

**DEPARTMENT OF EDUCATION-
FEDERAL STUDENT AID
FINANCIAL PARTNERS**



**EXECUTIVE SUMMARY
FUNCTIONAL DESIGN DOCUMENT
FINANCIAL PARTNERS DATA MART RELEASE III**

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Version 1.0

Approval

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1 Introduction

1.1 Purpose

The Financial Partners Channel is continuing with the Integration program in the business, technical and organizational aspects of its operations. The objective of the Financial Partner's (FP) Data Mart is to provide executive information and decision support capabilities around several key business functions, which include Risk Management, Customer Relationship Management, Compliance Management, and Portfolio Management. The first two releases of the FP Data Mart created a central repository to accomplish the key business functions described above.

Current disparate systems within FSA contain data to support some of these key business functions; however, it is difficult and costly to obtain the appropriate information in a timely manner. Providing a central location of necessary information within the Channel is required to support these key functions. The FP Data Mart is positioned to be that central location for information associated with student lending among Financial Partners including Guaranty Agencies, Lenders, and Servicers participating in the Federal Family Education Loan (FFEL) Student Loan Program.

The FP Channel is responsible for both current and retired loan programs and, as such, is under customer and program obligation to ensure the capture and comparative ability of all programs. By collecting information from several sources into a central location, personnel in the Channel, as well as external partners, will be able to more efficiently identify areas in which each party may assist the other while improving the support for borrowers within the FFEL Program.

1.2 Key Business Functions

The objective of the Financial Partners Data Mart is to provide executive information and decision support capabilities around several key business functions.

- Risk Management - Targeting areas of fiscal risk to FSA and its Financial Partners (i.e., Guaranty Agencies, Lenders and Servicers). Monitoring Financial Partners' operating performance (risk factors) to identify and focus on areas of risk and the need for technical assistance. Reducing the time required between identifying risk areas and implementing solutions.
- Customer Relationship Management - Increasing routine, positive communication with external Financial Partners by providing information regarding their performance between review cycles. Assist GAs in reviewing lenders by providing additional information.
- Compliance Management - Focusing performance reviews to those Financial Partners that are not performing in accordance with standards and/or regulations. Improving the efficiency of review planning and analysis activities associated with the review process.

- Portfolio Management – Identifying and assessing the portfolio mix to improve policy decisions. Improving the efficiency and effectiveness of trend analysis by providing calculated benchmarks, where appropriate.

1.3 Scope

Release III of the FP Data Mart will provide a GA Scorecard for FSA Financial Services in order to evaluate GAs through a risk modeling assessment tool. The scorecard will support FSA in reviewing GAs fiscal and operational activities to provide assurance that a GA is in compliance and diligent in carrying out their FFEL program responsibilities.

With the implementation of the Lender Reporting System (LaRS) on FMS and the retirement of the FFEL system, the FP Data Mart no longer receives Lender data required to calculate the Lender Scorecard and other Lender related reports. Release 3 of the overall Data Mart initiative will capture LaRS data, which is comprised of reference data, historical data, and financial information needed to calculate the Lender scorecard.

Release 3 will also identify additional data elements from FMS and NSLDS that are needed to satisfy GA and Lender reporting requirements. The extracted information from each system will be transformed, as required, and then loaded into the Data Mart.

In addition, access to the Data Mart will be provided to Lenders. The Data Mart security profile will be updated to allow Lenders to have access to only their designated information as well as designated public reports. As many as six thousand users will be set up by FSA's CIO Security Officer using a gradual process once Release 3 is implemented.

Lastly, Release 3 will also provide the capability to send alerts to users where a previously identified condition exists, using Microstrategy's Narrowcast Server product.

Release 3 of the FP Data Mart involves the following significant increases in scope from Release 2:

- Development of a GA Risk Scorecard
- Capture LaRS data from FMS
- Additional data feeds from FMS and NSLDS
- Lender user access to the data mart
- Ability to “push” reports to users

1.4 Overview of Project Approach

This project will use the data mart architecture that was established within the Financial Partners Channel during Release 1 and 2 of the FP Data Mart. This release of the FP Data Mart will create additional database tables and load those tables, create additional reports, and establish processes to periodically update the data. In order to accomplish this several tasks are required:

- Determine user requirements. Prior work within the FP Channel was referenced as a starting point for building requirements. Additional requirements were collected during user working sessions. This also includes the design of pre-defined reports.
- Determine technical requirements. Some technical requirements were already understood as they relate to the data mart architecture. Additional technical requirements were collected during user working sessions.
- Develop the logical data model. This involved understanding the user requirements in order to develop a logical data model from a data mart perspective.
- Determine data mart tables required to support the requirements. This involved understanding database design as it relates to data marts and designing the database tables that support the user requirements.
- Determine the source of data to support the requirements. This involved working with the NSLDS, FMS, and PEPS system application ED staff and maintenance contractors to understand the current location of the data that will be required for the data mart. This also involved what transformation/reorganization of the data was required to appropriately map it to the data mart tables.
- Design the extract processes from the FMS, NSLDS, and PEPS systems. This involved working with the source system developers to design programs/queries to extract the information that was identified from the source system.
- Code and execute extract programs. This involved converting the extract program/queries designs into executable programs and actually creating the extract files.
- Map the source data to the target data mart tables. This involved using the Informatica COTS tool to map the data contained within the extract files to the actual data mart fact and dimension/lookup database tables. The database structure between the source systems (and the sequential files) is different than the database structure of the data mart. The mapping may result in several situations: one source record mapped to many fact table rows, one source record mapped to one fact table row, many source records mapped to one fact table row.
- Create the pre-defined reports. This involves using the Microstrategy COTS tool to create the pre-defined reports that were identified in the 'determine user requirements' task.
- Test the data mart application. Several levels of testing are involved: unit, system, UAT, and stress test. Identification of items to be tested at each level as well as verification to expected results will be conducted.
- Deploy the application. This involves preparing for and conducting the necessary reviews to migrate the application into production, actually migrating the application into production and verifying a correct migration, and providing some post-production support.

1.5 Contents of Functional Design Document

1. FP Data Mart Release III - Executive Summary
2. FP Data Mart Release III - Reports Design
 - a. GA Scorecard and Reports
 - b. Modifications to Existing Reports
3. FP Data Mart Release III - Interface Design
 - a. Appendix A: Source to Target Mapping
 - b. Appendix B: Logical and Physical Data Model
 - c. Appendix C: Interface Control Documents
 - i. FMS
 - ii. NSLDS
 - iii. PEPS
4. FP Data Mart Release III - Processes Design
 - a. Lender Access Process
 - b. Narrowcast Server Process