

Prepared by: FMS 11i Upgrade Assessment Team	Date: June 1, 2004	Subject: 11i Upgrade Assessment Executive Summary
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FMS Release 11i Upgrade Assessment Executive Summary

Purpose

The purpose of the FMS Release 11i Upgrade Assessment is to assess the impact of an upgrade to Oracle Applications Release 11i on the Federal Student Aid Financial Management System (FMS). The objectives of the Assessment document are to:

- Summarize the current FMS functional processes and describe the FMS interaction with the different FSA programs.
- Review 11i COTS functionality and determine impacts to FMS business processes and extensions to the FMS applications.
- Assess the current FMS Technical Architecture and determine impacts of Release 11i on technical components.
- Recommend the implementation approach for the FMS 11i upgrade.

Current Functional Architecture

FMS allows the FSA CFO to account for all FSA program transactions (e.g. FFEL GA, Pell, Direct Loan, etc.), perform funds checking, and create financial statements. FMS, consisting of Oracle U.S. Federal Financials, is the single point of financial information, integrating transactions both from the FSA feeder systems as well as from the ED CFO GAPS system. Accordingly, FMS provides consolidated data to support key management analysis and is the only place within the Department of Education to obtain a comprehensive financial picture of a school across all FSA programs.

The FMS application utilizes Oracle's multi-org architecture to handle the unique requirements of the various FSA programs. The Oracle Application was extended to include many FSA-developed interfaces and reports that are specific to each FSA program. At month end, FSA consolidates data, using a custom consolidation "splitter" process to transform data from the FSA account code structure to the ED CFO account code structure, and sends the data to ED CFO FMSS for closing and reporting. Core Oracle processes and tables are used heavily in FMS application processing. Extended programs and tables were installed within FMS to handle FSA-program specific interaction.

Oracle Financials 11i Impact Assessment

An upgrade to Oracle Applications Release 11i would have little impact on core FMS processing. The 11i release offers no functionality that can entirely replace either the interfaces between FMS and other FSA programs or the splitter and interface to ED CFO FMSS. In most cases, interface programs would only need to be recompiled and tested in an 11i environment to confirm that they would function properly following the upgrade. Any additional development of these programs for 11i would be at the disposal of the FMS implementation team if they choose to take advantage of new 11i features.

The FMS application also includes many custom-developed reports, most of which are used for FSA program-specific control and error reporting. Program-specific reports should only require a recompilation and testing to confirm that they work in an upgraded environment, although any report that accesses packaged Oracle tables will require some revision before testing. The Assessment team recommends further analysis to determine which of these reports will be needed following the upgrade. With the Tier 2 portion of the 11i upgrade implementation, the FMS reporting strategy needs to be revisited to determine the data that needs to be accessible and the best approach for viewing it. The goal of this approach would be to leverage as many off-the-shelf Oracle reports and views as possible.

Certain FSA programs use custom-developed forms to enter financial data for processing by FMS. As with the interface programs, these forms cannot be replaced by any new functionality in Release 11i. The forms will have to be recompiled and tested in order to confirm that they work following the upgrade. Oracle has changed the look of the Oracle Applications forms in Release 11i considerably. Some development will be required to take advantage of new navigational features as well as any updates to packaged Oracle tables. Regardless of how much navigation within these forms change, FMS end-users must be trained on the new 11i features and exposed to the new look and feel of the custom forms prior to completion of the upgrade.

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Oracle Financials 11i Technical Architecture Considerations

Oracle Applications Release 11i boasts many technological enhancements over previous versions of the Oracle Applications. Many of these enhancements are designed to improve performance of FMS online and background processing; however, FSA will be required to make a substantial investment in infrastructure to accommodate 11i requirements. The Assessment team worked with Hewlett-Packard and CSC to develop a preliminary sizing of the FMS application in an 11i environment. HP recommended the FMS database be moved to one of their top-of-the-line enterprise servers (rp8400 or Superdome), and they also recommended that more memory be added to the existing L class servers that power the FMS application tier.

In addition to the impact on servers used, Oracle 11i has a much larger disk space footprint than prior versions – the FMS implementation team will need to assess additional disk space requirements driven by the extent of their instance strategy. Impacts of 11i can also be felt at the desktop level, in which PC's with faster processing chips are highly recommended for use of the FMS upgraded applications.

A move to 11i requires an upgrade of the FMS database to a minimum of Oracle 8i. The Assessment team recommends that the FMS database be upgraded to 8i prior to the 11i upgrade, both to simplify the upgrade process and to take advantage of 8i features. Anticipating the 11i upgrade to occur in FY2004, the FMS implementation team should also consider a move to Oracle 9i in that timeframe, but this should be dependent on a deeper Oracle customer base using 9i/11i than there is today. The Assessment team also recommends that FMS be upgraded to Oracle's latest version of the Applications, 11.5.7. This version includes the full version of Oracle's 9i Application Server.

Implementation Approach

The Assessment team recommends that FMS be upgraded to release 11i using a fresh-install method. While no significant functional changes are planned for the move to 11i, a fresh install involves less risk than an upgrade-in-place approach. An implementation utilizing a fresh-install approach is organized in much the same way as a new implementation of Oracle Applications, but effort and time for each implementation phase can be reduced given the existing configurations and developed programs in FMS.

Next Steps

In Tier 2 of the Release 11i upgrade implementation, the FMS implementation team should include the following tasks to the scope of the follow-on assessment:

- Assess use of Oracle multi-org functionality in a potentially merged FMSS-FMS environment.
- Revisit design of extended components (interfaces, reports, et al) in the upgraded environment.
- Develop instance strategy and environment change control plan for the upgrade implementation.
- Reevaluate current business processes and configuration in light of new 11i features.
- Create reporting strategy for FMS, and identify current reports that can be removed in the upgrade implementation.
- Work with HP and CSC to create a final sizing for the FMS 11i environment that will be used in actual hardware procurement.
- Develop install guide for release 11.5.7 of the Oracle Applications. Develop skills in the use of Oracle AutoConfig and Applications Manager components.
- Develop timeline for implementation and estimated workdays to complete the upgrade.