

SAP Quality Assurance Services

Municipality of Anchorage

ERP Synergy Project Realization Phase – Design Review for SAP ECC

August 23, 2012



SAP QA



Contents

- **Executive Summary**
- Financial Structures and Processing
 - Project System
 - Fixed Assets
 - Funds Management
 - Grants Management
- Federal Energy Regulatory Commission (FERC)
- SAP ERP Human Capital Management (SAP ERP HCM)
- SAP Solution Manager

Overview content

Conditions and exceptions

- This report represents the results of the Quality Assurance Design Review conducted August 6–8, 2012 for the Realization phase of the Municipality of Anchorage implementation of SAP software.
- This report reflects a point-in-time analysis on the current state and future deliverable readiness.
- The findings and recommendations result from information provided to SAP during on-site Q&A sessions with numerous Municipality of Anchorage and SAP resources.
- The design review centered on SAP ERP Central Component (SAP ECC) with a focus on financial structures and processing, Federal Energy Regulatory Commission (FERC), the SAP ERP Human Capital Management (SAP ERP HCM) solution, and the SAP Solution Manager application management solution.
- This report is forward looking in that it focuses on the actions necessary for future project success and reserves commentary on project history only for contextual understanding.

Overview content

Findings legend

Business Process Scorecard: Definitions

Risk indicator: The overall status of the business process area. The indicator represents the current overall risk level based on the detailed analysis performed during the Design Review.

Design build completeness: The status indicator that represents the blueprint design or build configuration completeness and accuracy to meet business requirements and expected business outcomes. The indicator represents the current risk level in this analysis area based on the detailed review performed during the Design Review.

Future fit or impact on scalability: The status indicator that represents the current design or configuration to meet as-is and to-be product development direction in any given business process area. The indicator represents the current risk level in this analysis area based on the detailed review performed during the Design Review.

Status Indicator: Definitions



Low: Minor impact to program success and will not likely adversely affect the implementation or business operations.



Medium: May produce or contribute to a negative outcome during the implementation, including extended Blueprint or Realization lifecycles.



High: A significant likelihood of causing or contributing to a negative impact during implementation or when going live. A critical topic to be addressed that requires investigation, follow-up, and response.



NA – Topic Not Reviewed: This topic was inappropriate for review at this stage of the project, or there was insufficient information to be able to review the topic to the appropriate level of detail.

Overview content

High-level risk areas



Financial structures and processing

Organizational elements:

- The use of business area to represent the current divisions is not aligned with the SAP Best Practices for Public Sector package. Business areas should represent subentities, such as Municipal Light and Power (MLP), Anchorage Water and Wastewater Utility (AWWU), and municipality. The impact of numerous business areas could be experienced while handling reorganizations if cost centers are assigned to business areas. Business areas are organization structures and, as such, are hard-linked to other functionalities, such as controlling. A cost object can have only one business area when a posting is made, so multiple objects would be needed. Business areas are not hierarchical, so sets would have to be created to accommodate groupings for reporting. The general ledger is designed to split and balance on a business area in addition to other dimensions, so additional data lines would be created. If multiple business areas are still a requirement, examine the segment field in the new general ledger to resolve the issue.

General ledger:

- SAP provides three leading ledgers in the new general ledger, two of which are available for public sector, FMGLFLEX and PSGLFLEX. PSGLFLEX is the most recently released ledger and contains new fields to support budget period, cash ledger, and cash flow reporting. To use the budget period, the leading ledger must be defined as PSGLFLEX and scenario PS_BUDPER must be assigned. If the FMGLFLEX ledger is chosen and it is decided that PSGLFLEX is required after going live, a migration effort would be required. To use RE_ACCOUNT in FMGLFLEX, an enhancement would be required, but note that it is already available in PSGLFLEX.

Overview content

High-level risk areas



FERC

FERC flow-of-costs trace not tested:

- The FERC flow-of-costs trace program must be executed successfully in a test before going live. There is no successful trace in the quality assurance system (QAS). It is inadvisable to enter system test before the FERC solution has been unit-tested. Without a successful trace, a high number of errors can result when running the FERC trace in a high volume test, which could result in a significant delay in getting to a FERC trial balance of accounts.
- Users cannot validate the FERC design without seeing the results of the FERC drill-down from the natural account to the regulatory account. The drill-down requires a successful trace run.

Overview content

High-level risk areas



Time

Kronos and WorkTech integration with SAP software:

- It was apparent during the interviews that the recent municipal deployment of Kronos should not yet be considered stable or fully accepted by end users and the Municipality at large. This situation adds risks to the project.
- Ownership of the effectiveness of the time clock to paycheck integration in SAP software is undefined, so employees are likely to find themselves going back and forth among multiple parties to correct paycheck errors and questions. This situation could lead to a difficulties and embarrass project leadership because the time needed to correct issues could be lengthy.

Integration testing:

- Kronos stability is needed before integration testing begins.
- Require full population loads for integration testing. Business owners must be held accountable for accurate loads at this point, not waiting until going live.

Parallel testing:

- Parallel testing is **not** merely a test of SAP software. Rather, it is a holistic test of the **entire** payroll process, beginning with end users and progressing through time entry to upload to pay. Any other view should be reconciled to this statement as it will lead to postproduction problems and errors.

Readiness for going live:

- The opinion of management should be changed to regard readiness for going live as stability of time clock applications, accountability, the SAP software, and the end users themselves. Clearly defined processes should be designed and presented to all end users for how to use the software and get help for resolving questions and errors.

Overview content

High-level risk areas



SAP Solution Manager

Ownership of SAP Solution Manager:

- The Municipality of Anchorage (MoA) needs to have an owner responsible for the functionalities of the SAP Solution Manager application management solution. There should be an owner for implementation projects, who should be more of a functional project manager or business lead. There should also be an owner of the operations and optimizations scenarios within the solution. This individual should have an IT background. Without proper ownership from the customer, the use of the solution is at risk and might not be used to its full potential.

Incomplete solution within SAP Solution Manager:

- Currently, the implementation project has an adequate business process structure. However, the WRICEF objects and some of the configuration objects are not inventoried in SAP Solution Manager. Test documents and plans are also not set up in SAP Solution Manager. Without these items in the project, a final functional solution will not be represented correctly. This situation will make remote support from SAP more difficult, because SAP personnel will have to hunt and peck around systems to resolve issues. Also, in terms of upgrades, it will be unknown where the areas affected for change and retest will be made visible. Without a complete solution, it will be extremely difficult to any type of business process monitoring and process improvements.

Overview content

High-level risk areas



Financials – overall readiness

- The processes for sales and distribution and billing are not fully developed:
 - The consulting resource for sales and distribution (SD) has not been assigned for the duration of the project (SD consultant only recently joined the project).
 - Grant billing configuration is complex, and integration needs are high along with resource-related billing (RRB) for project system.
- Using the new general ledger:
 - The design of parallel ledgers to support FERC reporting for MLP and NARUC for AWWU as well as average daily balance (ADB) would mean the use of three parallel ledgers and multiple ledger groups. Is the design finalized?
 - The new general ledger supports cash-basis accounting and cash-flow reporting by source accounts if required.
 - Closing by business area is supported as an option to streamline the closing process.
- Funds management:
 - SAP software supports multiple funding on a single line item through rule-based account assignment distribution (RBAAD) – the use of this function would prevent creating multiple lines for various funding within a purchasing or accounting document.
 - The reconciliation tool is now available for all customers (previously only for U.S. Federal) – the tool facilitates reconciling relationships and compares values between finance and funds management .
- Financial reporting:
 - The solution to support consolidated annual financial reporting (CAFR) is not fully defined – SAP does provide a standard approach. In general, the SAP NetWeaver Business Warehouse (SAP NetWeaver BW) component would be needed along with a custom InfoCube.

Overview content

High-level risk areas



Project system

Work breakdown structure:

- Different work breakdown structures (WBS) are being designed in the implementation for MoA and AWWU. A consistent project structure based on project phases is highly recommended not only for simplifying project implementation but also for reducing overall maintenance costs after going live.

Capturing labor costs:

- Activity types are not being used in the project system design for capturing labor hours and costs. The best practice is to use activity types at standard cost and revalue them with the payroll interface to actual labor costs. The use of activity types provides full visibility to actual cost drivers, enabling the organization to improve efficiencies and control labor budget effectively.

Overview content

High-level risk areas



Asset accounting

- A significant number of asset classes are being designed, in some cases different subsets for MoA, AWWU, and MLP. This situation increases the cost of implementation in terms of configuration, testing, and support. A harmonized set of asset classes and further breakdown of them using evaluation groups to meet the requirements of different business units is highly recommended.

Overview content

High-level risk areas



FERC – overall readiness

Gaps exist between user requirements and the FERC design:

- Users have indicated four very essential requirements for National Association of Regulatory Utility Commissioners (NARUC) and FERC reporting that are not being met by the FERC solution as a design choice, including:
 - Charging directly to a regulatory account during document entry
 - Seeing results in the regulatory chart of accounts before the month is closed
 - Seeing regulatory account by fund
 - Supporting regulatory account balances using both primary and secondary cost element values
- Use of the new general ledger should be considered to make the functional area the FERC account. With this approach, each transaction posted will include a FERC account for both primary and secondary cost elements.

Overview content

High-level risk areas



SAP ERP HCM – time evaluation

Incomplete integration between time clocks and time evaluation:

- Generic positive pay work schedules minimize any ability to take advantage of the functionality of SAP software. Most municipal installations use some degree of negative pay schedules to minimize nonvalue-added work and reduce risk.
- SAP software is configured to accept any time entries from Kronos, although it is known that Kronos is not yet fully stable.
- Testing does not proactively accept accountability for integration issues in this area.
- There is no full scale test planned that will enter time in the same manner as after going live.



Contents

- Executive Summary
- **Financial Structures and Processing**
 - Project System
 - Fixed Assets
 - Funds Management
 - Grants Management
- FERC
- SAP ERP HCM
- SAP Solution Manager

Financial structures and processing scorecard

Design Review – Business Processes	Risk Indicator	Design or Build Completeness	Future Fit or Impact on Scalability
Organizational elements			
General ledger			
Accounts receivable and accounts payable			
Controlling			
Project system			
Fixed assets			
Funds management			
Grants management			



Findings

- The business area element is used to represent groupings of departments. The Municipality of Anchorage (MoA) blueprint design calls for more than 90 business areas, an unusually high number for a public sector client.
- Regular and detailed integration discussions with the HCM team do not appear to occur on a regular basis. Informal discussions are unlikely to capture the full spectrum of integration needs that likely exist.

Recommendations

- Use at least one business area or multiple business areas as appropriate where the requirement is to prepare a full set of financial statements at a level below that of the company code. In a state government implementation, a business area would represent an agency within the state government.
- Determine if there is a driving business need for the large number of business areas and if there is a need for full financials for functional groupings of departments. Business areas need to be split and balanced in document splitting, and cross-business-area transactions will create a large volume of entries in the splitting and balancing account. Unless changed, this design will increase operating costs and lessen the return on investment (ROI) to the municipality.
- Determine if there are alternatives, such as use of the segment field in the new general ledger, to accomplish the reporting need currently designed using business areas.



Findings

- The new general ledger is used, but FMGLFLEXT (for funds management) has been chosen as the leading ledger instead of PSGLFLEXT (includes funds and budget period).
- PSGLFLEXT provides the new fields of budget period and RE_ACCOUNT. Budget period is part of the implementation to add another dimension to funds management. The RE_ACCOUNT field is not being used at this time, but may be needed in the future to accomplish cash flow reporting.
- Document splitting and balancing will create many entries if accounts are split by business area, fund, grant, and budget period – these due-to and due-from balances will increasingly grow and need to be settled periodically.
- Report specifications based on user requirements for SAP NetWeaver BW have not been finalized.

Recommendations

- Revisit the decision to use FMGLFLEXT instead of PSGLFLEXT. Use of the most current ledger delivered is a best practice.
- Migrate data as required if you decide to use PSGLFLEXT as the leading ledger.
- Develop a strategy for document splitting and balancing accounts to settle the due-to and due-from balances periodically.
- Use the line item extractor **OFI_GL_14** for the new general ledger, which is enhanced for the following public sector fields:
 - Financial management area (FIKRS)
 - Fund (GEBER)
 - Grant (GRANT_NBR)
 - Partner fund (PGEBER)
 - Partner grant (PGRANT_NBR)
 - FM: budget period (BUDGET_PD) – FM: partner budget period (PBUDGET_PD)



Findings

- The business partner field is used only for grants, not for accounts receivable and accounts payable. The business partner in SAP software is intended to be used by many applications to eliminate redundancy in master data and lessen the need for more maintenance of customer and vendor master data.
- The Municipality of Anchorage (MoA) consulting resource for sales and distribution (SD) billing came to the project only recently, and SD configuration is incomplete for resource-related billing.
- Dunning and late fees are deferred to after going live, which means that the design for customer notices and collections is incomplete.
- MoA wants to use transaction FMFEE (a fee schedule) to assess late fees, which is actually part of the Federal solution.
- A custom enhancement is planned to FI-AR cash desk for field personnel to simplify the fee entry process so that manual calculations will not be required by end users.

Recommendations

- Use the business partner field to eliminate redundancy in master data.
- Close the gap in configuration of SD so that resource-related billing can be tested for grants and project system. Automating billing using resource-related billing will reduce the need for manual billing.
- Determine if there are compatibility issues with the use of FMFEE with public sector (PS), since it was intended for use by Federal agencies and is activated by business function PSM_USFED_DEBT_1.
- Evaluate the necessity for a custom enhancement for the cash desk to automate fee calculations.



Findings

- Labor postings are not going to the home cost center assigned to the employee. Instead, the first posting for labor is made to the actual internal order or work breakdown structure (WBS) where the employee performed the work.
- The blueprint design indicates the use of 200 assessment cycles to accommodate cost allocations, which is very detailed and could result in excessive time to maintain the allocation rules in production.
- Real-time controlling (CO) and financials (FI) reconciliation is not active. Therefore, secondary cost postings cannot be shown in the general ledger tables to aid in financial audits to trace allocations to general ledger accounts.

Recommendations

- Standardize the costing approach so the gross payroll is charged to the home cost center of the employee when the payroll is run every two weeks. Secondary costs in the form of internal activity allocations should then be used to credit the home cost center and debit the receiving controlling (CO) object (internal order or WBS element, for example). By assigning secondary costs to the CO object, labor can be posted independently of the payroll cycle and at whenever a time distribution is available (daily, for example).
- Reexamine the requirement for the initial number of assessment cycles to reduce the number. The recommended approach is to start out with fewer cycles and add more segments and build off a basic approach.
- Determine if parallel processing of the assessment cycles in CO can be used to expedite allocations from MoA.
- Ensure that real-time integration with general ledger is activated to include secondary cost element assignments in the general ledger.



Findings

- Two work breakdown structures (WBS) are designed for capital projects in project system (PS) functionality. One structure for MoA consists of Project Definition → CIP project → Asset Class → Project Phase (Studies, Design, Build, Close-Out) → Activities, and another one for AWWU, which consists of Project Definition → CIP project → Project Phase (Studies, Design, Build, Close-Out) → Asset Class → Activity. The duality causes additional complexity in terms of configuration, testing, training, and reporting and, therefore, increased lifecycle maintenance cost.
- MLP will be using Power Plant for managing capital projects and sending the projects to SAP software via an interface as network orders. The dual maintenance and building and maintenance of interfaces between Power Plant and SAP software is costly in the long run.
- The designed WBS includes WBS elements and networks. WBS master data in SAP software has been modified to include 10 custom fields in addition to standard, user-defined fields. Networks are used for charging actual labor costs. Activity types are not used for capturing labor hours and labor costs. The actual rates are calculated outside the software and are based on base salary for MoA and fully loaded salary for AWWU. Normally, networks are used to manage the flow of a project in terms of time sequences and dependencies of events and activities in complex project environments. Activity types along with network structures are core components for planning internal and external activities, capacity, milestones, and procurement of materials. The use of networks without activity types does not provide the benefits noted. The use of networks causes increased complexity and cost in terms of configuration, testing, training, reporting, and so on.
- Project-related time is entered in Kronos and interfaced to SAP software. Two different interfaces, one for MoA and one for AWWU, are designed for sending time to SAP software. Another interface from SAP software to Kronos has been designed to communicate valid and active WBS elements based on WBS user statuses. AWWU time interface checks the validity of WBS elements before sending time to SAP software, whereas the MoA interface does not, leaving error handling to be taken care in SAP software. Multiple Kronos interfaces and different error-handling approaches increase complexity, risk, and therefore the total cost of ownership (TCO) in the long run.
- In terms of project budgeting, bond funds are assigned to top-level WBS elements, and grants are assigned to lower-level WBS elements related to project phases. In addition, a WRICEF item has been identified to create funded programs for bond and grant WBS elements based on user statuses on WBS elements. The sequence of using grants funds first and once depleted bond funds next, is manually controlled. This approach makes the process of managing funds rather complicated and inconsistent.



Recommendations

- As part of period-end closing, results analysis (RA) has been designed to manage project deposits. Resource-related billing is used for billed projects to recognize revenue. Overhead calculations are designed in SAP software. Capitalized interest is not posted to projects.
- Use a consistent, single (rather than multiple) WBS based on Project Definition → Construction In Progress (CIP) Project → Project Phase (Studies, Design, Build, Close-Out) → Asset Class → Activity/Funding Source. The use of a consistent WBS simplifies implementation and lowers maintenance costs after going live.
- Reduce and eliminate the number of legacy systems performing similar business processes. Doing so is critical for reducing costs, maximizing process integrity and data quality, and reducing the interface and reconciliation efforts. Therefore, use project system functionality being built in SAP software for MLP rather than performing dual maintenance of projects in both systems.
- Reevaluate the use of networks to see if projects can be handled by using WBS elements for simplicity and TCO reduction. The design of networks merely for charging lump-sum labor costs without the use of activity types is not recommended. Activity types contain critical information in terms of hours, efficiencies, resource planning, and costs. Capturing actual and plan activity hours as cost drivers on projects provides valuable information for improving efficiencies, controlling cost drivers, and budgets. Use of standard activity rates during day-to-day project activities for capturing labor costs and then updating those rates with actual costs based on payroll amounts is a best practice.
- Use a single interface between SAP software and Kronos for capturing time, with a well-defined error-handling mechanism in Kronos (rather than SAP software) for process efficiencies, reconciliation, and cost reduction.
- Allocate funds consistently at lower-level WBS elements (phase or asset-class level) for bond funds and grants to provide simplicity for operations and increased visibility when grants and bond funds are assigned to a specific project phase or asset class to be built.
- Post capitalized interest on projects, even using general ledger journal entries, to capture complete project and asset costs.



Findings

- A significant number of asset classes are defined 0 in some cases, three sets of assets classes for MoA, AWWU, and MLP. Roughly 50 asset classes are currently determined. A high number of asset classes directly translates to increased configuration effort, testing, training, and, therefore, increased cost of maintenance.
- MLP will not use asset accounting functionality in SAP software as the source system for master data. The assets will be maintained in a legacy system, Power Plant, and interfaced to SAP software. Dual maintenance in both systems is costly and requires an additional interface and reconciliation processes.
- The Blueprint design on how to capture assets with multiple components and to value and depreciate the components individually or as a whole and reconcile them to contributions in aid of construction (CIAC) values has not been finalized. Asset transfers and retirements design has not been finalized either. These incomplete Blueprint decisions are planned during the first integration test cycle. Embarking on integration testing without a signed-off design, completed baseline configuration, and unit testing offers very little value and potentially a lot of risk to the project timeline and cost and may have unforeseen effects on other business process areas.
- Fleet management functionality is not used. There are four separate legacy fleet management systems. Even though plant maintenance (PM) functionality of SAP software is not in scope, automatic creation and maintenance of equipment masters and functional location objects used in PM are configured. Maintaining separate fleet systems requires integration to SAP software and is costly.
- Depreciation rates are calculated outside the software, based on mortality curves and retirement units. Depreciation keys are then maintained annually with the updated rates.
- The capital budgeting process and budget availability control design has not been finalized. The use of commitment items in funds management and statistical cost elements for balance sheet asset general ledger accounts are being contemplated. An incomplete design in realization may have a negative impact on the project timeline.
- Over 100,000 asset masters (rather large) in legacy systems are to be converted to SAP software. Currently, the capitalization threshold is \$5,000 for vehicles and equipment and \$1 million for infrastructure. However, there are many assets below these thresholds in legacy systems.



Recommendations

- Rationalize and reduce the number of asset classes by utilizing and configuring evaluation groups on the asset master to further classify asset classes into asset types. Consider flexible substitution and validation rules on asset master data to enforce the classifications on evaluation groups.
- Bring MLP asset management into SAP software rather than using third-party systems to reduce or eliminate additional interfaces and maintenance costs significantly.
- Use asset subnumbers to value and depreciate components of physical assets. Doing so will provide flexibility to depreciate certain building infrastructure components, such as HVAC, roofs, and so on, separately from the rest of the structure. Consider the design of group assets carefully, since the entire group is valued and depreciated the same way. This approach might be applicable for some cases only.
- Use the fleet management functionality along with PM to consolidate separate legacy fleet systems to reduce long-term cost, utilization, and preventive maintenance of fleet assets.
- Cleanse asset master data according to new policy thresholds before conversions. The asset clean-up process can sometimes be painful and lengthy, so clean-up should be completed and the conversion process tested in separate data conversion clients and reconciled multiple times to ensure a smooth asset conversion when going live.
- Start the clean-up of asset master data early. Over 100,000 asset masters (rather large) in the legacy system are to be converted into SAP software. The current capitalization threshold is \$5,000 for vehicles and equipment and \$1 million for infrastructure. However, many assets below these thresholds exist in legacy systems.
- Defer recognition of income from CIAC as a regulatory asset and recognize income over the life of the asset as part of the design for handling CIAC.
- Amortize CIAC over the depreciable life of the related plant assets.



Findings

- The budget period is intended to be used only for capital projects and grants, not funds management.
- The funds management derivation strategy is not finalized, which could lead to unintended fund assignments to financial transactions in production.
- The object number field must be configured to be updated automatically in funds management, or the internal order or WBS element will not be visible in any funds management report that displays the object number as a reference.

Recommendations

- Define budget periods with sequential or overlapping validity date ranges to simplify the process of maintenance.
- Select *Allow BLANK as Value for Account Assignment Elements* if the budget period of BLANK is a valid budget period value (that means, the budget period will be an optional entry).
- Finish adding all the derivation rules in transaction FMDERIVE so the correct fund and grant can be identified during document entry.
- Implement SAP Note 139211 to get the OBJNRZ field updates in the funds management tables to make the internal order or WBS element charged visible in funds management reports that show the cost object in the line items.



Findings

- The transition to the use of grants management represents a major process change from the current approach at MoA.
- Data conversion of active grants now in use is behind schedule, which means that some grant transactions will not be recorded when going live.
- Grant billing depends on SD billing, and resource-related billing is not fully configured and tested.
- Grants are being split in document splitting, but no requirement exists to prepare financial statements by grant. This ability might not be a current requirement for MoA, but it is a very common procedure, so it should not be eliminated within the overall design.
- Assets will not be depreciated at the grant level. Best practice recommends that when splits occur by business area, fund, and grant, underlying assets should be depreciated at the grant level. Some grants will require depreciation over useful lives that might differ from financial or regulatory specifications.
- SAP does not provide a standard report to support the schedule of expenditures federal awards (SEFA). If the report is required, it would need to be added to the list of reports to be designed in report painter SAP NetWeaver BW.

Recommendations

- Use the business add-in (BAI) provided, *Fill Alternative CO Objects*, to get the controlling cost object for the balance sheet line. The object may be useful in resource-related billing (RRB) to specify or override the order, cost center, or WBS element with another object for accountability purposes.
- Develop a manual process for RRB, to insure the FI and grant management ledgers are synchronized for liabilities and payments. There might be a need to add a custom value type for indirect costs. Review SAP Note 1106892 because it may apply here.

Financial structures and processing

RICEFW details

Key integration areas

FINDING: Finance, controlling, and funds management are the key components for integrating the entire enterprise. In addition to the account assignment aspects, derivation tools are key to ensuring that account assignments can be properly defaulted to or overridden.

RECOMMENDATION: Appoint an overall integration manager or specialist to ensure that all modules are in synchronization.

Master data

FINDING: Detailed master data design should be decided upon in the Blueprint. For example, the master data element “commitment item” in funds management must be finalized with respect to the use of the statistical indicator for items such as depreciation. The definition of availability control objects (ACO) and levels of budget checking should be further defined. The use of additional availability control ledgers (if necessary) should be further defined. There is no mention of the use of key figures or consistency checks that could be used to enhance the budget execution.

RECOMMENDATION: Include all features in the Blueprint and address whether they will be utilized or out of scope. For a public sector project to have a well-defined solution going into Realization, the solution should be as complete as possible, especially in the areas of the budget control system that affect budget execution.

Reporting

FINDING: The Blueprint design is to use FERC for regulatory reporting and SAP NetWeaver Business Warehouse for other financial reporting along with delivered reporting tools.

RECOMMENDATION: Include a comprehensive list of reports and a mapping to the anticipated reporting function in SAP software. Some customization would be required to extend the standard InfoCube for the new general ledger to accommodate CAFR reporting. The budget control system does not deliver the large number of many drill-down reports that were delivered with former budgeting. Report painter can be used, but it is recommended to use SAP NetWeaver Business Warehouse for better overall performance.

Interfaces

FINDING: Major interfaces will be required for Maximo (inventory), Power Plant (projects), utility billing, and time entry (Kronos and WorkTech).

RECOMMENDATION: Reference interfaces in the Blueprint to functional specifications. They should be defined in the Blueprint as to complexity (high, medium, and low); whether they will be inbound, outbound, or both; how frequently they will be executed; and what methodology will be used (such as SAP NetWeaver Process Integration technology, Web services, and so on).

Financial structures and processing

RICEFW details

Conversions

FINDING: All master data is anticipated to be loaded via the legacy system migration workbench (LSMW) from flat files or another format, such as Microsoft Excel. Standard BAPIs can also be used for data conversion where more enhanced techniques are required, such as for asset conversion.

RECOMMENDATION: The process for extracting, transforming, and loading master data should be an iterative effort, with at least two and probably three attempts to attain a 100% successful data load.

Enhancements

FINDING: Standard business add-ins (BAI) will be activated and coded. A number of BAIs are available but not specified in the Blueprint.

RECOMMENDATION: A number of BAIs could be used with funds management and the budget control system that might be of value:

- Account assignment derivation of AVC ledger
- Derivation of tolerance profile for AVC ledger
- Enhance budget carry-forward for commitment
- Validation of FM account assignments in budget structure
- Enhance checks and post data

Forms

FINDING: The main forms that will be required from a financial requirement are 1099s, checks, invoices, and grants.

RECOMMENDATION: SAP delivers SmartForms and SAP Interactive Forms software by Adobe to facilitate the development of external and internal forms. Workflow may be used to replace some internal processes that previously required paper forms.

Workflow

FINDING: Standard workflows are in scope for approval of parked documents, budgetary transactions, and asset movements.

RECOMMENDATION: Keep workflow levels within the required limits of authority.

Financial structures and processing (PS/AA)

RICEFW details

Key integration areas

FINDING: Fixed assets and project system (PS) are tightly integrated with the general ledger, funds management, and controlling. The project has also identified a significant number of interfaces (over 150) to be developed. Developing, integrating, and testing the interfaces involves a significant challenge and risk.

RECOMMENDATION: Produce and test a comprehensive list of scenarios by taking into account all interfaces to other legacy systems. A great number of moving parts exist between MLP and SAP software, because MLP will use legacy asset and project systems. Do not underestimate the development and testing effort.

Master data

FINDING: Networks have been designed for capturing labor costs. No activity types have been defined for labor costs. Normally, networks are used to manage the flow of a project in terms of time sequences and dependencies of events and activities in complex project environments. Activity types are used to capture labor costs.

Over 50 asset classes have been identified to be configured, a rather large number.

RECOMMENDATION: Consider eliminating use of networks and adopting use of activity types to charge not only labor costs but also labor hours when interfacing to Kronos for simplicity and better management of labor costs and hours.

Consider using evaluation groups for minimizing asset classes and therefore reducing implementation costs.

Define data standards and policies as part of the Blueprint.

Reporting

FINDING: Standard reports will be used in PS and asset accounting (AA). No custom ABAP reports have been identified.

RECOMMENDATION: Configure the asset history sheet to address specific reporting requirements in AA. Use reports created in report painter and report writer for PS-related reporting needs.

Interfaces

FINDING: A number of interfaces between MLP systems and SAP software have been identified that relate to budget data, master data, labor posting, commitments, summary billing, and other transactional postings, because MLP will continue to use legacy systems for projects and fixed assets. Kronos is also interfaced with active projects. The error-resolution mechanism is inconsistent for different business units. Interfaces between AWWU Maximo and SAP software has been identified for chart of accounts, inventory, and project costing.

RECOMMENDATION: Consider bringing MLP projects and fixed assets processes into SAP software to eliminate costly and throw-away interfaces. Consider a consistent error-handling process aimed at fixing issues at the source systems before sending invalid project related labor postings into SAP software.

Consider removing the chart of accounts interface since the chart should be relatively stable and might be handled by manual updates.

Financial structures and processing (PS/AA)

RICEFW details

Conversions

FINDING: All master data related to projects and fixed assets is anticipated to be loaded via the legacy system migration workbench (LSMW) from flat files. Over 100,000 fixed assets are to be cleansed and converted into SAP software.

RECOMMENDATIONS: Consider cleansing master data early on and measure the progress of cleansed data and its quality regularly. Create a stand-alone client to load master data until the desired data quality and reconciliation for transactional data is achieved.

Enhancements

FINDING: No specific enhancements identified for PS and fixed assets.

RECOMMENDATIONS: None

Forms

FINDING: Asset retirement form has been identified for fixed assets.

RECOMMENDATIONS: Consider removing development of this form, creating forms in Microsoft Excel, and attaching them to asset master data when an asset is retired earlier than expected.

Workflow

FINDING: Master data workflow has been identified for projects.

RECOMMENDATIONS: Consider using project statuses, standard reports, and variants in the software to achieve similar results without workflows to minimize development costs.



Contents

- Executive Summary
- Financial Structures and Processing
 - Project System
 - Fixed Assets
 - Funds Management
 - Grants Management
- **FERC**
- SAP ERP HCM
- SAP Solution Manager

FERC scorecard

Design Review – Business Processes	Risk Indicator	Design or Build Completeness	Future Fit or Impact on Scalability
Natural and regulatory chart of accounts			
FERC parameters (for month-end postings)			
Trace and direct-post account translation			
FERC flow-of-costs trace (FERCR010)			
FERC drill-down and reporting cubes in SAP NetWeaver BW			
Overall FERC readiness for AWWU and MLP requirements			



Findings

- Natural accounts have been defined for capturing costs related to labor, materials, outside contracts, and other nonlabor expenses that can be traced to two or more regulatory accounts (traced accounts, for example) as required.
- Regulatory accounts for compliance with the National Association of Regulatory Utility Commissioners (NARUC) and the Federal Energy Regulatory Commission (FERC) have been identified for both utility units: Anchorage Water and Wastewater Utility (AWWU) and Municipal Light and Power (MLP) and created in SAP software as required.

Recommendations

- Consider checking the chart of accounts against the legacy chart of accounts, even though the chart of accounts has been created for both the natural and regulatory range of accounts.
- Ensure that a conversion mapping can be accomplished without any gaps.
- Add any new accounts discovered from conversion testing.



Findings

- The addition of the FERC indicator is established on the internal order and WBS element required for the flow-of-costs trace to derive the percentage of sender costs to receiver cost objects as required.
- A separate document type has been created for posting the FERC account balance to the general ledger as required.
- A regulatory account group has been established in the general ledger master data to separate the regulatory chart of accounts.

Recommendations

- Consider changing the percentage tolerance to 1% or higher and the dollar tolerance to \$0.05 or higher to reduce the time of the actual trace when running FERCR010. These adjustments to the FERC parameters will drop some of the paths from sender to receiver, thus reducing the run time while still maintaining the accuracy of the trace.



Findings

- A determination between traced accounts and direct post accounts has been defined, but is not finalized, which could cause charges to the wrong regulatory account when running the FERC flow-of-costs trace and the trace-posting program.
- Not all combinations of natural account and regulatory indicator have been defined in the trace table (FERC_C3), which could cause the FERC post-trace to fail during execution. A posting failure will require the user to reverse the trace postings, correct the table entries in FERC_C3 (using transaction FERO), and reexecute the trace-post, which could cause significant delay during the close.
- The direct-post translations are incomplete in table FERC_C9. This situation can cause the direct-post process to fail during execution, requiring the user to reverse the posting run, correct the entries on FERC_C9, and reexecute the direct postings.

Recommendations

- Develop a volume-test plan to include transactions for hundreds of order numbers that have charges to multiple cost elements. The internal orders (IOs) should have a variety of different regulatory indicators to test the readiness of the translation table to translate all known combinations of cost element and regulatory indicator to regulatory accounts.
- Apply the same rigor in testing to all the direct-post accounts such as revenues, interest, taxes, depreciation, and amortization accounts on the profit and loss statement and all balance sheet accounts.



Findings

- The FERC flow-of-costs trace has not been unit-tested.
- Because there are no successful trace runs, there is no data to review in tables FERC_D1 (the percentage table) and FERC_D2 (the document table). These tables form the basis for all reporting in FERC. Unless a successful trace is executed, users have no way to validate the design.
- The FERC flow-of-costs trace is dependent upon the mapping of the natural accounts to the regulatory accounts using tables FERC_C3 (the trace table) and FERC_C9 (the direct post table). Not having a successful trace means there is no way to know if the translation tables (FERC_C3 and FERC_C9) are ready for use in production.

Recommendations

- Run the flow-of-costs trace in the quality assurance system (QAS) once all the regulatory indicators are assigned to each internal order or WBS element being charged during the month. Correct any trace errors and continue to run the trace-post, direct-post, and drill-down to complete the FERC month-end processes in test.
- Allow users and stakeholders to view results in the FERC_D1 and FERC_D2 tables via the drill-down transaction FEOD (or FERD). Seeing the results by FERC account will help to understand if the design will meet user expectations well before going live.



Findings

- Because there are no successful trace runs, there is no data to review in tables FERC_D1 (the percentage table) and FERC_D2 (the document table). These tables form the basis for all reporting in FERC. Unless a successful trace is executed, users have no way to validate the design.
- The trace from sender objects (usually a cost center) to receiver objects (usually an internal order or WBS element) creates percentage distributions such that each sender has one or more paths coming out of it to the one or more receivers. These path percentages must equal 100%. If the user cannot see the results, there is no way to know if the results will be acceptable for auditing.

Recommendations

- Run the FERC drill-down in transaction FERO and show results to financial users to validate the design. It is imperative to see the FERC results in the drill-down prior to go-live so translation adjustments can be made to FERC_C3 and FERC_C9.
- The results in the FERC_D1 table should be analyzed in detail for a few sender objects so that users can understand how the allocations are made from FI documents in the natural range of accounts to the regulatory accounts.



Findings

- The regulatory reporting module has gaps based on user requirements. Input from AWWU and MLP financial stakeholders indicated that they want the ability to charge both the natural account and the regulatory account during transaction processing. The regulatory accounts must also be supported with detail transactions from both FI documents (general ledger accounts) and CO documents (primary and secondary cost elements).
- The ability to see the regulatory account balances on a month-to-date basis is a requirement.
- The design of the FERC functionality is a month-end derivation process using CO documents to derive percentages to apportion FI document line items (the natural accounts) to regulatory accounts. The design will not provide for the visibility of secondary cost element dollars in the NARUC and FERC accounts as required by users. For example, MoA allocates costs of administration as secondary cost movements in CO. The distributed dollar amounts for some 200 assessment cycles to allocate administration costs from MoA will not be seen as supporting detail in the regulatory accounts posted to the general ledger.
- Regulatory account values by fund is a requirement, but the FERC functionality does not store fund as part of the derivation in the FERC_D1 table used to create reporting by regulatory account.
- No direct posting to regulatory accounts is allowed with the approach to FERC functionality. Any changes to the regulatory accounts will require the reversal and rerunning of the regulatory accounts. Reversing and rerunning is not an issue when natural accounts are used to produce financial statements. However, AWWU and MLP require the regulatory accounts for generating financial statements at anytime during the month without having to wait to close before running the regulatory derivation.
- There is no reporting output for users to view and validate the design, since the FERC functionality has not been unit-tested.



Recommendations

- Consider a real-time, line item reporting design for AWWU and MLP to view natural accounts by regulatory account. Consider the new general ledger to satisfy the requirements more directly than the FERC functionality.
- Consider the functional area (FA) to assign each controlling (CO) and project system (PS) object an FA representing the regulatory account number. Using the FA is not in the current design because FERC functionality was chosen to derive regulatory accounts. In contrast, the FA also includes derivation rules to allow the cost element assigned to the transaction to override the FA on the CO object (for revenues, interest, depreciation, and amortization). Substitution rules are also delivered to assign the correct FA for each transaction in the case of exceptions. Users can also override the FA during document entry.
- Activate the real-time CO/FI reconciliation setting to allow all secondary cost postings to the general ledger. The secondary cost element values can then be visible by FA on a line item, real-time basis. This approach would allow financial users to see the 200 assessments from MoA by secondary cost in the new general ledger tables along with the FA showing the NARUC or FERC account on each line item.
- Consider the extensibility features of the new general ledger to add a regulatory account field to the coding block to allow direct entry of the NARUC account during document entry. Alternatively, the regulatory account field can be derived from the FA for P&L accounts and by the general ledger account master data for balance sheet accounts.
- Examine changing the existing FERC functionality to treat secondary cost elements as primary by changing table V_FERC_C8 to make selected CO transactions primary, so that the CO dollars will be visible in the FERC_D1 table as an alternative to the new general ledger. However, not all user requirements can be addressed with the FERC approach alone. For example, even if enhanced to trace secondary cost elements, the FERC approach will not show the fund assignment, allow for real-time regulatory reporting, or provide a means to enter regulatory accounts directly during document entry.



Contents

- Executive Summary
- Financial Structures and Processing
 - Project System
 - Fixed Assets
 - Funds Management
 - Grants Management
- FERC
- **SAP ERP HCM**
- SAP Solution Manager



SAP ERP HCM – scorecard

Design Review – Business Processes	Risk Indicator	Design or Build Completeness	Future Fit or Impact on Scalability
Organizational structures			
Integration of organizational objects with personnel administration and finance			
Personnel administration – enterprise and personnel structures			
Personnel administration – master data			
Personnel administration – actions and reasons			
Time management configuration			
Kronos and WorkTech integration with SAP software			

SAP ERP HCM – scorecard (2)

Design Review – Business Processes	Risk Indicator	Design or Build Completeness	Future Fit or Impact on Scalability
Payroll			
Benefits			



Findings

- Organizational structures appear to be defined according to the approved Blueprinting document and client requirements.
- Organizational management InfoTypes are configured and ready for testing.
- The outbound interface to send organizational data to Nakisa has been identified.
- Decisions have been made regarding postproduction maintenance of the organizational structures that will help MoA have a better overall view of staffing and future organizational support.

Recommendations

- Complete the outbound interface to Nakisa before the start of integration testing to utilize and confirm organizational management data effectively and to ensure that the configuration in SAP software will work according to the proposed design.
- Utilize the actual legacy organizational structures for all organizational management (OM)-related integration testing to test all relationships, integration with personnel management, and cost object integration with finance and recruitment processes.
- Include standard OM reports included in integration testing.



Findings

- An inheritance rule in personnel administration (PA) has been configured to derive the cost center from the position in PA. Personnel management master data has been configured in such a way that the derived values of personnel area, cost center, and business area from position cannot be overwritten in PA during actions or individual PA InfoTypes.
- For each position, cost objects have to be assigned in InfoTypes 1008 and 1018 (cost assignment), including business area. This object will serve as the home cost object string when a position is assigned to the employee. Unless the cost object assignment is overwritten in a cross-application time sheet (CATS), PA will always use this cost object string as the home cost object.
- The financial structure is based on one company code and one controlling area with a single chart of accounts. Business areas are defined based on groupings of divisions, and more than 90 business areas are defined. The number of business areas was found to be excessive in the financials review and will be discussed in that section. Functional areas are based on the highest level of corporate function, and a total of 21 functional areas are defined. In addition, activity types, WBS, internal orders, and projects will also be utilized.

Recommendations

- Add security restrictions to blocking access to InfoType 0027 should be added. The Blueprint design does not utilize InfoType 0027 to maintain assignment level costing details. Instead, InfoType 1018 will be used to maintain such at the position level. Since it is a requirement not to allow end users to override InfoType 1018 settings, the security restrictions are necessary.
- Hold regular, detailed integration meetings between the HCM team and the financial team because of the extensive use of financial cost objects in PA, OM, time management, and payroll modules.



Findings

- Enterprise and personnel structures that include personnel areas, personnel subareas, employee groups, and employee subgroups are complete. They are foundational to all HCM software, including time, payroll, and integration with financial accounting.
- The hierarchy of the enterprise structure is based on a personnel area that is the first level, the second level is the personnel subarea, the third level is the employee group, and the last level is the employee subgroup. In a public sector implementation, the first level generally represents a higher level of grouping like a collective bargaining unit. In this design, more granular objects like departments are utilized for personnel area. The design is workable, but it requires an above-average maintenance effort.
- Personnel subareas represent collective bargaining units, and there are currently five bargaining units.
- Employee groups identify types of employees, and employee subgroups identify eligibility criteria for benefits, retirement, and so on.
- No significant change is anticipated in the enterprise structure in the future, based on what MoA indicated. Election workers are a group of employees who are seasonal in nature and have been outsourced to a third-party employment agency to gain efficiencies, which minimizes processing in SAP software. W2 forms for these employees will be produced by the third-party agency, because election workers are not considered MoA employees. Any regulations requiring election workers to be employees of the municipality needs to be confirmed by MoA.
- MoA understands that the OSHA 300 report is a legal requirement with which MoA needs to comply and that the OSHA 300 delivered by SAP does not meet the filing requirements. This report is being custom developed to meet the mandated requirement, but the development and testing status is unclear. It was unclear if MoA is utilizing standard reports for other legal compliance reporting needs. Whether MoA uses custom reports or standard reports, it is not anticipated that any significant maintenance issues will occur in the future.

Recommendations

- Exercise due diligence before changing the enterprise structure to ensure that appropriate regression testing documents and scripts are written and tested with new data and that ongoing operational procedures are updated. Any future change to the enterprise structure will result in revisiting the configuration of benefits, time, and payroll and might require additional regression testing.



Findings

- Change pointers are activated for certain InfoTypes where there is a need to capture changes. For example, InfoTypes 0000, 0001, 0002, 0007, 0008, 0554, and so on.
- Three enhancements have been identified in PA that are still under design. They include an enhancement that utilizes employees' education (InfoType 22), certificate and licensing (InfoType 795), and update basic pay (InfoType 0008) with factored rate, which affects employees' basic pay.
- Infotype 554 (additional position assignment) is utilized for employees who will get a factored rate for certain positions, but the approach is not documented in the Blueprint document.
- During discussions, it was mentioned that approximately 71 Adobe Interactive Forms with workflows have been identified in SAP ERP HCM and that they are being developed.
- The Blueprint document does not identify certain critical business processes and enhancements. For example, use of InfoType 554 to derive the percentage-based pay rate, update of InfoType 0008 with this new rate and a new pay code and wage type, and enhancement of InfoType 795 and InfoType 0022 to update InfoType 0008 based on an employee's certification.
- It appears that unit testing in personnel administration is incomplete. For example, the effect of utilization of InfoType 0008 and InfoType 0015 reporting cannot be complete unless payroll is run successfully. Since payroll is not configured completely and payroll cannot be run successfully, the pay results cannot be verified.



Recommendations

- Use the standard program to clean up change pointer tables. Generally, if change pointers are activated for multiple objects, the size of the change pointer table can increase significantly and needs to be cleaned out periodically.
- All go-live critical custom development objects should be completed before integration testing. Unit testing that includes the basic pay InfoType and education InfoType cannot be marked as complete unless the enhancement is complete. No testing is evident of integration to financials for this area. This situation should be corrected as soon as possible.
- Test the custom-forms updating mechanism to the back end (SAP ECC) and include role-based security role to ensure that all the fields and InfoTypes are updated properly. Development of approximately 71 interactive forms appears to be a significant development undertaking. There is known performance degradation with large drop-down values in SAP Interactive Forms software by Adobe.
- Develop all custom enhancements to handle configuration changes with minimum code impact and with minimal regression testing to provide for scalability (that is, that it works when similar additional wage types are created).



Findings

- All personnel action types and action reasons are captured in the Blueprint document. A special process for leave of absence is identified and monitored by the leave department of MoA and the employee relations department.
- NeoGov, a third-party tool, is used for the recruitment process and updates employee information data using a new hire action that may include future dated actions. Updating employee data in SAP software from NeoGov is planned. It appears that any rehire situations from NeoGov to SAP software will require manual adjustment of a few InfoTypes in SAP software.
- The inbound and outbound interfaces from SAP software to NeoGov and NeoGov to SAP software were identified, and the design is complete. It appears that the outbound interface from SAP software to NeoGov is primarily for position information and related attributes, including vacancy InfoType 1007.

Recommendations

- Perform additional testing of the standard process for vacancy creation in InfoType 1007 during processing of future dated actions.
- Define a process to correct errors in certain employee master data InfoTypes (for example, InfoType 0041, or the basic pay InfoType), for the NeoGov to SAP software interface.



Findings

- MoA currently uses two separate Kronos implementations with different versions and one WorkTech system, all considered third-party time-entry systems for SAP software. The system of records for time entry are the two Kronos systems and the WorkTech system. All employees of MoA will enter time in one of the three third-party systems.
- The interface from SAP software to Kronos for employee minimaster and absence quota information is still in the design phase.
- Documents indicate that five holiday calendars will be configured to meet MoA requirements. Holiday calendars are important to calculate employees' regular time, overtime, and shift premium. It appears that there is no automated sync mechanism for holiday calendars among SAP software, Kronos, and WorkTech.
- All work schedule configuration in SAP software appears generic, with the capability to accept 24x7 schedules to accommodate Kronos and WorkTech time schedules. No automated sync mechanism is in place between Kronos and WorkTech systems and SAP software.



Recommendations

- Consider a Kronos upgrade project to be aligned with the SAP project testing schedule so that timely testing can be performed. The effect of upgrading to new Kronos versions might also affect inbound and outbound interfaces between SAP software and Kronos and the processing of data in SAP software. Test the Kronos upgrade by running a payroll and comparing data with financial postings to make sure that everything works as desired.
- Conduct regular (weekly) integration meetings with the Kronos and WorkTech team, finance team, and HCM team.
- Perform additional checks within SAP software on all time entered in third-party systems, even though it is evaluated in those systems. In case of discrepancies, pay the higher amount, but produce an error message to show the discrepancy.
- Ensure that the holiday calendar, absence quotas, and pay-code mapping with attendance and absence codes for Kelly or union employees are synchronized between SAP software and third-party systems to minimize errors in processing overtime, regular time, holiday pay, shift premiums, and so on. This time is processed in SAP software for these employees, which is not the case for other groups of employees.
- Develop a single report that shows time entered in the third-party systems and what time is paid in SAP software, so that any time-entry errors can be reconciled.



Findings

- Mapping of attendance and absence codes with Kronos and WorkTech pay codes has been identified. SAP software configuration seems to allow all attendance and absence codes for all employee types.
- Kronos and WorkTech financial object validation is similar to validation in CATS, but is still in the planning phase. The validation process is yet to be documented.
- During discussions with the MoA team, it was noted that there is no clear understanding of how Kronos and WorkTech systems would handle an emergency business closing, for example, an earthquake. Since such an event cannot be planned ahead of time, there could be a potential issue in evaluating time entry around this event and pay for the employees who work during such events.
- It was noted that no automated process of keeping holiday calendars in SAP software and Kronos or WorkTech holidays in sync is planned. This process may impact valuating time correctly for Kelly union employees, if the holiday calendars go out of sync between SAP software and third-party systems.

Recommendations

- Develop a process in coordination with the Kronos and WorkTech team to determine the configuration steps in SAP software that are needed to accommodate correct processing and evaluation of time and payroll data in case of emergency business closings.
- Define a process to keep configuration the same in Kronos, WorkTech, and SAP software, which will help in the resolution of postproduction support issues. Holiday calendars, absence quota information, and other configuration in SAP software will affect how time is entered and evaluated in Kronos and WorkTech time-entry systems.



Findings

- SAP software is the system of record for absence quotas, and the proposed design transfers absence quota information from SAP software to Kronos and WorkTech systems through an interface.
- It appears that leave banks, where employees donate their leave (reduces leave balance) to another employee (increasing leave balance), or a union bank will be configured in SAP software and transferred to the third-party time-entry systems via an interface.
- A requirement for utilizing InfoType 0416 to pay out leave balance as a cash payout or compensation to be applicable for 401k only and or 457 plan has been documented in the Blueprint document and appears to be configured according to the requirement.
- It appears that the requirement for employees who are eligible for different absence quotas to receive an exception report before the end of the year showing the approximate leave balance at the end of the year is still in the planning phase and no work-around solution seems to exist.
- A user exit in CATS to meet MoA requirements of deriving relevant funds in split-funding situations for employees with activity types appears to be in the planning phase.
- SAP software will be configured to accept any time-entry value from the third-party systems with no provision to check the accuracy of the data sent, unless the error surfaces in payroll. This approach will cause significant ownership problems for resolution of payroll errors. Employees are likely to become frustrated and confused. Manual leave donations will be somewhat tricky to keep in balance with respect to Kronos.



Recommendations

- Evaluate a detailed process of handling different situations when donating leave to leave banks with integration points between Kronos and WorkTech systems.
- Hold frequent integration meetings among the SAP finance team and HCM teams. Due to the absence of close integration between third-party time-entry systems, the SAP finance team, and the and HCM team regarding processing of time entry, validation, and charging to financial cost objects may cause incorrect processing and additional work later.
- Test and document the process of employee self-service leave cash-in portal for active employees mentioned in the Blueprint document to avoid any gaps in the process.
- Complete the design for capturing of all the validations built in SAP software for cost objects in third-party systems. Unless it is finalized soon, it might affect the error-handling mechanism in SAP software.
- Have a clear error-handling process for time entry in SAP software without having to access the source systems to avoid retroactive error-handling situations in emergencies.



Findings

- It appears that an outbound interface from SAP software to third-party time-entry systems is already designed. The interface is based on change pointers to capture any changes that affect employees' employment status, organizational management data (any field change in InfoType 0000 and InfoType 00001), InfoType 1018 (cost assignment), address, location, quota accruals (2006), quota adjustments (2013), change in pay, InfoType 554, activity types, work schedule, and so on.
- It appears that Kronos and WorkTech systems have built-in workflow and approval process functions, and all time entered in Kronos or WorkTech is validated for accuracy, including cost-object validation.
- Evaluation of overtime, shift premiums, holiday pay, and so on is based on the time entered in Kronos and WorkTech systems. The evaluated time is sent to CATS via an interface. The exception is for Kelly shift employees with a 27-day schedule.
- The configuration plan in time management appears to be configured with two CATS profiles to accommodate transfer of time received from Kronos and WorkTech to SAP software with and without cost distribution.



Recommendations

- Whenever an error is encountered in SAP software due to time entry, correcting such time entries in third-party source systems and re-transfer corrected time entry may not seem to be feasible at certain times, especially during the payroll correction process. A clear process of how such errors will be handled needs to be defined.
- An error-handling mechanism for financial object validation, time-entry errors, and errors due to evaluated times in third-party systems needs to be clearly defined.
- It is recommended to have a single report that will help in reconciliation of what is paid versus what is entered, including absences, attendances, and overtime calculated in Kronos and WorkTech systems and SAP software.
- It is recommended to have at least two test cycles of a Kronos upgrade done in the current time and payroll environment before switching over to SAP software in order to provide accurate data for comparison testing.
- It is recommended to have at least one full employee population test of Kronos and WorkTech time entry to SAP software during integration testing to avoid post go-live errors, which could be overwhelming for the time and payroll administrators to reconcile.
- It is recommended to include retroactive change test scenarios with Kronos and WorkTech testing, which affect absence quotas, while creating integration test scenarios in SAP software.



Findings

- The project plan reviewed for payroll configuration work does not have correct predecessor of tasks.
- Some 95% of employees are direct deposit and rest are on check. With this high volume of direct-deposit remittance, it is vital for MoA to have an efficient prenote process to avoid any errors and delay in verifying bank information.
- Benefits changes come from the central benefits department. Third-party vendors, such as benefit vendors and tax authorities, have been identified, but the final configuration is incomplete. Not all vendors will be set up in third-party remittance.
- MoA is self-insured for state unemployment insurance. BSI, tax-calculation software used by payroll, will be set up with a tax rate for calculation purposes only.
- The timeline for validating Kronos and WorkTech system time entry and integration with SAP software seems unknown at this time, and this will impact going live.

Recommendation

- Have a confirmation process in Kronos and WorkTech systems and SAP software to confirm that time must be entered to receive pay.
- Check for the layout of prenote and positive pay files in SAP software to avoid future development items that are unplanned.
- Have vendors sign off on all third-party remittances and define a reconciliation process.



Findings

- While designing any third-party interface, or sending files from SAP software to third-party vendors like financial institutions, insurance carriers, and others, the turnaround time from vendors to validate data needs to be considered when developing the timeline.
- The payroll functionality in SAP software is iterative and during correction process in each iteration, master data can be changed that affects current payroll.
- It appears that benefit test integration scenarios do not include payroll runs, and hence combined contribution limits could not be checked in the payroll run.
- The payroll functionality in SAP software provides multiple options for claims/overpayment processing.
- It was noted that month-end accruals configuration and its impact on the payroll reconciliation process is not documented in the blueprinting document.
- It appears a decision as to how claims processing and new overpayment functionality should work is not yet made. Per Alaska Statute, no amounts are forgiven. The solution for claims processing should be resolved quickly.

Recommendation

- It is an SAP recommended best practice to implement either a manual or automated process, to be implemented during the payroll correction process, to block out users from changing master data in both employee self-service and SAP ECC.
- Unless the baseline payroll configuration with benefits integration is completed, combined contributions cannot be checked for limits and year-to-date accumulations relevant to benefits processing.
- It is recommended that a split payroll period that spans across two months be used during parallel testing, at least for one group of employees, in order to show the impact of month-end accruals configuration. SAP month-end accrual configuration will create multiple documents as compared to the regular payroll without splits.



Findings

- According to a MoA requirement, retirees will have a different payroll area that is not relevant for payroll processing. All retirees will be in a withdrawn status and in a different payroll area. It appears that SAP software has been configured to have retiree payments received and tracked in InfoType 0015 without posting these wage types to the general ledger.
- A custom labor-distribution program is planned for reconciling labor distribution. It was pointed out that the standard cost center report in SAP software does not meet MoA requirements due to missing cost objects from funds management and project system objects.
- MoA has a requirement to split fringe costs and tax liabilities to be in line with salary postings and for certain grants. The requirement is to post only salaries, but not overtime or fringe costs.
- MoA runs a biweekly payroll for approximately 2,800 employees. The requirement to perform FICO postings at each regular payroll run and at each off-cycle payroll run to post the fringe-benefit cost as per cost distribution allocated (just as salary would post to cost distribution).
- Some of the custom forms (HCM Process and Forms) are designed to update master data. While a normal function, thorough end-to-end security testing was not observed as a planned activity.

Recommendations

- Develop a business process document with details of what is tracked and how it is used by the business. Retiree payment tracking is not mentioned in the Blueprint document.
- Test the custom labor-distribution report developed thoroughly, given that the standard cost-center report does not meet the needs of MoA. Testing should incorporate all scenarios including multiple retroactive situations with cost object changes with full employee population.
- Use the template that SAP delivers to customize splitting of fringe costs and tax liabilities to be in line with salary posting to finance as a basis for splitting fringe costs.
- Ensure that the test scripts include the requirement of providing split pay where an employee is being paid out of two or more funds, or if the salary is out of a grant (which cannot accept fringe and overtime) can accept both fringe and overtime.
- Test any custom form used to update master data in SAP software completely, because it might affect payroll processing.



Findings

- The plan calls for using all standard year-end processing activities, including W-2 process, quarterly forms, SUI forms, and the W-2 request process via employee self-service in SAP software.
- Installation of a new 834 adaptor to support electronic data interchange (EDI) for certain third-party vendors is in progress.
- Use of the standard pay-increase program is planned for all pay raises. During discussions, it was pointed out that the program is not tested with the current design of InfoType 0008, which depends on InfoType 554 values, InfoType 22, and InfoType 795. The entire pay raise process is still in the planning phase.

Recommendations

- Complete configuration activities to support the year-end activities and include them in integration tests or parallel testing.
- Do not use the 834 adaptor for the interfaces that are built and tested with the vendors, in view of the timeline. The new installation of 834 adaptor might affect the development and testing timeline and require changes to the interfaces that are already built. Use a phased approach to incorporate the 834 adapter, unless the vendors receiving these files require that files be sent via EDI.
- Test the pay-increase program with relevant data. If it is not tested with the current configuration, it will affect postproduction support.



Findings

- To meet MoA requirements, separate benefit areas appear to have been created so that these groups can participate in a separate open enrollment periods (ENG and IBEW). For all benefit enrollments, use of employee self-service is planned.
- Standard reports like the eligible employees report, participation report, changes in benefits elections report, and so on are planned for reporting according to the Blueprint document.
- The benefit macro eligibility requirements in InfoType 0171 consist of approximately 600 variations, all of which are supported by the enterprise structure. Out of 600 scenarios, it appears that 540 eligibility combinations are unit-tested.
- The current process of monitoring certain leave-without-pay situations and new eligibility information in certain cases, such as an employee status change that might affect their eligibility from part time to full time, will continue in the new implementation of SAP software.
- A decision has already been made to manage deductions from fixed dollar amounts to percent contribution.
- The proposed plan is not to use the family and medical leave act (FMLA) workbench in SAP software, but to track family medical leave in third-party systems. However, personnel actions are monitored, tracked, and executed in SAP software.
- For the most part, benefits requirements are clearly defined, and standard configuration has been utilized.
- The open enrollment for the next subsequent year benefit plans occurs in the legacy system, although the legacy system ceases to exist in the new year based on the current project plan.



Recommendations

- Unit-test all 600 scenarios and combinations relevant to MoA requirements. Employee benefits eligibility for certain benefit plans is critical during enrollment and driven by the correct combination for eligibility.
- Test all benefit interfaces with the full employee population based on converted data and allocate sufficient turnaround time from the vendors. Testing includes custom interfaces and third-party remittances as delivered by SAP. Generally, interface requirements for third-party vendors are higher in benefits than other SAP software.
- Initiate a detailed planning effort on how to accommodate requirements and successful conversion of data. According to the current project plan, open enrollment extends till the end of January, which adds an additional level of complexity of having data available in both the legacy system and the new system.

Key integration areas

- Integration between SAP ERP HCM and FI is inadequate.
- Integration among time-clock systems and the SAP ERP Human Capital Management solution is inadequate.

Master data

Master data is not in direct scope, but integration is a concern as documented throughout the Review.

Reporting

- Reporting elements are not fully constructed, although integration testing is beginning. All critical reports for going live should be developed and fully tested before the start of integration testing.
- We did not observe a solid plan to train end users to utilize reporting tools.

Interfaces

- Key interfaces are incomplete, although integration testing is beginning. Do not begin integration testing until all critical development for going live is complete.

Conversions

- Key conversions are incomplete, although integration testing is beginning. Do not begin parallel testing until all critical conversions for going live are complete.
- Conversion of time entries during parallel testing is not the same approach as will be used when going live. This scenario opens the door to stabilization issues after going live.

Enhancements

- Key enhancements are not complete, although integration testing is beginning. Should not begin integration testing until all go-live critical development is complete.

Forms

- Key forms are incomplete, although integration testing is beginning. Do not begin integration testing until all critical development for going live is complete.
- The number of Adobe forms is excessive for the size of organization and difficult to support after going live.

Workflow

- Key workflows are incomplete, although integration testing is beginning. Do not begin integration testing until all critical development for going live is complete.



Contents

- Executive Summary
- Financial Structures and Processing
 - Project System
 - Fixed Assets
 - Funds Management
 - Grants Management
- FERC
- SAP ERP HCM
- **SAP Solution Manager**



SAP Solution Manager – scorecard

Design Review – Business Processes	Risk Indicator	Design or Build Completeness	Future Fit or Impact on Scalability
Operations			
Project management			
Documentation			
Business blueprint			
Configuration			
Development			
Testing			



Findings

- The technical landscape for SAP Solution Manager consists of a sandbox instance and a production instance that is high availability.
- The sandbox instance stores system information for the sandbox and development systems for SAP software.
- The production instance will store system information for the quality assurance (QAS) and production (PROD) systems.
- The legacy migration database (LMDB) is used to update the application components and keep the satellite system information in sync with SAP Solution Manager. It is unclear how often the LMDB updates system components.
- Remote function call (RFC) connections exist for some of the SAP software landscape, but are incomplete for all of the systems being used.
- Logical components are created for the current project.
- The SAP EarlyWatch Alert service is not being used now, but is planned for production systems.
- A road map strategy for functions of SAP Solution Manager after going live has not been addressed, nor has a center of excellence strategy.

Recommendations

- Create RFC calls for all systems to enable SAP EarlyWatch Alert, project implementation, testing, and other future functions of SAP Solution Manager.
- Ensure that the LMDB updates the system component information of SAP Solution Manager more frequently, such as daily or weekly.
- Enable reports for SAP EarlyWatch services and run them bimonthly or monthly.
- Develop a road map strategy for functionality of SAP Solution Manager that is planned for implementation after going live – change request management and business process monitoring, for example.
- Do not use the standard, delivered logical component. Instead, reference it and create IDs in the customer name space and have a naming convention specific to the customer.



Findings

- The current project is set up in SAP Solution Manager as an implementation project. Since there are no plans for future rollouts, the implementation project type is adequate.
- There are plans to have a maintenance project created in SAP Solution Manager after going live to manage the operations and optimizations functions.
- User-defined keywords are business area specific.
- User-defined status values are maintained for documents.

Recommendations

- Use an operations guide that explains how project administration functions are being used for the project, even though the strategy for SAP Solution Manager is good. A sample document is delivered as part of the accelerators for the ASAP methodology.
- Assign a resource as an owner or champion responsible for functional and technical activities with SAP Solution Manager.



Findings

- User-defined document types have been created within SAP Solution Manager, and templates have been loaded.
- Blueprint documentation is being stored on the project documentation tab at the process level.
- Configuration documentation is being stored on the configuration tab associated with the appropriate process or configuration structure node.
- RICEFW documentation is being stored on the development tab for the specific business process to which it relates.
- Training documentation is stored outside of SAP Solution Manager in the Uperform server.
- Security documentation is included in documentation in SAP Solution Manager.
- Test cases are being uploaded to the test cases tab in SAP Solution Manager.
- Three document status schemes are in use. The final released and approved status locks the document from further changes. The document naming convention is defined well.

Recommendations

- Develop a plan to place missing items into SAP Solution Manager as quickly as possible. Although the process for documentation is adequate, not all of the documents have been loaded into SAP Solution Manager, including some configuration documents and test case documents. These documents can be missed and not be included as a part of the overall solution documentation.



Findings

- The business process hierarchy is mostly structured in functional silos. However, the structure is adequate because much of the scope is human resources and finance functionalities, and there are not many end-to-end business scenarios associated with these functions.
- The structure and transaction codes were all input manually rather than using the SAP-provided business process repository.
- The business processes are structured in such a way that will be useful for integration testing because they will be easy to mix and match for different variations of integration tests.

Recommendations

- Lock the structure and all business blueprint–related documentation from further changes, given that the Blueprint phase is complete. Have the administrator or SAP Solution Manager control the documents.
- Create an operations guide for SAP Solution Manager that states the guidelines for business blueprint usage in SAP Solution Manager. The guide is part of the ASAP methodology and is an accelerator document.



Findings

- Business process–specific configuration is being stored on the configuration tab in SAP Solution Manager for the business processes to which they are related.
- General configuration that is not specific to a process is being stored in the configuration folder, which is created by the team.
- There is a minimum of one configuration rationale document per configuration tab for any given business process.
- Transport numbers will be added to the configuration tab.
- Configuration is being executed and tracked directly in satellite systems and does not use SAP Solution Manager as the launch point.
- Configuration documents are being uploaded into SAP Solution Manager from the shared drive. Once uploaded, they become the document of record, and changes are then performed only in SAP Solution Manager.

Recommendations

- Assign configuration objects 100% to business processes in SAP Solution Manager. Configure implementation guide (IMG) objects with SAP Solution Manager as the launching point. This recommendation assures the completeness of the solution and helps group the configuration transports together by IMG project. Therefore transports are more easily referenced by IMG project and visible by IMG project in satellite systems.
- Create a timeline to complete the configuration-object list in SAP Solution Manager. Not all configuration objects are in SAP Solution Manager, and integration testing is now starting.
- Create a documented test procedure that explains, as a result of a defect, the process for updating configuration objects and the related documentation in SAP Solution Manager.



Findings

- RICEFW documentation (namely the functional and technical specifications) is stored in SAP Solution Manager on the development tab. The documents are attached within the business process section to which they are related. The exception is interfaces, which have their own business scenario. The interface documentation includes the specifications for inbound and outbound data from SAP software to legacy systems and the specifications of middleware applications to third-party systems.
- There is a clearly defined process for tracking development objects through the processing statuses in SAP Solution Manager.
- The actual custom development objects are not stored in SAP Solution Manager.
- Transport-request numbers will be added per development object in SAP Solution Manager.

Recommendations

- Add the custom development objects to SAP Solution Manager to have a complete solution and for later business process monitoring.
- Create a document that states the guidelines for Realization phase usage in SAP Solution Manager. The guide is part of the ASAP methodology and is an accelerator document.



Findings

- The test workbench of SAP Solution Manager will be used for integration testing.
- Test plans and test packages have been set up for custom development objects. Test cases have been uploaded to SAP Solution Manager for custom development objects.
- Creation of test plans and test packages for business processes is estimated to be complete on August 10, 2012. Test cases are being loaded into SAP Solution Manager for business processes.
- Test package status will be tracked in SAP Solution Manager.
- Test defects will be tracked using the issue management functionality of SAP Solution Manager.

Recommendations

- Create a document that states the operational guidelines for test management usage in SAP Solution Manager. The guide is part of the ASAP methodology and is an accelerator document.
- Put a plan into place to ensure that test case documents will be loaded into SAP Solution Manager to facilitate integration testing.

SAP Solution Manager

RICEFW details

Key integration areas

FINDING: Integration points with SAP ECC, SAP NetWeaver BW, SAP NetWeaver Portal, and so on are in order (satellite systems).

RECOMMENDATION: None.

Reporting

FINDING: No additional reports are identified on the WRICEF list for SAP Solution Manager, and no additional reports are recommended.

RECOMMENDATION: None.

Master data

FINDING: Search items, such as topics, within SAP Solution Manager need additional definition.

RECOMMENDATION: Add additional information for topics.

Interfaces

FINDING: SAP Solution Manager has no key integration points with external systems.

RECOMMENDATION: None.

SAP Solution Manager

RICEFW details

Conversions

FINDING: No conversions are on the WRICEF list or necessary for SAP Solution Manager.

RECOMMENDATION: None.

Forms

FINDING: No forms are on the WRICEF list or necessary for SAP Solution Manager.

RECOMMENDATION: None.

Enhancements

FINDING: No enhancements are on the WRICEF list or necessary for SAP Solution Manager.

RECOMMENDATION: None.

Workflow

FINDING: No workflows are on the WRICEF list or necessary for SAP Solution Manager.

RECOMMENDATION: None.

Next steps

Follow-up action items



Follow-up action items

Response plan:

- Return by September 10, 2012

Interview participants

Interviewee	Interviewee
Luc Cayet	Nathan Pannkuk
Michael Bertsh	Brian Smith
Tom Boudeau	Tony Prockisch
Benson Odighibor	Cosie West
Verity Woolley	Hillary Robinette
Pam Ellis	Pam Ellis
Ginny Fritz	David Beach
Glenda Gibson	Bob Moore
Erik Johnson	Melissa Steffen
Elizabeth Zib	Sandy Simmons
Virginia Ruggles	Nathan Fyer
Godwin Obilitty	Bekki Wraver
Paul Yenter	Chris Richardson
Kak Shanahan	Abraham Kumah
Charmi Tilka	David Hertrich
Karen Norwworthy	Kristin House
Tony Prockish	Phil Corriveau
Holli Bonnee	Kat Shanahan
Martha Nelson	Christine Chestnut
Jill McCullen	Joyce Mucha
Joanne Benjamin	Jim McManus

SAP Quality Assurance organization: special notations

List of commonly used acronyms

Title	Acronym
Quality Assurance	QA
Quality Control	QC
Project Management Institute	PMI
Project Management Office	PMO
Project Management	PM
Work Breakdown Structure	WBS
Key Performance Indicator	KPI
Business Process Document	BPD
Business Process Flow	BPF
Business Process Requirement	BPR
Reports, Interfaces, Conversions, Enhancements, Forms, and Workflow	RICEFW
Key Decision Document	KDD
Functional Specification Document	FSD
Technical Specification Document	TSD
Organizational Change Management	OCM
Business Process Reengineering	BPR
Business Transformation	BT
End User Training	EUT
Knowledge Transfer	KT/KX
Product Data Structure	PDS
Date Set by External System	DSEX

Title	Acronym
Center of Excellence	COE
Development Environment	DEV
Quality Assurance Environment	QAS
Training Environment	TRN
Production Environment	PROD
Service Level Agreement	SLA
Financials	FI
Controlling	CO
Asset Accounting	AA
SAP Financial Supply Chain Management	FSCM
Sales and Distribution	SD
Logistics Execution	LE
Materials Management	MM
Warehouse Management	WM
Production Planning	PP
Core Interface Function	CIF
SAP Customer Relationship Management	SAP CRM
SAP Supply Chain Management	SAP SCM
SAP Product Lifecycle Management	SAP PLM
SAP NetWeaver Master Data Management	MDM
SAP NetWeaver Portal	EP



Contact information:

Norma Johnson
VP Quality Assurance

SAP NA QA Office
norma.johnson@sap.com
+1 314-397-0304

Lynne Ketchie
Quality Assurance Director

SAP NA QA Office
lynne.ketchie@sap.com
+1 619-315-1100

