

Advanced Product Quality Planning (AQ9)

BPA Delivery 7 for V5R19 (V5.7)

User's Guide



Modification Tracking

Version	Date	Done by	Modification
D7W35.3	26 Aug 2009	IJK	Modification Tracking Table added

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Introduction

In order to provide an integrated environment to manage FMEA and Control Plan for engineering department, a solution based on SMARTEAM WEB EDITOR i.e.APQP, is provided to all engineers. This tool should enable users to manage information in database and to share with others.

APQP objectives are:

Support the collaborative management of FMEA, Control Plan, and Gage R&R across world wide product development teams.

- Support easy edit tool to make Design FMEA and Process FMEA.
- Generate summary screen.
- Generate Gage report and Control Plan report.

The purpose of this document is to help the reader understand how to use the APQP solution.

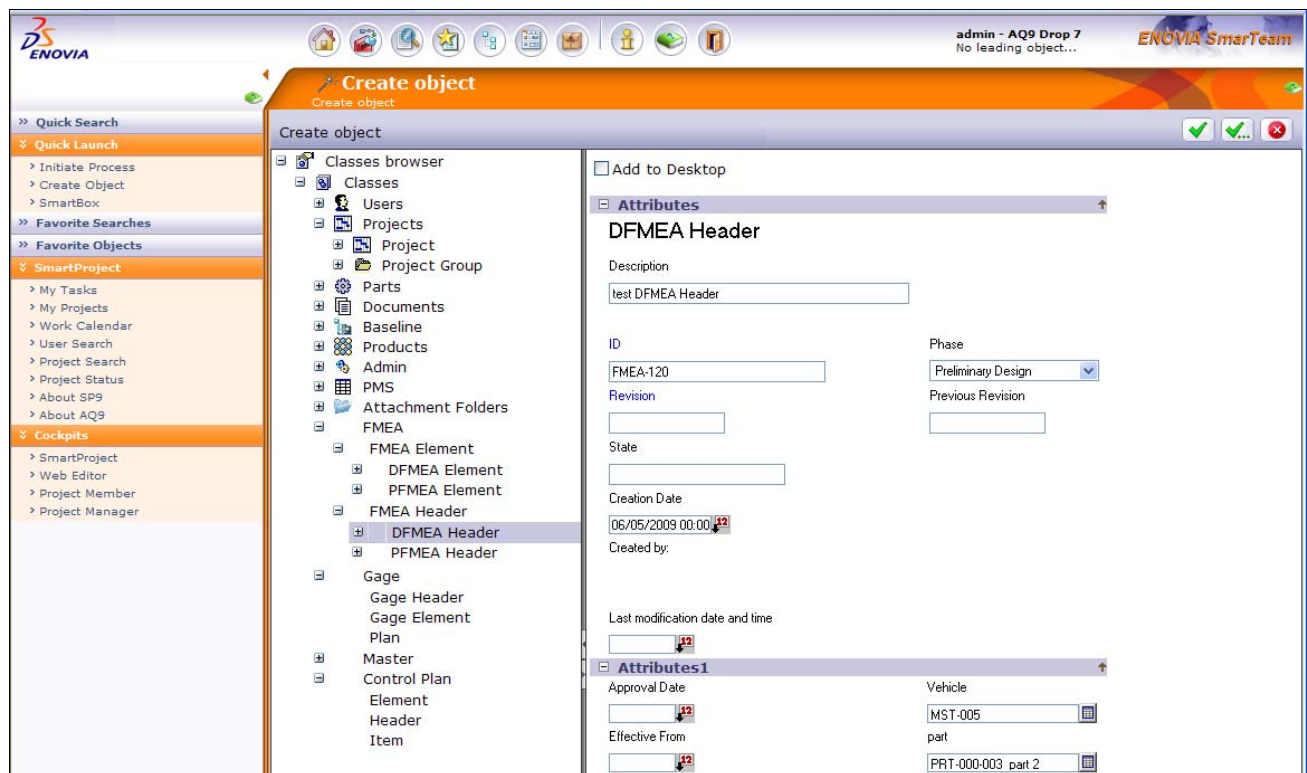
1 Overview of APQP

This chapter describes and explains all the functionalities related to APQP

1.1 APQP General Features and Configuration

- **System Look and Feel**

APQP's default look & feel is different from SmarTeam Web Editor's look & feel.



1.2 How to Create a New Project

1.2.1 FMEA Definition

1. From Scratch:

- a. Create a new project object

- b. Directly with Web Editor: By using SmarTeam Web Editor standard operation, user can add FMEA Head objects

2. By Reusing an Existing Project:

- c. Directly with Web Editor.
 - Create a new Project object.
 - Use FMEA Copy tool from the project profile card. From this interface, you can browse the existing projects and select the project you want to copy from.
 - You can copy Design FMEA as well as Process FMEA. If user click on header check box, the FMEA header will get copied. If user clicks on FMEA element check box header will get automatically selected and header along with elements will be copied.



The screenshot shows the 'Design FMEA' webpage. It includes a header with 'FMEA - Webpage Dialog' and 'Design FMEA'. Below the header, there are input fields for 'FMEA NO' (FMEA-114), 'Car Model' (Vehicle 1), 'Production Target Date' (2009-06-05), 'Date To Finish' (2009-06-30), 'Part No.' (PRT-000-004), and 'Part Name' (part 2). There are also fields for 'Responsible Team' (aa) and 'Core Team' (dd). At the bottom, there is a table with columns: Item, Function, Potential Effect(S) Of Mode, Potential Effect(S) Of Failure, Sev, Class, Potential Cause(S) Mechanism(S) Of Failure, Occur, Prevention, Detection, Detec, R.P.N., Recommended Action(S), Responsibility, Target Completion Date, Action Results (Action Taken, Sev, Occ, Del, R.P.N.). The table contains two rows of data.

Item	Function	Potential Effect(S) Of Mode	Potential Effect(S) Of Failure	Sev	Class	Potential Cause(S) Mechanism(S) Of Failure	Occur	Prevention	Detection	Detec	R.P.N.	Recommended Action(S)	Responsibility	Target Completion Date	Action Results	Sev	Occ	Del	R.P.N.
aa	Failure Mode 1	Failure Effect 1	2	dd	Failure Cause 1	3	ff	ff	5	30				2009-06-05	ff	6	8	9	432
dd	Failure Mode 1	Failure Effect 1	3	dd	Failure Cause 1	4	cc	dd	6	72	70	100		2009-06-05	ff	7	8	10	560

1.2.2 Control Plan Definition

1. From Scratch:

- a. Create a new Project object.
- b. Directly with Web Editor: By using SmarTeam Web Editor standard operation, user can add Control Plan Header, Element, and Item objects.

2. By Reusing an Existing Project:

- a. Directly with Web Editor.
 - Create a new Project object.
 - Use Control Plan Copy tool from the project profile card. From this interface, you can browse the existing projects and select the project you want to copy from.
 - Choose Header, Element, or Item object. If user click Item, system choose upper Header and Element by default. When user unselect Header, sub Elements and Items are unselected.

DFMEA Copy -- Webpage Dialog

Control Plan Copy
Control Plan Copy

Start Cancel

Source Project

Project Group: PRJ-000-149 , ITE APQP Test PrjGrp 001

Project: . / ITE Template1 , PRJ-000-152

Target Project

Project ID: PRJ-000-162

Project Name: Template1

Control Plan

☒ ITE Control Plan Header 001

☐ Default 1234567890 ABC1

1.3 Project Execution

1.3.1 FMEA

1. Edit

- From Design FMEA or Process FMEA Head, user can call edit and then Update

FMEA -- Webpage Dialog

Design FMEA
Design FMEA

Chart Export to Excel Close

Update

FMEA NO: FMEA-114

Car Model: Vehicle 1 Responsible Team: aa

Production Target Date: 2009-06-05 Date To Finish: 2009-06-30

Part No.: PRT-000-004 Core Team: dd

Part Name: part 2

Add

Item	Function	Potential Effect(S) Of Mode	Potential Effect(S) Of Failure	Sev	Class	Potential Cause(S)/ Mechanism(S) Of Failure	Occur	Prevention	Detection	Detect	R.P.N.	Recommended Action(S)	Responsibility	Target Completion Date	Action Results				R.P.N.
															Actions Taken	Sev	Occ	Det	
aa	Failure Mode 1	Failure Effect 1	2	dd	Failure Cause 1	3	rr	ff	3	30				2009-06-05	Nh	6	3	9	432
dd	Failure Mode 1	Failure Effect 1	3	dd	Failure Cause 1	4	cc	dd	5	72	no	101		2009-06-05	100	7	8	30	560

* RPN (Risk Priority Number)

2. Export

- By clicking Export to excel, user can save to Microsoft excel.

DFMEAExpert - Windows Internet Explorer

http://hpmed1/med8/dfs/APCF/DFMEAExpert.aspx?id=346&code=1615

File Edit View Favorites Tools Help

Export to ExcelClose

Potential Failure Mode And Effects Analysis (Design FMEA)

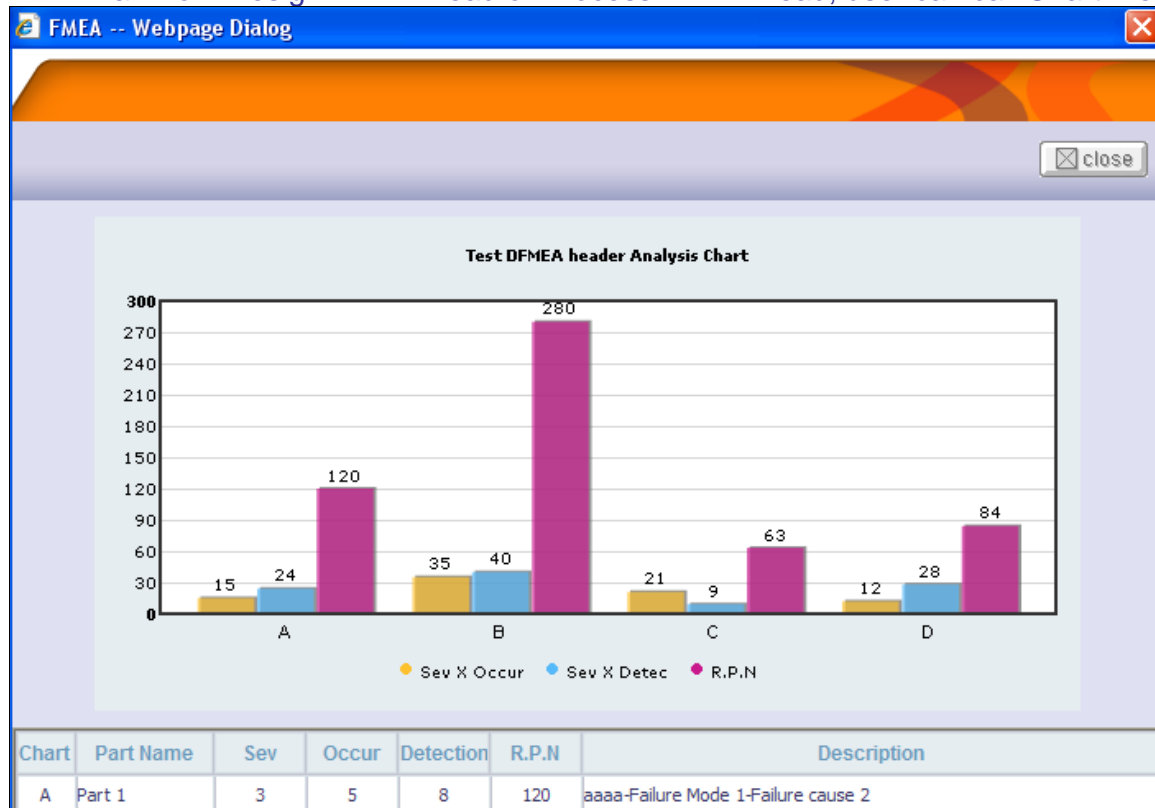
FMEA NO	FMEA-114	Responsible Team	aa	Revision	Date	Major Revision	Prepared(Sign/Date)	Checked(Sign/Date)	Approved(Sign/Date)
Car Model	Vehicle 1	Date To Finish	2009/05/30	First Issue					
Production Target Date	2009/05/05								
Part No	PRT-000-004	Core Team	dd						
Part Name	part 2								

Item/ Function	Potential Effect(S) Of Mode	Potential Effect(S) Of Failure	Sev	Class	Potential Cause(S)/ Mechanism(S) Of Failure	Occur	Current Design Controls		Detect	R.P.N	Recommended Action(S)	Responsibility/ Target Completion Date	Action Results				
							Prevention	Detection					Agreed Taken	Sev	Occ	R.P.N	
aa	Failure Mode 1	Failure Effect 1	2	dd	Failure Cause 1	3	rr	tt	5	30		2009-05-05	hh	5	8	9	432
dd	Failure Mode 1	Failure Effect 1	3	dd	Failure Cause 1	4	cc	dd	5	72	no	2009-05-05	qq	7	8	10	560

* RPN (Risk Priority Number)

3. Chart

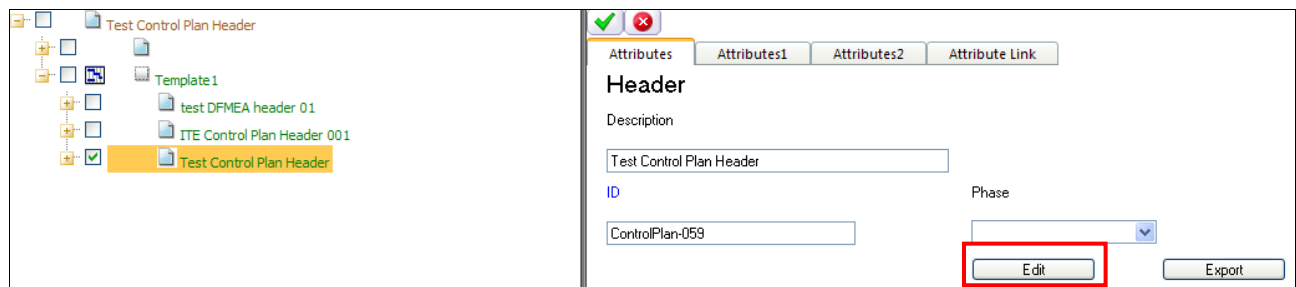
a. From Design FMEA Head or Process FMEA Head, user can call Chart View.



1.3.2 Control Plan

1. Edit

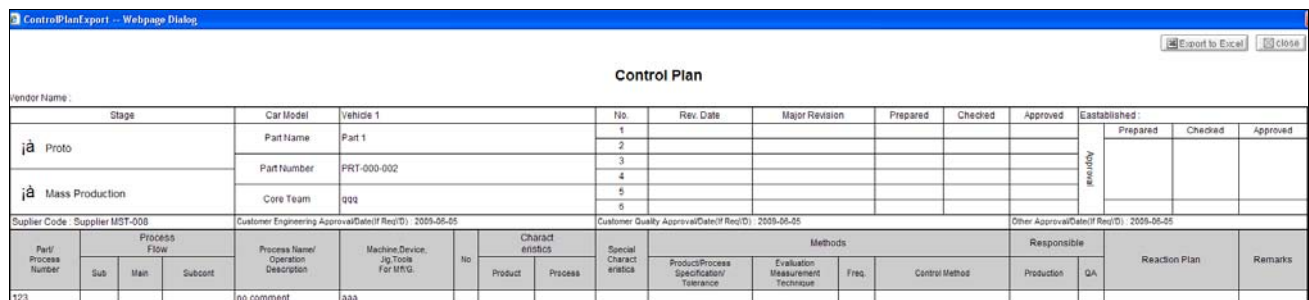
a. From Control Plan Header, user can call Update and then Edit.




Part/ Process Number	Process Flow	Process Name/ Operation Description	Machine/Device, Jig, Tools For MFG.	No	Characteristics	Special Characteristics	Product/Process Specifications/ Tolerance	Evaluation Measurement Technique	Freq.	Control Method	Responsible	Reaction Plan	Remarks
123	Default	no comment	aaa										

2. Export

a. By clicking Export to Excel, user can save to Microsoft Excel.



Control Plan														
Vendor Name:		Stage	Car Model	Vehicle 1	No.	Rev. Date	Major Revision	Prepared	Checked	Approved	Established:			
jã Proto		Part Name	Part 1		1						Ready	Prepared	Checked	Approved
		Part Number	PRT-000-002		2									
		Core Team	qqq		3									
jã Mass Production					4									
					5									
					6									
Supplier Code: Supplier MST-008		Customer Engineering Approval Date (If Req'd): 2009-06-05			Customer Quality Approval Date (If Req'd): 2009-06-05			Other Approval Date (If Req'd): 2009-06-05						

Part/ Process Number	Process Flow			Process Name/ Operation Description	Machine/Device, Jig, Tools For MFG.	No	Characteristics		Special Characteristics	Methods				Responsible		Reaction Plan	Remarks
	Sub	Main	Subcont				Product	Process		Product/Process Specifications/ Tolerance	Evaluation Measurement Technique	Freq.	Control Method	Production	QA		
123				no comment	aaa												

1.3.3 Gage R&R Report

1. Edit.

a. From Gage Header, user can call Report View after calling Update.

[Export to Excel](#)
[close](#)

Gage R & R Report

Part		Gage										Trial		
No:		No:	Gage-013										A: Admin, Admin	
Name:		Name:	Gage header										B: Admin, Admin	
Spec:		Tolerance:	5										C: Admin, Admin	
Character:		Etc:												

Operator(m)	Trial(r)	Parts No(n)										Average
		1	2	3	4	5	6	7	8	9	10	
A	1	1	2	3	4	5	6	7	8	9	10	5.5
	2	11	12	13	18	22	26	30	14	15	16	17.7
	3	17	18	19	20	21	22	23	24	25	26	21.5
	Average	9.667	10.667	11.667	14	16	18	20	15.333	16.333	17.333	Xa : 14.9
	Max diff	16	16	16	16	17	20	23	16	16	16	Ra : 17.2
B	1	1	2	3	4	6	7	8	9	10	11	6.1
	2	12	5	13	15	17	18	19	20	21	22	16.2
	3	14	16	23	24	25	26	27	28	29	30	24.2
	Average	9	7.667	13	14.333	16	17	18	19	20	21	Xb : 15.5
	Max diff	13	14	20	20	19	19	19	19	19	19	Rb : 18.1
C	1	21	22	23	24	25	26	27	28	29	30	25.5
	2	11	11	12	13	14	15	16	12	11	18	13.3
	3	13	17	15	16	17	18	19	20	21	22	17.8
	Average	15	16.667	16.667	17.667	18.667	19.667	20.667	20	20.333	23.333	Xc : 18.867
	Max diff	10	11	11	11	11	11	11	16	18	12	Rc : 12.2
Part Avg ($\bar{\bar{X}}_p$)		11.222	11.667	13.778	15.333	16.889	18.222	19.556	18.111	18.889	20.555	Rp : 9.333
$\bar{R} = (\bar{R}_a + \bar{R}_b + \bar{R}_c) / \text{people}$												$\bar{R} : 15.8333$
$\bar{X}diff = \max \bar{X} - \min \bar{X} = Ro$												Ro : 3.967
$EV = 5.15 \times \bar{R} / d_2$												EV= 48.164
$AV = \sqrt{(Z \times R_a / d_2)^2 - (EV^2 / nr)}$												AV= 6.0899
$TV = \sqrt{R^2 + PV^2}$												
$\%R \& R = R \& R / TV \times 100\%$												

2 Prerequisite Settings for New Project

This chapter explains all the prerequisite Admin Tasks to be performed, related to APQP before starting or creating any new Project.

Note: The below detailed settings are for the scenario that is described in the next chapter, which is just a small example to guide the user.

2.1 Library

2.1.1 Create Reference Objects

There are three groups library.

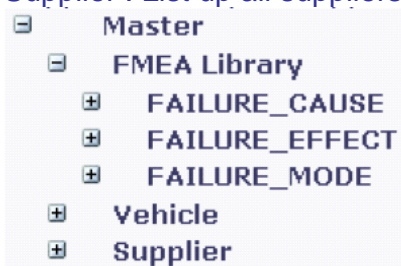
Failure Cause : List up all failure cause in this class and users can utilize.

Failure Effect : List up all effects from failure

Failure Mode : List up all failure was happened in the past.

Vehicle : List all OEM's vehicle code or name.

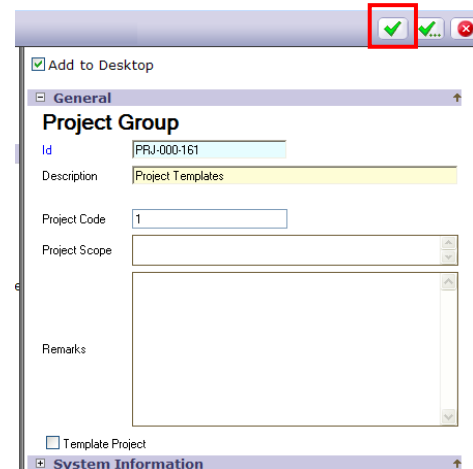
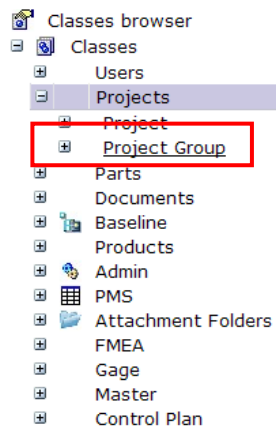
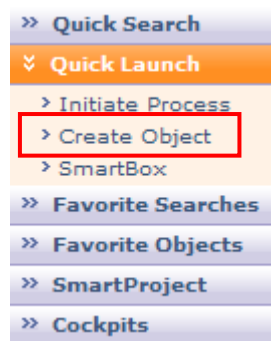
Supplier : List up all suppliers.



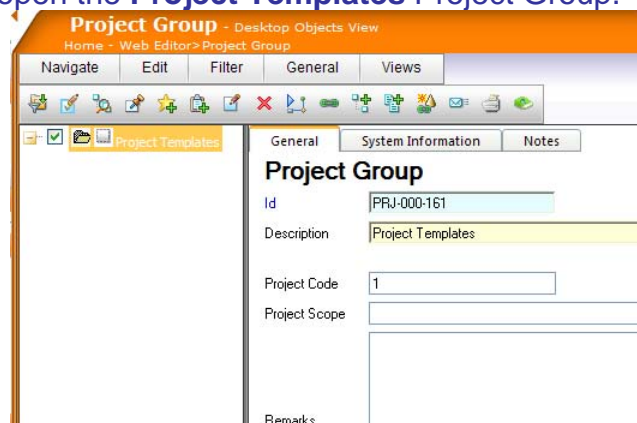
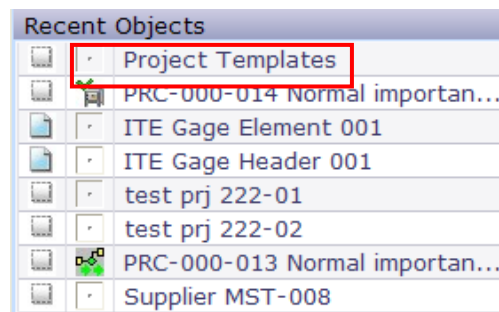
2.2 Project Template Creation

2.2.1 Project Group Creation

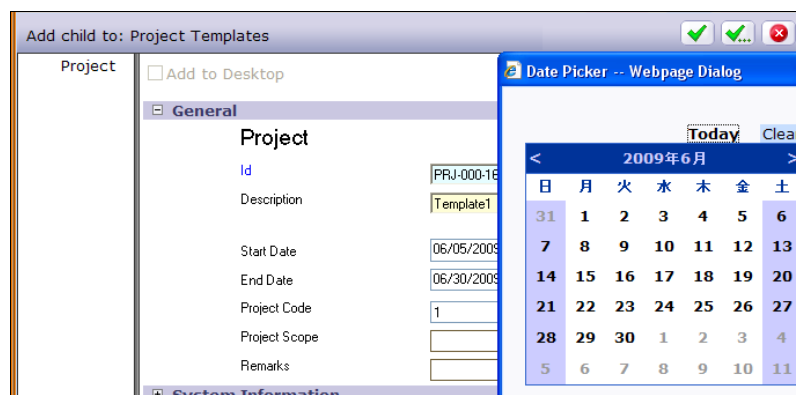
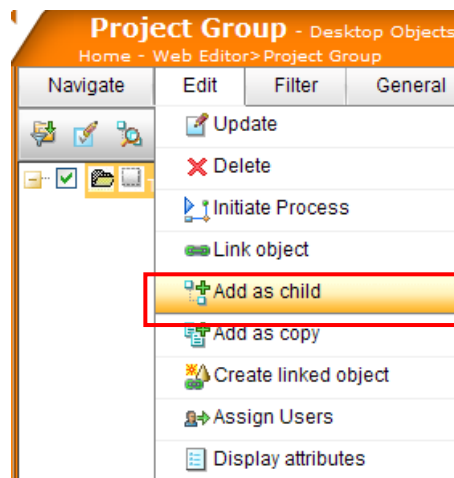
In SMARTEAM Web Editor, click on **Create Object**, select **Project Group** class from the Class Browser. Enter the description **Project Templates** and click on **OK** to Finish.



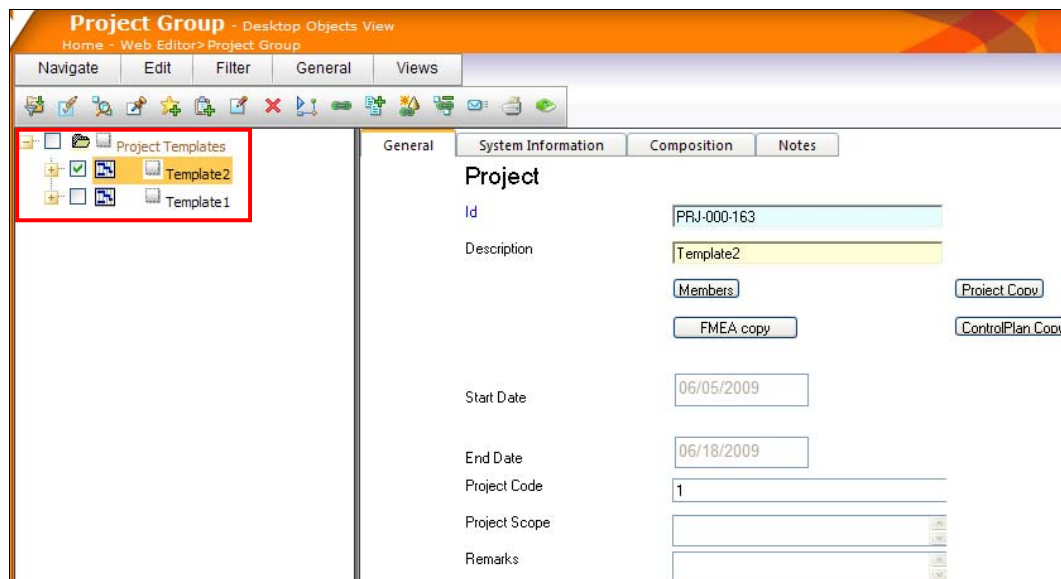
From the Recent Objects list, select and open the **Project Templates** Project Group.



Perform **Add as Child** Action on it to create **Project Template1** under the **Project Templates** Group. Enter the **Description**, **Start Date** and **End Date** fields. Click on OK to finish.



Similarly also create **Template2** under the **Project Templates** Group. **Template1** and **Template2** are seen under the **Project Templates**.

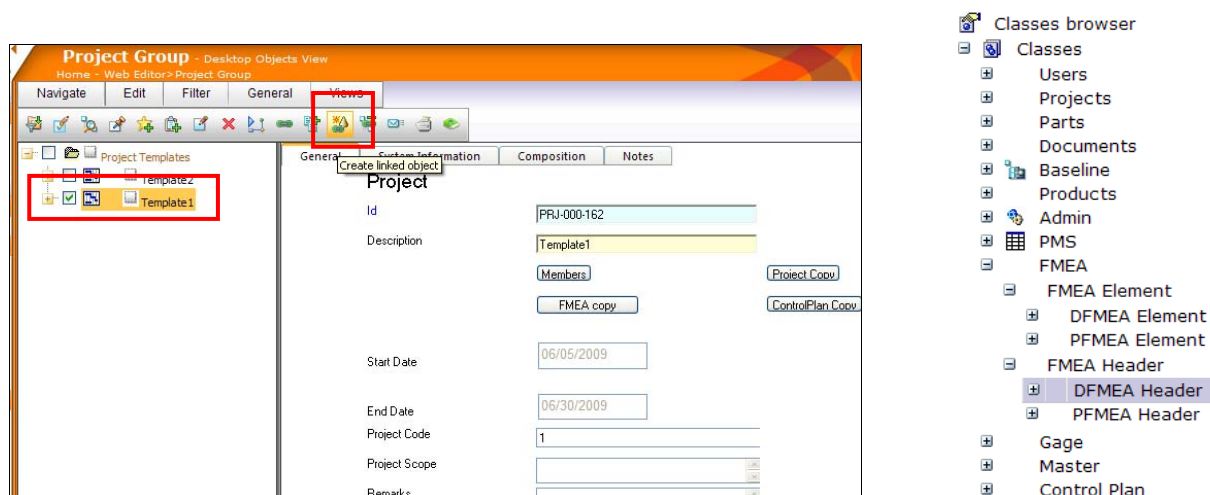


2.2.2 Template FMEA Definition

The user needs to define FMEA for both the projects **Template1** and **Template2**.

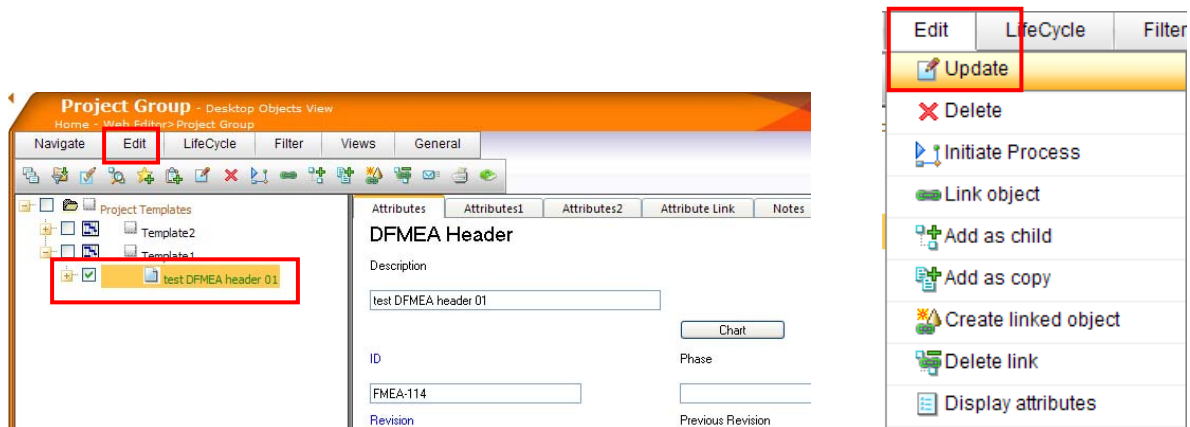
1. for Template1:

Open the **Template1** and perform **Create Linked Objects** Action on it. Select **DFMEA Header** under the FMEA tree.

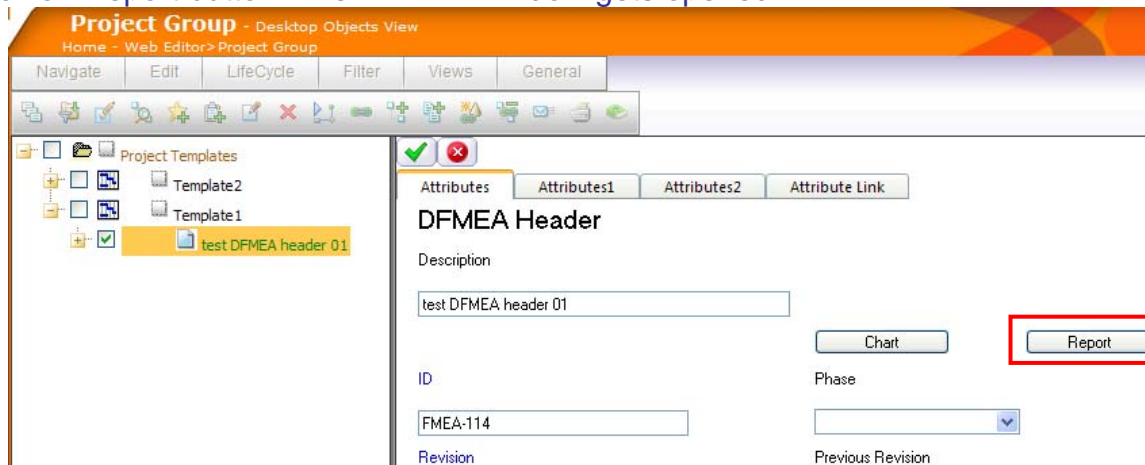


Enter the **Description** and the **Vehicle, Part, Manager, MP Date, Finish Date, Responsible Team, Core Team** fields and click on **OK** to finish.

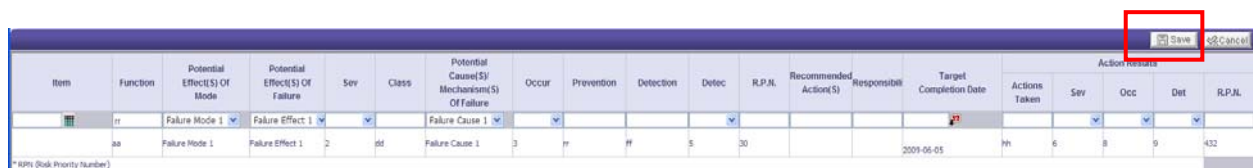
Open the newly generated DFMEA Header. Perform **Update** Action on it



Click on Report button. The DFMEA window gets opened.



Click on “Add” button. Fill all the required information and click on save.



The element gets added. Number of such elements can be added. Click on Update to update DFMEA Header. Close the page.

Design FMEA

Design FMEA

Chart Export to Excel Close

Update

FMEA NO: FMEA-114
 Car Model: Vehicle 1
 Responsible Team: jz
 Production Target Date: 2009-06-05
 Date To Finish: 2009-06-30
 Part No: PRT-000-004
 Core Team: dd
 Part Name: part 2

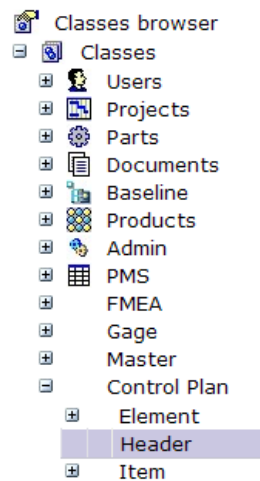
Item	Function	Potential Effect(S) Of Mode	Potential Effect(S) Of Failure	Sev	Class	Potential Cause(S)/ Mechanism(S) Of Failure	Occur	Prevention	Detection	Detec	R.P.N.	Recommended Action(S)	Responsabil	Target Completion Date	Actions Taken	Sev	Occ	Det	R.P.N.
aa		Failure Mode 1	Failure Effect 1	2	dd	Failure Cause 1	3	rr	ff	5	30			2009-06-05	hh	6	8	9	432
dd		Failure Mode 1	Failure Effect 1	3	dd	Failure Cause 1	4	cc	dd	6	72	no	100	2009-06-05	100	7	8	10	560

* RPN (Risk Priority Number)

2.2.3 Template Control Plan Definition

1. Control Plan Structure for Template1:

Select and open the **Template1** Project and perform **Create Linked Objects** Action on it, Select **Header** by expanding **Control Plan** tree.



Enter the **Description** and click on **OK**.

☒ Add to Desktop

Attributes

Header

Description

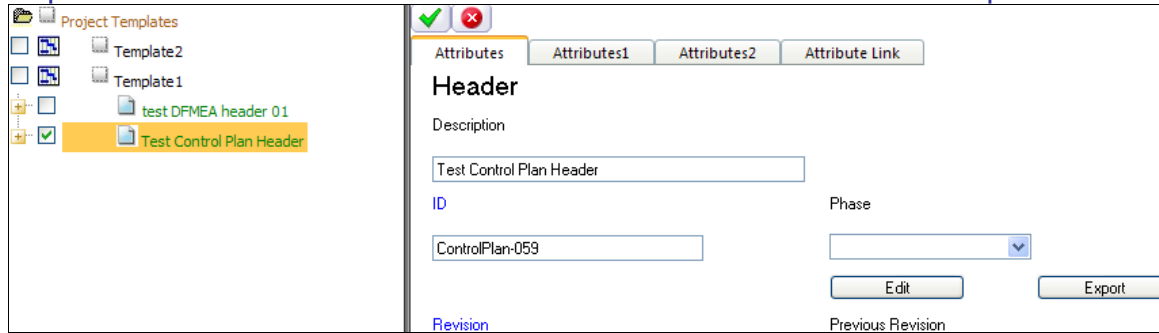
Test Control Plan Header

ID

ControlPlan-059

Phase

Open the **Control Plan Header** and perform **Update** Action on it, click **Edit**. Add all the required information and click save to add the element to the Control plan Header.




Part/Process Number	Process Flow	Process Name/Operation Description	Machine/Device, Jig/Tools For MFG.	No	Characteristics	Special Characteristics	Product/Process Specification/Tolerance	Evaluation Measurement Technique	Freq.	Control Method	Responsible	Reaction Plan	Remarks
123	Default	no comment	jaa										

Click on **Update** to update the control plan to DB. Close the page.

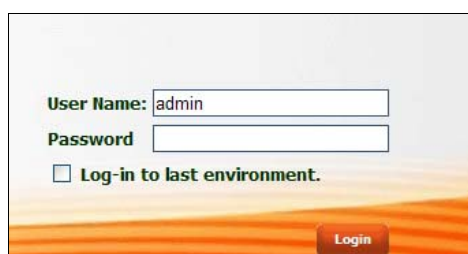
3 End User Scenario on APQP

This chapter gives one small example of APQP application.

3.1 End User Operations

3.1.1 Phase 1: Project Creation

1. Launch SMARTEAM Web Editor.
2. Log in as **admin** and connect to the correct database.



User Name:

Password:

☐ Log-in to last environment.



ENOVIA

Select environment

Database:

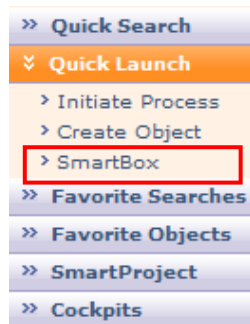
3. Click on **Initiate Process** from **Quick Launch** toolbar and start a **Project Creation Approval** process for the need that has been identified.
 - Fill the Importance field as High Importance.
 - Enter the End Time Date.
 - Click Create.



The screenshots illustrate the steps for creating a Project Creation Approval process:

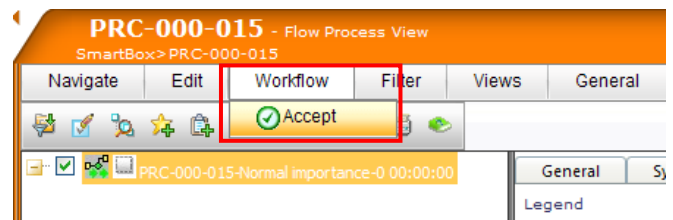
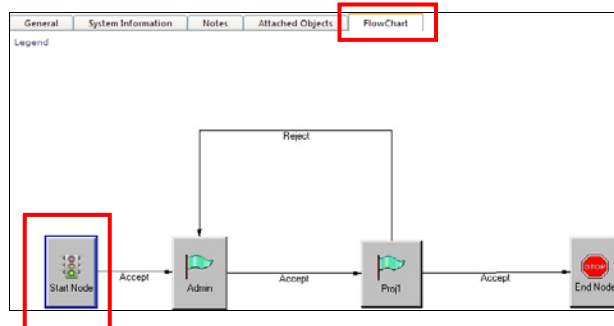
- Quick Launch Toolbar:** The 'Initiate Process' button is highlighted with a red box.
- Flow Process Tree:** The 'Project Creation Approval' process is selected under the 'Project Process' category, highlighted with a red box.
- Form Fields:** The 'General' tab of the form shows the following details:
 - Name:** PRC-000-015
 - Description:** (empty)
 - Process Status:** Process has been initiated
 - Importance:** High importance
 - End Time:** 06/05/2005
 - System Information:** Created by, Creation Date, Modified by, and Last modification date and time fields are present.
 - Comment and Notification:** (empty)
 - FlowChart:** (empty)

4. Click on **SmartBox** from **Quick Launch** toolbar and select the process in Inbox.

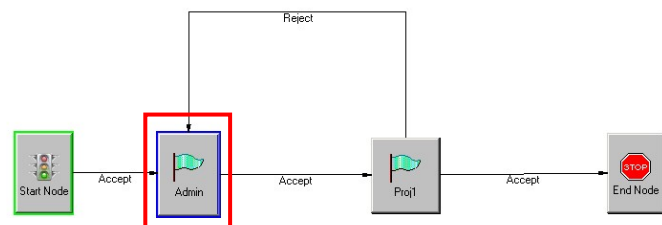


SmartBox						
(11 Items, 2 Unread)						
	Subject/Process	Body/Node	From	Created	Received	Working Time
<input checked="" type="checkbox"/>	PRC-000-015	Start Node		06/05/2009 14:14	06/05/2009 14:14	0 00:00
<input type="checkbox"/>	PRC-000-014	proj1	Start	06/05/2009 11:48	06/05/2009 11:50	0 02:24
<input type="checkbox"/>	PRC-000-012	proj1	Start	05/29/2009 17:08	05/29/2009 17:11	6 21:03
<input type="checkbox"/>	PRC-000-011	Checker	Engineering	05/29/2009 16:10	05/29/2009 16:13	6 22:01
<input type="checkbox"/>	PRC-000-009	Start Node		01/15/2009 14:41	01/15/2009 14:41	140 23:33
<input type="checkbox"/>	PRC-000-008	Start Node		01/15/2009 14:39	01/15/2009 14:39	140 23:34
<input type="checkbox"/>	PRC-000-005	Admin	Start Node	01/14/2009 22:11	01/15/2009 14:37	140 23:37

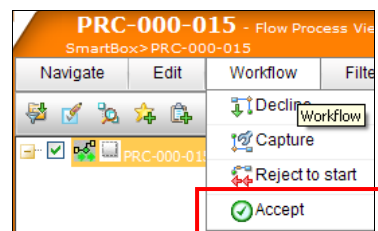
- Switch to Flow Chart tab and view it.
- Perform Accept Action on it.

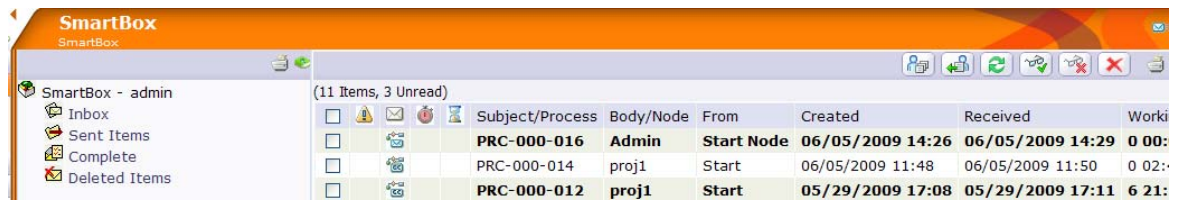


- Enter some comments and validate with ok.
- Again have a look on Flowchart, it is moved to second node for which user **admin** is only responsible.

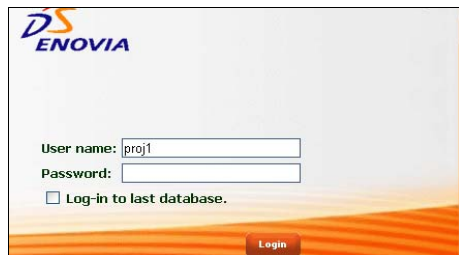


- Again perform Accept on it and validate with ok.
- Check the Inbox. No process will be displayed for admin user.

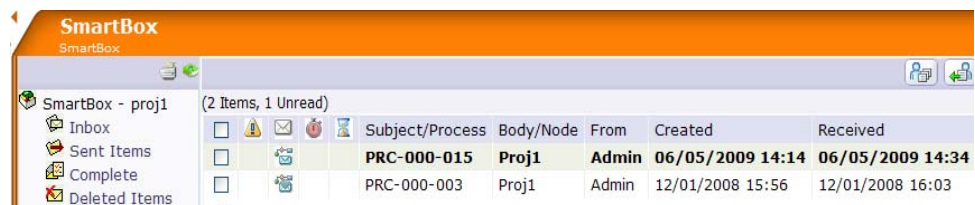
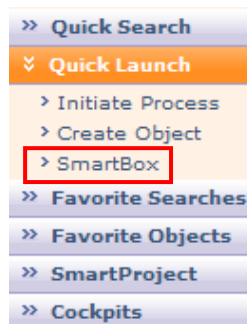




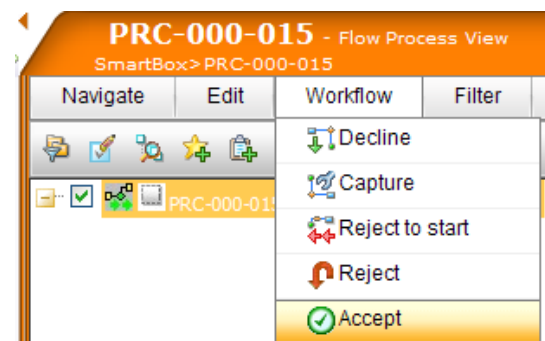
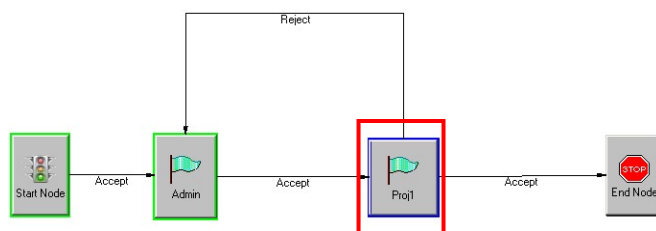
5. Click **Logout**.
6. Log in as **proj1** and connect to the correct database.



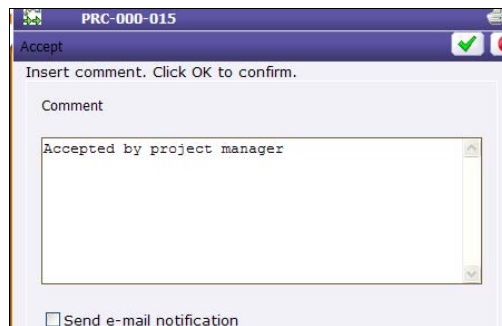
7. Click on **SmartBox** from **Quick Launch** toolbar and select the process in Inbox.



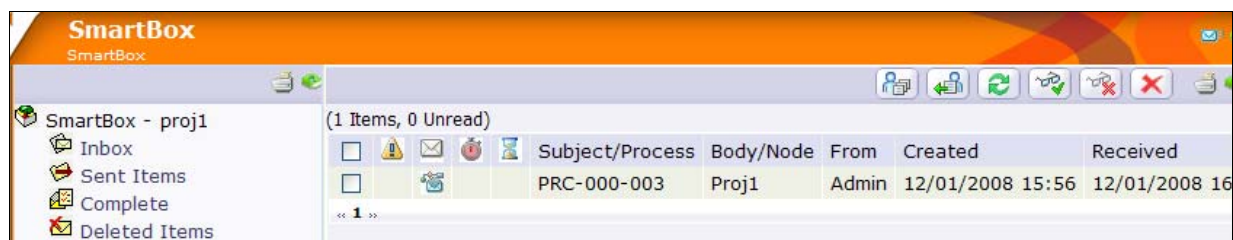
- Switch to Flow Chart tab and view it.
- Perform Accept Action on it.



- Enter some comments and validate with ok.



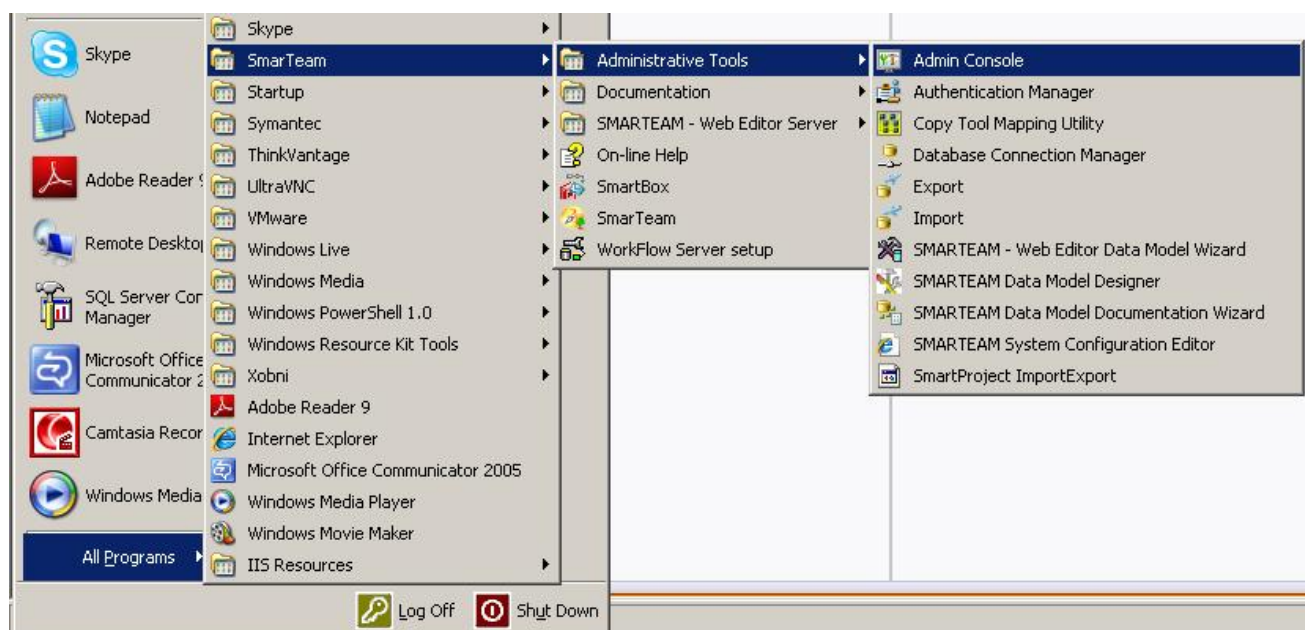
- Check the Inbox. The process “PRC-000-015” will not be displayed for proj1 user.

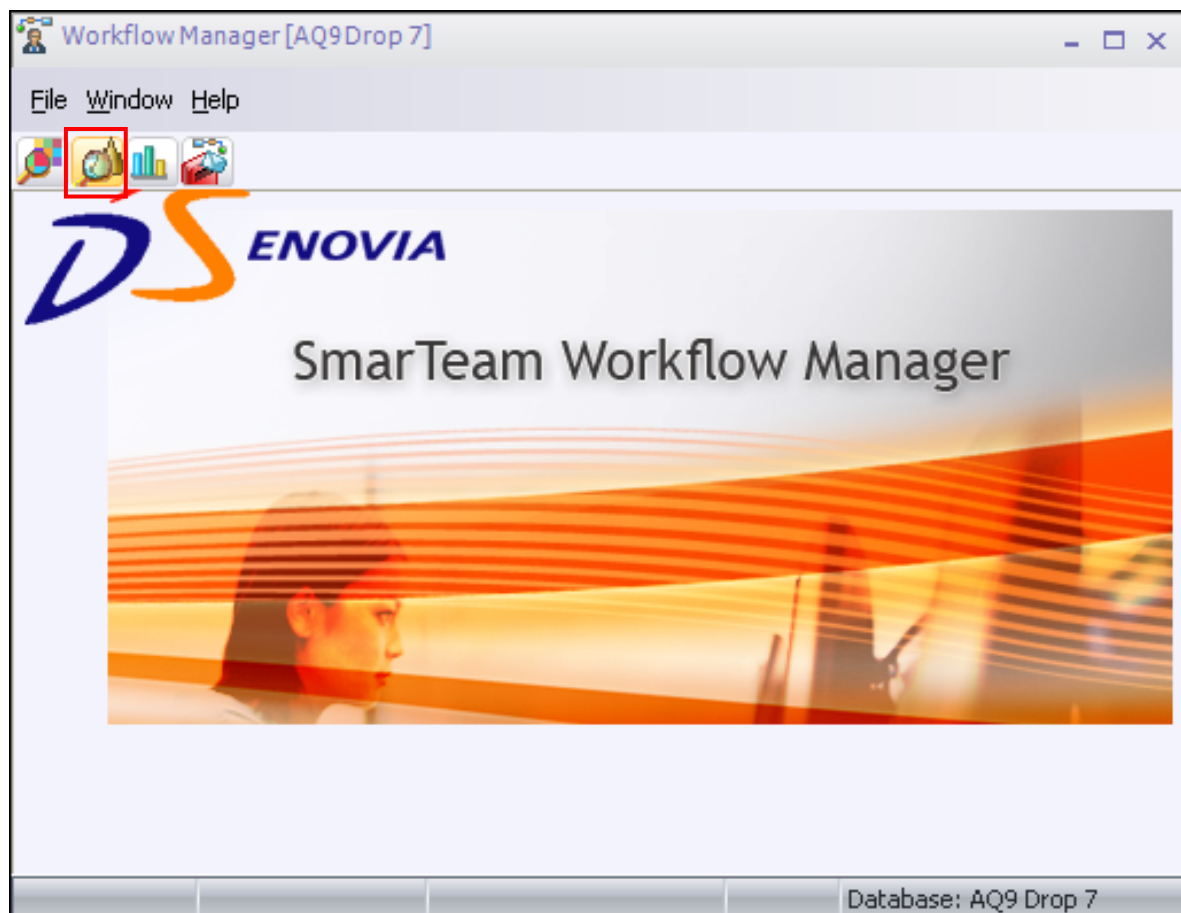
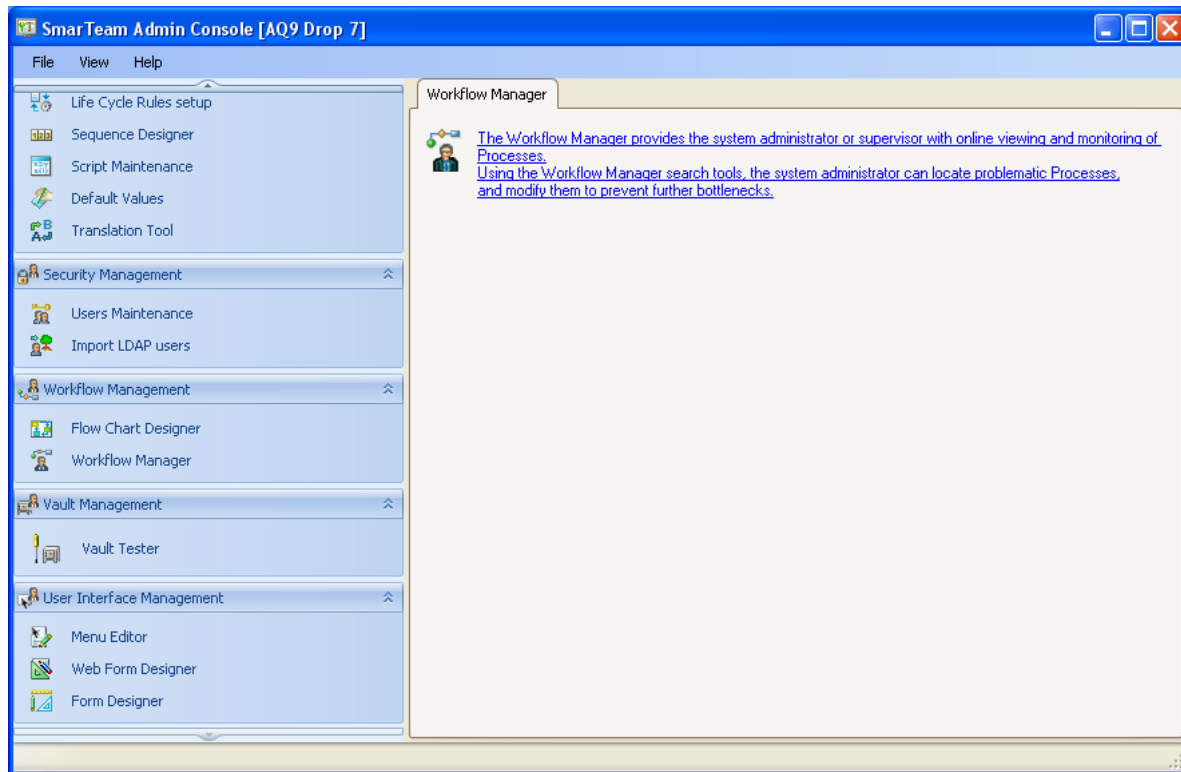


8. Click **Logout**.

Process Progress Check from Administration Client

1. Launch **Workflow Manager** from the **SmarTeam Windows Admin Console** to view the progress of the process.
 - Search for Project Creation Approval process and view it.
 - All the nodes are displayed as completed.
 - Close the Workflow Manager.





Search Processes

File Help

Name & Location Date Past Due Node Advanced

Name:

Class: All

Status: All

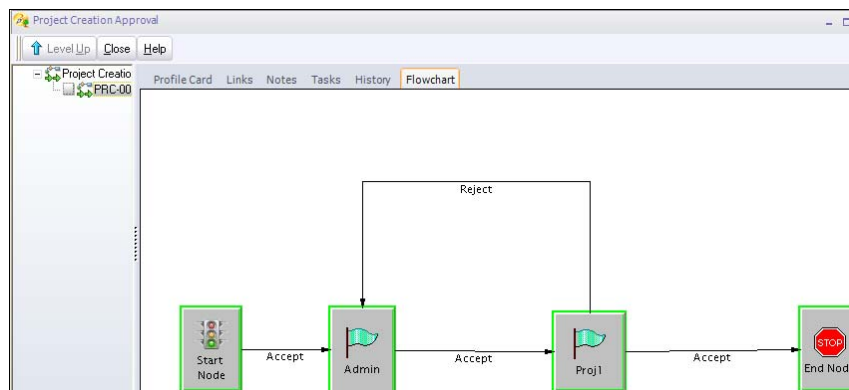
Importance: All

Supervisor:

Find Now

New Search

Class	Name	State	Creation Date	Created by:	Modified by:	Last modification date and time	Description	End Time	Process Status	Importance	Time Limit	Security level of new attached o	Work
1	PRC-000-001		11/28/2006 18:5	Admin , Admin	Admin , Admin	11/28/2006 18:50			Process has been	Normal impor	0	Object attached to FlowProcess	
2	PRC-000-002		11/21/2008 15:5	Admin , Admin	Project , Manag	11/21/2008 15:56	project creatio	11/21/2008	Process has ende	Normal impor	0	Object attached to FlowProcess	
3	PRC-000-003		12/01/2008 15:5	Admin , Admin	Admin , Admin	12/01/2008 15:57		12/01/2008	Process is flowing	Normal impor	0	Object attached to FlowProcess	
4	PRC-000-004		01/14/2009 22:1	Admin , Admin	Admin , Admin	01/15/2009 14:35			Process is flowing	Normal impor	0	Object attached to FlowProcess	
5	PRC-000-005		01/14/2009 22:1	Admin , Admin	Admin , Admin	01/15/2009 14:37			Process is flowing	Normal impor	0	Object attached to FlowProcess	
6	PRC-000-006		01/14/2009 22:1	Admin , Admin	Admin , Admin	01/14/2009 22:13			Process has been	Normal impor	0	Object attached to FlowProcess	
7	PRC-000-007		01/14/2009 22:1	Admin , Admin	Admin , Admin	01/14/2009 22:14			Process has been	Normal impor	0	Object attached to FlowProcess	
8	PRC-000-008		01/15/2009 14:4	Admin , Admin	Admin , Admin	01/15/2009 14:39			Process has been	Normal impor	0	Object attached to FlowProcess	
9	PRC-000-009		01/15/2009 14:4	Admin , Admin	Admin , Admin	01/15/2009 14:41			Process has been	Normal impor	0	Object attached to FlowProcess	
10	PRC-000-010		05/29/2009 15:5	Admin , Admin	Project , Manag	05/29/2009 16:06	project creatio	05/29/2008	Process has ende	Normal impor	0	Object attached to FlowProcess	
11	PRC-000-011		05/29/2009 16:1	Admin , Admin	Admin , Admin	05/29/2009 16:11	Document Val	06/02/2008	Process is flowing	Normal impor	0	Object attached to FlowProcess	
12	PRC-000-012		05/29/2009 17:0	Admin , Admin	Engineer , . eni	05/29/2009 17:13	doc validation	05/29/2008	Process has ende	Normal impor	0	Object attached to FlowProcess	
13	PRC-000-013		06/05/2009 11:1	Admin , Admin	Project , Manag	06/05/2009 11:29		06/05/2008	Process has ende	Normal impor	0	Object attached to FlowProcess	
14	PRC-000-014		06/05/2009 11:1	Admin , Admin	Engineer , . eni	06/05/2009 11:54	ITS Document	06/05/2008	Process has ende	Normal impor	0	Object attached to FlowProcess	
15	PRC-000-015		06/05/2009 14:1	Admin , Admin	Project , Manag	06/05/2009 14:47		06/05/2008	Process has ende	Normal impor	0	Object attached to FlowProcess	
16	PRC-000-016		06/05/2009 14:2	Admin , Admin	Admin , Admin	06/05/2009 14:29		06/05/2008	Process is flowing	Normal impor	0	Object attached to FlowProcess	



9. Log in as **admin** into SMARTEAM Web Editor and connect to correct database.

User Name:

Password:

☐ Log-in to last environment.

Login

ENOVIA

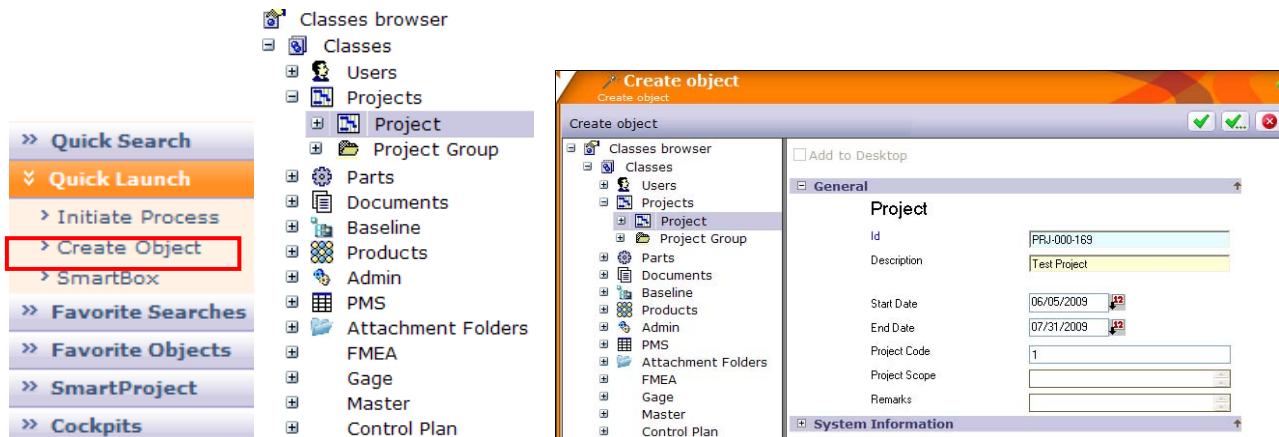
Select environment

Database:

Connect **Cancel**

10. Click on **Create Object**; select **Project** class from the Class Browser.

- Enter the Description Test Project, the Start Date and the End Date.



- Click on **OK button**.

11. Click **Logout**.

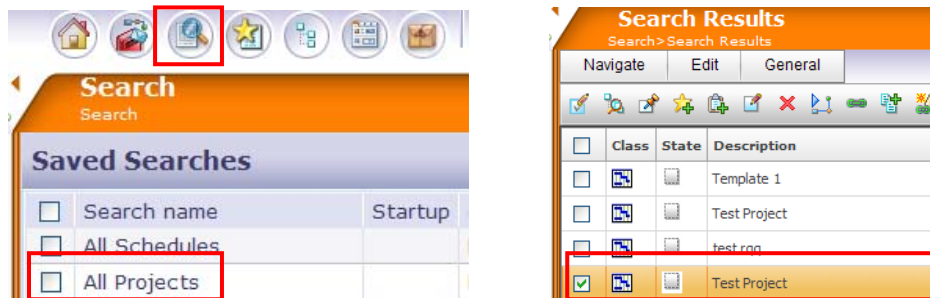
3.1.2 Phase 2: Project Definition

1. Log in as proj1 and connect to the correct database.



2. Click on icon “Search” and then find “All Projects”. Select the newly created project. Click FMEA Copy button on its profile card.

- Select “Project Templates” and “Template1” for the Source Project.
- Click Start and validate ok to the completion message.



General	System Information	Notes
Project		
Id	PRJ-000-144	
Description	Test Project	
	Members	Project Copy
	FMEA copy	ControlPlan Copy
Start Date	05/29/2009	
End Date	06/30/2009	
Project Code	1	
Project Scope		
Remarks		

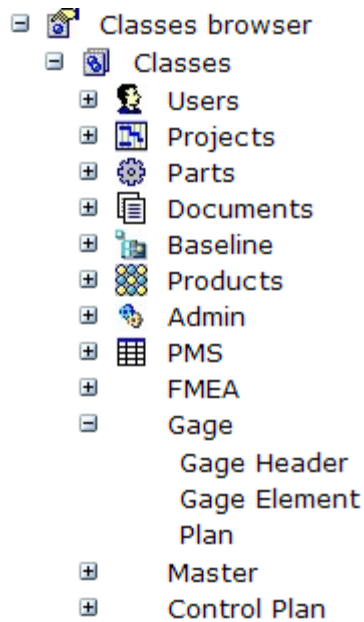
Process FMEA Copy			
Source Project			
Project Group	PRJ-000-161 , Project Templates		
Project	. / Template1 , PRJ-000-162		
Target Project			
Project ID	PRJ-000-144		
Project Name	Test Project		
Design FMEA			
<input checked="" type="checkbox"/>	FMEA-114 test DFMEA header 01		
<input checked="" type="checkbox"/>	Failure Mode 1	Failure Effect 1	Failure Cause 1

3. Click on Control Plan Copy under the Test Project.

General	System Information	Notes
Project		
Id	PRJ-000-144	
Description	Test Project	
	Members	Project Copy
	FMEA copy	ControlPlan Copy
Start Date	05/29/2009	
End Date	06/30/2009	
Project Code	1	
Project Scope		
Remarks		

Control Plan Copy	
Control Plan Copy	
Source Project	
Project Group	PRJ-000-161 , Project Templates
Project	. / Template1 , PRJ-000-162
Target Project	
Project ID	PRJ-000-144
Project Name	Test Project
Control Plan	
<input checked="" type="checkbox"/>	Test Control Plan Header
<input checked="" type="checkbox"/>	Default no comment aaa

- Logout from SmarTeam WED.
- Login as "admin"
- Click on icon "Search" and then find "All Projects". Select "Test Project".
- Perform Create Linked Objects Action and select Header under the Gage tree. Enter the Description and others (Tolerance value is mandatory) and click Finish



☐ Add to Desktop

Attributes

Gage Header

Description

ID

Phase

Revision

Previous Revision

State

- Open the Gage Header and perform Add as child Action, Select Gage Element from the class tree under Gage. Click Create and Finish after filling in Description & other information.

Add child
 Home - Web Editor>Project>Add child

Add child to: Gage header

Gage Element

☐ Add to Desktop

Attributes

Gage Element

Description

Attributes2

103

201

104

202

105

106

107

108

109

110

101

102

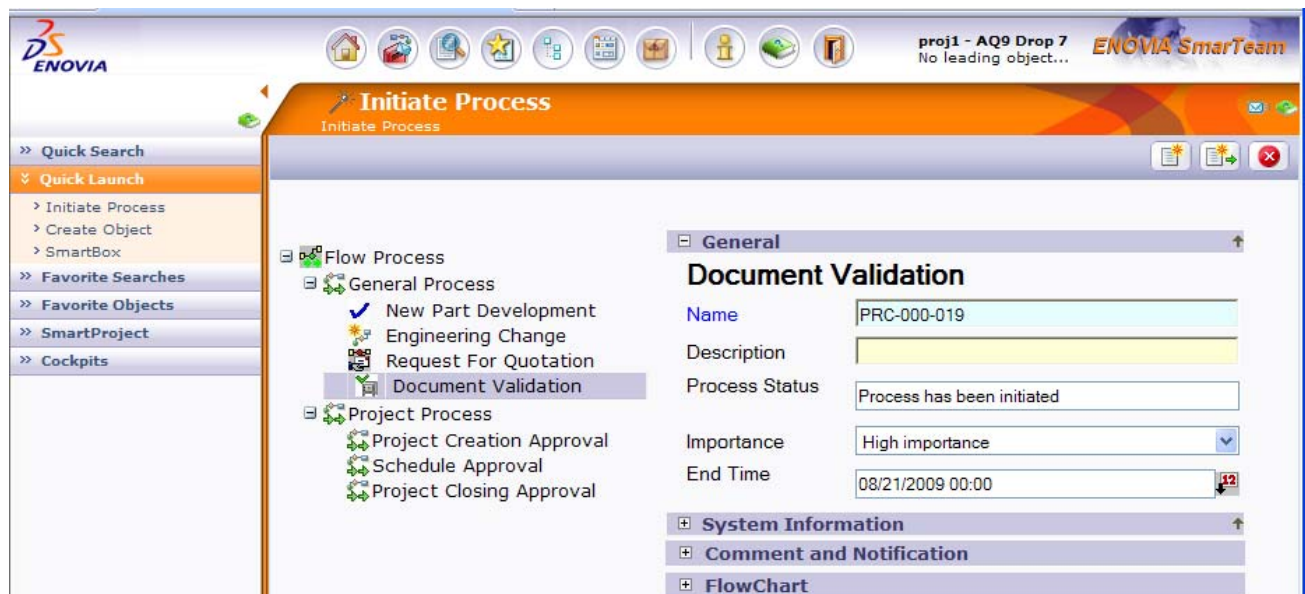
Attributes3		Attributes4	
203	301	303	
13	17	19	
204	302	304	
18	18	20	
205		305	
22		21	
206		306	
26		22	
207		307	
30		23	
208		308	
14		24	
209		309	
15		25	
210		310	
16		26	

9. Logout from SmarTeam WED.

10. Login as “proj1”.

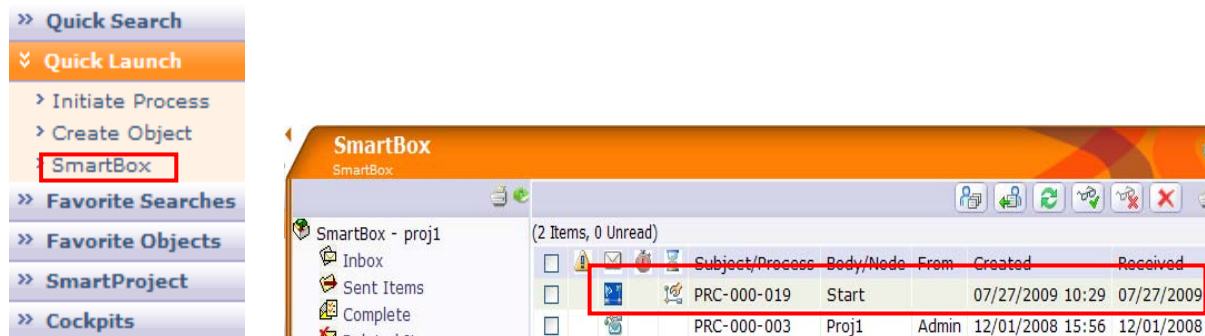
11. Click on Initiate Process from Quick Launch toolbar and start a Document Validation process to confirm the Project Definition from the assignees.

- Fill the Importance field as High Importance.
- Enter the End Time Date.
- Click Finish.

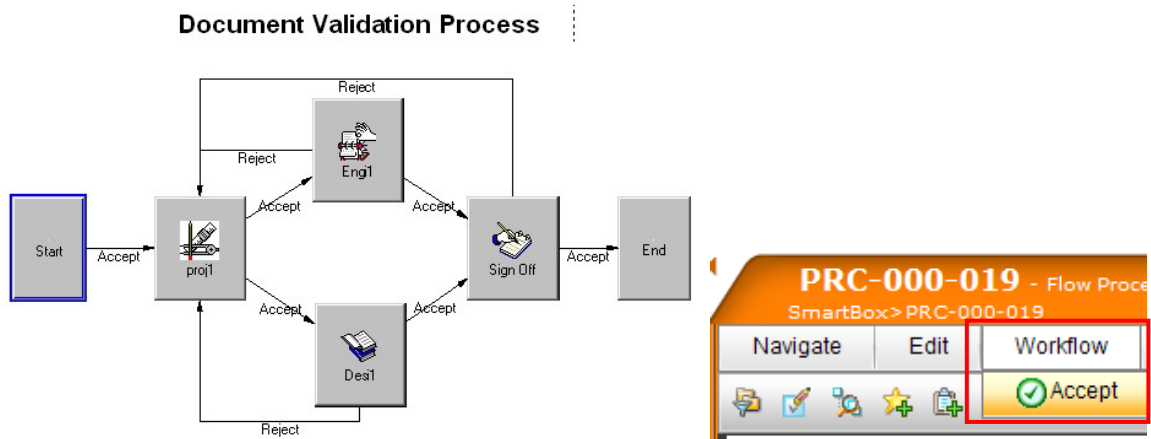


The screenshot shows the ENOVIA SmarTeam web interface. The top navigation bar includes the ENOVIA logo, a toolbar with various icons, and a user profile section for 'proj1 - AQ9 Drop 7' with the status 'No leading object...'. The main content area is titled 'Initiate Process' and features a 'Quick Launch' sidebar on the left with options like 'Initiate Process', 'Create Object', and 'SmartBox'. The central workspace displays a tree view of process types, including 'Flow Process' (General Process, New Part Development, Engineering Change, Request For Quotation, Document Validation) and 'Project Process' (Project Creation Approval, Schedule Approval, Project Closing Approval). The 'Document Validation' process is selected, and its details are shown in a form on the right. The form includes fields for 'Name' (PRC-000-019), 'Description', 'Process Status' (Process has been initiated), 'Importance' (High importance), and 'End Time' (08/21/2009 00:00). Below the form are expandable sections for 'System Information', 'Comment and Notification', and 'FlowChart'.

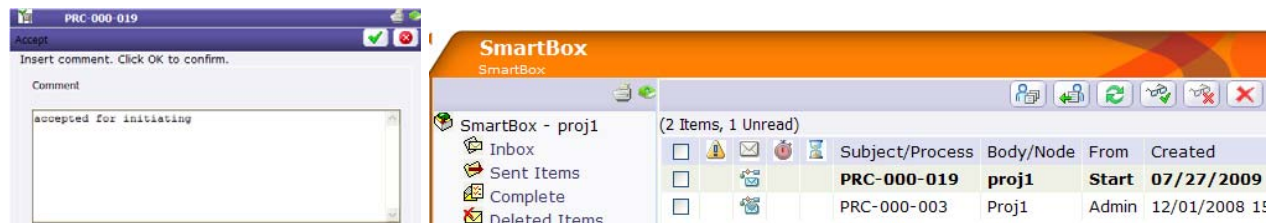
12. Click on SmartBox from Quick Launch toolbar and select the process in Inbox.



- Switch to Flow Chart tab and view it.
- Perform Accept Action on it.

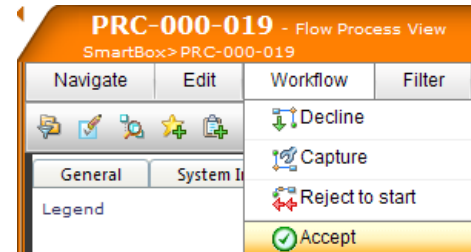
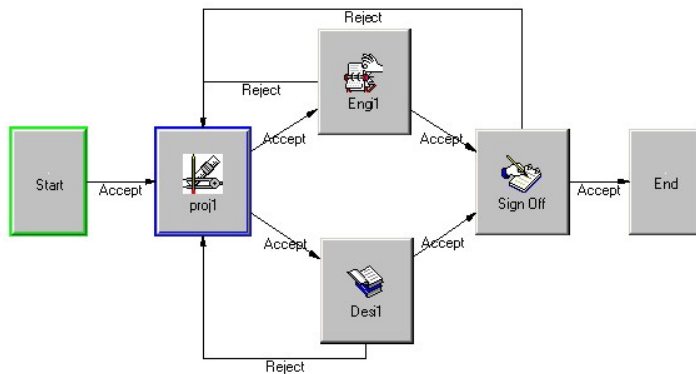


- Enter some comments and validate with ok.
- Check the Inbox and select the process in Inbox.

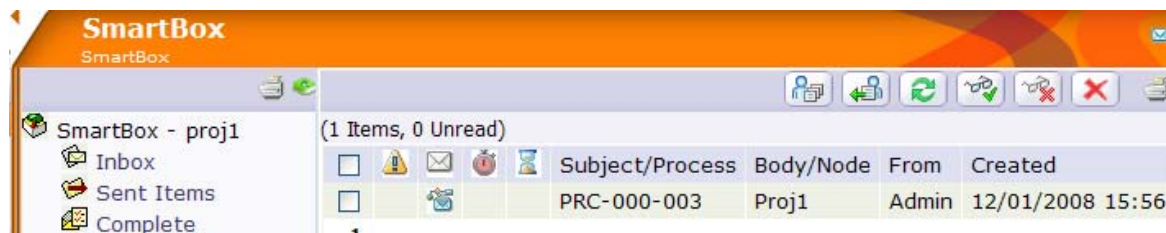


- Switch to Flow Chart tab and view it.
- Perform Accept Action on it.

Document Validation Process



- Enter some comments and validate with ok.
- Check the Inbox. No process will be displayed for proj1 user.

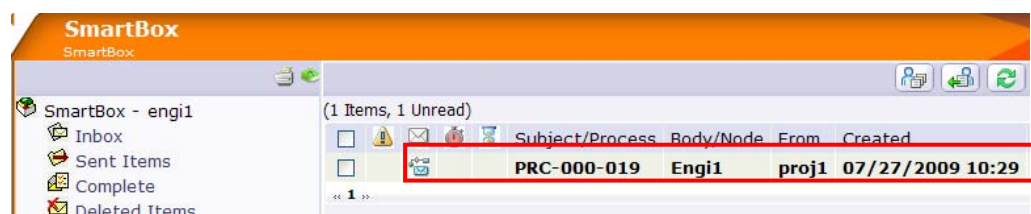
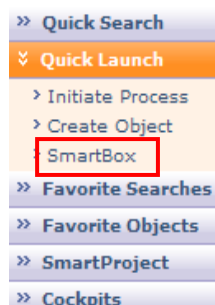


13. Click Logout.

14. Log in as engi1 and connect to the correct database.

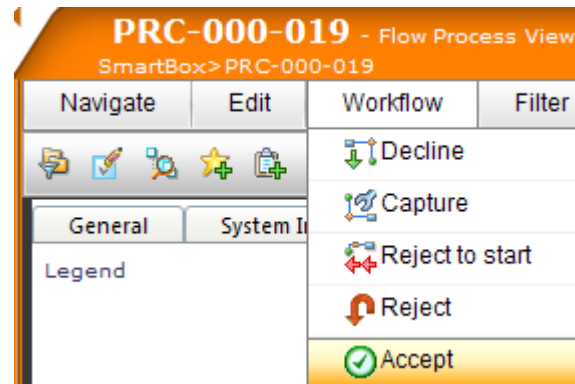
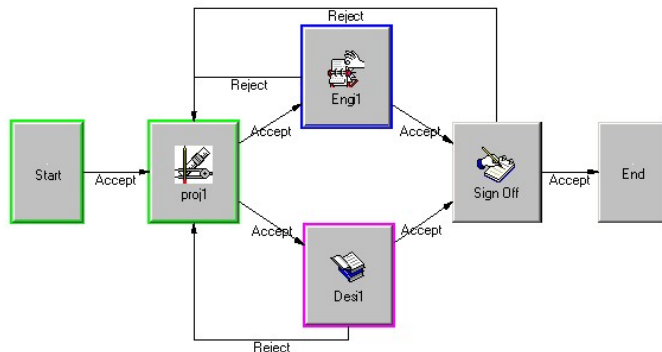


15. Click on SmartBox from Quick Launch toolbar and select the process in Inbox



- Switch to Flow Chart tab and view it.
- Perform Accept Action on it.

Document Validation Process



- Enter some comments and validate with ok.
- Check the Inbox. No process will be displayed for admin user.



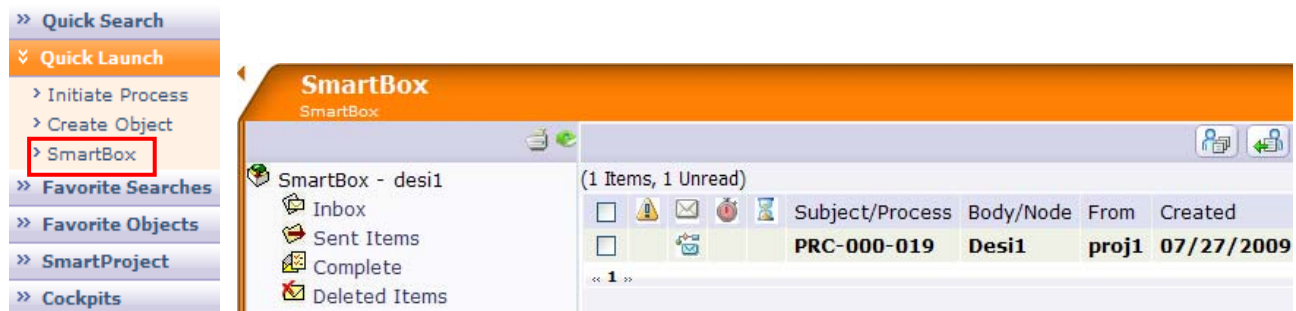
16. Click Logout.

17. Log in as desi1 and connect to the correct database.

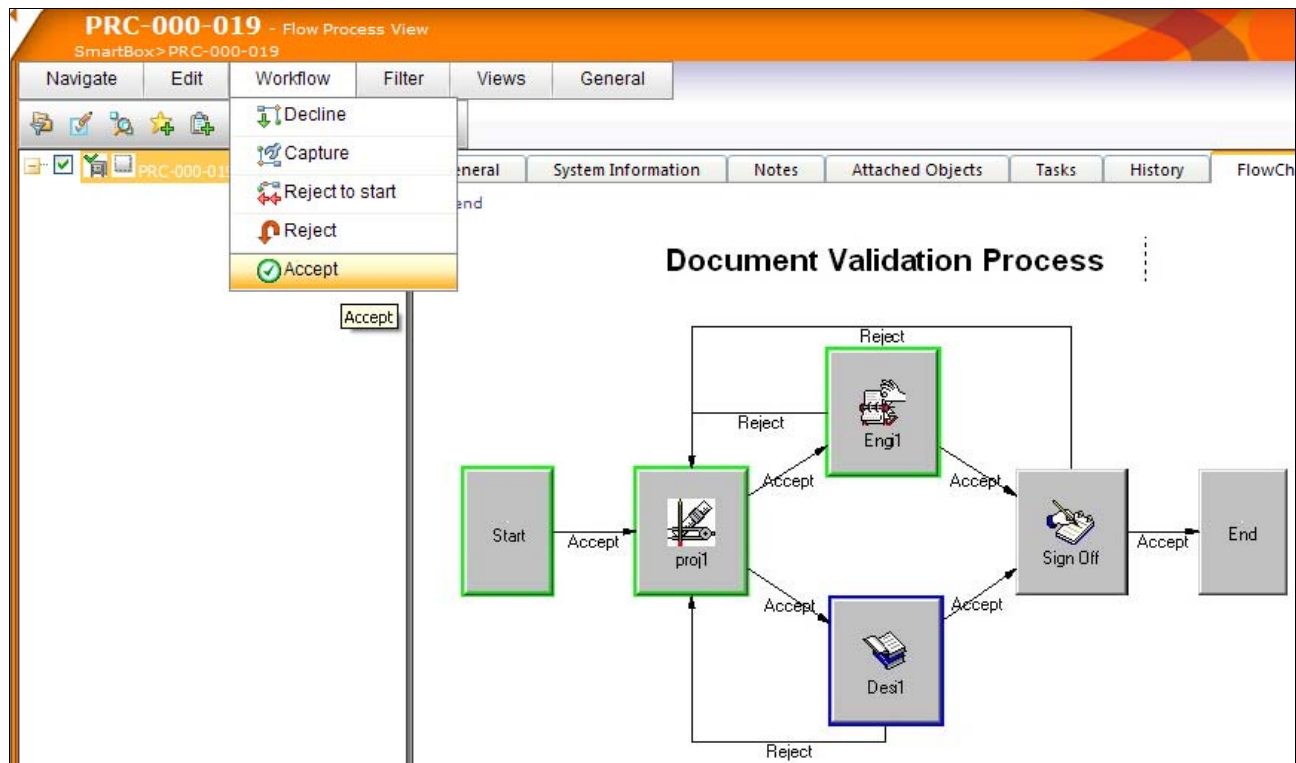


18. Click on SmartBox from Quick Launch toolbar and select the process in Inbox

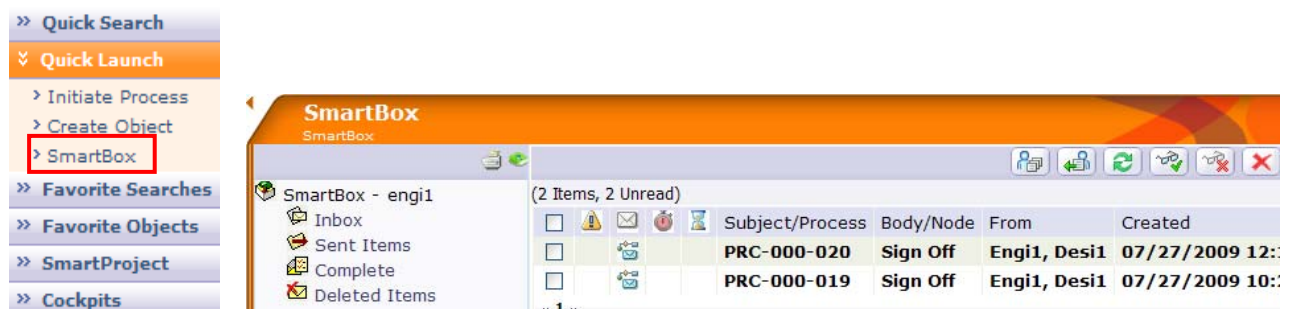
- Switch to Flow Chart tab and view it.



- Perform Accept Action on it.

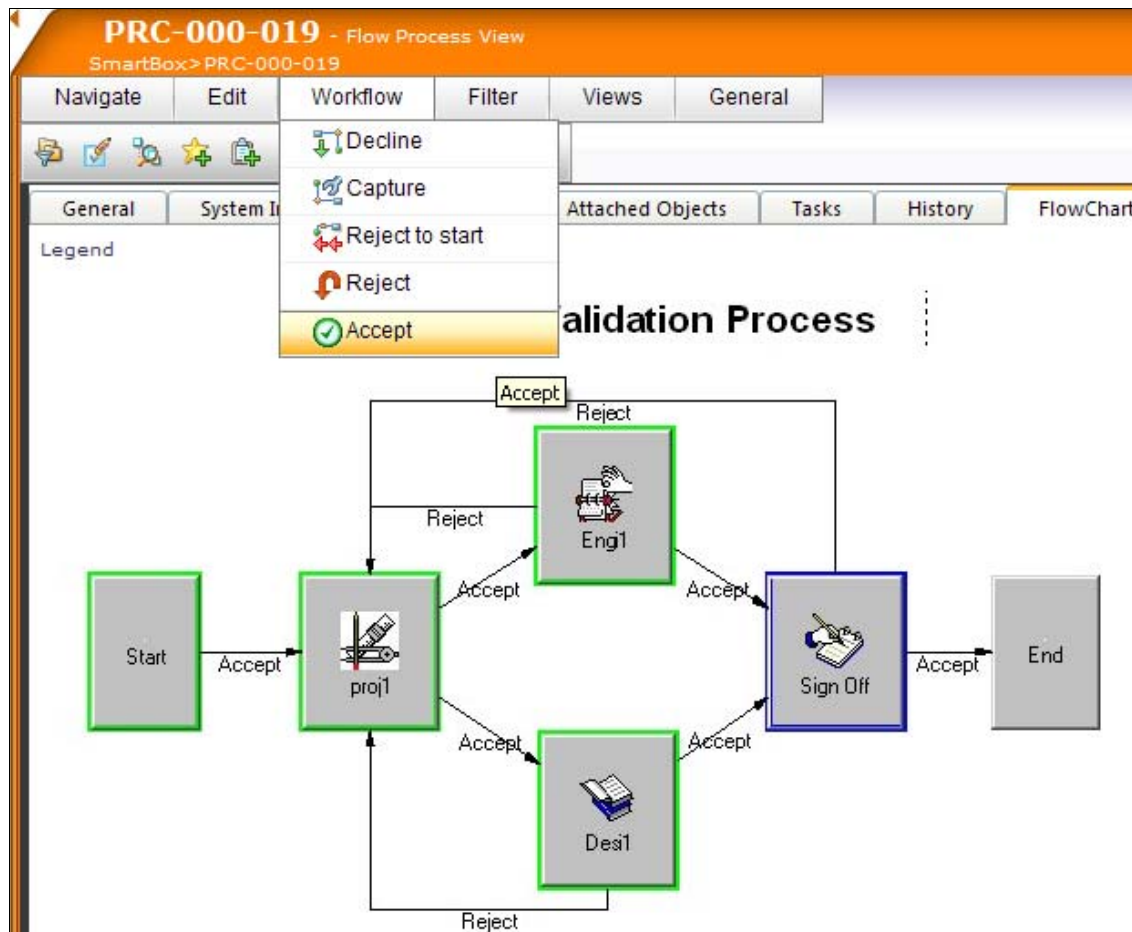


- Enter some comments and validate with ok.
- Check the Inbox and select the process in Inbox.



- Switch to Flow Chart tab and view it.

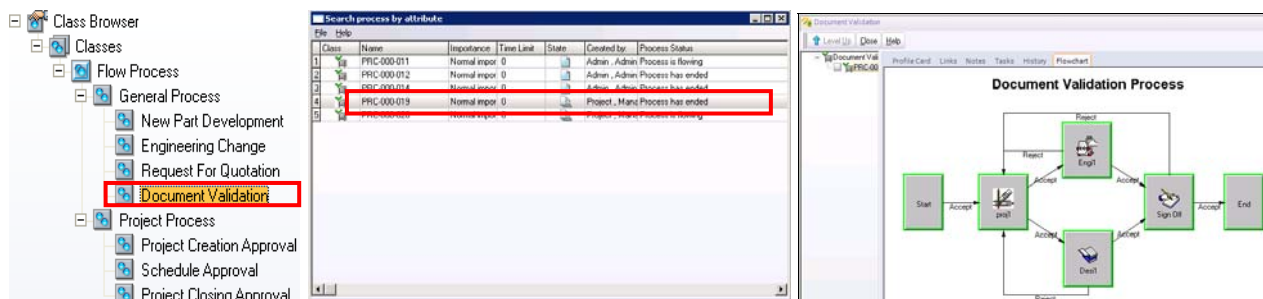
- Perform Accept Action on it.
- Check the Inbox. No process will be displayed for admin user.



19. Click Logout.

20. Launch Workflow Manager to view the progress of the process.

- Search for Document Validation process
- Select the process and view it.
- All the nodes are displayed as completed.
- Close the Workflow Manager.



3.1.3 Phase 3: Project Execution

1. Log in as **engi1** and connect to the correct database.

User Name:

Password:

☐ Log-in to last environment.

Login



Select environment

Database: **Connect** **Cancel**

- Click on the test project created.
- Choose FMEA Header.
- Click on Chart button.

Attributes **Attributes1** Attributes2 Attribute Link

DFMEA Header

Description

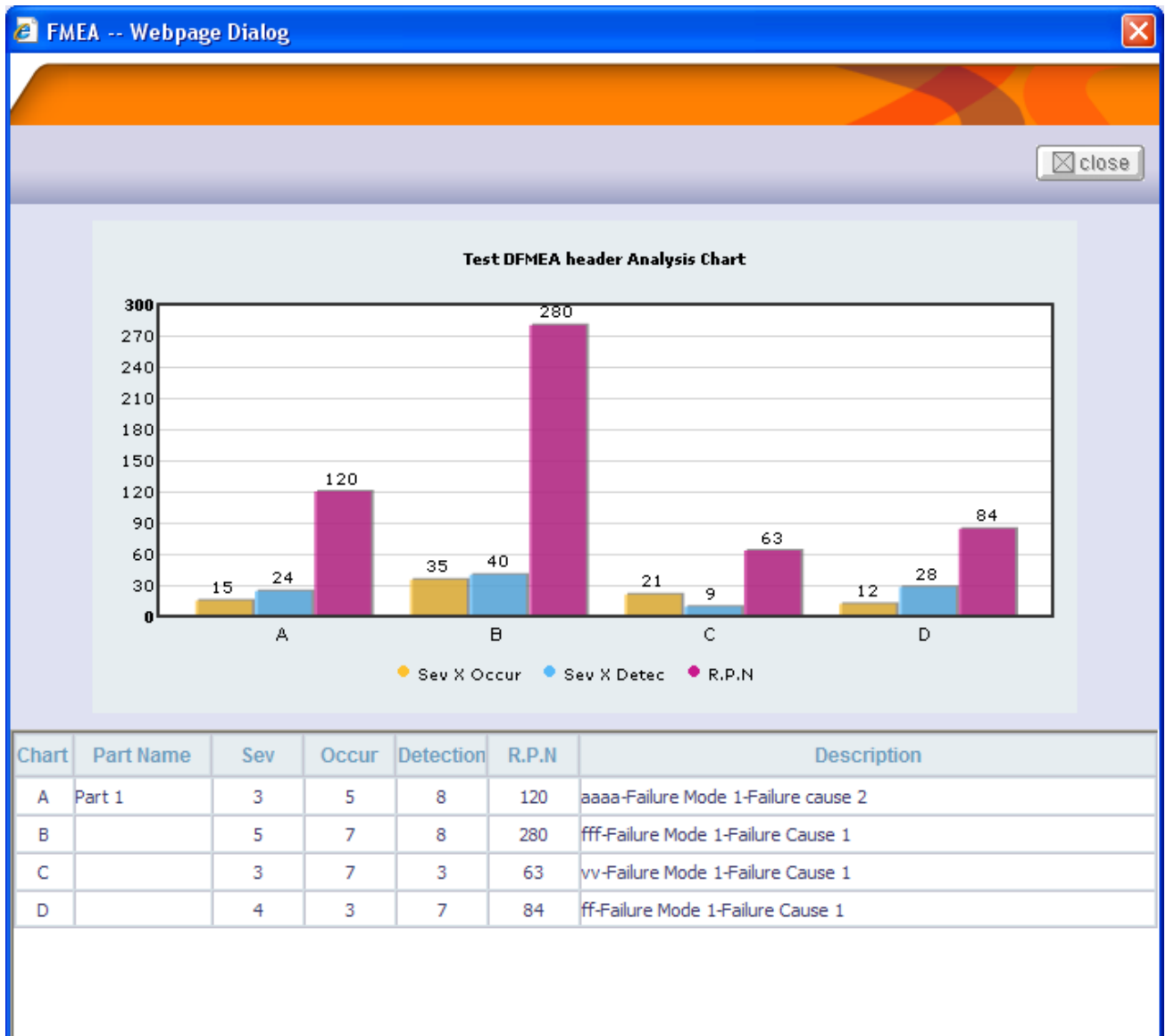
Chart **Report**

ID

Phase

Revision

Previous Revision



- Choose Control Plan Header.
- Click on Export button.

ControlPlanExport - Windows Internet Explorer

http://ipms01/webEditor/APQP/ControlPlanExport.aspx?id=349&id=1424

File Edit View Favorites Tools Help

Export to ExcelClose

Control Plan

Vendor Name :

Stage	Car Model	Vehicle 1	No.	Rev. Date	Major Revision	Prepared	Checked	Approved	Established
Proto	Part Name	Part 1	1						Approved
			2						
	Part Number	PRT-000-002	3						
Mass Production			4						
			5						
	Core Team	AAA	6						

Supplier Code : Supplier MST-008Customer Engineering Approval Date(Ref ID): 2005-06-12Customer Quality Approval Date(Ref ID): 2005-06-19Other Approval Date(Ref ID): 2005-06-26

Part/Process Number	Process Flow			Process Name/Operation Description	Machine Device, Jig Tools For INFO	No	Characteristics		Special Characteristics	Methods				Responsible		Reaction Plan	Remarks
	Sub	Man	Subent				Product	Process		Product/Process Specification/Tolerance	Evaluation Measurement Technique	Freq	Control Method	Production	QA		
1				1234567890	ABC1	123	V		as	2	23		V				
2				www	eee	4566	V		ss	7	28		V				

- Choose Gage Header.
- Click on Report button.

Attributes Attributes1 Attributes2 Attribute Link Notes

Gage Header

Description

Gage header

ID Phase

Gage-013

Report

Export to Excel close

Gage R & R Report

Part		Gage										Trial	
No:		No: Gage-013										A: Admin, Admin	
Name:		Name: Gage header										B: Admin, Admin	
Spec:		Tolerance: 5										C: Admin, Admin	
Charactor:		Etc:											

Operator(m)	Trial(r)	Parts No(n)										Average
		1	2	3	4	5	6	7	8	9	10	
A	1	1	2	3	4	5	6	7	8	9	10	5.5
	2	11	12	13	18	22	26	30	14	15	16	17.7
	3	17	18	19	20	21	22	23	24	25	26	21.5
	Average	9.667	10.667	11.667	14	16	18	20	15.333	16.333	17.333	Xa: 14.9
	Max diff	16	16	16	16	17	20	23	16	16	16	Ra: 17.2
B	1	1	2	3	4	6	7	8	9	10	11	6.1
	2	12	5	13	15	17	18	19	20	21	22	16.2
	3	14	16	23	24	25	26	27	28	29	30	24.2
	Average	9	7.667	13	14.333	16	17	18	19	20	21	Xb: 15.5
	Max diff	13	14	20	20	19	19	19	19	19	19	Rb: 18.1
C	1	21	22	23	24	25	26	27	28	29	30	25.5
	2	11	11	12	13	14	15	16	12	11	18	13.3
	3	13	17	15	16	17	18	19	20	21	22	17.8
	Average	15	16.667	16.667	17.667	18.667	19.667	20.667	20	20.333	23.333	Xc: 18.867
	Max diff	10	11	11	11	11	11	11	16	18	12	Rc: 12.2
Part Avg ($\bar{\bar{X}}_p$)		11.222	11.667	13.778	15.333	16.889	18.222	19.556	18.111	18.889	20.555	Rp: 9.333
$\bar{R} = (\bar{R}_a + \bar{R}_b + \bar{R}_c) / \text{people}$												$\bar{R}: 15.8333$
$\bar{X} \text{ diff} = \max \bar{X} - \min \bar{X} = R_o$												$R_o: 3.967$
$EV = 5.15 \times \bar{R} / d_2$												$EV = 48.164$
$AV = \sqrt{(Z \times R_o / d_2)^2 - (EV^2 / nr)}$												$AV = 6.0899$
$TV = \sqrt{R^2 + PV^2}$												
$\% R \& R = R \& R / TV \times 100\%$												

3.2 Help About APQP

1. Click on the SmartProject Application bar.
2. Now click on About AQ9 link.

