



## State of Florida Project Aspire

# Requirements Traceability Matrix P010

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## 1.0 Requirements Tracking

### 1.1 Definition

The Requirements Traceability Matrix tool leverages the requirements matrix database created by the State during the discovery phase of the project. The Requirements Traceability Matrix tool will:

- Cross-reference the key event artifacts and show that the requirements previously identified are built into the solution throughout the various phases.
- Make it possible to track the requirements developed by the State throughout Project Aspire's lifecycle.

This section discusses the procedures for use with the Requirements Traceability Matrix.

### 1.2 Framework

This section is organized in the following manner:

- Approach – Summarizes the approach to requirements tracking procedures for Project Aspire.
- Guidelines/Procedures – Outlines the steps to the requirements tracking procedure:
  - Requirements
  - Design Documents
    - Conceptual Designs
    - Detailed Designs
  - Gap Requirements
  - Test Plans
  - Security
  - Reports
  - Updates
- Requirements Traceability Matrix Navigation:
  - Maintain Requirement Details
  - Gap Details
  - Conceptual Design
  - Detail Design
  - Gap Analysis/Application Development Master
  - Test Details

### 1.3 Approach

The State's existing requirements matrix database provides the foundation for requirements tracking; the database along with any associated comments and process guidelines will be uploaded into the Requirements Traceability Matrix once development is complete.

The Requirements Traceability Matrix provides the ability to:

- Track and cross-reference key events that impact the requirements. The following events have been mutually agreed upon to be tracked by the tool:
  - Business Processes and the Conceptual Design Documents
  - Gap Analysis and the Application Development Master Plan
  - Detailed Design
  - Conference Room Pilot (CRP) Test Plan
  - Integration Test Plan
  - System Test Plan
  - User Acceptance Test Plan
- Update and publish reports of the revised requirements database as outlined in Appendix C of the Statement of Work.
- Limit update capability to a small number of individuals.
- Make reports accessible to a large number of individuals.
- Track significant additions and/or changes to requirements.

### 1.4 Guidelines/Procedures

#### 1.4.1 Requirements

The Requirements Traceability Matrix is a Microsoft Access-based tool. The State's requirements matrix database will be imported into the tool. The imported requirements are cross-referenced to information about each requirement contained in the Statement of Work (SOW). A link connects the user to a read-only screen displaying the SOW procurement requirement details and responses.

Going forward, changes to existing requirements or potential new requirements are subject to the Project Aspire change management process, as set forth in the Project Administration Procedures. Once approved any changes to existing requirements will be added to the Requirements Traceability Matrix in the comments field of the Maintain requirements screen. Any new requirements will be added by using the "Add" feature provided in the Maintain Requirements form.

### **1.4.2 Design Documents**

The tool will provide an ability to cross-reference each requirement to its conceptual and detailed design documents. This will document how the requirements are addressed in the design phase of the project. The cross-reference to these artifacts is entered in the conceptual and detailed design section of the tool.

#### **1.4.2.1 Conceptual Designs:**

Each requirement will be mapped to its respective process. Each process will have a cross-reference to its associated Conceptual Design Document. The index page of the Conceptual Design Document will list all of the requirements that are addressed in that particular design document. There is a one-to-one correlation between a process and its Conceptual Design Document. Requirements with multiple processes will be cross-referenced to multiple Conceptual Design Documents.

#### **1.4.2.2 Detailed Designs:**

Each requirement will be mapped to its respective module. Each module will have a cross reference to its associated Detailed Design Document. The index page of the Detailed Design Document will list all of the requirements that are addressed in that particular design document. There is a one-to-one correlation between a module and its Detailed Design Document. Requirements with multiple modules will be cross-referenced to multiple Detailed Design Documents.

### **1.4.3 Gap Requirements**

The out-of-the-box PeopleSoft product will not meet all of the identified requirements. Requirements requiring further modifications to the software product, as validated during Requirements Confirmation, will be documented in the gap section of the Requirements Traceability Matrix. The Gap Details section of the tool provides the ability to classify information about the gaps and cross-reference them to the Gap Analysis document and/or the Applications Development Master Plan and/or the solution document (white paper etc). The cross reference will include both the Gap Analysis document and the section where this requirement is addressed. This will document that the gap requirements are addressed in the Gap Analysis document.

#### **1.4.4 Test Plans**

Each requirement will be cross-referenced to an appropriate test plan:

- Conference Room Pilot (CRP) Test Plan
- System Test Plan
- Integration Test Plan
- User Acceptance Test Plan

The Requirements Traceability Matrix will capture the test plan identification number for each test cycle. Test plans will be created and stored using the Mercury Test Director. The Test Director will capture the test scripts and detailed test scenarios for each of the requirements. Providing the cross-references to the test plans in the Requirement Traceability Matrix helps ensure that all the requirements are addressed during testing.

#### **1.4.5 Security**

Windows NT folder security will be employed to define access rights to the Requirements Traceability Matrix. It is the responsibility of BearingPoint to maintain and update the tool. Therefore, update capability will be limited to BearingPoint users. Read-only access to the database will be available to other users.

#### **1.4.6 Reports**

Reports will be defined and developed after the Requirements Traceability Matrix is approved.

#### **1.4.7 Updates**

BearingPoint will present the Requirements Traceability Matrix tool to the State for review and approval. BearingPoint Team leads will be responsible for updating the database on a continuous basis throughout the project. As and when required the State can get periodic reports. In accordance with the Contract, BearingPoint will submit the tool to the State during the project as follows:

- At the end of the Requirements Confirmation phase of the project
- At the end of the Configuration phase of the project

A final update will be made at the end of the Implementation phase, at which time the finished matrix will be turned over to the State. At the end of the each phase, along with the completed Requirement Traceability Matrix database, any mutually agreed upon reports will be delivered to the state.

## 2.0 Requirements Traceability Tool

### 2.1 Maintain Requirement Details

The Maintain Requirement Details screen is the heart of the Requirements Traceability Matrix and the starting point for using the tool. Its purpose is to cross reference processes and modules to the Statement of Work (SOW) requirements imported from the State’s requirements database. This screen will also allow users to enter any new requirements approved through the formal change control procedure.

Each requirement is categorized based on processes. A link connects the user to a read-only screen displaying the SOW requirement details and responses. This screen also displays the Conceptual Design process reference(s) for each identified requirement, and the Detailed Design module reference(s) for each identified requirement. Each requirement may be cross-referenced to one or more processes and to one or more modules.

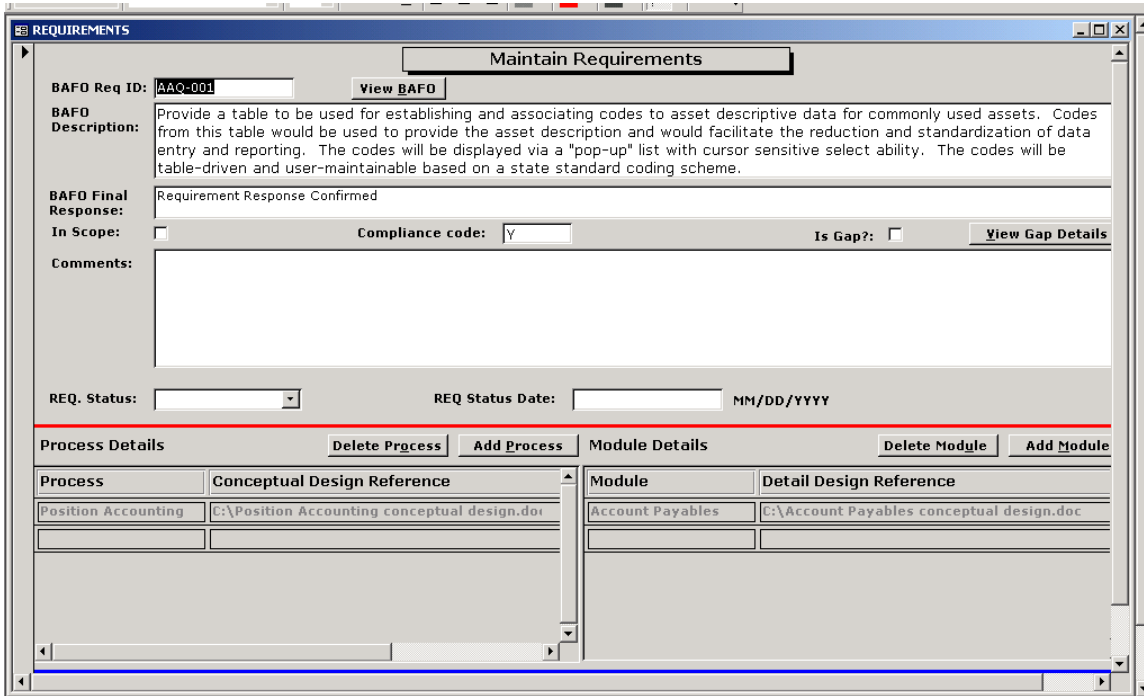


Figure 1 – Maintain Requirements

A brief explanation of each of the fields displayed on the Maintain Requirements screen is shown below:

SOW Req ID	Requirement identification number from the Statement of Work (SOW); automatically populated when the State's requirement database is imported.
View SOW	Link to the Statement of Work (SOW) requirement details and responses.
SOW Description	Requirement Description from the Statement of Work (SOW); automatically populated when the State's requirement database is imported.
SOW Final Responses	BearingPoint's final response from the Statement of Work (SOW); automatically populated when the State's requirement database is imported.
In Scope	Yes or No. The In Scope information is automatically imported as is from the State's requirements database; any scoping details should be defined in the comments text field.
Compliance Code	Yes or No. The Compliance Code is automatically populated when the State's requirement database is imported.
Is Gap?	Yes or No. Denotes the requirement is classified as a gap requirement. This will be defined during the Requirements Confirmation phase and the tool updated with that information.
View Gap Details	If the Is Gap field is Yes, this button provides a link to the Gap Details screen for additional information.
Comments	Text field for adding pertinent or clarifying information relating to the requirement.
Req Status	Field for changing the requirement status.
Req Status Date	Field for entering the requirement status date.

**Process Details**

- Click on the Add Process button to add a new process to a requirement:
  - SOW Requirement ID is uploaded from the State's requirements matrix database.
  - Select the process description from the drop down menu.
- The Process Description field is automatically populated once the new process is added.
- The Conceptual Design Reference is automatically populated once the Conceptual Design cross-references are loaded into the tool.
- Click on the Delete Process button to delete a process from a requirement.

**Module Details**

- Click on the Add Module button to add a new module to a requirement:
  - SOW Requirement ID is State's requirements matrix database.
  - Select the module description from the drop down menu.
- The Module Description field is automatically populated once the new module is added.
- The Detailed Design Reference is automatically populated once the Detail Design cross-references are loaded into the tool.
- Click on the Delete Module button to delete a module from a requirement.

## 2.2 Gap Details

The Gap Details screen will be used to enter information about the requirements that are classified as gap requirements. These requirements will be cross-referenced to the Gap Analysis Reference Document, the Applications Development Master Plan, or a Solution Document.

The tool will track the parts of the solution that fall outside the business processes and/or development objects through Solution Documents such as white papers, business process changes, etc. Gap requirements requiring customization will be cross-referenced to the Application Development Master Plan.

Figure 2 – Maintain Gap Requirements

A brief explanation of each of the fields displayed on the Gap Details screen is shown below:

SOW Req ID	Requirement identification number from the Statement of Work (SOW); automatically populated when the State's requirement database is imported.
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SOW Description	Requirement description from the Statement of Work (SOW); automatically populated when the State's requirement database is imported. The requirement is an identified gap if it appears in the Gap Details.
Gap Comments	Text field discussing how the gap will be addressed during the project.
Gap Status	Field for changing the gap status.
Status Date	Field for entering the gap status date.
Resolution	Select a resolution option from the drop down menu.
Gap Documents	<ul style="list-style-type: none"><li>▪ Click on the Add Gap Document button to add a new gap document to a requirement. Select the appropriate source document from the drop down menu. For gap requirements, there are three possible source documents:<ul style="list-style-type: none"><li>○ Gap Analysis Reference Document</li><li>○ Applications Development Master Plan Reference</li><li>○ Solution Document (such as a white paper, business process change, etc.</li></ul></li><li>▪ The Gap Document Type field is automatically populated once the source document is added.</li><li>▪ The Gap Event Reference field is automatically populated once the Gap Analysis cross-references are loaded into the tool.</li><li>▪ Click on the Delete Gap Document button to delete a gap document from a requirement.</li></ul>

## 2.3 Conceptual Design

The Conceptual Design screen is used to input cross-references between the processes and Conceptual Design References, and cross-references between the processes and the Test Plan References for System, Integration and User Acceptance testing. Members of the BearingPoint Applications Software Team will upload this information into the tool. This screen is used to enter or modify the process-related details.

The screenshot shows a software window titled 'MAINTAIN PROCESS' with a subtitle 'Conceptual Design'. The window contains a form with the following fields and values:

- Process Id: BA
- Process Description: Budget Allocations
- Conceptual Design Ref: C:\Budget Allocations Conceptual design.doc
- Detail Design Reference: C:\Budget Allocations Detail design.doc
- Integration Test Reference: BA INT 001
- System Test Reference: BA SYS 001
- User Acceptance Test Reference: BA UAT 001

At the bottom of the form are buttons for 'Prev', 'Next', 'Find', 'Add', 'Save', 'Delete', and 'Close'. The window is part of a 'Reports Switchboard' application.

Figure 3 –Conceptual Design

A brief explanation of each of the fields displayed on the Conceptual Design screen is shown below:

Process ID	Drop down menu of process identification abbreviation.
Process Description	Text field for the process description name.
Conceptual Design Reference	Text field for the file name of the Conceptual Design reference to be cross-referenced to this process. The test plan reference will provide a link to its respective test plan in Mercury Test Director.

Integration Test References	Text field for the file name of the Integration Test Plan reference to be cross-referenced to this process. The test plan reference will provide a link to its respective test plan in Mercury Test Director.
System Test Reference	Text field for the file name of the System Test Plan reference to be cross-referenced to this process. The test plan reference will provide a link to its respective test plan in Mercury Test Director.
User Acceptance Test Reference	Text field for the file name of the User Acceptance Test Plan reference to be cross-referenced to this process. The test plan reference will provide a link to its respective test plan in Mercury Test Director.

## **2.4 Detail Design**

The Detail Design screen is used to input cross-references between the modules and Detailed Design References, and cross-references between the modules and the CRP Test Plan Reference. Members of the Applications Software Team will upload this information into the tool.

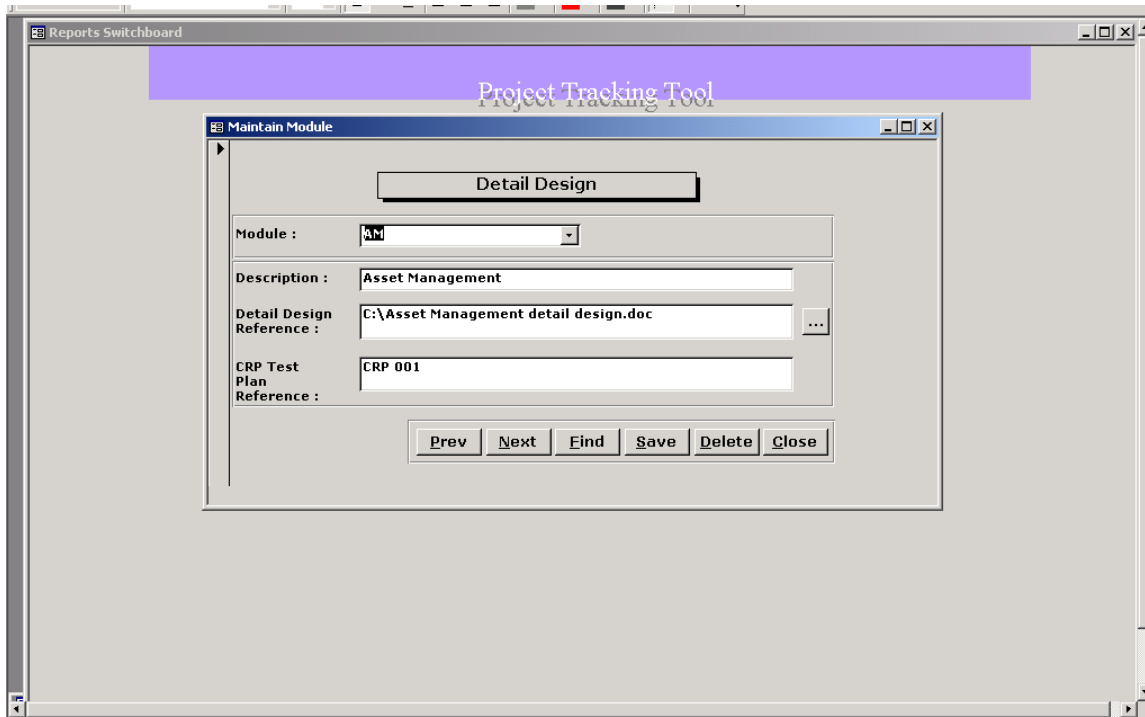


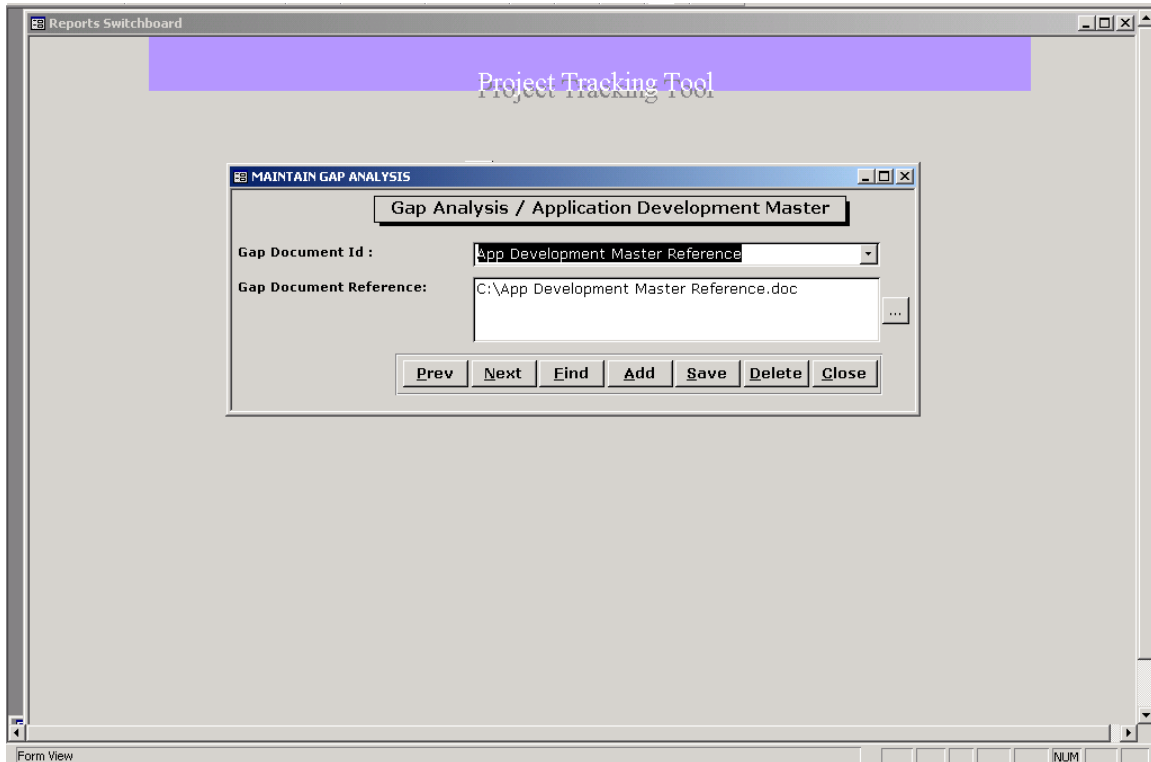
Figure 4 – Detail Design

A brief explanation of each of the fields displayed on the Detail Design screen is shown below:

Module ID	Drop down menu of module identification abbreviation.
Module Description	Text field for the module description name.
Detail Design Reference	Text field for the file name of the Detail Design reference to be cross-referenced to this process. The test plan reference will provide a link to its respective test plan in Mercury Test Director.
Conference Room Pilot (CRP) Test Plan Reference	Text field for the file name of the CRP Test Plan reference to be cross-referenced to this process. The test plan reference will provide a link to its respective test plan in Mercury Test Director.

## 2.5 Gap Analysis/Application Development Master

The Gap Analysis/Application Development Master screen is used to populate the reference for the gap requirement source documents.



The screenshot shows a software window titled "Reports Switchboard" with a purple header bar that says "Project Tracking Tool". Inside, a dialog box titled "MAINTAIN GAP ANALYSIS" is open. The dialog has a title bar "Gap Analysis / Application Development Master". It contains two input fields: "Gap Document Id" with a dropdown menu showing "App Development Master Reference", and "Gap Document Reference" with a text box containing "C:\App Development Master Reference.doc" and a browse button "...". At the bottom of the dialog are buttons for "Prev", "Next", "Find", "Add", "Save", "Delete", and "Close". The status bar at the bottom of the main window shows "Form View" and "NUM".

**Figure 5 – Gap Analysis /Application Development Master**

A brief explanation of each of the fields displayed on the Gap Analysis/Application Development Master screen is shown below:

Gap Document ID	Text Field for the gap document name.
Gap Document Reference	Enter the file name to be cross-referenced to this Gap Document reference. Clicking on the box to the right of the Gap Document Reference field will bring up a dialog box allowing the user to select a file name to insert here.

## 2.6 Test Details

The Maintain Test Details screen is used to cross-reference the requirements to the test plans.

Module	CRP Test Plan Reference:	Process	Integration Test Plan Reference:	System Test Plan Reference:	User Acceptance Test Plan Reference:
Account Payables		Position Accounting			
		*			

Figure 6 – Test Details

A brief explanation of each of the fields displayed on the Test Details screen is shown below:

SOW Req ID	Requirement identification number from the Statement of Work (SOW); automatically populated when the State's requirement database is imported.
SOW Description	Requirement description from the Statement of Work (SOW); automatically populated when the State's requirement database is imported.
Comments	Text field for adding pertinent or clarifying information.

Test Plan References      The Test Plan References are automatically populated for each type of test (CRP, System, Integration, UAT) once the Conceptual Design and Detail Design cross-references are loaded into the tool.

**Document Version Control**

<b>Version Number</b>	<b>Release Date</b>	<b>Version Number Description</b>	<b>Description of Changes</b>
1	10/22/2003	Baseline	
2	10/29/2003	Draft	PM initial edits; new headers & footers; new screen shots and updated information for tool
3	10/31/2003	Draft	Incorporated additional team edits; new screen shots and updated tool information
4	11/3/2003	Draft	Incorporated team edits
5	11/5/2003	Review	Project Manager review
6	11/5/03	Review	Format review
7	11/20/03	Deficiency list	Incorporated changes as detailed
8	11/14/03	Format	Format review