

May 29, 2013

GARY C. MATTHEWS
Vice Chancellor
Resource Management and Planning
0057

**Subject: *Facilities Management – Work Order Process
Audit & Management Advisory Services Project 2013-40***

The final audit report for Facilities Management - Work Order Process, Audit Report 2013-40, is attached. We would like to thank all members of the department for their cooperation and assistance during the audit.

We were able to reach agreement regarding corrective actions to be taken in response to the issues noted, and these are noted in this final report. Therefore, a formal response to the report is not requested. The corrective actions included in this report will be added to our follow-up system. We will conduct a follow-up review to review the implementation of management corrective actions at the appropriate time.

UC wide policy requires that all draft audit reports, both printed (copied on tan paper for ease of identification) and electronic, be destroyed after the final report is issued. Because draft reports can contain sensitive information, please either return these documents to AMAS or destroy them at this time.

David Meier
Assistant Vice Chancellor
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Attachment

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UC San Diego

AUDIT & MANAGEMENT ADVISORY SERVICES

Facilities Management – Work Order Process May 2013

Performed By:

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Approved By:

David Meier, Assistant Vice Chancellor

Project Number: 2013-40

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ATTACHMENT A – Facilities Management Work Order System - Current

ATTACHEMENT B – Facilities Management Work Order System - Proposed

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I. Background

Audit & Management Advisory Services (AMAS) has completed a review of the Facilities Management Work Order Process as a supplemental audit for Fiscal Year 2012-13. This report summarizes the results of our review.

Facilities Management (FM) is responsible for the routine maintenance of UCSD buildings and grounds, and gives design and construction expertise to campus building renovations. The Customer Relations help desk processes customer-initiated work requests and dispatches qualified staff to handle building systems, facilities, and equipment needs. Services provided by FM consist of the following:

1. Building Operations
2. Central Utilities Plant
3. Cleaning Services
4. Landscape Services
5. Project Management Services
6. Special Event Support Services
7. Trade Shops
8. Storehouse

FM receives financial support from A&PS Business & Finance (Business and Finance) in the form of centralized financial accounting and related support services. Core services provided by Business and Finance include financial analysis, annual budget preparation, financial reporting, accounts payable, payroll and accounts receivable. FM receives Information Technology (IT) support through the Resource Management and Planning (RMP) IT Services Unit.

During Fiscal Year 2006-2007, FM, RMP IT¹ and Business and Finance began implementing a new enterprise asset management system called Maximo, the objective of which was to replace the legacy work order system with a system that would assist FM in performing business operations for administering work orders (WO). The Maximo system is integrated with the Oracle Financial application for accounts payable services; processing recharge information through the campus Integrated Financial Information System (IFIS); and the Huntington Business Systems (HBS) for processing time and payroll records (*Attachment A*).

UCOP has implemented the “Funding Stream Initiative” (FSI) to change the method used for distributing University funds and supporting central operations. The goal of the initiative was to allow campuses to retain the majority of core revenue generated through student fees, indirect cost recovery, short term investment pool (STIP) earnings, and other sources, and to provide a clear and adequate funding model for central operations as

¹ RMP IT was previously organized within A&PS during the fiscal year of 2006-2007.

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well as system wide priorities and initiatives. This required campuses to implement a clear, accurate and transparent accounting of current funding for these needs of which the FSI represented a first step.

The UCSD implementation of the FSI called for the separation of recharge activities from state funds and the de-coupling of the Central Benefits Pool². The decoupling process required a financial re-structure for FM, moving a portion of their operations into a recharge-based system. As a result, FM calculated that recharge rates for campus customers will need to be increased to recover employee benefits. FM determined that the rate increase needed to support the revenue recovery for the central benefits would be in the 20-30% range. It was decided that this increase would be difficult for campus customer to absorb at one time, so FM and the Campus Budget Office (CBO) have agreed to allow a recharge from affected FM Self Supporting units³ (Custodial, Grounds, Building Maintenance, and Central Utility Plant) to state funds to re-cover available employee benefits funding. This approach is designed to keep FM recharge rates stable until a coordinated long-term strategy can be formulated with the input of key FM customers.

II. Audit Objective, Scope, and Procedures

The objective of our review was to evaluate FM policies, practices and procedure in the use of the Maximo WO system for accuracy and appropriateness of costing practices. The scope of the review included direct costs including materials and labor, as well as indirect costs such as overhead material and expendable items. In order to achieve our objectives we completed the following:

- Interviewed the Director and Manager of Accounting Services for Business and Finance;
- Reviewed the Business and Finance, and FM organization charts;
- Interviewed the following FM Assistant Directors: Campus Services, Campus Energy, Project Management, and Building Operations;
- Interviewed the following FM staff members: Manager of Planning and Project Management, Project Manager Superintendent, and Customer Relations Manager;
- Interviewed the Director of RMP IT;
- Interviewed the Principal and Supervisor Accountants in General Accounting (GA);
- Interviewed the Financial Officer, RMP Financial Services Unit;
- Interviewed the Director and Principle Budget Analyst for the Financial Analysis Office (FAO);

² A mechanism established and administered by the CBO to manage employee state funded benefits.

³ The related units are those servicing recharge customers from within 19900a prior to the decoupling. Building Maintenance is a description covering several teams that includes both teams serving State O&MP and recharge customers (such as Electric Shop) as well as those only doing O&MP work (such as Zone Maintenance).

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- Obtained a high level overview of the functionality of the Maximo, Oracle, and HBS;
- Gained a detailed understanding of the FM accounting structure;
- Evaluated FM inventory, recharge, and timekeeping practices;
- Evaluated the WO work flow reporting processes through Maximo and Oracle;
- Evaluated the accuracy of work order transactions for labor and inventory from Maximo to IFIS by testing a random sample of 6 Maximo work orders processed between July 1, 2011 and June 30, 2012. Transactions were randomly selected based on WO totals. In addition, we performed the following tests:
 - Tested a sample of labor rates and charges against the Campus Title and Pay database;
 - Tested a sample of title codes for accuracy of applied hourly rates;
 - Reviewed the details of recharge rates for appropriateness; and
 - Tested a sample of 10 labor entries between HBS and Maximo system identified as being duplicate entries.

Data used in detailed testing was provided by RMP IT through data extractions from the Maximo and Oracle Financial systems.

III. Conclusion

Based on our review, we concluded that FM business practices and information systems required improvement to provide effective internal controls for ensuring that WO's are properly administered and revenue is collected appropriately. We noted several concerns in select business practices including: inventory management; timekeeping; and staffing and services. In addition, we noted that recharge rates had not been reviewed timely for FM recharge activities. The concerns noted had an impact on the accuracy of revenue generated from recharge activity and recorded in IFIS. Issues of concern and opportunities for improvement are noted in detail in the balance of this report.

IV. Observations and Management Corrective Actions

A. Inventory Management

Controls for inventory management contained weaknesses in key areas which could lead to the risk of misuse of resources for personal use, and misallocation of costs between work orders. We also noted that FM units were not all aware of how to classify material items in order to accurately account for inventory through the financial system.

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Storehouse and Shop Inventory Processes

In July of 2012, the storehouse inventory process was moved from FM into Business and Finance. The storehouse staff consisted of a supervisor, a senior storehouse worker, and at times a temporary employee. During our review, the storehouse supervisor was on leave as of October, 2012. Audit interviews indicated that reconciliation activities for storehouse inventory were scheduled for the end of each fiscal year and perpetual inventory counts were scheduled for a quarterly cycle. However, due to staff shortages, inventory counts were not being conducted consistently.

AMAS performed a physical review of shop locations and inventory supplies. Each FM trade shop within Building Operations retained internal inventory stock which would be replenished through charging indirect or direct funds. It was noted that the electrical shop appeared to have a large amount of inventory, while the carpentry, custodial/special events, and paint shops appeared to have minimal inventory supplies. The lock shop inventory was secured behind a locked door and a statistical inventory sampling process was performed annually. However, the materials in each of the shops were not tracked within the main storehouse inventory using Maximo. In addition, they lacked a proper inventory process to receive, track and audit materials purchased to work orders, resulting in inaccurate financial accounting.

Physical Inventory Controls

During the onsite review of the storehouse location, we noted that physical access to the main storehouse was controlled by a pin code mechanism. Pin codes were administered by the storehouse supervisor and given to all staff that requested access. Accountability for the codes did not appear to be implemented as neither the Director of Business and Finance nor the senior storehouse staff member had access to reset the codes or knew if there was a listing of who the codes were assigned to. In addition, it appeared that security cameras were not installed in the building or surrounding vicinity.

It was noted that in or around 2011, a new card swipe mechanism was implemented on all the FM buildings at Campus Service Complex with the exception of the storehouse. The absence of physical security measures for storehouse inventory increased the risk of unauthorized access and leakage.

Inventory Classification

The units within FM provide services to campus state funded buildings and to other campus buildings on a recharge basis. Each unit was allocated an overhead

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account to purchase consumable items, charge training time and use for other non billable labor hours. During audit interviews, it was determined that there was a lack of understanding regarding what a consumable item was and which account that item should be charged to. As a result, bulk supply orders were occasionally charged directly to WO's instead of the overhead account. Without the proper classification, items may be charged to the wrong account creating errors within financial statements and possible compliance issues regarding use of state funds.

Management Corrective Actions:

FM Management and Business and Finance will:

- Work to reduce individual inventory locations and consolidate operations into the main storehouse process;
- Identify internal resources to assist with the inventory reconciliation process;
- Determine the feasibility of installing a card swipe system for storehouse access;
- Determine if additional security cameras are appropriate;
- Identify a process to control, document and review access to inventoried items;
- Ensure separation of duties for ordering, receiving, and issuing storehouse materials;
- Implement a process to properly classify and define inventory and consumable items; and
- Ensure that consumable supplies are charged to overhead accounts.

B. Timekeeping

Timekeeping practices were not properly controlled to ensure that labor transactions were accurate, effectively reviewed, and approved prior to charging the customer work order.

Labor Transactions

We noted a large number of labor entries for timekeeping were not correctly entered into the Maximo system creating duplicate and overlapping entries that may have resulted in over charges to customer work orders. AMAS reviewed the total labor entries in Maximo for Fiscal Year 2011-2012 and using an Access database filtering process, identified duplicate labor charges for the year. The approximate amount of potential duplicate charges was: \$76,912. Of that amount, approximately \$69,890 was charged to 19900A funds and \$7,021 was charged to the balance of customer funds.

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Our review of payroll records, on a sample basis, indicated that the duplicate entries did not result in payroll overpayments to the employees. A manual timekeeper review process ensured that the employee's payroll records were accurate. However, it did not appear that there was a similar review process to ensure that duplicates or overlaps were corrected on work orders.

A sample of duplicate transactions for 10 employees were reviewed between the HBS User Interface (UI), Maximo UI, and the Maximo database to determine if the duplicate time entries actually resulted in a duplicate charge. Results showed that 65% of the work orders tested indicated that the customer index did not appear to have been overbilled based on the payroll time entry. For example, we noted one timesheet where 16 hours were recorded for one day, suggesting a duplicate charge, but zero hours were recorded the next day. However, for the other 35% of the transactions, we could not determine if the work order was corrected due to inconsistent data between the HBS and Maximo systems.

All of the duplicate and overlapping entries were approved in the Maximo UI, indicating that the supervisor review and approval process was not effective in these cases.

Management Corrective Actions:

RMP IT is re-engineering the timekeeping workflow to eliminate duplicate and overlapping time entries (***Attachment B***). The implementation will include a training session for FM staff and a follow up process for FM management. The system will also include reporting capabilities. FM management will monitor the reports for accuracy.

Audit Logs

During the process of detailed testing we noted that an automated audit process to track the data integration between Maximo and Oracle was not operative. As a result, the accuracy of all data transactions between the two systems could not be readily determined. For instance, the process to audit for duplicate labor entries required multiple data extractions between the systems as well as a manual review for accuracy. This manual audit process increased the risk of introducing errors into the report database, possibly resulting in inaccurate results. Information obtained from the RMP IT Services Unit indicated that the Maximo system contained a licensed auditing feature, but requests for the feature to be enabled were not submitted during system implementation. In addition, the Maximo to Oracle integration table did not contain an audit feature for accurately mapping transaction data between the two systems.

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Management Corrective Actions:

RMP IT will fully enable the audit capabilities of both the Maximo and Oracle systems to assist with tracking and reviewing integrated system transactions, and Business and Finance will develop processes to utilize the features for quality assurance purposes (*Attachment B*).

Labor Rates

Labor rates for FM are calculated based on an average rate for each Full Time Equivalent (FTE) salary and title code. Rates are updated when a campus wage action occurs. During detailed testing, we noted that labor rates did not agree between the Business and Finance recharge rate schedule for FM services and the campus title and pay plan for that time period. Discrepancies were also identified between the labor rates posted within the Maximo and Oracle systems. Labor rate calculations for recharge processing should have been based on data entered into Maximo. However, rates were manually entered into Oracle without updating the corresponding table in Maximo, resulting in inaccurate rates used to recharge for labor.

AMAS tested seven Maximo craft codes and corresponding employee's labor transactions for Fiscal Year 2011-2012 and found that approximately \$50,565 in revenue was not realized, due to using incorrect labor rates.

Management Corrective Actions:

RMP IT will enable an audit feature in Maximo to track labor rate updates. Business and Finance has updated the labor rate data in Maximo and will coordinate with RMP IT in determining which audit parameters to enable. In addition, Business and Finance will review and document procedures for calculating and updating labor rates to the Maximo system (*Attachment B*).

C. Staffing and Services

With the implementation of Maximo, support needs within FM and Business and Finance have changed substantially, without corresponding changes to staffing levels and assignments. System support, and reconciliation and audit efforts were minimal and generally reactive. The inability to proactively identify and address process issues through routine monitoring increased the risk of undetected errors or irregularities.

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Business and Finance

Business and Finance responsibilities for accounting and financial reporting services for FM have increased to include oversight of the storehouse operations. The level and composition of services provided to FM have changed significantly, primarily due to the Maximo and Oracle system implementations. This has increased the requirement for system and control monitoring. In April of 2012, an analyst position tasked with reviewing data analysis reports to identify discrepancies in accounting and inventory counts, became vacant and is yet to be filled. Other Business and Finance staff members have been tasked with ensuring that Oracle data is being properly processed and uploaded to IFIS. In total, four positions are currently vacant within Business and Finance. Although financial reconciliation processes have been reassigned to cover the vacant analyst position, reviews are performed in a reactive rather than a routine proactive manner, increasing the risk of undetected errors or irregularities.

FM Business Operations

The FM Project Management and Planning group manages the business initiatives that drive system process integrations into Maximo. The group is comprised of a Manager and programmer analyst, tasked with system trouble shooting, working with users as they interface with the system, and creating metric reports for senior management. There are approximately 300 employees currently using the Maximo system to process work orders, charge purchase orders, order material and enter time.

Because Business and Finance took on additional responsibilities without additional resources or staff, services that were historically provided to FM units were delegated to the units. For example, Business and Finance charged FM with assuming increased ownership of work order data and taking a more active role in fielding customer billing inquiries. This has created staffing resource issues within FM. For instance, quality assurance reviews for work order integrity errors are not being performed in a timely manner. Also, work orders were not being closed in a timely manner allowing charges to occur, resulting in reporting errors.

Management Corrective Action:

FM Management will comprehensively assess business processes, and required services, and priorities of staff workload to ensure data integrity and data monitoring.

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D. Recharge Rate Review

Recharge rates have not been reviewed or approved on a timely basis. As a result, FM rates are not sufficient to cover total costs, to include salary, benefits, and miscellaneous overhead.

During audit interviews it was noted that FM recharge rates for FM units were approved by the Campus Recharge Rate Committee using a percentage multiplier that would calculate a new rate during a wage change. This alleviated the need for Business and Finance to resubmit recharge rates for review to the committee each time a change would occur.

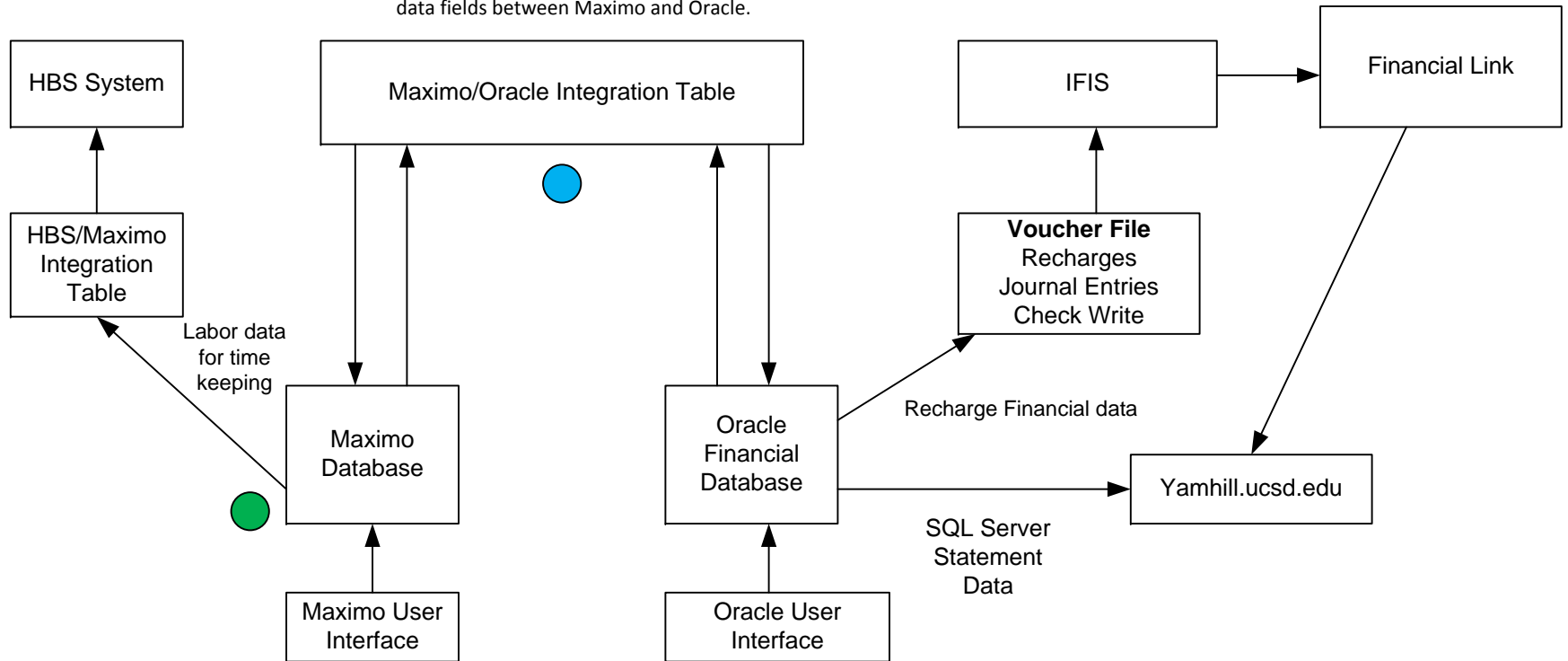
It was noted that the campus FAO is involved in an effort to re evaluate the recharge rates for auxiliary enterprise service units that provide recharge services. The last recharge rate review occurred in 2007. This rate review would assist FM with accurately assessing recharge rates in order to properly recover salary, benefits and other associated costs.

Management Corrective Action:

Business and Finance will initiate the process to develop a proposal to update FM recharge rates to include the appropriate benefit rate, for submission to the Campus Recharge Rate Review Committee.

Facilities Management Work Order System - Current Attachment A

Time approvals in Maximo trigger the integration which writes the data to the integration table. Data fields are then mapped to the individual data fields between Maximo and Oracle.



Facilities Management staff will enter work order related data into Maximo

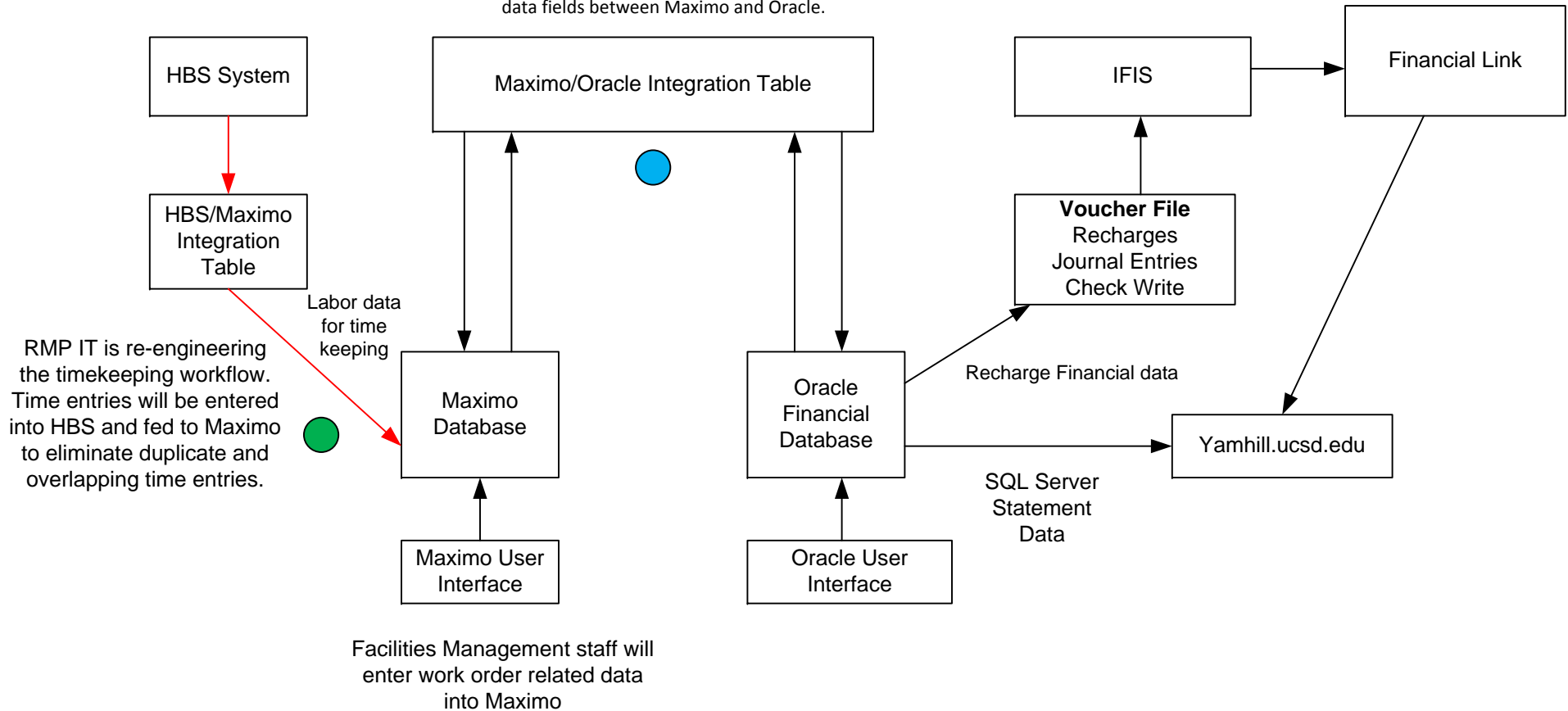
- Control Weakness – Auditing Feature for Maximo transactions was not enabled.
- Control Weakness – Auditing Feature for integrated transactions was not enabled.

Maximo is the source system that captures labor, material, service and time information, and sends to Oracle for financial processing. Labor data is sent to HBS for payroll.

Oracle is the source system for burden rate calculations. Financial information is sent to IFIS and passed to Financial Link for viewing. Work order status' are sent from Oracle to Maximo (closed, complete, open)

Facilities Management Work Order System - Proposed Attachment B

Time approvals in Maximo trigger the integration which writes the data to the integration table. Data fields are then mapped to the individual data fields between Maximo and Oracle.



Control Strength – Auditing Feature for Maximo transactions will be enabled.

Control Strength – Auditing Feature for integrated transactions will be enabled.

Maximo is the source system that captures labor, material, service and time information, and sends to Oracle for financial processing. Labor data is sent to HBS for payroll.

Oracle is the source system for burden rate calculations. Financial information is sent to IFIS and passed to Financial Link for viewing. Work order status' are sent from Oracle to Maximo (closed, complete, open)