

eCampus-Based

70.1.2 Detail Design Document - Iteration 1



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1. Introduction

1.1 Purpose

The purpose of this document is to provide a detailed functional and technical design for Iteration I of the eCampus-Based (eCB) system. The functional design describes the As-Is and To-Be processes, departmental policies, federal regulations, required skills, and performance measures for Iteration 1. The technical design provides the components, interactions, and technical specifications that can be used to develop and explain the makeup of the eCB System software. This document was assembled with input from the SFA Campus-Based (CB) staff and representatives from the post-secondary community.

The effort to modernize the CB system addresses several risks related to the current system. The application was one of the earliest systems brought on-line by SFA over 20 years ago and was intended to be operated for just one year. Three separate contractors have maintained the system. Due to the annual maintenance and long-term patching of the programs, there are concerns regarding the ability of the application to continue to be maintained on its current platform. The storage of data in its current form makes it difficult for SFA staff and institutions to get access to information when and how they need it.

The redesign of the current application and migration of the CB System from a VSAM storage system to a relational database system will increase customer satisfaction. Some benefits for institutional users include:

- Reduced turnaround time for processing the FISAP
- Alternative FISAP transmission capability
- Access to prior year FISAP data
- Ability to enter data and save incomplete FISAPs
- Increased self-service capabilities

Benefits for the CB Staff include:

- Increased effectiveness of program oversight through improved functionality and access to data
- Ability to quickly respond to internal and external ad hoc inquiries
- Enhanced analytical reporting capabilities
- Increased self-service capabilities

In addition to these benefits, implementation of the eCB System will reduce system maintenance and operations costs. Eliminating costs associated with the legacy system and reducing costs associated with providing programmatic support (e.g. conference support, document maintenance, etc.) will result in maintenance savings of \$755,000 per year. An annual operations cost savings of \$402,840 will also be realized using the technical architecture for the eCB System that was developed during the first phase of this project. As a result of the reduced cost, SFA will experience a cost savings as early as FY 03.

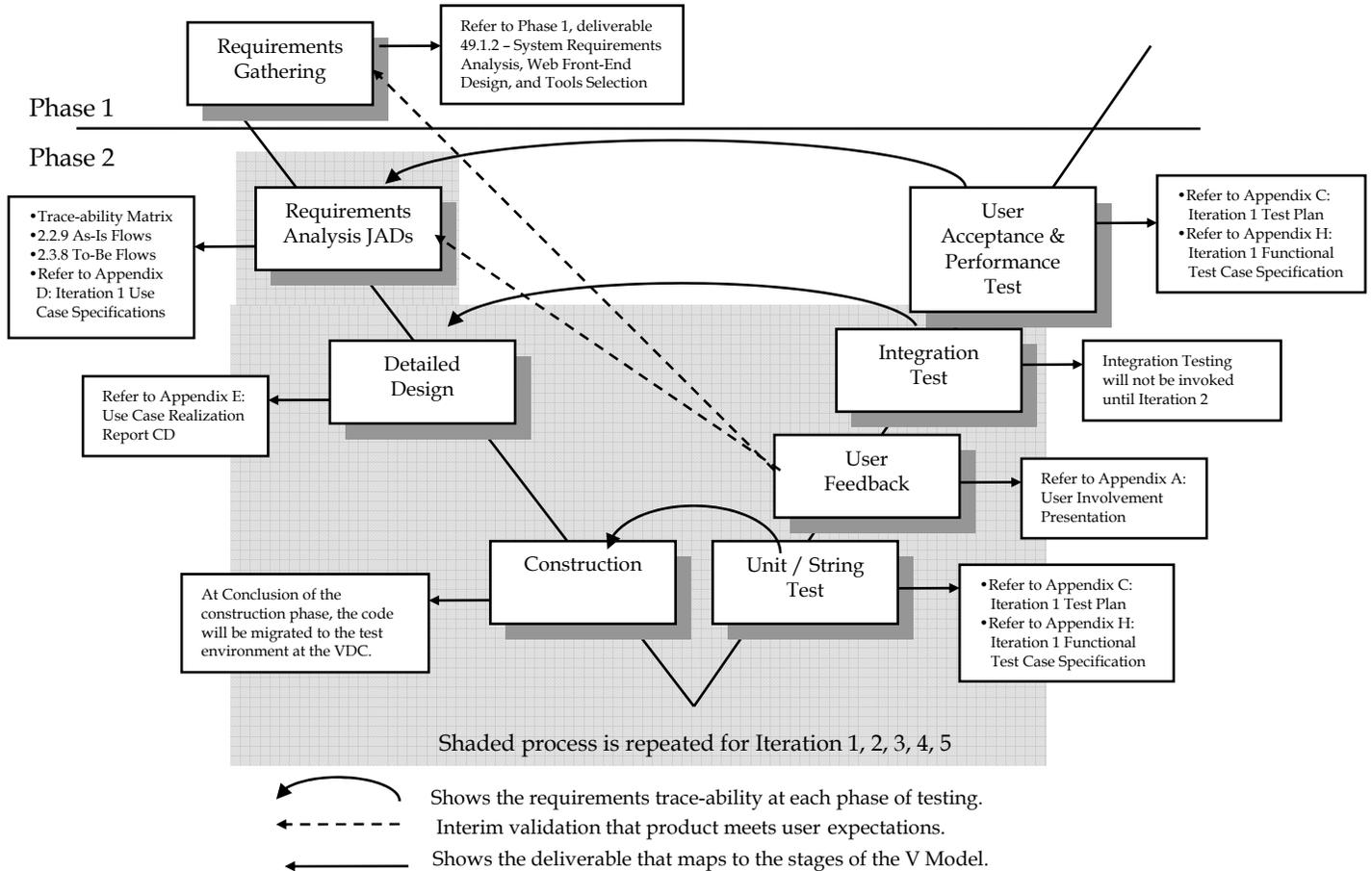
Successful implementation of the eCB system requires a common understanding of the functionality that will be delivered in each Iteration. This document reflects the agreed scope of what Iteration I will deliver.



1.2 V Model Approach

The following figure depicts the approach that will be used to deliver the implementation of the eCampus-Based system. This approach is a customized version of the approach documented in the Software Development Life Cycle Guide published on 2/12/01. This approach is discussed in further detail below:

SFA Software Development Life Cycle as modified to reflect Iteration 1 for the eCampus-Based project.



1.3 Scope

Modernization of the CB system and process will follow an iterative approach. Iteration is defined as a complete development loop resulting in a release of an executable product, a subset of the final product under development, which grows incrementally from iteration to iteration to become the final system. Each eCB iteration includes the Definition, Construction, and Deployment components of the SFA System Development Life Cycle. Benefits of an iterative approach include an increased ability to manage change and risk, greater potential for product reuse, and improved end-user satisfaction.

A high level description of the content of each iteration is listed below; the content listed is the target as of the creation date of this document:



Iteration	Content
1	Completing and Submitting the FISAP: Fiscal Operations Report and Application to Participate (FISAP) Application Data Entry Parts 1 through 6, Additional Information and Associated Database Tables.
2	Receiving and Editing the FISAP: FISAP Initialization, Validation, and Submit batch processes.
3	Log On, On-Line Help/Self-Service: Return Unused Funds (Reallocation), Help / Self-service, Login and Logout security functionality.
4	Campus-Based Staff, Allocation and Simulation: Simulate Awards, Create Awards, Process Transactions, Generate/View Report, External Interface (FMS), Institution Recalculation, GAPS Resolution, PEPS Eligibility, Create New Award ID, Admin Change FISAP, Admin Review of Validation Errors, Waiver Generation, View/Edit Hold Release Data, View Tracking Information, and View Award Worksheets.
5	Campus-Based Staff, Final Support Requirement: Record Accounting Transaction, Returned Funds Reallocation, Review Unprocessed Award Adjustments, Capture Correspondence/ Send Message, Phone Log Review, Change Authorization Amounts, PLIST Calculation, Title III Based Approval, View Database Audit Log, FISAP Inquiry, Generate TC Worksheets/ Awards, and View Under-Utilization Information.

The objective of this analysis is to document the Iteration 1 As-Is state and demonstrate the Iteration 1 redesigned To-Be state. Figure 1 provides a high-level view of the current CB process and illustrates where Iteration 1 fits within the overall process. Iteration 1 does not include the steps required to receive and edit the FISAP. These processes will be addressed in Iteration 2.

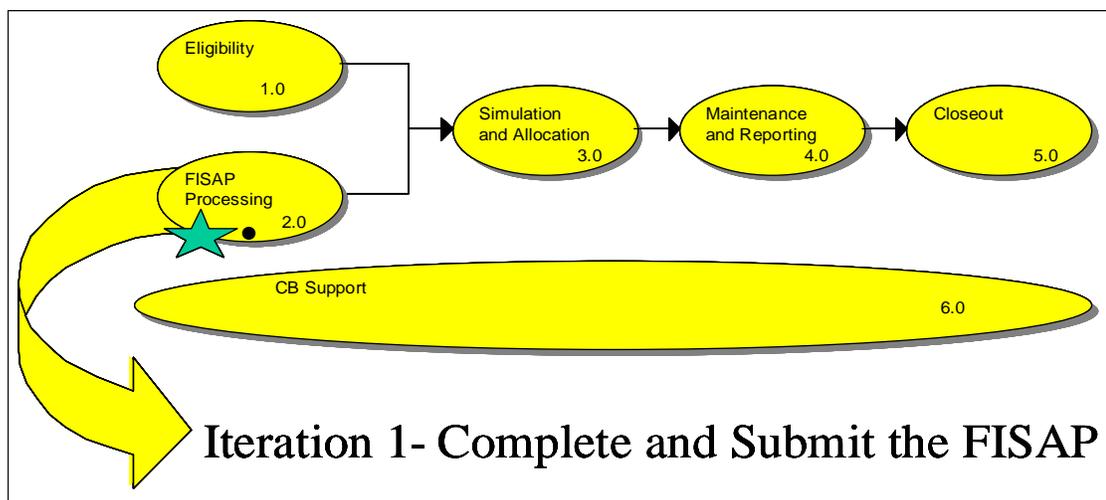


Figure 1 - Campus-Based High Level Process and Iteration 1 Definition

Iterations 1 through 3 comprise the Web-based FISAP release to the post-secondary user community on September 5, 2001. Iterations 4 and 5 will complete the system development and will deliver the administrative portion of the FISAP to the CB staff on December 15, 2001.

2. Functional Design

2.1 Functional Design Overview

As a component of the eCB system the functional design:

1. Provides a common agreement of functionality to be delivered
2. Demonstrates an understanding of user requirements
3. Describes the business rules for Iteration 1
4. Provides input for testing scenarios
5. Provides input to user training
6. Provides input to development

The functional design of the eCB System requires an understanding of the current environment and a detailed future state environment.

2.2 Campus-Based Systems As-Is Functional Environment

2.2.1 Overview of As-Is Mapping

Iteration 1 As-Is Functional Environment begins with completing the FISAP software and ends with submitting the FISAP using FISAP PC Software, EDExpress, and TIV WAN. The information presented in this section was compiled through review of TO 49- Campus-Based Programs Systems Redesign materials, interviews with the SFA Campus-Based Staff and Institutional Steering Committee Members, the SFA Handbook, the Higher Education Act of 1965, FMS documentation, and CB/FAMIS Award Notification Subsystem documentation.

2.2.2 Iteration 1 As-Is Process Flow

Figure 2 provides a visual representation of the current activities completed during the Iteration 1 process.

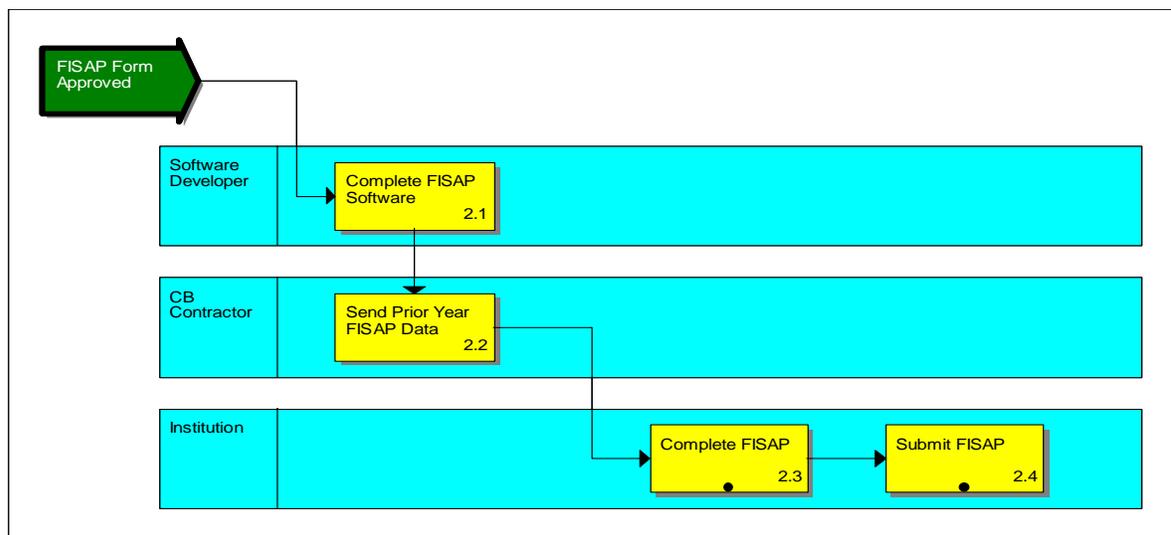


Figure 2 - Iteration 1 As-Is Process Flow

Refer to section 2.2.9 Iteration 1 As-Is Detailed Process Flows and Task Description for detailed sub-process flows and descriptions.



2.2.3 Task Definition and Detail

Table 1 outlines the tasks, resources, costs, and time needed to complete each Iteration 1 activity.

Task ID	Task	Resources to Complete Task	Time to Complete Task (1)	Costs Related to Task (2)	Application Supporting Task
2.1	Complete FISAP Software	CB Contractor ED Express Software Developer CB FISAP Dev. Team	1 year for FISAP software development.	\$347,000 (charged to the Students Channel)	ED Express
2.2	Send Prior Year Data to School	CB Contractor	Mid-July.	-	ED Connect TIV WAN
2.3	Complete FISAP	Institution	The Institution may begin to complete the FISAP once it is available in mid-July. Estimated 1 month preparation time to complete the FISAP. Data entry estimated to take 20 hours.	TIV WAN Call Center support charged to Institution at approximately \$14.87 per call.	FISAP Software Homegrown Software www.SFADownload.ed.gov
2.4	Submit FISAP	Institution	1st Submission Due 10/1. Final Submission Due 12/15. All sub-tasks estimated to take 8 hours and span the course of one week.	-	FISAP Software Homegrown Software TIV WAN

Table 1 - Iteration 1 As-Is Task Definition and Detail

- (1) Time to complete task information compiled through interviews with Campus-Based staff members and eCB User Steering Committee members.
- (2) Costs Related to Task taken from the eCB Business Case and SAIG Enrollment Form.

2.2.4 Other Resources Used

When completing the FISAP, institutions use resources that go beyond the systems and applications associated with the Campus-Based Programs. The institutions' use of Title IV WAN (TIV WAN) may require the use of the TIV WAN Customer Service Center. During the task of organizing the FISAP data, an institution may use the following resources:

- Servicer Reporting Information
- General Ledger
- Comptroller's Office
- Enrollment Office
- School Mainframe
- Bursar's Office
- Loan Office



2.2.5 Department of Education/SFA Policies

The Business Rules and Policies stated in the Comment Elements portion of the SFA Handbook Reference - Campus-Based Programs that apply to Iteration 1 As-Is processes are:

- To receive funds from the Department for one or more of the Campus-Based Programs, a school must submit a FISAP each award year.
- All schools are required to file the FISAP data through the electronic FISAP process. The Department no longer provides or accepts paper, diskette, or magnetic tape FISAP forms.
- A school must use the TIV WAN electronic FISAP transmission process through the TIV WAN using EDExpress to be eligible to participate (request/receive a funding allocation) in the Campus-Based Programs.
- Information reported must be accurate and verifiable.
- A school that has applied to participate in the Campus-Based Programs for the first time should submit a FISAP by the deadline even if the school has not been certified to participate in the programs.

2.2.6 Campus-Based Program Rules

Additional rules and policies of the CB operations that affect Iteration 1 are:

- The CB Program sets a calendar for each processing year that includes key processing and congressionally mandated dates.
- The FISAP Development Team is led by Dorothy Proctor. This team is responsible for providing input to the software development contractor when updating FISAP software. The team members are determined each year.

2.2.7 Federal Regulations

The following Federal Regulations stated in the Higher Education Act of 1965 Section 482 Master Calendar are Congressionally mandated for CB Programs and apply to Iteration 1:

- August 1: Distribution of institutional application for Campus-Based funds (FISAP) to institutions.
- October 1: Final date for submission of FISAP by institutions to the Department.
- The FISAP form must be approved by the Office of Management and Budget (OMB) each year under the Paperwork Reduction Act of 1995 and 5 CFR 1320.

For a complete listing of the Master Calendar dates refer to Appendix B: Higher Education Act of 1965: Section 482 Master Calendar (a) (2).



2.2.8 Iteration 1 As-Is Application Use Flow

Figure 3 provides a visual representation of the applications used to support Iteration 1 As-Is processes. Tasks not related to an automated interface are not shown in this diagram.

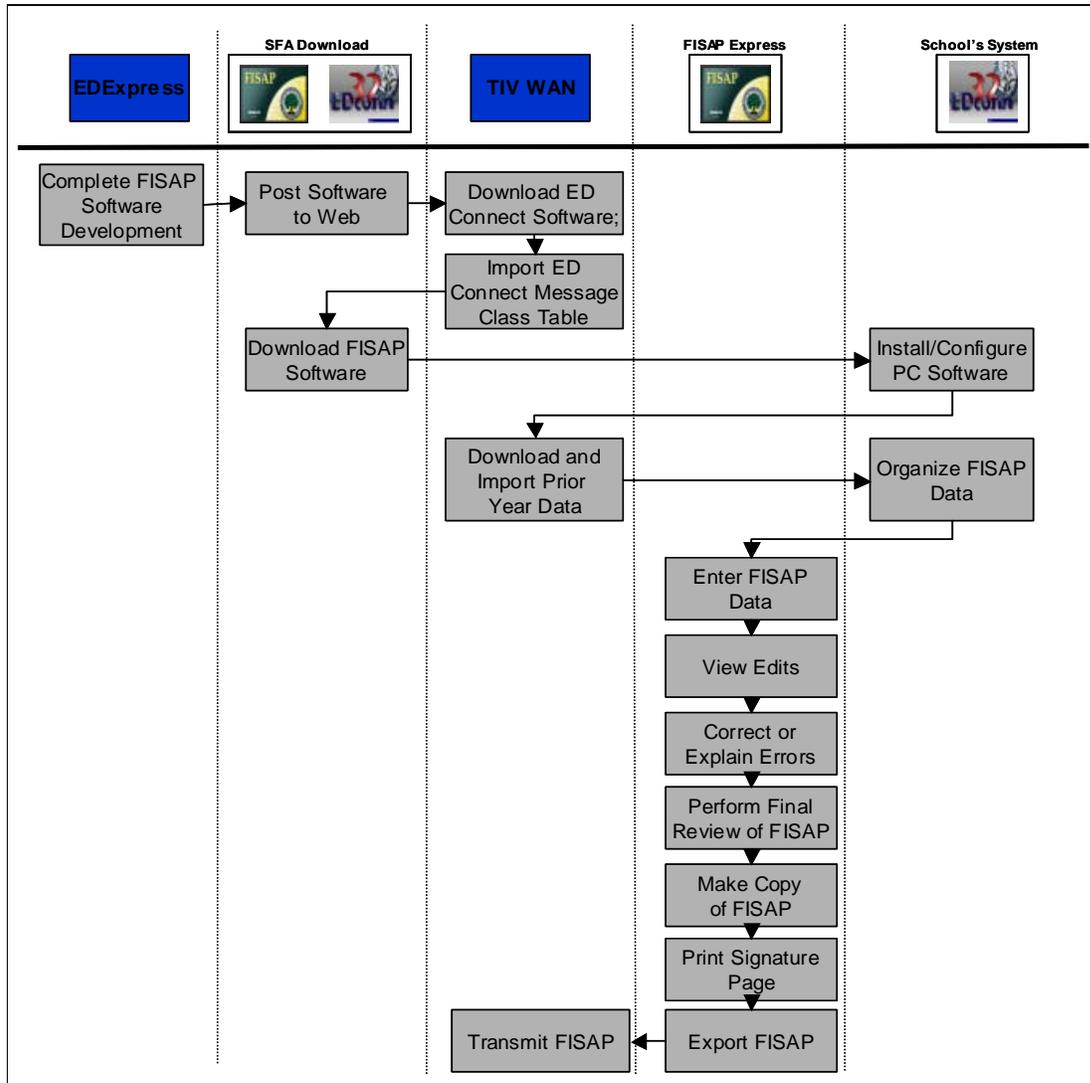
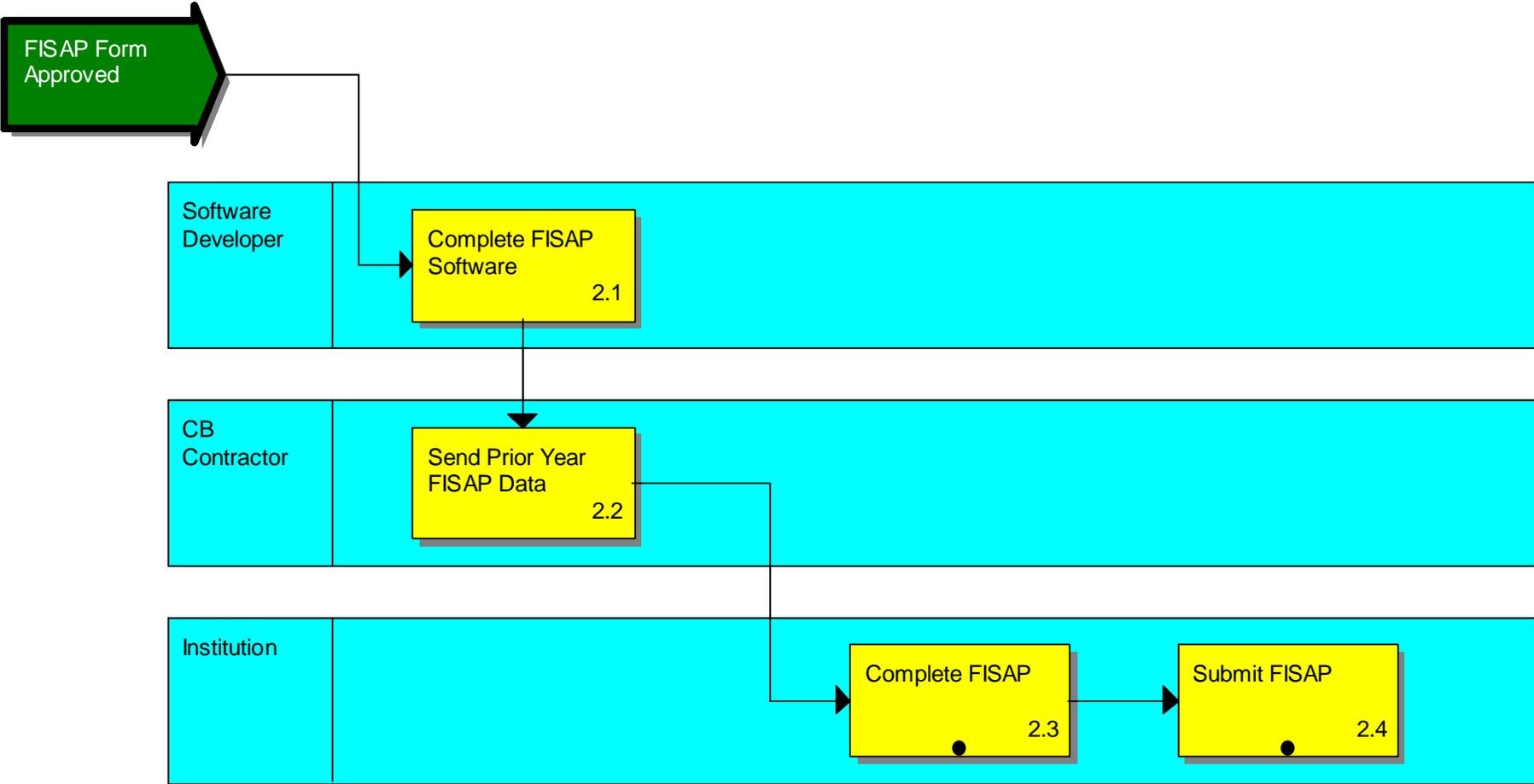


Figure 3 - Iteration 1 As-Is Application Flow

2.2.9 Iteration 1 As-Is Detailed Process Flows and Task Description

CB As-Is: Process Receipt of FISAP 2.0



CB As-Is: Process Receipt of FISAP 2.0

EVENT:			
Event ID	Name	Description	Specification
N/A	FISAP Form Approved	<p>The FISAP form must be approved by the Office of Management and Budget (OMB) each year under the Paperwork Reduction Act of 1995 and 5 CFR 1320.</p> <p>CB Staff is responsible for presenting FISAP changes/updates to OMB for approval. Once the FISAP form is approved the Software Developer can update the software to reflect the approved version.</p>	N/A
PROCESS:			

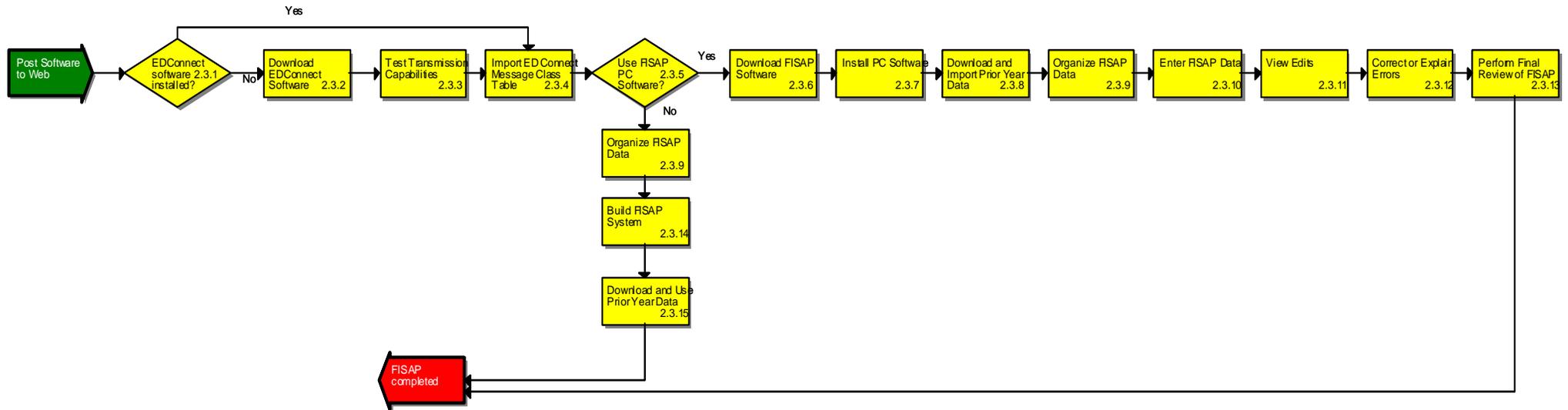
As-Is Process Receipt of FISAP 2.0 Detailed Task Information

Process ID	Name	Description	Specification
2.1	Complete FISAP Software	<p>The FISAP software is a 32-bit PC application used by schools and servicers to file the annual FISAP report and submit Reallocation Data electronically to SFA.</p> <p>FISAP PC software must be complete in time to meet the Congressionally mandated software distribution date of August 1st. (HEA Sec 482 Master Calendar) and must reflect the OMB approved updates.</p>	<p>FISAP PC Software is developed by NCS Pearson and posted to the SFA download site by the third week in July.</p> <p>Each August, CB Staff begins to review the requirements for next year's software. This may include functionality enhancements, new edits, etc. The CB Staff proposes these changes to NCS Pearson. After the software is developed, it is tested by the CB Staff for approximately three weeks.</p> <p>Software must have PRR approval and must be signed off by the GM of the Students Channel. The cost of the software development for the FISAP PC software and ED Connect is absorbed by the Students Channel since they are responsible for paying for the EDEExpress package.</p>
2.2	Send Prior Year FISAP Data to School	<p>CB Contractor must send institutions a file which includes their reported fiscal data from the prior award year.</p>	<p>CB contractor sends institutions a prior year data file approximately the third week in July. It is necessary for schools to upload this file in order for schools to complete the FISCAL OPERATIONS REPORT section of the FISAP.</p> <p>Uploading prior year data allows schools to view validation edits while entering new data in the current year FISAP.</p>

As-Is Process Receipt of FISAP 2.0 Detailed Task Information

Process ID	Name	Description	Specification
2.3	Complete FISAP	FISAP completion consists of two parts. -FISCAL OPERATIONS REPORT: Institutions report their prior year expenditures - APPLICATION TO PARTICIPATE: Institutions apply for funds for the next award year.	Institutions collect FISAP data throughout the award year. Each institution maintains its own policy as to who (or which office) will be responsible for completing the FISAP. In most cases this office is the Financial Aid Office (FAO). Since the FISAP requires data that may not be housed by the FAO, they are required to collect data from other sources such as: - Bursar's Office - Comptroller Office - Enrollment/ Admissions Office
2.4	Submit FISAP	According to the HEA of 1965 the date for submission of the FISAP is October 1.	According to the SFA Handbook a school must use the TIV WAN electronic FISAP transmission process through the TIV WAN using EDEExpress to be eligible to participate (request/ receive a funding allocation) in the Campus-Based Programs. ED Connect must be installed on the client's PC in order to submit over TIV WAN.

CB As-Is: Complete FISAP 2.3



CB As-Is: Complete FISAP 2.3

EVENT:			
Event ID	Name	Description	Specification
N/A	Post Software to Web	FISAP PC Software and ED Connect software are posted to the web at www.sfadownload.ed.gov. FISAP PC Software is usually posted one week prior to its Congressional deadline of August 1.	N/A
N/A	FISAP completed	The FISAP data population/entry is complete and the FISAP is now ready for submission.	The SFA/Campus-Based Policy Perkins Cash on Hand deadline is October 31st.
PROCESS:			
Process ID	Name	Description	Specification
2.3.1	EDConnect Software Installed?	Has the EDConnect software already been installed?	EDConnect software does not need to be re-installed each year unless updates are required.
2.3.2	Download EDConnect Software	ED Connect provides access to TIV WAN services which include storing and forwarding data transmissions and online query.	EDConnect software can be downloaded from the SFA download site. Institutions will not have to download the software every year. The software will only have to be reinstalled if software updates have been made.
2.3.3	Test Transmission Capabilities	Send out transmissions to test that EdConnect software is functioning properly.	
2.3.4	Import ED Connect Message Class Table	The Message Table File (MESSAGTB) populates the EDconnect Message Class Manager.	The Message Table File (MESSAGTB) populates the EDConnect Message Class Manager. EDConnect uses the Message Class Manager to recognize the various standard filenames (or message classes) that EDconnect users send and receive. Additionally, the Message Table File may also be used as a reference by Title IV WAN mainframe users who would like information on the various Message Classes.
2.3.5	Use FISAP PC Software?	Institutions have the option of using the FISAP PC Software provided SFA or using their own internally developed software.	If institutions chose to build their own application for FISAP submission the system must adhere to the programmer specifications and record layouts provided by SFA in the FISAP Technical Reference (located on SFA Download Site). From 1999-2001 award years, institutions were required to use the FISAP PC software provided by SFA. The option to use internally developed software is new for the 2002 award year.

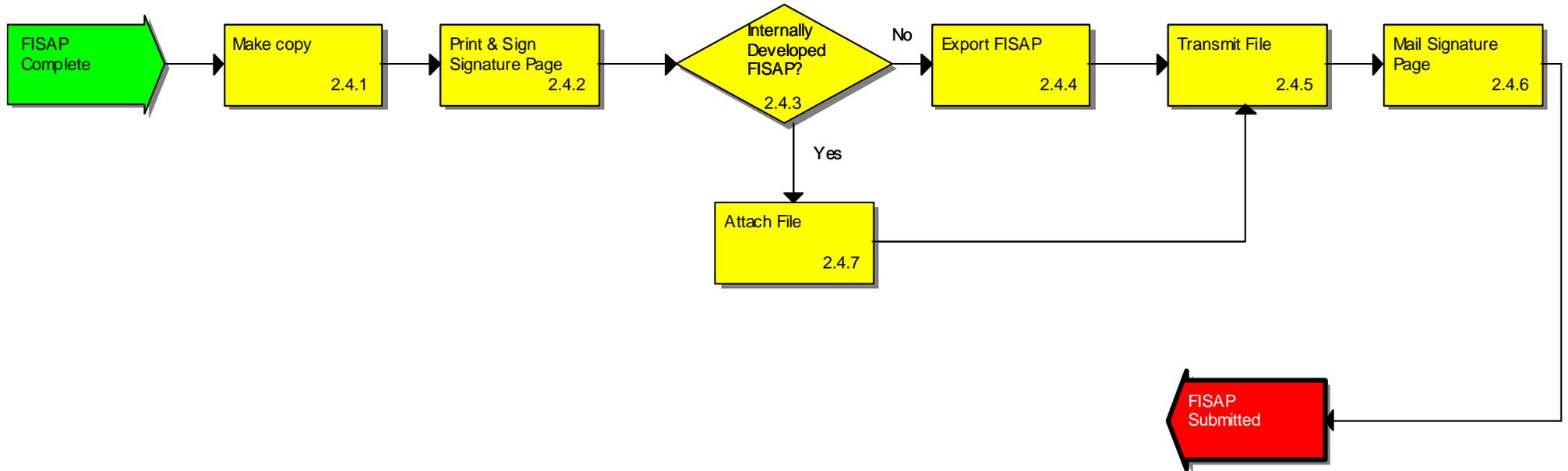
CB As-Is: Complete FISAP 2.3

Process ID	Name	Description	Specification
2.3.6	Download FISAP Software	To complete the FISAP, institutions must download the FISAP PC software from the SFA download web site: www.sfadownload.ed.gov .	
2.3.7	Install PC Software	Institutions must install and configure PC software to their system.	Installation instructions are located in the FISAP Technical Reference located on the SFA Download site: www.sfadownload.ed.gov . The final configuration of the PC software cannot occur without importing prior year data.
2.3.8	Download and Import Prior Year Data	Prior year data files are sent to institutions via TIV WAN.	The CB contractor sends prior year data files to institution via TIV WAN during the third week in July. Institutions must download the prior year data file from their TIV WAN mailbox and import it into the FISAP PC software. This import allows schools to view and complete sections III, IV, V, and VI of the FISAP. (The FISCAL OPERATIONS REPORT) The final configuration of the PC software cannot occur without importing prior year data.
2.3.9	Organize FISAP Data	Institutions must begin organizing the FISAP data they collected throughout the award year before entering data into the FISAP. This process is the same for both PC Software and Internally Developed Software.	Institutions collect FISAP data elements throughout the award year. FISAP data elements are collected by various offices at an institution including the Financial Aid Office, Bursar, Admissions Office and Enrollment Office. Schools begin collecting the data elements from all offices and organizing it in September after they have closed out financial data for the previous year.
2.3.10	Enter FISAP Data	FISAP data is entered using FISAP PC software or an internally developed application. After data is entered it is typically verified by top institutional executives.	Schools have the option of: - keying data into the FISAP PC software - importing the data produced by their mainframe into the PC software - producing a file from their mainframe which adheres to the record layouts provided by SFA.
2.3.11	View Edits	Schools are able to view edits while entering data.	As institutions input data elements into the FISAP PC software they are able to view both field and validation edits. The validation edits will not run unless the school has entered the prior year data file.

CB As-Is: Complete FISAP 2.3

Process ID	Name	Description	Specification
2.3.12	Correct or Explain Errors	After viewing edits schools have the option of either correcting or providing an explanation for the data.	Fields are provided at the bottom of the edit message for institutions to input comments or corrections.
2.3.13	Perform Final Review of FISAP	A final review of the FISAP is performed.	Institutions often have top executives and other internal offices review the FISAP before it is officially declared complete.
2.3.14	Build FISAP System	<p>Institutions are allowed to create a system to submit FISAP data files directly to the FISAP processing mailbox via TIV WAN.</p> <p>Institutions building their own FISAP software system must build edits into their software that meet the specifications in the FISAP technical reference.</p>	<p>Typically servicers choose to build their own FISAP system. The FISAP technical reference provides programmer specifications and record layouts for schools and other organizations that need to design software systems to interface with the U.S. Department of Education's FISAP processor. This document is located on SFA download (www.sfadownload.ed.gov.)</p> <p>The document includes record layouts, processing error messages, batch edit/reject codes, field edit messages, etc.</p> <p>The edits built into the internally developed FISAP software system are identical to the edits that are in the FISAP PC software and on the CB mainframe. Institutions are required by CB to view and edit each FISAP screen page .</p> <p>For an institution to properly run the edits it must have loaded the prior year data provided by the CB Contractor. This is because many of the edits are built around comparing the newly entered data to last year's FISAP data.</p>
2.3.15	Download and Use Prior Year Data	Prior year data files are sent to institutions via TIV WAN.	<p>Institutions that choose to build a FISAP system must use the prior year data files provided by the Department of Education.</p> <p>The CB contractor sends prior year data files to institution via TIV WAN during the third week in July. Institutions must download the prior year data file from their TIV WAN mailbox and import it into the FISAP PC software. This import allows schools to view and complete sections III, IV, V, and VI of the FISAP. (The FISCAL OPERATIONS REPORT)</p>

CB As-Is: Submit FISAP 2.4



CB As-Is: Submit FISAP 2.4

EVENT:			
Event ID	Name	Description	Specification
N/A	FISAP Complete	The FISAP is complete and is ready for submission.	The SFA/Campus-Based Policy Perkins Cash on Hand deadline is October 31st.
N/A	FISAP Submitted	The FISAP has been submitted to the Department of Education and is ready for processing.	
PROCESS:			
Process ID	Name	Description	Specification
2.4.1	Make copy	Institution's typically make an electronic and hard copy of the complete FISAP for their records.	
2.4.2	Print & Sign Signature Page	The CEO of the institution must sign the "signature page" in order to have the institution's FISAP processed.	<p>Schools are required to provide only one signature. The Chief Executive Officer (CEO) must sign in field 8 to certify that the school is in compliance with the Drug-Free Workplace, Debarment, and Anti-Lobbying requirement, and that the FISAP data is "true and accurate". The certifying official must be aware that the information in this FISAP is subject to audit and program review. Providing false or misleading information may result in criminal penalties.</p> <p>This process has been burdensome to institutions because of font size and formatting issues.</p>
2.4.3	Internally Developed FISAP?	Is the institution using the FISAP PC software or internally developed software that adheres to SFA standards?	<p>The submission method is different for institutions that have internally developed FISAP software than it is for institutions that are using the PC software.</p> <p>The institutions that internally developed the FISAP software must attach the file they created to ED Connect. Institutions that used the FISAP PC software & ED Connect need to export it from the software to transmit the file.</p>
2.4.4	Export FISAP	Schools must export their FISAP from the FISAP PC software into a directory.	<p>There are four edits that prevent an institution from exporting the FISAP:</p> <p>Negative Expenditures: -Edit #08130 (FSEOG, Part IV, Section E, Field 13) -Edit #09172 (FWS, Part V, Section E, Field 17)</p> <p>Negative Unexpended Authorization: -Edit #08140 (FSEOG, Part IV, Section E, Field 14) -Edit #09175 (FWS, Part V, Section E, Field 18)</p>

CB As-Is: Submit FISAP 2.4

Process ID	Name	Description	Specification
2.4.5	Transmit File	Using EDConnect the FISAP is transmitted via TIV WAN.	<p>If the institution is using the FISAP PC Software and it is on the same computer as EDConnect the PC software automatically will transmit the file if configured.</p> <p>If EDConnect is on a separate computer, the exported file must be moved to the computer with EDConnect and the Institution must create its own transmission entry. Internally developed FISAP software must also create its own transmission entry.</p>
2.4.6	Mail Signature Page	The signed signature must be mailed to the Department of Education.	<p>If a signature page is not received, the contractor will classify the school as "on hold" and the institution will not receive funding until the issue is resolved.</p> <p>Signature pages are manually logged into the system by the CB contractor using CB Windows. The documents are filed and maintained for 5 years until they are destroyed.</p> <p>It takes approximately 2-3 CB contracting staff to process the signature pages. The processing time for each signature page is approximately 10 minutes. This includes opening the mail, sorting, logging, and filing.</p>
2.4.7	Attach File	The file must be attached to the TIV WAN mailbox.	

2.3 eCB System To-Be Functional Environment

2.3.1 Overview of To-Be Mapping

Iteration 1 To-Be process begins with updating the FISAP on the web and ends with submitting the FISAP using the web. The information presented in this section was compiled through analysis of the As-Is documentation, interviews with SFA CB Staff and Institutional Steering Committee Members, and a review of technical requirements. This section focuses on the process of completing and submitting the FISAP once the web-based FISAP is available on September 5, 2001.

2.3.2 Iteration 1 To-Be Process Flow

Figure 4 provides a visual representation of the activities that will be completed during the Iteration 1 To-Be process.

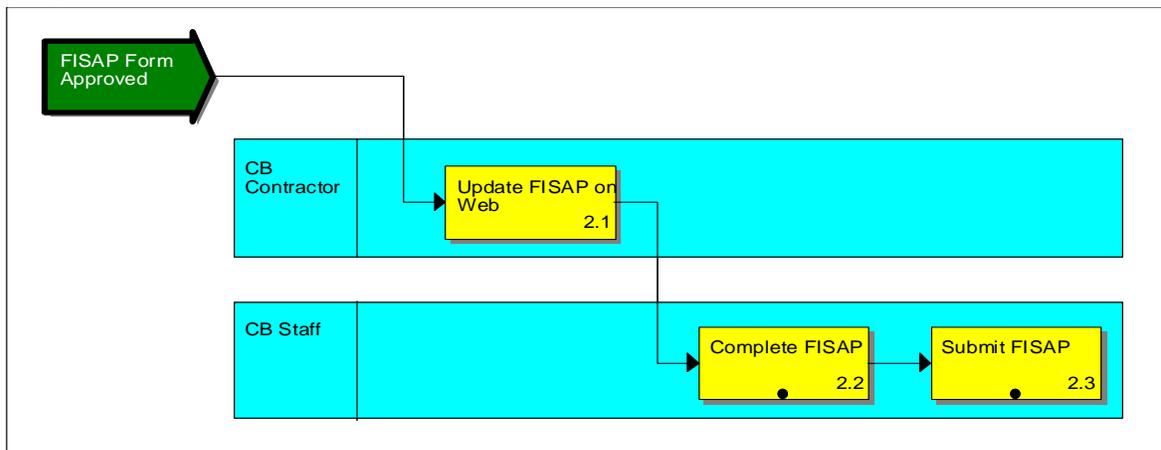


Figure 4 - Iteration 1 To-Be Process Flow

Refer to section 2.3.8 Iteration 1 To-Be Detailed Process Flows and Task Description for detailed sub-process flows and descriptions.

2.3.3 Task Definition and Detail

Table 2 outlines the tasks, resources, costs, time, and skills required to complete each Iteration 1 To-Be process.

Task ID	Task	Resources	Time (1)	Costs (2)	Skills Required	Application Interface
2.1	Update FISAP on Web	CB Contractor	1 year development cycle.	\$62,500	Java JSP Oracle	FISAP Web Site
2.2	Complete FISAP	Institution	Estimated 1 month preparation time to complete the FISAP.	-	Internet Use	FISAP Web Site
2.3	Submit FISAP	Institution	Data entry estimated at 20 hours.	-	Internet Use	FISAP Web Site

Table 2 - Iteration 1 To-Be Task Definition and Detail

- (1) Time to complete task information compiled through interviews with Campus-Based staff members and eCB User Steering Committee members.
- (2) Costs estimated from the eCB Business Case.



2.3.4 Business Rules/ED-SFA Policies

The Business Rules and Policies stated in the SFA Handbook Reference- Campus-Based Programs will be updated to read:

- To receive funds from the Department for one or more of the Campus-Based programs, a school must submit a FISAP each award year. All schools are required to file the FISAP data through the electronic FISAP process. Thus, a school must use the FISAP electronic process through the Web or the Student Aid Internet Gateway (SAIG - formerly known as TIV WAN) using EDEXpress to be eligible to participate in the campus-based programs.
- In July, the Department makes available the electronic FISAP for schools to use in applying for funds for the subsequent award year. For the 2002-2003 award year, the web-based FISAP will be available on September 5, 2001. The information reported must be accurate and verifiable. The deadline for transmitting the completed FISAP to the Department using either the Web or SAIG is October 1.

2.3.5 Federal Regulations

The following Federal Regulation will apply to the To-Be Iteration 1 process:

- OMB approval requests will need to include screen-shots of the web-based FISAP and access to a functional version of the website.

2.3.6 Iteration 1 To-Be Application Use Flow

Figure 4 provides a visual representation of the applications used to support Iteration 1 To-Be processes. Tasks that are not related to an automated interface are not shown in this diagram.

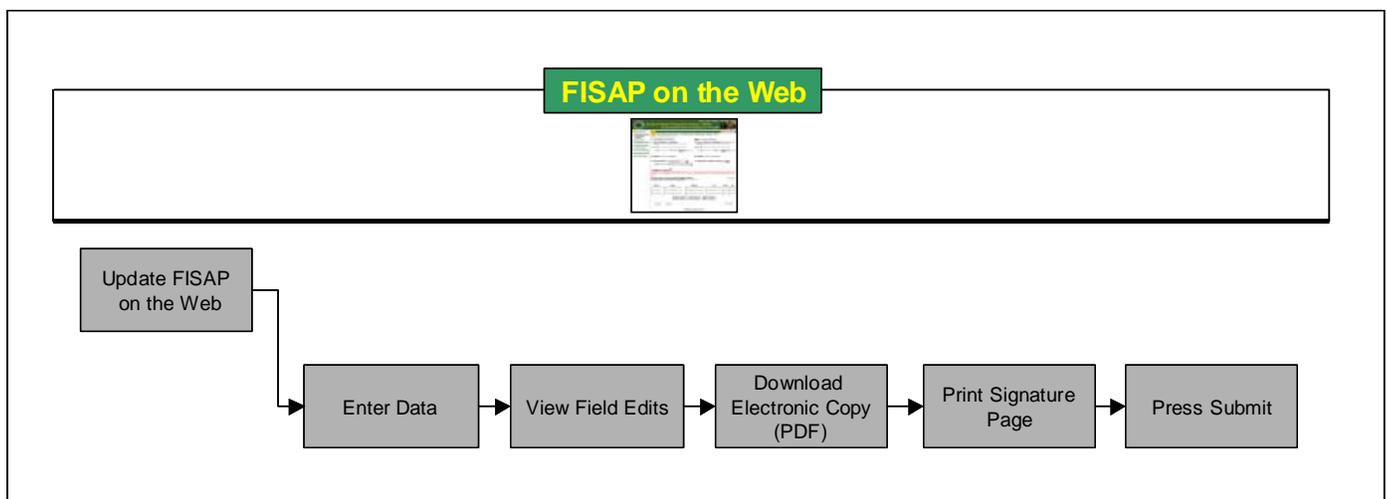


Figure 4 - Iteration 1 To-Be Application Use Diagram



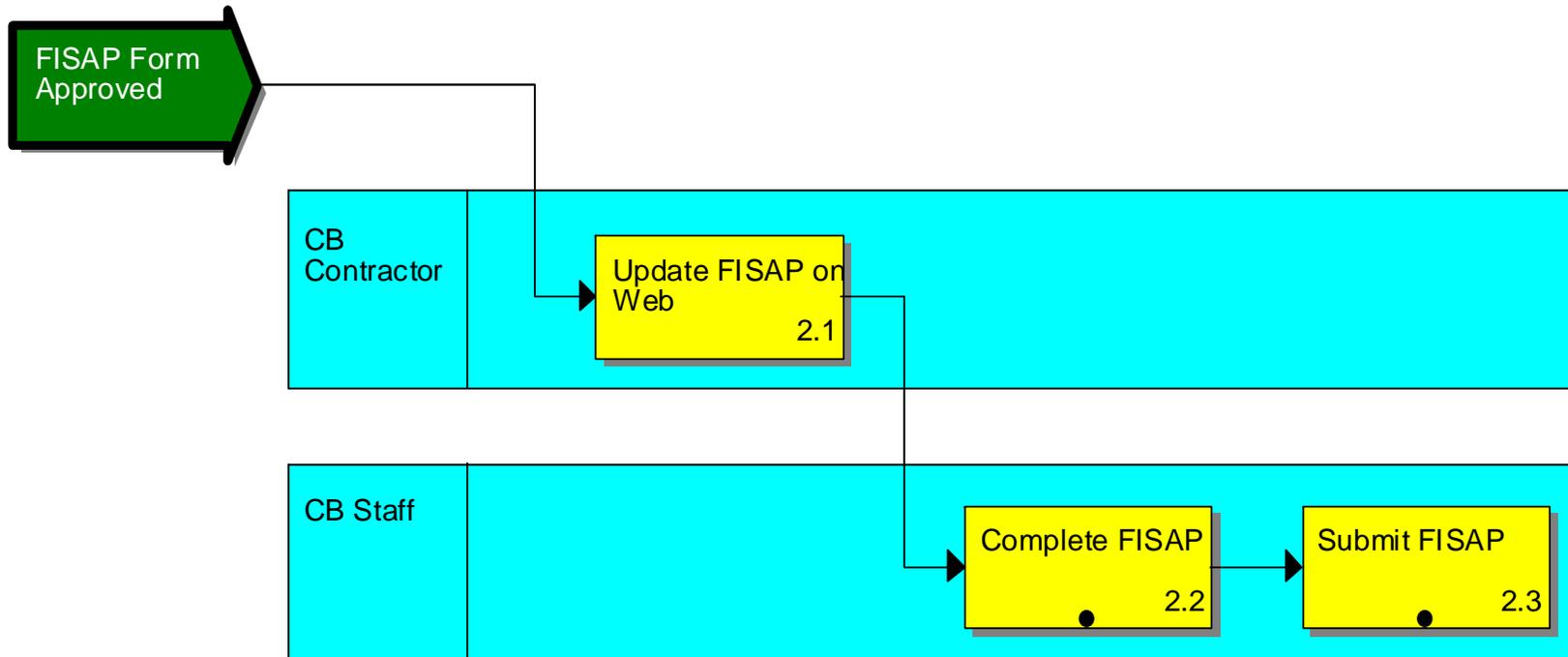
2.3.7 Performance Measures

One of the goals behind implementing the eCB System is to increase customer satisfaction for institutional users. Specific metrics that may be tracked to evaluate achievement of this goal include:

1. The amount of time required to configure the FISAP. This currently requires the institution to download and configure software and download/import data. This process may take a full working day or longer depending on the institution's familiarity with EDEExpress. The eCB System eliminates the need to take these steps and access to the FISAP form will be instant.
2. The level of customer satisfaction conveyed from institutional users. Institutions have indicated that the eCB system will simplify the tasks performed to apply for Campus-Based aid by eliminating the need to download prior year data or configure the PC Software. Satisfaction may be measured through the use of detailed satisfaction surveys and through communication with institutions.
3. The percent of institutions that continue to use the FISAP PC software after the web-based FISAP is available. This ratio will provide insight into institutions' awareness of the availability and benefits of the web-based FISAP as communicated through the eCB roll-out plan.

2.3.8 Iteration 1 To-Be Detailed Process Flows and Task Description

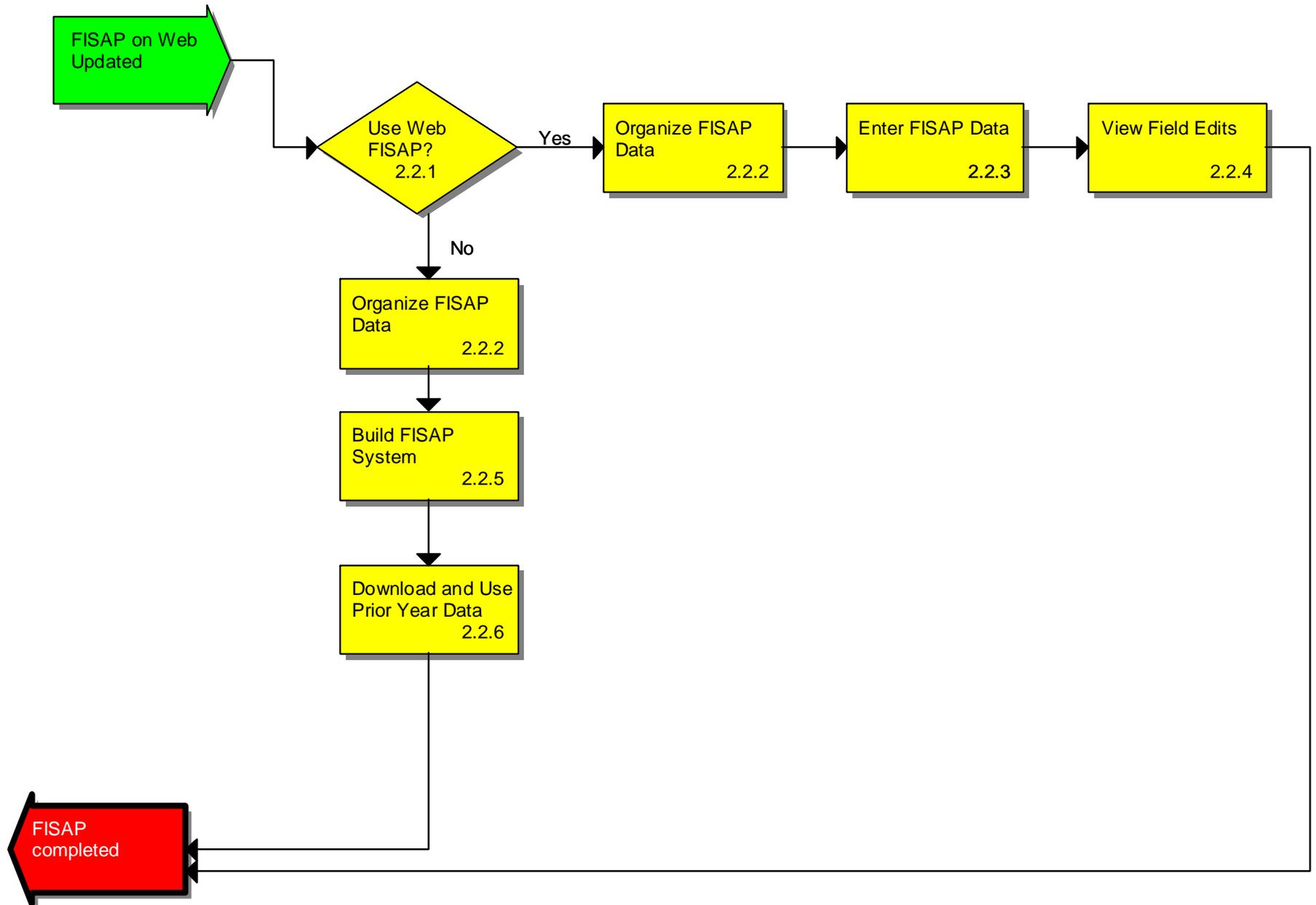
eCB To-Be: Process Receipt of FISAP 2.0



eCB To-Be: Process Receipt of FISAP 2.0

EVENT:			
Event ID	Name	Description	Specification
N/A	FISAP Form Approved	The FISAP must receive OMB approval before it is distributed to the public. CB Staff is responsible for presenting FISAP changes/updates to OMB for approval. Once the FISAP form is approved the Software Developer can update the software to reflect the approved version.	The FISAP form must be approved by the Office of Management and Budget (OMB) each year under the Paperwork Reduction Act of 1995 and 5 CFR 1320. OMB approval requests will need to include screen-shots of the web-based FISAP and access to a functional version of the website.
PROCESS:			
Process ID	Name	Description	Specification
2.1	Update FISAP on Web	The web-based FISAP must be updated in time to meet the Congressionally mandated distribution date of August 1st. (HEA Sec 482 Master Calendar) and must reflect the OMB approved updates.	The update FISAP on the Web process will replace the current process of updating the FISAP software.
2.2	Complete FISAP	Each part of the FISAP will be available via the web. Institutions will be able to complete the FISAP by logging onto the FISAP website and inputting data into the appropriate fields. FISAP completion consists of two parts: -FISCAL OPERATIONS REPORT: This is where institutions report their prior year expenditures - APPLICATION TO PARTICIPATE: This is where institutions apply for funds for the next award year.	In the 2001 award year institutions will have the option of submitting the FISAP using either the FISAP PC Software or the FISAP on the web. The web-based FISAP will replace the FISAP PC Software in 2002.
2.3	Submit FISAP	Once data is entered, institutions will be able to submit the FISAP via the web by simply pushing a submit button.	The eCB System will eliminate the need for schools to use the FISAP PC software, ED Connect software and the TIV WAN when submitting the FISAP.

eCB To-Be: Complete FISAP 2.2



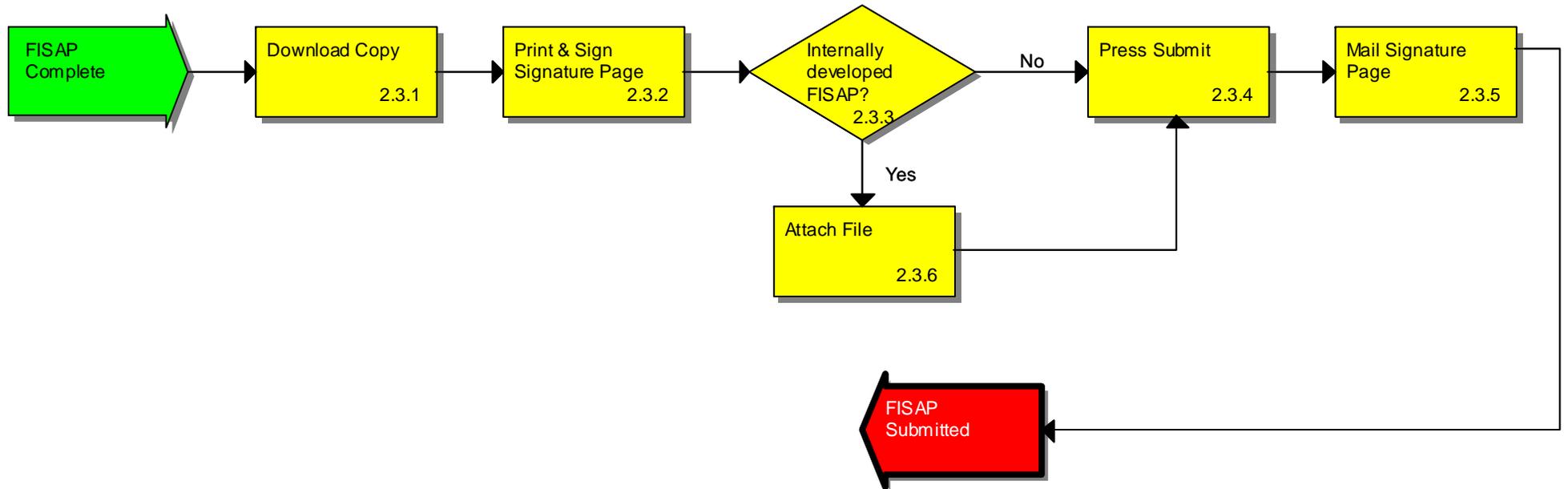
eCB To-Be: Complete FISAP 2.2

EVENT:			
Event ID	Name	Description	Specification
N/A	FISAP on Web Updated	The FISAP and web pages have received OMB approval and have been updated to reflect changes.	N/A
N/A	FISAP completed	FISAP is complete and is ready for submission.	The SFA/Campus-Based Policy Perkins Cash on Hand deadline is October 31st.
PROCESS:			
Process ID	Name	Description	Specification
2.2.1	Use Web FISAP?	Institutions have the option of entering and submitting data through the web-based FISAP or creating their own FISAP system and submitting through the web.	<p>If institutions choose to build their own application for FISAP submission, they must adhere to the programmer specifications and record layouts provided by SFA in the FISAP Technical Reference (located on SFA Download Site www.sfadownload.ed.gov).</p> <p>In the 1999-2001 award years, institutions were required to use the FISAP PC software provided by SFA. The option to use internally developed software is new for the 2002 award year.</p>
2.2.2	Organize FISAP Data	<p>Institutions collect and organize data throughout the award year before it is entered into the FISAP.</p> <p>This process is the same for both the web and Internally Developed Software.</p>	Institutions collect FISAP data elements throughout the award year. The data elements are collected by various offices at an institution including the Financial Aid Office, Bursar, Admissions Office and Enrollment Office. Schools begin collecting the data elements from all offices and organizing it in September after they have closed out the previous year.

eCB To-Be: Complete FISAP 2.2

Process ID	Name	Description	Specification
2.2.3	Enter FISAP Data	FISAP data is entered using the web-based FISAP or an internally developed application. After data is entered it is often verified by top institutional executives.	Schools have the option of: - keying data into the web-based FISAP - producing and attaching a file from their mainframe which adheres to the record layouts provided by SFA
2.2.4	View Field Edits	Institutions are able to view field edits while entering data into the web-based FISAP.	Field edits determine if the correct character type is entered into a field. For example, entering numbers in the name field would trigger a field edit.
2.2.5	Build FISAP System	Institutions are allowed to create a system to submit FISAP data files directly to the FISAP processing mailbox via FTP to the web. Institutions building their own FISAP software system must build edits into their software that meet the specifications in the FISAP technical reference.	The FISAP technical reference provides programmer specifications and record layouts for schools and other organizations that need to design software systems to interface with the U.S. Department of Education's FISAP processor. This document is located on SFA download (www.sfadownload.ed.gov) The document includes record layouts, processing error messages, batch edit/reject codes, field edit messages, etc. The edits built into the internally developed FISAP software system are identical to the edits that are in the relational database. Institutions are required by CB Programs to view and edit each FISAP screen page . For an institution to properly run the edits it must load the prior year data provided by the CB Contractor. This is because many of the edits compare the newly entered data to last year's FISAP data.
2.2.6	Download and Use Prior Year Data	Institutions will be able to access prior year data files through the Self-Service section of the web-based FISAP.	The process for downloading multiple prior year data files has not yet been defined. This process will apply to servicers.

eCB To-Be: Submit FISAP 2.3



eCB To-Be: Submit FISAP 2.3

EVENT:			
Event ID	Name	Description	Specification
N/A	FISAP Complete	The FISAP is complete and is now ready for submission.	The SFA/Campus-Based Policy Perkins Cash on Hand deadline is October 31st.
N/A	FISAP Submitted	The FISAP has been submitted and is now ready for processing.	N/A
PROCESS:			
Process ID	Name	Description	Specification
2.3.1	Download Copy	Schools can download a copy of the complete FISAP for their records.	The self-service section of the web-based FISAP will contain the capability to download a copy of the completed FISAP. The file will be in .pdf format and viewable with Adobe Acrobat Reader.
2.3.2	Print & Sign Signature Page	The CEO of the institution must sign the "signature page" in order to have the the institution's FISAP processed.	The self-service section of the web-based FISAP will contain the capability to download a copy of the signature page. The file will be in .pdf format and viewable with Adobe Acrobat Reader. Once electronic signatures have been approved this process will be upgraded to incorporate the e-sign functionality.
2.3.3	Internally developed FISAP?	Is the institution using the web-based FISAP or an internally developed FISAP application?	The internally developed FISAP requires one extra task in the FISAP submission process.
2.3.4	Press Submit	To submit the FISAP the school must press the submit button.	An institution will be allowed to submit the FISAP as many times as they wish through Dec 15. Each new submission will overwrite the prior submission and be considered the last submission will be considered the final FISAP used in award calculations.
2.3.5	Mail Signature Page	The signed signature page must be mailed to SFA.	This process will be removed once electronic signatures are available.
2.3.6	Attach File	The internally developed FISAP file must be attached to a FTP website which is accessible through a link on the web-based FISAP.	



3. Technical Design

3.1 Technical Design Overview

As a component of eCB System, the technical design provides a detailed account of the components, interactions, and technical specifications that can be used to develop and explain the makeup of the eCB System software. In addition, identification of functional requirements, technical requirements, and specific testing requirements comprise a large portion of the design documentation.

3.2 Trace-ability Matrix

The Trace-ability Matrix demonstrates how each system requirement gathered during Phase I of the eCB project maps to its technical fulfillment in the test case. Refer to the following page for the Trace-ability Matrix and a description of each column.

Project Requirement Column

The Project Requirement column represents the logical beginning of the design process. The requirements listed in this column were gathered as part of Phase I of the eCB project. Table 3 provides a guideline for understanding the numbering schema used within this column. As an example, requirement number WEBFX001 has the following meaning:

Req. ID	Reference
WEB	is a web front-end requirement
F	the requirement is derived from the FISAP submission process
X	a placeholder because the reports area breaks down further
001	indicates this is the first requirement of this sequence.

Table 3 – Trace-ability Matrix Requirement Column Example

Table 4 contains the complete Requirements Matrix numbering schema:

WEB	ADMIN	DATABASE	REPORTS
FISAP - WEBFX	AUI - ADMAX	Structure - DBASX	WEB
TIVWAN - WEBTX	CBWIN - ADMCX	Archive - DBAAX	FISAP - RPTWF
General - WEBGX	Utilities - ADMUX	Interfaces - DBAIX	TIVWAN - RPTWT
Notes - WEBNX	General - ADMGX	General - DBAGX	General - RPTWG
	Notes - ADMNX	Notes - DBANX	ADM
			AUI - RPTAA
			CBWIN - RPTAC
			Utilities - RPTAU
			General - RPTAG
			DBA
			Structure - RPTDS
			Archive - RPTDA
			Interfaces - RPTDI
			General - RPTDG
			General - RPTGX
			Notes - RPTNX

Table 4 – Requirements Matrix Numbering Schema

**Campus-Based Modernization
Trace-ability Matrix**

**Iteration I
5/10/01**

Project Requirement	Requirement Label	Description	Use Case	Technical Fulfillment	Test Case	Application Objects
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COLUMN DEFINITIONS:

<p>The Project Requirement column represents the logical beginning of the design process. This requirement was gathered as part of Phase I of the eCB Project.</p>	<p>Requirement Label column represents a second identifier used within the Rational Rose Requisite Pro product. Each identifier maps through one-to-one relationship with the Project requirement. Refer to Appendix E: Use Case Realization Report CD</p>	<p>Description column provides a full explanation of each requirement as documented from Phase I of the eCB Project (Deliverable 49.1.2).</p>	<p>Use Case column identifies the related Use Case for each requirement. Refer to Appendix D: Use Case Specifications for complete Use Case documents.</p>	<p>Technical Fulfillment column identifies the software object that fulfills the original requirement. Refer to Appendix E: Use Case Realization Report CD</p>	<p>Test Case column represents the Test Cases that verify the functionality created to fulfill each requirement. Refer to Appendix H: Iteration 1 Functional Test Case Specification.</p>	<p>Application Object column identifies which application is used for the requirement.</p>
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**Note: Test Cases will be added after the post-cycle of Iteration 1.

EXAMPLE:

<p>DBAGX006 - Documented requirement from Phase I</p>	<p>SUPL107 - Second identifier used by Rational Rose Requisite Pro</p>	<p>The requirement explanation for the Discription column is the same for both DBSGX006, Project Requirement, and SUPL107, Requirement Label.</p>	<p>KEY TO USE CASES = UC1 - Data Entry General UC2 - Address Entry UC113 - Part 1 Section A UC126 - Add/Edit Additional Locations UC127 - Delete Additional Locations UC38 - Part 1 Section B UC39 - Part 2 UC120 - Part 3 UC121 - Part 4 UC122 - Part 5 UC124 - Part 6 UC125 - Additional Info</p>			
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**Campus-Based Modernization
Trace-ability Matrix**

**Iteration I
5/10/01**

Project Requirement	Requirement Label	Description	Use Case	Technical Fulfillment	Test Case	Application Objects
WEBFX001	SUPL387.4	The system shall customize FISAP forms similar to the current FISAP PC System: (4) New Schools Special Processing	Parent Use Cases =	UC1, UC113	tcfnCBS421, tcfnCBS005, tcfnCBS365 IndentityInfoBean	
			UC1.23	497.4		
			UC1.24	497.4		
			UC113.1	387.4 422 422.3 422.4 422.5 422.6 422.7 429 430 431 432 433 434 435 436 437 438 439 440 441 442		
WEBFX003 gWEBFX004	SUPL232 SUPL233	232 - The System provides that each page/panel/form has extensive field edits. These execute upon any update to the field and must be satisfied before the Institution User can move to the next page.	Parent Use Cases =	UC1, UC2, UC113, UC126, UC127, UC38, UC39, UC120, UC121, UC122, UC124, UC125		
			UC1.5	333		
			UC1.21	426 427 428 468		
					tcfnCBS005, tcfnCBS023,	<i>Ref: All Beans for this section</i>

Campus-Based Modernization
Trace-ability Matrix

Iteration I
5/10/01

Project Requirement	Requirement Label	Description	Use Case	Technical Fulfillment	Test Case	Application Objects
		233 - The System provides that as each page/panel is submitted, only those dependency edits will execute that are related to that page.	UC1.25	468	tcfnCBS041, tcfnCBS059, tcfnCBS077, tcfnCBS095, tcfnCBS113, tcfnCBS131, tcfnCBS149, tcfnCBS167, tcfnCBS185, tcfnCBS203, tcfnCBS221, tcfnCBS239, tcfnCBS257, tcfnCBS275, tcfnCBS293, tcfnCBS311, tcfnCBS329, tcfnCBS347, tcfnCBS365, tcfnCBS013, tcfnCBS031, tcfnCBS049, tcfnCBS067, tcfnCBS085, tcfnCBS103, tcfnCBS121, tcfnCBS139, tcfnCBS157, tcfnCBS175, tcfnCBS193, tcfnCBS211, tcfnCBS229, tcfnCBS247, tcfnCBS265, tcfnCBS283, tcfnCBS301, tcfnCBS319, tcfnCBS337, tcfnCBS355, tcfnCBS373	
			UC2.5	278 329 329.1 329.2 333 422 422.3 422.4 422.5 422.6 422.7 422.8 422.9 422.10	tcfnCBS411, tcfnCBS412, tcfnCBS413, tcfnCBS419,	<i>Ref: All Beans for this section</i>

Campus-Based Modernization
Trace-ability Matrix

Iteration I
5/10/01

Project Requirement	Requirement Label	Description	Use Case	Technical Fulfillment	Test Case	Application Objects
			UC2.7	278 278.1 278.2 329 329.1 329.2 333 422 422.3 422.4 422.5 422.6 422.7 422.8 422.9 422.10 431 432 433 434 435 436 437 438 439 440 464	tcfnCBS420, tcfnCBS365, tcfnCBS023	
			UC2.8	278 278.1 278.2 464		
			UC2.9	422 422.3 422.9 442		
			UC2.11	278.1 278.2 422.4 422.5 422.6 422.7 422.8 422.9 422.10		
			UC2.12	468		
			UC113.4	422 422.3 422.8 443	tcfnCBS428, tcfnCBS438, tcfnCBS445, tcfnCBS446, tcfnCBS447, tcfnCBS448, tcfnCBS427	IdentityInfoBean
			UC113.11	422 422.3 422.9 446 447 447.1 448 448.1		
			UC113.14	422.6 431 432 433 434 435		
			UC113.15	422.6 431 432 433 434 435 441		
			UC113.16	422.6 441		
			UC113.17	422.6 441		
			UC113.29	422.4 422.5 422.6 422.10		
			UC38.2	278 278.1 278.2 333	tcfnCBS462, tcfnCBS463, tcfnCBS465	IdentityCertWarnBean
			UC38.3	278 278.1 278.2 498.1 498.2 498.3 498.4		
			UC38.4	278.1 278.2 464		
			UC39.6	449 491	tcfnCBS471	
			UC39.24	278.1 278.2 289.1 289.2 289.3 290.1 290.4 290.5 333	tcfnCBS484	ApplRequestsBean ApplEnrollmentBean ApplEnrollment2Bean ApplExpBean ApplAidBean

**Campus-Based Modernization
Trace-ability Matrix**

**Iteration I
5/10/01**

Project Requirement	Requirement Label	Description	Use Case	Technical Fulfillment	Test Case	Application Objects
			UC120.17	293.1 293.2 293.3 293.4 295.1 297.1 297.2 297.3 456.3 456.4 456.5 456.6 456.7 456.8 456.9 456.10 456.11	tcfnCBS505	PerkinsFiscalBean PerkinsFiscal2Bean PerkinsFiscal3Bean PerkinsFundBean PerkinsRepayInfoBean PerkinsRepayBean
			UC121.8	454.4 455.3	tcfnCBS513	FSEOGAuthBean FSEOGSpentBean
			UC122.10	451.4 452.4 452.5 453.4 453.5	tcfnCBS523	FWSAuthBean FWSSpentBean FWSEmployBean
			UC124.6	324.1 324.2	tcfnCBS532	SumDistBean SumCalcBean
			UC125.1.6	328	tcfnCBS540	AddInfoBean
			UC126.6	422.9	tcfnCBS547	MoreLocationsBean

**Campus-Based Modernization
Trace-ability Matrix**

**Iteration I
5/10/01**

Project Requirement	Requirement Label	Description	Use Case	Technical Fulfillment	Test Case	Application Objects
WEBGX001 WEBGX002 WEBGX003 WEBGX005 WEBGX008 WEBGX010 WEBGX012 WEBGX023	SUPL244 SUPL245 SUPL246 SUPL248 SUPL251 SUPL253 SUPL255 SUPL266	<p>244 - The Institution and Servicer User interface is web based.</p> <p>245 - The System provides a User interface compatible with display resolutions in common use at the time of development (e.g., 800 x 600).</p> <p>246 - The System provides a User interface compatible with web client software versions in common use at the time of development (e.g., Netscape Navigator 4.x, Microsoft Internet Explorer 4.01+, AOL 4+).</p> <p>248 - The System provides a User interface compatible with Accessibility Requirements in common use at the time of development.</p> <p>251 - The System handles Multiple-User panel access. That is, more than one User can access the same screen at the same time. Currently in the FISAP PC software if a User is accessing a screen, that screen is locked to other Users.</p> <p>253 - Server side processing is maximized to reduce the complexity and size of the site's pages.</p> <p>255 - The relational database is used to store partial data entered by a User to reduce the amount of data being held and also allows for improved disaster/recovery (autosave).</p> <p>266 - The System architecture supports access up to 250 concurrrent sign-ons.</p>	<p>Parent Use Cases =</p>	<p>UC1, UC2, UC113, UC126, UC127, UC38, UC39, UC120, UC121, UC122, UC124, UC125</p>		

**Campus-Based Modernization
Trace-ability Matrix**

**Iteration I
5/10/01**

Project Requirement	Requirement Label	Description	Use Case	Technical Fulfillment	Test Case	Application Objects
			UC1.9	428	tcfnCBS402, tcfnCBS404, tcfnCBS002, tcfnCBS020, tcfnCBS038, tcfnCBS056, tcfnCBS074, tcfnCBS092, tcfnCBS110, tcfnCBS128, tcfnCBS146, tcfnCBS164, tcfnCBS182, tcfnCBS200, tcfnCBS218, tcfnCBS236, tcfnCBS254, tcfnCBS272, tcfnCBS290, tcfnCBS308, tcfnCBS326, tcfnCBS344, tcfnCBS362, tcfnCBS380, tcfnCBS003, tcfnCBS021, tcfnCBS039, tcfnCBS057, tcfnCBS075, tcfnCBS093, tcfnCBS111, tcfnCBS129, tcfnCBS147, tcfnCBS165, tcfnCBS183, tcfnCBS201, tcfnCBS219, tcfnCBS237, tcfnCBS255, tcfnCBS273, tcfnCBS291, tcfnCBS309, tcfnCBS327, tcfnCBS345,	<i>Ref: All Beans for this section</i>

Campus-Based Modernization
Trace-ability Matrix

Iteration I
5/10/01

Project Requirement	Requirement Label	Description	Use Case	Technical Fulfillment	Test Case	Application Objects
			UC1.15	460	tcfnCBS363, tcfnCBS381, tcfnCBS006, tcfnCBS024, tcfnCBS042, tcfnCBS060, tcfnCBS078, tcfnCBS096, tcfnCBS114, tcfnCBS132, tcfnCBS150, tcfnCBS168, tcfnCBS186, tcfnCBS204, tcfnCBS222, tcfnCBS240, tcfnCBS258, tcfnCBS276, tcfnCBS294, tcfnCBS312, tcfnCBS330, tcfnCBS348, tcfnCBS366, tcfnCBS383	
			UC1.16	461.1		
			UC1.18	461.3		
			UC1.19	460		
			UC1.24	387.4 497.4		
			UC2.10	461.1 461.2 461.3	tcfnCBS414, tcfnCBS415, tcfnCBS416	<i>Ref: All Beans for this section</i>
			UC113.21	460	tcfnCBS452, tcfnCBS455, tcfnCBS458, tcfnCBS459	IdentityInfoBean
			UC113.23	461.1		
			UC113.25	461.3		
			UC113.26	460		
			UC120.18	428 460 461.1 461.2 461.3	tcfnCBS506	PerkinsFiscalBean PerkinsFiscal2Bean PerkinsFiscal3Bean PerkinsFundBean PerkinsRepayInfoBean PerkinsRepayBean
			UC121.9	428 460 461.1 461.2 461.3	tcfnCBS514	FSEOGAuthBean FSEOGSpentBean
			UC122.11	428 460 461.1 461.2 461.3	tcfnCBS524	FWSEAuthBean FWSSpentBean FWSEmployBean

**Campus-Based Modernization
Trace-ability Matrix**

**Iteration I
5/10/01**

Project Requirement	Requirement Label	Description	Use Case	Technical Fulfillment	Test Case	Application Objects
			UC124.7	428 460 461.2 461.3 461.4	tcfnCBS533	SumDistBean SumCalcBean
			UC125.2	428 460 461.1 461.2 461.3	tcfnCBS541	AddInfoBean
			UC126.7	428 460 461.1 461.2 461.3	tcfnCBS548	MoreLocationsBean
			UC127.5	428 460 461.1 461.2 461.3	tcfnCBS553	DeleteLocationsBean
WEBGX004	SUPL247	All functionality currently contained within the PC FISAP system and TIVWAN shall be considered included in the baseline requirements.	Parent Use Cases =	UC1, UC2, UC113, UC126, UC127, UC38, UC39, UC120, UC121, UC122, UC124, UC125		

**Campus-Based Modernization
Trace-ability Matrix**

**Iteration I
5/10/01**

Project Requirement	Requirement Label	Description	Use Case	Technical Fulfillment	Test Case	Application Objects
			UC1.12	461.4	tcfncBS015, tcfncBS033, tcfncBS051, tcfncBS069, tcfncBS087, tcfncBS105, tcfncBS123, tcfncBS141, tcfncBS159, tcfncBS177, tcfncBS195, tcfncBS213, tcfncBS231, tcfncBS249, tcfncBS267, tcfncBS285, tcfncBS303, tcfncBS321, tcfncBS339, tcfncBS357, tcfncBS375, tcfncBS385, tcfncBS016, tcfncBS034, tcfncBS052, tcfncBS070, tcfncBS088, tcfncBS106, tcfncBS124, tcfncBS142, tcfncBS160, tcfncBS178, tcfncBS196, tcfncBS214, tcfncBS232, tcfncBS250, tcfncBS268, tcfncBS286, tcfncBS304, tcfncBS322, tcfncBS340, tcfncBS358, tcfncBS376, tcfncBS386,	<i>Ref: All Beans for this section</i>

**Campus-Based Modernization
Trace-ability Matrix**

**Iteration I
5/10/01**

Project Requirement	Requirement Label	Description	Use Case	Technical Fulfillment	Test Case	Application Objects
			UC1.11	497.3	tcfnCBS017, tcfnCBS035, tcfnCBS053, tcfnCBS071, tcfnCBS089, tcfnCBS107, tcfnCBS125, tcfnCBS143, tcfnCBS161, tcfnCBS179, tcfnCBS197, tcfnCBS215, tcfnCBS233, tcfnCBS251, tcfnCBS269, tcfnCBS287, tcfnCBS305, tcfnCBS323, tcfnCBS341, tcfnCBS359, tcfnCBS377, tcfnCBS018, tcfnCBS036, tcfnCBS054, tcfnCBS072, tcfnCBS090, tcfnCBS108, tcfnCBS126, tcfnCBS144, tcfnCBS162, tcfnCBS180, tcfnCBS198, tcfnCBS216, tcfnCBS234, tcfnCBS252, tcfnCBS270, tcfnCBS288, tcfnCBS306, tcfnCBS324, tcfnCBS342, tcfnCBS360, tcfnCBS378	
			UC1.13	333		
			UC1.14	333		
			UC1.20	428		
			UC1.22	428		
			UC2.1	329 422.10 467 468	tcfnCBS405,	<i>Ref: All Beans for this section</i>
			UC2.3	333	tcfnCBS407,	

Campus-Based Modernization
Trace-ability Matrix

Iteration I
5/10/01

Project Requirement	Requirement Label	Description	Use Case	Technical Fulfillment	Test Case	Application Objects
			UC2.4	333	tcfnCBS408	IdentityInfoBean
			UC113.1	387.4 422 422.3 422.4 422.5 422.6 422.7 429 430 431 432 433 434 435 436 437 438 439 440 441 442	tcfnCBS422, tcfnCBS425, tcfnCBS426, tcfnCBS429, tcfnCBS430, tcfnCBS431, tcfnCBS432,	
			UC113.7	422 422.3 422.10 446	tcfnCBS433, tcfnCBS436, tcfnCBS437,	
			UC113.27	422 422.3 422.8 443 444	tcfnCBS441, tcfnCBS443, tcfnCBS444,	
			UC113.8	422 422.3 422.8 444	tcfnCBS449, tcfnCBS450, tcfnCBS451,	
			UC113.19	422 422.3 422.9	tcfnCBS442, tcfnCBS423	
			UC113.12	422 422.3 422.9 442 447 447.1 448 448.1		
			UC113.22	422 422.3 422.9 442 447 447.1 448 448.1		
			UC113.10	422 422.3 422.9 446 447 447.1 448 448.1		
			UC113.11.3	422 422.3 422.9 446 447 447.1 448 448.1		
			UC113.9	422 422.3 444		
			UC113.2	422 422.3 445		
			UC113.3	422 422.3 445		
			UC113.28	422 422.3 447 447.1 448 448.1		
			UC113.1	387.4 422 422.3 422.4 422.5 422.6 422.7 429 430 431 432 433 434 435 436 437 438 439 440 441 442		
			UC113.7	422 422.3 422.10 446		
			UC113.27	422 422.3 422.8 443 444		
			UC113.6	422.4 422.5 422.7 429 430 431 432 433 434 435 436 437 438 439 440 441 442		
			UC113.8	422 422.3 422.8 444		
			UC113.13	422.6 441		

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Project Requirement	Requirement Label	Description	Use Case	Technical Fulfillment	Test Case	Application Objects
			UC113.18	422.6 441		
			UC113.19	422 422.3 422.9		
			UC113.12	422 422.3 422.9 442 447 447.1 448 448.1		
			UC113.20	460		
			UC113.22	422 422.3 422.9 442 447 447.1 448 448.1		
			UC126.3	446 447 447.1 448 448.1	tcfncBS542, tcfncBS543, tcfncBS544, tcfncBS545, tcfncBS546	MoreLocationsBean
			UC126.5	446 447 447.1 448 448.1		
			UC126.4	422.3 422.9		
			UC126.1	422.3 422.9 446 447 447.1 448 448.1		
			UC126.2	422.3 446 447 447.1 448 448.1		
			UC127.2	422.3 448 448.1	tcfncBS549, tcfncBS550, tcfncBS551, tcfncBS552	DeleteLocationsBean
			UC127.1	448 448.1		
			UC127.3	448 448.1		
			UC127.4	448 448.1		
			UC38.6	462 463 464 465	tcfncBS460, tcfncBS460a, tcfncBS461	IdentityCertWarnBean
			UC38.1	278 465		
			UC38.7	428 460 461.1 461.2 461.3		
			UC39.3	289 494	tcfncBS466, tcfncBS467, tcfncBS468, tcfncBS469, tcfncBS472, tcfncBS473, tcfncBS474, tcfncBS476, tcfncBS477, tcfncBS479, tcfncBS480, tcfncBS481, tcfncBS483, tcfncBS486, tcfncBS487, tcfncBS488,	ApplRequestsBean ApplEnrollmentBean ApplEnrollment2Bean ApplExpBean ApplAidBean
			UC39.13	289 494 494.1 494.2 494.3 494.4 494.5 494.6 494.7 494.8 494.9		
			UC39.15	290 290.2 290.3		
			UC39.4	290 495		
			UC39.25	428 460 461.1 461.2 461.3		
			UC39.22	424 458 458.1 458.2 458.3 459 459.1 459.2 459.3 492.4 492.5 492.6 492.7 492.8 492.9 492.10		

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Project Requirement	Requirement Label	Description	Use Case	Technical Fulfillment	Test Case	Application Objects
			UC39.7	449 449.6 449.7 449.8	tcfnCBS489, tcfnCBS490, tcfnCBS482, tcfnCBS485, tcfnCBS478, tcfnCBS475	
			UC39.8	449 449.6 449.7 449.8 491 491.7 491.8 491.9 491.10 491.11 491.12 491.13 491.14 491.15		
			UC39.1	449 491		
			UC39.26	449.7 449.11 491.13		
			UC39.26.1	449.7 449.11 491.13		
			UC39.21	449.8 449.12 491.14		
			UC39.21.1	449.8 449.12 491.14		
			UC39.21.2	449.8 449.12 491.14		
			UC39.23	458 458.1 458.2 458.3 459 459.1 459.2 459.3 493 493.1 493.2 493.3 493.4 493.5 493.6 493.7 493.8 493.9 493.10 493.11 493.12 493.13 493.14 493.15 493.16 493.18 493.19 493.20 493.21 493.22 493.23 493.24 493.25 493.26 493.27 493.28 493.29 493.30 493.31 493.32 493.33 493.34 493.35 493.36 493.37 493.38 493.39 493.40 495 495.1 495.2 495.3 496		
			UC39.28	458 458.1 458.2 458.3 492 492.1 492.2 492.4 492.5 492.6 492.7 492.8 492.9 492.10		
			UC39.17	458 459		
			UC39.11	458 492		
			UC39.2	458 492		
			UC39.17.3	459 459.1 459.2 459.3 493.37 493.38 493.39 493.40		

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Project Requirement	Requirement Label	Description	Use Case	Technical Fulfillment	Test Case	Application Objects
			UC39.17.2	459 493		
			UC39.27	459 493		
			UC120.13	456 456.1 504	tcfnCBS491, tcfnCBS492, tcfnCBS493, tcfnCBS494, tcfnCBS495, tcfnCBS496, tcfnCBS497, tcfnCBS498, tcfnCBS499, tcfnCBS500, tcfnCBS501, tcfnCBS502, tcfnCBS503, tcfnCBS504	PerkinsFiscalBean PerkinsFiscal2Bean PerkinsFiscal3Bean PerkinsFundBean PerkinsRepayInfoBean PerkinsRepayBean
			UC120.4	456.1 456.2 504		
			UC120.14	456.1 504		
			UC120.15	456.2 504		
			UC120.6	293 499		
			UC120.1	293 499 500 501		
			UC120.7	293 500		
			UC120.8	293 500		
			UC120.10	293 501		
			UC120.9	293 501		
			UC120.11	295 502		
			UC120.2	295 502		
			UC120.12	297 503		
			UC120.3	297 503		
			UC121.2	454.1 454.2 454.3 506		
			UC121.5	454.1 454.2 454.3 506		
			UC121.6	454.4		
			UC121.1	455.1 455.2 505		
			UC121.3	455.1 455.2 505		
			UC121.4	455.3		
			UC122.1	451.1 451.2 451.3 507	tcfnCBS515, tcfnCBS516, tcfnCBS517, tcfnCBS518, tcfnCBS519, tcfnCBS520, tcfnCBS521, tcfnCBS522	FWSAuthBean FWSSpentBean FWSEmployBean
			UC122.4	451.1 451.2 451.3 507		
			UC122.2	452.1 452.2 452.3 508		
			UC122.9	452.1 452.2 452.3 508		
			UC122.6	452.4 452.5		
			UC122.7	453 509		
			UC122.3	453.1 453.2 453.3 509		
			UC122.5	454.4		
			UC124.1	324 510		
			UC124.3	324 510		
			UC124.2	327 511		
			UC124.5	327 511		
			UC124.5.1	327 511		
			UC124.5.2	327 511		
			UC124.5.3	327 511		

**Campus-Based Modernization
Trace-ability Matrix**

**Iteration I
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Project Requirement	Requirement Label	Description	Use Case	Technical Fulfillment	Test Case	Application Objects
			UC125.1	328 512	tcfnCBS534, tcfnCBS535, tcfnCBS536, tcfnCBS537, tcfnCBS538, tcfnCBS539	AddInfoBean
			UC125.1.1	328 512.3 512.3.1		
			UC125.1.2	328 512.4 512.4.1		
			UC125.1.3	328 512.5 512.5.1		
			UC125.1.4	328 512.6 512.6.1		
			UC125.1.5	328 512.7 512.7.1		
WEBGX020	SUPL385.5	The web site includes a Self-Service component that provides pertinent information to the Institutions. One component of this module is a Standard Help & FAQs section.	Parent Use Cases =	UC1, UC2, UC113, UC126, UC127, UC38, UC39, UC120, UC121, UC122, UC124, UC125		
			UC2.2	420	tcfnCBS406	RoboHelp
			UC38.5	420	tcfnCBS464	
			UC113.5	420	tcfnCBS429	



3.3 Test Plan

The Test Plan documents the test approach; each delineates testing responsibility and defines the high-level test case. The test plan is used in conjunction with Appendix H: Iteration 1 Functional Test Case Specification.

3.4 Use Cases

Use Cases are classes that define units of functionality or behavior provided by a system. They specify the external requirements and the functionality offered by the system. Use Cases are used in UML to analyze system requirements and to define how the user accesses the features of the system. The information available in a use case may include:

- Use case (function) name and description
- Flow of events, including the basic flow and all alternative flows
- Special requirements, when needed
- Pre-conditions required for the function to occur
- Post-conditions that exist after the function occurs
- Related use cases (called “extension points”) that describe a variation of the normal behavior of the function

Refer to Appendix D: Use Case Specifications for the 12 Use Cases for Iteration 1 development.

3.5 Use Case Realization Report

The Use Case Realization Report is a document created by the Rational Rose product illustrating the steps that have been designed to fulfill the each specific Use Case for the Iteration. Refer to Appendix E: Use Case Realization Report (CD) for the complete document.

3.6 Test Cases

Test cases represent the specific testing functions that must take place to test the system. The test case is comprised of the steps a tester must follow to complete the test case. Refer to Appendix H: Iteration 1 Functional Test Case Specification.

3.7 Technical Specifications

The Technical Specifications documentation contains detailed information used by the developer as a blueprint for the software design. Many technical specifications have been created, each are designed for specific areas of technical functionality. When the software developer completes each specific area of software, the combination of the various software components culminate in the creation of a working system or working portion of that system. All developers within the eCB System use Technical Specification documents when developing software code. Refer to Appendix G: Iteration 1 Technical Specifications for the complete Technical Specifications document.

3.8 FISAP Field Specifications

The FISAP Field Specifications document outlines the specific definition and relationship of each field on the FISAP. This document provides the ability to trace the relationship between the database and the form in which the data is initially entered. Refer to Appendix F: Iteration 1 Form Field Specifications for the complete FISAP Field Specifications document.