierarchical structure of requirements. The selected element is '1.1 Assign Resources' under '1.0 Plan for Requirements Management'.
- Top Right Pane (Table):** A table with columns: Rec ID, Record Type, Status, Verification, and Record Text.

Rec 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 representative or their 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 representative or their project library.
- Bottom Right Pane (Record Details):** Shows details for the selected record (Rec ID 11):
 - Record Type: Audit Checkpoint
 - Status: Noncompliant
 - Verification: [Empty]
 - GLBL:
 - Summary R:
- Bottom Left Pane (Text):** Displays the text for the selected element: 'Step 1.1.1: [Integration Point: Project Initiation v5] Review and confirm assignment of the Requirements Lead role. Method: QAMI Direct Evidence Project Planning'. Below it, 'Step 1.1.2: Document who on the team will be responsible for maintaining the traceability matrix.' is partially visible.
- Bottom Center Pane (Elements Attached to Record):** A table showing the model and element for the record:

Model	Element
XXX	1.1 Assign Resc
KSC	1.1 Assign Resc
- Bottom Right Pane (List of Elements):** A list of checkboxes for various elements, including 'Project Name 1' through 'Project Name 5', 'TL' through 'TM8', and '01-Sen Div Mgmt' through '07- Eng Mgrs'.

The Windows taskbar at the bottom shows the system clock as 8:06 PM on Thursday.

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

Element Review (AM009) Element: 12.3 Define customers requirements

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

Record Filter: NONE | State: | View: | SHARING

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 preliminar 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

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 nee constraints, and interfaces for all phases of the
27	DCE PIID	OE Examined	Yes	How do you elicit stakeholder needs, expectatio interfaces for all phases of the product's life cyc
89	GA(New) PIID	OE Examined	Yes	How do you maintain bi-directional traceability a requirements and the project plans and work pro
204	GA(New) PIID	OE Examined	Yes	How do you identify and collect stakeholder nee

Record Fields | Record Documents

Record Type	DCE PIID	How do you identify and collect stakeholder needs, expectations, constraints, and interfaces for all phases of the product's life cycle?
Status	OE Examined	
Verification	Yes	
GLBL	<input type="checkbox"/>	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
Summary R	<input type="checkbox"/>	

Go to | Rate all

Elements Attached to Record	Model	Element
<input type="checkbox"/>	ISO 900	7.2.1.b
<input type="checkbox"/>	ISO 900	7.2.1.c
<input type="checkbox"/>	ISO 900	7.2.1.d
<input type="checkbox"/>	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

12.3 Define customers requirements



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	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.



Summary Report Generation (AM121)

Options: Records

Report Name: Save Report Cancel

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 elect to change 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"/>	11
Project Plan	Strength	<input type="checkbox"/>	18
Project Plan	Weakness	<input type="checkbox"/>	
Project Mon	Strength	<input type="checkbox"/>	
Project Mon	Alternate Practice	<input type="checkbox"/>	
Project Mon	Weakness	<input type="checkbox"/>	
Supplier Agt	Strength	<input type="checkbox"/>	

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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**



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