

Appendix J – Current Environment

RFP-ERP16001

RFP Title: Sealed Offers for Enterprise Payroll Solution (EPS)

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1. Introduction

This appendix provides an overview of the State of Hawaii’s current organization; business processes; and technical environment including applications, interfaces, and network environment that are relevant to the project scope detailed in this RFP.

1. Background and Current Issues

The current State enterprise-wide systems lack the ability to efficiently and effectively manage the end-to-end financial, human resource and payroll, and budget preparation transactions and business processes. Substantial time, effort, and resources are dedicated to the manipulation and manual exchange of data between the disparate systems. This situation results in hours of staff time dedicated to redundant data entry, manual processing, and reconciliation between the various applications. This significantly limits the State’s ability to perform organization-wide analysis, management reporting, and proactive financial management.

The following table provides a summary of key issues identified by functional area:

1. Issues in Key Functional Areas

| **Functional Area** | **Issues** |
| --- | --- |
| Chart of Accounts | The current chart of accounts structure does not provide the level of detail and flexibility that the State and departments require to effectively manage and report financial transactions across the organizational structure. |
| Budget | A single, enterprise-wide budget system which supports the preparation of the department and the statewide budget is not available. Also, there is limited capability to track budget versus actual without significant manual manipulation of the data. |
| Accounting and Reporting | **Disparate Systems:**  The current State accounting system, the Financial Accounting and Management Information System (FAMIS), does not provide the functionality or detailed information required to efficiently provide necessary financial and budgetary reporting. Many departments have implemented secondary systems (e.g., DOE – Financial Management System) to meet the specific accounting and reporting needs of their organization.  **Reconciliation of Data:** Reconciliation between State-level and department-level financial records is problematic due to the following issues:   * Varying levels of detail for financial transactions between the FAMIS and departmental systems. * Lag between the entry of transactions in departmental systems and entry into the FAMIS. * A different basis of accounting (i.e., accrual in departmental systems and cash-basis in the FAMIS). * Delays between the recording of federal fund expenditures and the requests for fund drawdowns.   **Reporting:** The production of the State spell first (CAFR) is a time consuming manual process. The past two CAFRs required significant manual effort. The CAFR for FYs 2009-2010 took over 400 days to complete, and the CAFR for FYs 2010-2011 took over 230 days to complete.  In part, this situation is a result of the following required activities:   * Conversion of accounting transactions from cash to accrual-basis. * Re-classification of labor and expenses across projects and grants. * Manual computation of cash balances on accounts. |
| Acquisition | Currently, there are limited systems available to support the automation of key processes (e.g., requisitioning, approving purchases, generating purchase orders, and processing invoices). This has significantly increased the number of manual processes, amount of duplicate data entry, and requirement for extensive reconciliation. |
| HR/ Payroll | The State Human Resource systems are not integrated with the State Payroll System. Changes made that impact the Payroll System (e.g., personal information, position management, salary adjustments, and leave without pay) must be entered in both systems.  Maintenance of time and attendance records and management of leave balances are performed manually by individual departments. A few entities have implemented leave management systems, but these systems are not considered systems of record.  Employee overpayments have occurred due to the lack of automated leave accounting records.  For each pay period, payroll personnel in most State agencies manually calculate gross pay for each employee and submit the information to Central Payroll for verification and calculation of net payroll. |

1. Overview of Organization

The State of Hawaii is comprised of three separate branches of government, the Executive, Legislative, and Judicial. The Department of Education, University of Hawaii, Hawaii Health Systems Corporation, and Office of Hawaiian Affairs have varying degrees of autonomy. The Board of Regents provides oversight for the University of Hawaii; Board of Trustees provides oversight for the Office of Hawaiian Affairs; and Board of Education provides oversight for the schools under the Department of Education. The Department of Education functions as the school district for the entire State.

Within the Executive Branch, and as relevant to this RFP, there are three departments that are considered central departments:  Accounting and General Services, Budget and Finance, and Human Resources Development.

* 1. Central Departments
     1. Accounting and General Services including the State Procurement Office

The Department of Accounting and General Services (DAGS) is responsible for accounting, records management, digital archives, internal audit, automotive services, State parking lot management, building and grounds management, information technology for the State, land survey activities, public works, and capital planning project oversight. In addition, the DAGS ensures the effective management of a host of other functions including the Aloha Stadium, Access Hawaii, elections, information privacy and security, and State procurement functions.

For additional information, please see the [DAGS’ website](http://hawaii.gov/dags).

* + 1. Budget and Finance

The Department of Budget and Finance (B&F) administers the State budget, develops near- and long-term financial plans and strategies for the State, and provides programs for the improvement of management and financial management of State agencies.

For additional information, please see the [B&F’s website](http://hawaii.gov/budget).

* + 1. Human Resources Development

The Department of Human Resources Development (DHRD) provides timely and responsive leadership, resources, and services to fully support the State in the recruitment, management, and retention of a high performing workforce for the State’s Executive Branch (excluding the Department of Education, certain employees of and services for the University of Hawaii, and several other agencies).

For additional information, please see the [DHRD’s website](http://hawaii.gov/hrd).

* 1. Other Executive Agencies and the Department of Education
     1. Agriculture

The Department of Agriculture’s (DOA) mission is to re-establish agriculture by rejuvenating the economy, protecting important resources, and gaining greater self-sufficiency in food production and alternative energy development. The Department works to support, enhance, and promote Hawaii’s agriculture and aquaculture industries. It is responsible for animal quarantine, plant and pest control, and a resource for travel and shipping information.

For additional information, please see the [DOA’s website](http://hawaii.gov/hdoa/).

* + 1. Attorney General

The Attorney General (AG) is the chief legal officer and chief law enforcement officer of the State of Hawaii. Duties include the administration of the sex offender registry, issuance of State IDs, commission of notaries public, managing statewide criminal history and fingerprint information systems, and administration of child support enforcement.

For additional information, please see the [AG’s website](http://hawaii.gov/ag).

* + 1. Business, Economic Development, and Tourism

The Department of Business, Economic Development, and Tourism (DBEDT) is Hawaii’s resource center for economic and statistical data, business development opportunities, energy and conservation information, and foreign trade advantages.

For additional information, please see the [DBEDT’s website](http://hawaii.gov/dbedt).

* + 1. Commerce and Consumer Affairs

The Department of Commerce and Consumer Affairs (DCCA) promotes a strong and healthy business environment while protecting the community from unfair and deceptive business practices. Some duties include business registration, professional licensing, examination of financial institutions, and handling complaints against the entities they regulate.

For additional information, please see the [DCCA’s website](http://hawaii.gov/dcca/).

* + 1. Defense

The Department of Defense (DOD) assists authorities in providing for the safety, welfare, and defense of the people of Hawaii.

For additional information, please see the [DOD’s website](http://hawaii.gov/dod).

* + 1. Department of Education

The Department of Education (DOE) is dedicated to the commitment to a quality education for all of Hawaii’s children by administration of public and private schools as well as programs such as special needs, gifted/talented, learning centers, Hawaii language, and junior reserve officer training corps programs.

For additional information, please see the [DOE’s website](http://doe.k12.hi.us/).

* + 1. Hawaiian Home Lands

The Department of Hawaiian Home Lands (DHHL) manages the Hawaiian Home Lands trust to develop and deliver lands to native Hawaiians.

For additional information, please see the [DHHL’s website](http://www.hawaiianhomelands.org).

* + 1. Health

The Department of Health (DOH) protects and improves the health and environment for all people in Hawaii. Services include the issuance of vital records, issuing marriage licenses, tracking contagious disease outbreaks, disability/elder care services, and emergency preparedness.

For additional information, please see the [DOH’s website](http://www.hawaii.gov/health)

* + 1. Human Services

The Department of Human Services (DHS) provides programs, services, and benefits for the purpose of empowering those who are the most vulnerable in our State to expand their capacity for self-sufficiency, independence, healthy choices, quality of life, and personal dignity.

For additional information, please see the [DHS’s website](http://hawaii.gov/dhs).

* + 1. Labor and Industrial Relations

The Department of Labor and Industrial Resources (DLIR) is responsible for ensuring and increasing the economic security, well-being, and productivity of Hawaii’s workers.

For additional information, please see the [DLIR’s website](http://hawaii.gov/labor).

* + 1. Land and Natural Resources

The Department of Land and Natural Resources (DLNR) enhances, protects, conserves, and manages Hawaii’s unique and limited natural, cultural, and historic resources held in public trust for current and future generations of visitors and the people of Hawaii in partnership with others from the public and private sectors.

For additional information, please see the [DLNR’s website](http://dlnr.hawaii.gov/).

* + 1. Public Safety

The Department of Public Safety (PSD) provides for the safety of the public and State facilities through law enforcement and correctional management.

For additional information, please see the [PSD’s website](http://hawaii.gov/psd).

* + 1. Taxation

The Department of Taxation (DOTAX) administers tax laws for the State of Hawaii in a consistent, uniform, and fair manner.

For additional information, please see the [DOTAX’s website](http://hawaii.gov/tax).

* + 1. Transportation

The Department of Transportation (DOT) plans, designs, constructs, operates, and maintains State facilities for all modes of transportation including air, water, and land.

For additional information, please see the [DOT’s website](http://hawaii.gov/dot).

1. Overview of Business Processes

The following sections provide a high-level description of the State’s key business processes.

* 1. Current Statewide Chart of Accounts

The State of Hawaii adopted the State Accounting Manual in 1969 with the purpose of supporting the State’s accounting system and to serve as a means of communicating with departments and agencies regarding statewide accounting matters. See Offeror’s Library, State of Hawaii Accounting Manual, Volumes I and II.

The Uniform Accounting Code (UAC) defined in the State Accounting Manual was established with the following objectives:

* To accomplish the statutory and administrative control required of the State’s accounting system concurrently with the classification of financial data;
* To provide a wide range of cost analyses that would be meaningful to various management levels including the Governor, Legislature, and heads of departments and agencies; and
* To facilitate recording accounting transactions efficiently through the appropriate use of electronic data processing equipment.

The UAC supports the processing of all accounting transactions and is comprised of four main structures. The following are the four main sections of the UAC structure and related fields:

* Section I – Control Area
  + - Transaction Code
    - Fund Code
    - Year Code
    - Appropriation Code
* Section II – Organization Area
  + - Department Code
    - Subdivision Code
* Section III – Source of Receipt or Object of Expenditure Area
  + - Source or Object Code
* Section IV – Cost Area
  + - Function Code
    - Location Code
    - Project Code
  1. Current Budget Process

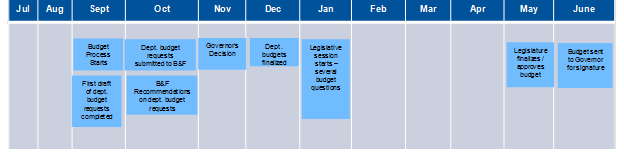
The State of Hawaii has a biennium budget which is updated yearly through a supplemental budget process. The B&F is responsible for working with all of the departments in the State and Legislature in the development and execution of the State’s budget.

Seven B&F budget systems are used in the State budgeting process. Additionally, several departments (e.g., DOT, DOE, and UH) have their own standalone budgeting systems.

* + 1. Preparation

The budget preparation process for the upcoming biennium generally begins in September of the second year of the current biennium (even numbered years). The following timeline provides a high-level depiction of the key tasks required to prepare a new biennium budget. This timeline starts at the beginning of year 2 of the current biennium and ends with the beginning of the new biennium.

1. Budget Preparation Process



In preparation for an upcoming biennium budget process, departments are required to:

* Update their program structure in the eANALYTICAL application including measures of effectiveness, target groups, and program activities. Each department’s approved program structure provides the basis for its upcoming biennium budget request. All department program structures are compiled by the B&F in the State’s Program Structure document.
* Review and update position management information.

Operating budget requests are prepared by departments using Excel. Budget requests included in the Executive Budget Request are summarized by cost element, means of financing, and department. Data from the summaries are used to produce the reports in the Multi-Year Program and Financial Plan (PFP) or the Supplemental Budget and. as appropriate. the budget bill.

After the PFP is compiled, the departments input their detail and summary data, if necessary, at the Program ID/organization code level to reflect the executive budget. The PFP or Supplemental Budget is transmitted to the Legislature 30 days before the start of the legislative session.

After approval of the budget by the Legislature and signature by the Governor, the summary and detail information is updated by the departments to reflect the approved budget.

* 1. Current Accounting and Reporting Process
     1. State DAGS – Core Accounting

The DAGS is currently responsible for statewide accounting functions. The DAGS uses the FAMIS and the FAMIS Data Mart to support its statewide accounting functions. The FAMIS is the financial system of record, and the FAMIS Data Mart is used to support financial reporting for the State.

Asset inventory is maintained in the Fixed Asset Inventory System (FAIS), which is managed by the State Procurement Office. For financial reporting purposes, the State uses a straight-line method of depreciating fixed assets on an annual basis.

* + 1. Departmental – Core Accounting

Due to the lack of detailed information in the FAMIS to perform budgetary analysis and financial reporting, departments have implemented a variety of standalone systems (e.g., manual processes, spreadsheets, and other applications) to meet their financial management requirements. Major departmental accounting systems include the DOE’s Financial Management System (FMS), the DHHL Oracle Financials, the DOT-Airports’ Management Information System, and the DOT–Highways’ Accounting System.

Because of the number of manual workarounds and other applications, the departmental processes to maintain and reconcile financial data typically involves the following:

* Entering financial expenditure and revenue data in departmental systems.
* Submitting encumbrances, expenditures, and internal agency journal vouchers to the DAGS for data entry into the FAMIS.
* Downloading financial transactions from the FAMIS Data Mart for reconciliation with standalone department systems.

Departments manually record fixed assets into the FAIS. On a quarterly basis, a reconciliation report is generated, which compares fixed assets entered into the system with data from the FAMIS. This business process identifies fixed asset purchases based on the object code for the expenditure.

* + 1. Grants Management

No statewide system for tracking grants exists. Departments have implemented a variety of manual processes, spreadsheets, and other applications to meet their business needs for tracking and reporting grant information. The State recently began an interim project to consolidate grant information based on available legacy system resources.

* 1. Current Acquisition Process

The State Procurement Office (SPO) plans, organizes, directs, and coordinates the various procurement activities within its authority under Hawaii Revised Statutes, Chapters 103D and 103F. In addition to providing State procurement policies, specific SPO services include:

* Support for competitive sealed bidding using Invitation for Bids and competitive sealed proposals using Request for Proposals.
* Price/Vendor lists and Western States Contracting Alliance contracts.
* Inventory management and surplus property.
* Procurement training.

Hawaii has broadly delegated authority for procurement to the Chief Procurement Officers in 21 jurisdictions including the Executive Branch. As a result, the acquisition process is highly decentralized, which has resulted in:

* Processes varying between agencies based on their established procurement hierarchies.
* Limited ability to analyze and report on statewide acquisitions.
* Decreased ability for the State to benefit from volume purchases.
  1. Current Human Resource Processes
     1. State DHRD

The DHRD provides various HR (human resource) and payroll and benefits services to Hawaii departments and, in some cases, to other local government entities (e.g., cities and counties).

* Personnel Administration Services*:* TheDHRD maintains the system of record for personnel data for State Executive Branch departments in the PeopleSoft Human Resource Management System (HRMS) version 8.3. PeopleSoft HRMS is not integrated with the State payroll System and duplicate entry is required.
* Recruitment Services: The DHRD provides basic recruitment services for civil service positions for most departments, which includes posting of open positions; initial screening; and background checks. The DHRD utilizes neoGov to support its recruitment process. This system is not integrated with PeopleSoft HRMS and requires duplicate entry of personnel data upon hire.
* Benefits Services: The State Employer Union Health Benefits Trust Fund (EUTF) organization manages health and related benefits for State and county employees. Employees are required to complete separate paper forms for each benefit (e.g., EUTF insurances and other voluntary benefit programs) for initial enrollment and any changes. The manual forms are distributed to the various parties (e.g., EUTF and third-party administrators) for processing.

The DHRD provides voluntary benefits administration services for participating departments and other jurisdictions including initial benefits enrollment and ongoing administration.

Workers’ Compensation*:* TheDHRD manages a self-insured workers’ compensation claims administration program for the State and participating employer groups. The DHRD has significantly customized the HRMS to provide the workers’ compensation claims administration functionality to participating departments. The DOE has a separate workers’ compensation claims administration program.

* + 1. Departmental
* Personnel Administration Services*:* Each department (excluding DOE) keeps a separate hardcopy of employee personnel files, which are manually transferred with the employee when the employee changes position/department. The DOE uses its own standalone HR systems (e.g., eHR and Casual Personnel System). These DOE HR systems provide vital information to support the DOE budgeting business process, which has functionality specific to the K-12 environment.
* Recruitment Services: The Executive Branch departments handle non-civil service recruitments outside of the DHRD’s standalone system; however, job postings may be accommodated for non-civil service recruitments. Additionally, the DOE manages its employee recruitment functions independent of the DHRD in its eHR System.
* Workers’ Compensation Claims Administration: The DOE manages a self-insured workers’ compensation claims administration program for the DOE’s participating employer groups. The DOE has a separate system to meet the requirements of workers’ compensation claims administration for the organization.
  1. Current Payroll Process
     1. State DAGS
* Payroll Services: Payroll is extremely labor-intensive throughout the State. Department personnel manually calculate any changes to the gross pay for each employee and submit the information to Central Payroll in the DAGS for processing. The payroll staff in the DAGS performs audit functions and manually enters the data in the Payroll System to calculate net pay for each employee. A significant pain point for the State is the manual calculation of all retroactive payroll adjustments. The retroactive payroll adjustments must be calculated manually.

The State is currently using a 40+ year old mainframe system to process payroll for all branches of government including the DOE, University of Hawaii, Legislative and Judicial branches, and some charter schools. Payroll is generated for approximately 73,000 full-time and part-time (e.g., casual) employees on a semi-monthly basis. The system generates approximately 64,000 direct deposit transactions and 16,000 checks. Deposits are generated and distributed to employees that participate in the direct deposit process.

A “pseudo-direct deposit” service is available for those employees with accounts at local banks. Central Payroll generates a check and listing of the detailed transactions for the banks located in Honolulu. For employees with accounts at out-of-state banks, Central Payroll generates and mails a check via the U.S. Postal Service. This process takes approximately four to five business days before the deposits are received and recorded in the employees’ accounts. The lack of standard Automated Clearing House direct deposit functionality in the existing Payroll System adds to the lead time required to submit the payroll and ultimately results in a number of payroll adjustments.

The DOD has special requirements to manage payroll for the National Guard during emergency and weekend activations or services by Army and Air Guard Reserves.

* + 1. Departmental
* Payroll Services: The DOE also maintains the Payroll Transaction System to assist with the collection, organization, and consolidation of payroll information prior to being transmitted to the DAGS for processing.
* Time and Attendance: Time and attendance is managed by each department. The work is decentralized to department managers and supervisors. As a rule, there is no automation to support this business process. Information is maintained manually for each employee by pay period. Time reporting is primarily exception-based, and documentation and/or time card information is only required to report overtime for regular employees and actual hours worked for hourly employees.

Reporting labor related to projects and grants is manually tracked by departments in separate timesheets, standalone systems, and through time and motion estimates.

* Leave Management*:* Leave accrual is managed by each department. The work is decentralized to department managers and supervisors. The State currently has overpayment issues and delayed leave reconciliation due to the complexity and manual process for tracking leave accruals.

The DOE has implemented Kronos Time Collection System to maintain leave accounting information. Other departments including the DCCA, DAGS, and DOH have implemented their own original leave management systems. Although there is some automation, maintaining employee leave records remains a labor intensive effort and has resulted in overpayment issues for most departments. Other jurisdictions have implemented similar systems including the Judiciary and HHSC.

1. Overview of Technical Environments
   1. Business Systems/Applications
      1. Budgeting

Currently, there are seven B&F budget systems: Analytical System (eANALYTICAL), Titles System (eTITLES), Capital Improvement Project (eCIP), Budget Development and Information System (eBUDDI), Variance System (eVARIANCE), Crosswalk System (eXWALK), and Revenue Reporting System (eREV). They are web-based applications that reside on the State’s intranet and are available to departmental personnel who have access to the State’s Next Generation Network (NGN).

All systems except eTITLES and eXWALK are utilized by all State departments. Departmental personnel are provided access to each system as requested by their respective organizations. eTITLES and eXWALK are for the B&F’s fiscal staff.

* + 1. Core Financials and Specialized Accounting

The following provides a description of the major financial applications used throughout the State.

1. Statewide Core Financials and Specialized Accounting Applications

| **Statewide Applications** | **Description** |
| --- | --- |
| FAMIS | * State financial accounting and management information system of record. |
| FAMIS Data Mart | * Financial information is stored and reported from the FAMIS Data Mart. |
| Central Warrant Writer | * Central system which produces vendor checks and is managed by the DAGS. |
| Warrant Reconciliation System | * Central repository for all checks cleared through the State Accounting System managed by the DAGS. |
| FAIS | * Provides control and accountability over asset inventories, and maintains information for the preparation of financial statements. |
| Bond Fund System | * Maintains accounting information for all CIP appropriations. The system initially accounted for appropriations funded by bond (e.g., revenue bonds and general obligation bonds) proceeds. The system was later modified to maintain information for all CIP appropriations including those funded by general, special, and federal funds. * The system maintains cumulative (year-to-date) information (e.g., allotment, expenditure, appropriation, and lapse) for CIP appropriations. Data elements in the system include the following:   + - Expending department code.     - Account number.     - Fund code.     - Means of financing.     - User department.     - Law (e.g., Act that appropriated the funds).     - Representative or senatorial district. |

1. Departmental Core Financials and Specialized Accounting Applications

| **Departmental Applications** | **Description** |
| --- | --- |
| DOE - FMS Accounting System | * Financial accounting system for the DOE. |
| DHHL - Oracle Financials | * Financial management system including General Ledger functionality. |
| DCCA – 4GOV (DILOG) Accounting System | * Financial management software solution that is designed for government agencies. In addition to the General Ledger functionality, it provides cash receipt functionality. |
| DLIR - CAS | * Provides grant management functionality for the organization; summary-level information, which is not available in the FAMIS; and integrates all expense categories (e.g., payroll, grants, and purchasing) into a single system. * Time is charged by individual cost categories (e.g., grants, sick leave, vacation, and other types of leave). * With regard to purchasing, the CAS (??) provides several layers of approval by user role. It also tracks all the detail accounting information. |
| DOH - Grants/ Contracts/ Financial Mgmt and Reporting System | * Provides grants, contracts, financial management, and reporting for the organization. |

* + 1. Requisition to Check (Acquisition)

The table below provides several requisition to check (acquisition) applications used throughout the State.

1. Statewide Requisition to Check (Acquisition) Applications

| **Statewide Applications** | **Description** |
| --- | --- |
| HIEPRO (Hawaii eProcurement System) | * HIEPRO is the State's eProcurement system. Executive Branch agencies use HIEPRO for goods, services, and construction when a small purchase request for quotes method of procurement is utilized and the award is estimated at $15,000 or above. |
| **Out of Scope** |  |
| Hawaii Compliance Express | * Expedites for vendors the ability to furnish proof of compliance with vendor requirements including clearances with the IRS, DLIR, DCCA, and State tax offices. |

* + 1. Payroll and Time & Attendance

The table below provides major hire to retire applications that are used throughout the State.

1. Payroll and Time & Attendance Applications

| **Statewide Applications** | **Description** |
| --- | --- |
| DHRD - PeopleSoft HRMS | * State system of record for tracking employee personnel information. |
| DHRD - PeopleSoft Workers’ Compensation | * Workers’ Compensation Claims Administration System processing. The system was custom developed by the State to manage the workers’ compensation claims processing for the State and several other participating organizations. |
| DHRD – NeoGov | * State system of managing recruitments. |
| DAGS - FAMIS Payroll | * State system of record for producing the net payroll for employees. |
| DAGS - Payroll Garnishments | * State system for recording payroll garnishments. |
| **Departmental Applications** | **Description** |
| DOE - Human Resources System (eHR) | * Departmental application used by the DOE as the system of record for personnel. Includes information to support the DOE budgeting process. |
| DOE - Casual Personnel System | * Departmental application used for processing personnel information for part-time (e.g., casual) employees. |
| DOE - Casual Payroll System | * Departmental application used to prepare the payroll transactions for part-time (e.g., casual) DOE employees. Information is transmitted to the DAGS for the production of payroll checks. |
| DOE – Teacher-Substitute Employee Automated System (TSEAS) | * Departmental application used to manage teacher absences and available substitutes. |
| DOE - Payroll Transaction Processing | * Departmental application used to prepare the payroll transactions for DOE employees. Information is transmitted to the DAGS for the production of payroll checks. |
| DOE – Workers’ Compensation | * Departmental application for the DOE used to track the workers’ compensation claims administration. |
| **Jurisdictional Applications** | **Description** |
| Judiciary – Payroll Entry (PENT) | * Jurisdictional application for the courts to prepare payroll transactions for submittal to the DAGS’ Central Payroll. |
| Hawaii Health Systems Corporation | * Lawson financial and payroll applications. |
| University of Hawaii PeopleSoft | * HR and payroll functionality. |

* + 1. Other Specialized Functionality

The table below provides other specialized functionality applications.

1. Other Specialized Functionality Applications

| **Application** | **Description** |
| --- | --- |
| Investments (Great Plains) | * Departmental application for tracking State investments. |
| Cash Management Improvement System | * Departmental application for tracking cash management in the State. |
| Collateral and Securities Inventory | * Departmental application for tracking and maintaining collateral and securities inventory. |
| Bond Allocation Tracking System | * Allows the the B&F’s Financial Administration Division (FAD) to provide the following information:   + - Bond fund expenditures by bond series for the arbitrage consultant.     - Bond fund expenditures by Act for FAD's reporting.     - Bond fund balances to feed into the Bond Investment Pool System, which allocates bond pool interest to the various revenue bond agencies and the General fund for general obligation bond balances. |

* 1. Number of Application Users

See “Appendix I - Number of End Users” for the number of application users.

* 1. Interfaces

See “Appendix H - Interface Requirements” for detailed information on the current interfaces.

* 1. Technical Architecture Layers

The table below provides a summary of the following technical architecture layers:

* Enterprise Collaboration and Messaging.
* Enterprise Information Management.
* Enterprise Application Environment.
* Enterprise Infrastructure.
* Enterprise Information Management.
* Personal Computing.
* Security.

1. Technical Architecture Layers

| Technical Architecture Layers | | Infrastructure Elements |
| --- | --- | --- |
| Enterprise Collaboration and Messaging | E-mail | Lotus Notes, Exchange mail system, Google Mail, and Iron Port Anti-Spam |
| Broadcast, User Messaging, and Social Media | Messaging tools (e.g., Instant Messenger, Mobile Broadcast Messaging, and Twitter) |
| Collaborative Workplaces | SharePoint Portal, Google Apps, Skype for Business |
| Enterprise Information Management | Document Management | iManage, Adobe, DropBox  DBMS, and FileNet |
| Data Management Analytics | ETL Tools and Reporting |
| Geospatial, Graphics, and Imaging | ESRI software/ARCGIS (e.g., ARCInfo, ARCMap, andARCGIS Geoportal |
| Enterprise Application Environment | Enterprise Application Interaction and Integration | Web Services |
| Client/Server Applications | Development Tools |
| Web Applications | Development Tools (Java, .NET, PHP, Perl, and Oracle Forms) |
| Mobile Applications | Development Tools |
| Enterprise Infrastructure | Directory Services | DNS and Active Directory for the Executive Branch |
| Enterprise Systems Management (configuration, performance, capacity, availability, licensing, and patching) | Centralized Active Directory being established for the Executive Branch. |
| Web Portals and Platforms | WordPress Web Content Management |
| Enterprise Servers | IBM, Dell, and HP |
| Hosting Environments | On-premise data centers and server rooms |
|  |
| Enterprise Information Management | Network | IP, MPLS, and DSL |
|  | Video Conferencing | Polycom, Alcatel-Lucent, and Skype |
| Voice Communications | Centrex and VOIP |
| Wireless and Radio | Robust RF radio network and some WiFi |
| Personal Computing | Desktops, Laptops, and Mobile  Devices | Windows, OS-X, IOS, and Android |
|  | User Productivity Software | Microsoft Office and Adobe Creative Cloud |
| Security | Anti Virus/Spam | Endpoint Protection |
| Security (Authentication, Authorization, Credentials, etc.) | Virtual Private Networks, Firewalls, and Group Policies |

* 1. Summary of the State Security Assessment

An assessment of the current information security environment was performed for the State and a high-level summary is presented below:

* Existing facilities and equipment do not adequately support high availability, continuity of operations, and disaster recovery requirements. The State has identified several initiatives to modernize the existing data centers and securely manage technology. In addition, although many departments have made recent investments in workstations, a large portion of the IT infrastructure is running on legacy and outdated hardware.
* The State has undertaken a centralized Microsoft Active Directory initiative with the goal of consolidating services such as Microsoft Office and Sharepoint.
  1. Data Center

In 2011, the SAIC conducted a detailed study of the existing State and departmental data centers. The SAIC data center teams visited 26 departmental data centers, server rooms, server closets, and telecommunications rooms plus two commercial data center facilities (e.g., DRFortress and SystemMetrics).   
  
The assessment reviewed key quality and capabilities of the data centers against industry standard dimensions, security, staffing level, electrical, HVAC, network redundancies, etc. Based on this assessment, the SAIC made two overall recommendations:

* Recommendation 1: Determine Primary Data Center and DR Strategy
* Recommendation 2: Data Center Consolidation
  1. Disaster Recovery (DR)

Some departments have implemented DR for their most critical applications. The following table provides a listing of key departments and their DR functionality.

1. Existing State Data Centers

| **State/ Division** | **Description** |
| --- | --- |
| AG - Crime Prevention and Justice Assistance Division (CPJAD) | * The CPJAD runs the statewide Juvenile Justice Information System application on a mainframe housed at the Honolulu Department of Information and Technology (DIT). The DIT mainframe has a separate DR failover site in Kapolei, which is tested on a regular basis. |
| B&F (ERS/EUTF) | * A Continuity of Operations Plan (COOP) was developed in 2009. The B&F has developed a simplified level of DR, but it recognizes that this DR is not complete or comprehensive; the focus is on offsite storage and recovery of backup tapes. * Both the ERS and EUTF have a vendor recovery contract to restore their systems in a 48-72 hour window. Their processes have been tested and they are performing remediation on failures. |
| DHRD | * The HRMS currently resides on the State’s Government Private Cloud which, in the event of a DR scenario occurring, has failover capability to another on-island site. |
| DOE | * A COOP was developed for the DOE under the recent statewide contracted effort; however, a Business Impact Analysis ( BIA ) has not been conducted. There is no DR Plan in place nor are there locations for DR that can support the necessary power, cooling, and space requirements at this time. |

* 1. Network

The Network Core, NGN, is an MPLS (Multiprotocol Label Switching) Cloud connecting all agencies and remote islands and provides access to Network services which is provided by a connection from the University of Hawaii to the State-run Data Center. Departments are connected through various options including DSL, T1‘s, fiber, etc.

Departments are connected to UH‘s Network Service through a single connection provided by the DAGS’ Information and Communications Services Division (ICSD) via a dedicated Virtual Local Area Network (VLAN) off the NGN.

In most cases, the departments have department-managed internal firewalls supported by department IT staff to protect their organization-specific perimeter. External monitoring is also provided by the ICSD with reporting information being made available to the departments, although few take advantage of it other than to respond to corrective actions. Few of the departments have internal network monitoring capabilities outside of system availability (up/down).

Approximately half of the departments use the ICSD-provided Virtual Private Network services, but some provide their own or do not currently have remote access capabilities. Although a few of the departments have segmented their networks or used VLANs to provide segmentation, few have implemented additional security or firewalls to those zones for added protection and technical separation.

* 1. Current Operational Support

The information technology responsibilities of the State are primarily divided among two (2) organizations:

* Enterprise Technology Services (ETS)
  + - The ETS is led by the State CIO who directly reports to the Governor.
    - The ETS is responsible for modernizing the State’s technology system, providing greater accountability for data and spending, enhancing security and backup measures, and reducing energy usage.
    - The ETS and DAGS have established a working agreement in which the DAGS’ ICSD reports to the ETS.
      * + The ICSD is the only organization within the State whose stated mission is to "comprehensively manage information processing and telecommunication systems and provide services to all organizations.”
        + Approximately 60-70% of ICSD resources are devoted to providing information technology services statewide, while the other 30-40% are devoted to information technology maintenance and operations for the DAGS’ divisions that are the system and data owners (e.g., accounting, payroll, and invoice/warrant).
* Department information technology staff – The department information technology staff is displayed in the table below:

1. Department IT Staff

| Department | Approximate Number of Information Technology Staff |
| --- | --- |
| AG | 50 |
| DOA | 1 |
| B&F | 25 |
| DAGS | 65 |
| DBEDT | 12 |
| DCCA | 18 |
| DOD | 29 |
| DOE | 153 |
| DHHL | 2 |
| DOH | 88 |
| DHRD | 4 |
| DHS | 51 |
| DLIR | 11 |
| DLNR | 10 |
| PSD | 10 |
| DOT | 51 |
| DOTAX | 19 |
| GOV | 1 |