ENTERPRISE ARCHITECTURE (EA) —

A BLUEPRINT FOR CHANGE

APPENDIX A—LINE OF BUSINESS SEGMENT

ARCHITECTURE TRANSFORMATION

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

A. LINE OF BUSINESS SEGMENT ARCHITECTURE TRANSFORMATION

A. LINE OF BUSINESS SEGMENT ARCHITECTURE TRANSFORMATION

This appendix to the State of Hawai`i's Enterprise Architecture (EA) provides additional detail regarding each of the State's Lines of Business (LOB). The intention is to capture and communicate additional detail for each layer of the EA – primarily the Enterprise Business Architecture (EBA), the Enterprise Information Architecture (EIA), and the Enteprise Solutions Architecture (ESA), with increasing levels of alignment with the Enterprise Technology Architecture (ETA) over time; and also to factor in LOB investment initiatives into the Transition and Sequencing (T&S) Plan. The business services provided within each LOB scope are defined; the future state vision for a comprehensive IT solutions architecture to deliver all required business services and functions is described, and the investment initiatives required to achieve the targeted future state for each of the LOB segments is provided. Additional information about each initiative is included in Appendix B of the EA.

This version of an Enterprise Architecture for the State of Hawai`i has addressed business analysis and planning at two levels – first, the state-wide enterprise which established the LOBs, and then secondly, the individual LOBs. The primary accomplishment of this planning function and all associated meetings has been the building of cultural momentum for enterprise solutions and consolidated investment planning. Additional opportunities will exist in the years ahead for specific LOB Business Segments to be analyzed in more detail to expand and provide additional architectural detail to significant priority areas – both Health IT and the ERP business segments are two areas addressed in Section 8.3 that have begun this detailed business segment architecture development. *As the EA content is evaluated and used, recommendations for changes to the LOB architectures will occur and will be addressed as part of an EA change control process going forward.*

Additional planning documents that have been created by the various LOBs are available in a separate Supplemental Addendum to this document. A **hyperlink** to this addendum and the specific LOB information is provided at the end of each LOB area.

A.1   CORE MISSION AREAS

A.1.1   DEFENSE

The State of Hawaii Defense LOB protects and advances the State of Hawaii's interests by rapidly assisting State and County civil authorities in providing for the safety, welfare, and defense of the people of Hawaii. The department maintains its readiness to respond in the event of disasters, either natural or human-caused. The Department of Defense represents a varied mixture of federal, state, Active Guard/Reserve, and drill-status National Guard members. This force totals approximately 5,500 Army and Air National Guard members.

Table 1: Defense LOB Business Services

LOB: Defense Service Name	Service Definition
State Active Duty Activation	The National guard may be activated to State Active Duty by the Governor or the Adjutant General to help respond to domestic emergencies and disasters, such as hurricanes, floods, and earthquakes.

A.1.1.1 FUTURE STATE VISION FOR DEFENSE

The future vision for Defense is to apply state-of-the-art technology to the fullest extent to accomplish the following critical business objectives and to address current state issues.

• Organize, train and equip all Hawaii National Guard units

• Continue to use Federal Department of Defense (DOD) systems, services and infrastructure

• Effective collaboration solutions and protocols for DOD across Federal and State networks that bridges information technologies and communications services to include voice, email/calendaring, and video services, email across DOD executive leadership and staff.

• Integration of State mission critical IT systems to DOD Continuity of Operations (COOP) capabilities.

• With the exception of publishing State Active Duty orders and email/file sharing services during emergency operations, the majority of automated services support for this LOB is obtained from Federal DOD systems.

• Operations and training of all National Guard units both Army and Air Force.

The future state solutions architecture is depicted in Figure 1 below. Key features of this solution include:

• Dual infrastructures for Federal DOD and State.

• "Hawai`i Anywhere" common web and mobile user interface architecture.

- "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
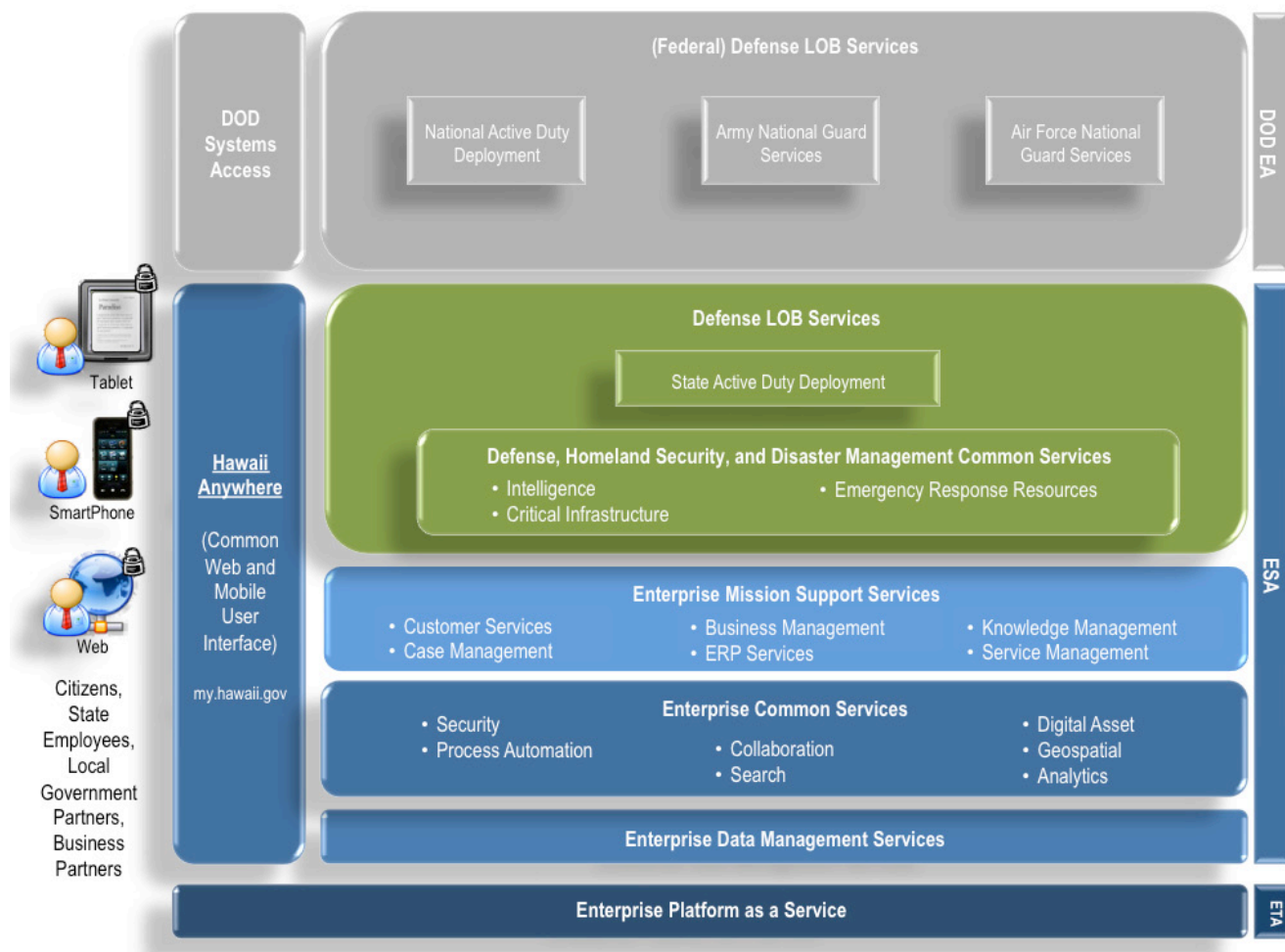
Figure 1: Defense Future State Solutions Architecture

INFORMATION EXCHANGES

- Need for the integration of processing State Active Duty orders with the state payroll and accounting system.

- Need for the integration of day-to-day cross-domain information sharing both within and between departments.

- Need for the integration of emergency response cross-domain information sharing both within and between departments.

A.1.1.2
TRANSITION & SEQUENCING
PLAN SUMMARY FOR DEFENSE

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 2 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 2: Defense LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
Production Alignment:			
EDOPS – Emergency Duty Orders and Pay System.	State Active Duty Orders and Payment System	On-going annual O&M: Pending Review	Status: Replace EA Compliance: 3 Priority: 3
Department of Defense Web Site	hawaii.gov/dod (hosted by ICSD)	On-going annual O&M: Pending Review	Status: Use As-Is EA Compliance: 3 Priority: 3
In Progress:			
None			
New:			
EDOPS – Emergency Duty Orders and Pay System.	State Active Duty – major issue to work State Active duty and then getting paid in a timely manner. No interface with State Accounting. Manual process – Fiscal Officer (Tom) has to specify General Funding $ set aside for special mission – not normal State employ	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Replace with State Active Duty COTS EA Compliance: 3 Priority: 3
LOB Infrastructure:			
In Progress:			
None			
In Progress:			
None			

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 2.

Figure 2: Defense Transition and Sequencing Plan Summary

A.1.2   HOMELAND SECURITY

The Homeland Security line of business protects the state and the nation against terrorist attacks. This includes analyzing threats and intelligence, guarding borders and airports, protecting critical infrastructure, and coordinating responses to emergencies.

Table 3: Homeland Security LOB Business Services

LOB: Homeland Security	Service Definition
Homeland Security Intelligence Collaboration	This is represented by the State all hazard Fusion Center.
Homeland Security & Law Enforcement Support	Key Asset and Critical Infrastructure Protection – involves assessing key asset and critical infrastructure vulnerabilities and taking direct action to mitigate vulnerabilities, enhance security, and ensure continuity and necessary redundancy in government operations and personnel. • Intelligence collaboration within a sensitive zone between Federal, State, and Local entities • Support for significant law enforcement activities • Protection of homeland critical infrastructure • Buffer zone planning
Homeland Security Outreach	Collaboration through Citizen Corp program, private sector, and whole community.
Homeland Security Strategy and Planning	Involves the development of Homeland Security strategy that involves preparedness, protection, mitigation, response, and recovery activities.

A.1.2.1
FUTURE STATE VISION
FOR HOMELAND SECURITY

The future state of Homeland Security for the State would include world class:

• Support for intelligence collaboration

• Security requirements for elevated levels of sensitive information.

The future state solutions architecture is depicted in Figure 4 below. Key features of this solution include:

• Dual infrastructures for Federal DOD and State

• "Hawai`i Anywhere" common web and mobile user interface architecture

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
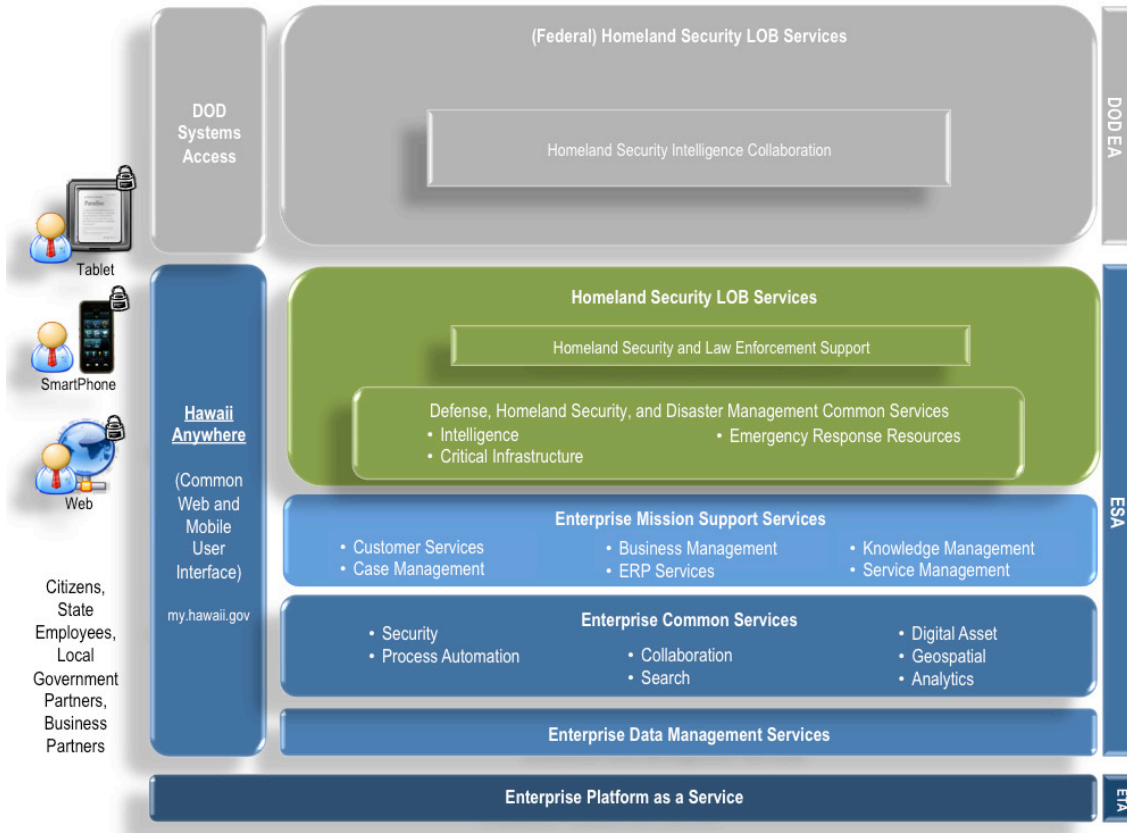
Figure 4: Homeland Security Future State Solutions Architecture

INFORMATION EXCHANGES

• Federal Department of Homeland Security

• Federal Department of Commerce

• US Coast Guard

• Federal Department of Justice

• State and Local Law Enforcement

• All State Agencies

• Private Sector (i.e. utilities, retail associations, tourism, security, malls, etc.)

• State and county emergency management

A.1.2.2
TRANSITION & SEQUENCING PLAN SUMMARY FOR HOMELAND SECURITY

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 4 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 4: Homeland Security LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
Production Alignment:			
None			
In Progress:			
State Fusion Center	The collection, synthesis, dissemination of intelligence information for all hazards.	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 1
Infrastructure and Analysis Function	Continue the assessment of critical infrastructure and prioritization of critical infrastructure for equipment and funding, identification of Group 2 assets (Ports, Harbor, Airport, Hospitals, etc.) development of buffer zone plans, identification of PII private sector activities. Identification and collection of ACAMS/Pacific Disaster Center for the assessment and identification of critical infrastructure. Development of a threat/hazard identification risk assessment on an annual basis.	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 1
Homeland Security Grant Management	Management of Homeland Security grant funding for the State of Hawaii. Includes: Homeland Security funds, emergency management performance grant, pre-disaster mitigation, and others as opportunities arise. Improve the development of internal grant management system that host all the Homeland Security grants with the ability to expand to other grant programs. Development of portal base interagency collaboration tool. Includes: law enforcement, fire, emergency medical, health, public works, emergency management, transportation, private sector.	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 3

Name	Description	Cost	Notes
HRSS – Hawaii Region Secure System	Facilitated by Pacific Disaster Center. SharePoint portal. Requested "Pending Review" from Homeland Security grant to refresh platform. DHS grant funded.	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 3
New:			
None			
LOB Infrastructure:			
In Progress:			
None			
New:			
None			

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 5.

Figure 5: Homeland Security Transition and Sequencing Plan Summary

A.1.3 DISASTER MANAGEMENT

The Disaster Management line of business prepares for, mitigates, responds to, and repairs the effects of all disasters, whether natural or manmade.

NOTE: Need to confirm that the boundaries of Defense LOB, Homeland Security LOB, and Disaster Management LOB are appropriate. These may need to be combined into one LOB. Disaster Management as a LOB has considerable interaction with other areas such as Transportation, Health, etc.

NOTE: The level of sensitive information may restrict LOB business and solutions descriptions.

- The DOD supports Civil Defense activities and provides infrastructure for assigned and volunteer personnel.

- There are Emergency POCs in each of the Departments; regular meetings are conducted with them.

Table 5: Disaster Management LOB Business Services

LOB: Disaster Management Service Name	Service Definition
Civil Defense Infrastructure Management	Continue to develop and improve statewide civil defense infrastructure which emphasizes emergency operating center preparedness; redundancy of systems and multiple means of communication; enhancement of the State siren system and the Emergency Alert System/ Common Alerting Protocol.
Damage Assessment	Assesses the Damage after a Disaster – involves determining the amount of cleanup and restoration activities that will be needed after a disaster. Includes assessing damage to homes, buildings, roads, environmental resources, or infrastructure that may be damaged due to a disaster.
Disaster Mitigation	Disaster Monitoring and Prediction – involves the actions taken to predict when and where a disaster may take place and communicate that information to affected parties. Note: Weather forecasting, while central to Disaster Monitoring and Prediction, is more closely aligned with the "Environmental Monitoring and Forecasting" Sub-function in the Environmental Management Line of Business.
Emergency Communications, Alerts, Notifications	Provide emergency communications, alerts, and notifications using emergency communications systems.
Emergency Management, Response, and Operations	Emergency Response – involves the immediate actions taken to respond to a disaster. These actions include, but are not limited to, providing mobile telecommunications, operational support, power generation, search and rescue, and medical lifesaving actions. This includes the training required to accomplish necessary response activities.
Emergency Preparedness Planning	Disaster Preparedness and Planning – involves the development of response programs to be used in case of a disaster as well as pre-disaster mitigation efforts to minimize the potential for loss of life and property. This involves the development of emergency management programs and activities as well as staffing and equipping regional response centers, and mitigation focused construction and preparation.
Disaster Recovery	Involves the actions taken to permanently recover capabilities and facilities which have been impacted by a disaster. This includes the management of project worksheets for each site which has been identified and validated for recovery funding.

A.1.3.1 FUTURE STATE VISION FOR DISASTER MANAGEMENT

The future vision for Disaster Management is to apply state-of-the-art technology to the fullest extent to accomplish the following critical business objectives and to address current state issues.

• Provide multi-lingual communications in times of emergency.

• DOD acknowledges the need to increase bandwidth across the islands and across the .mil to the State's network to support greater use of video and imaging as part of disaster response.

The future state solutions architecture is depicted in Figure 6 below. Key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
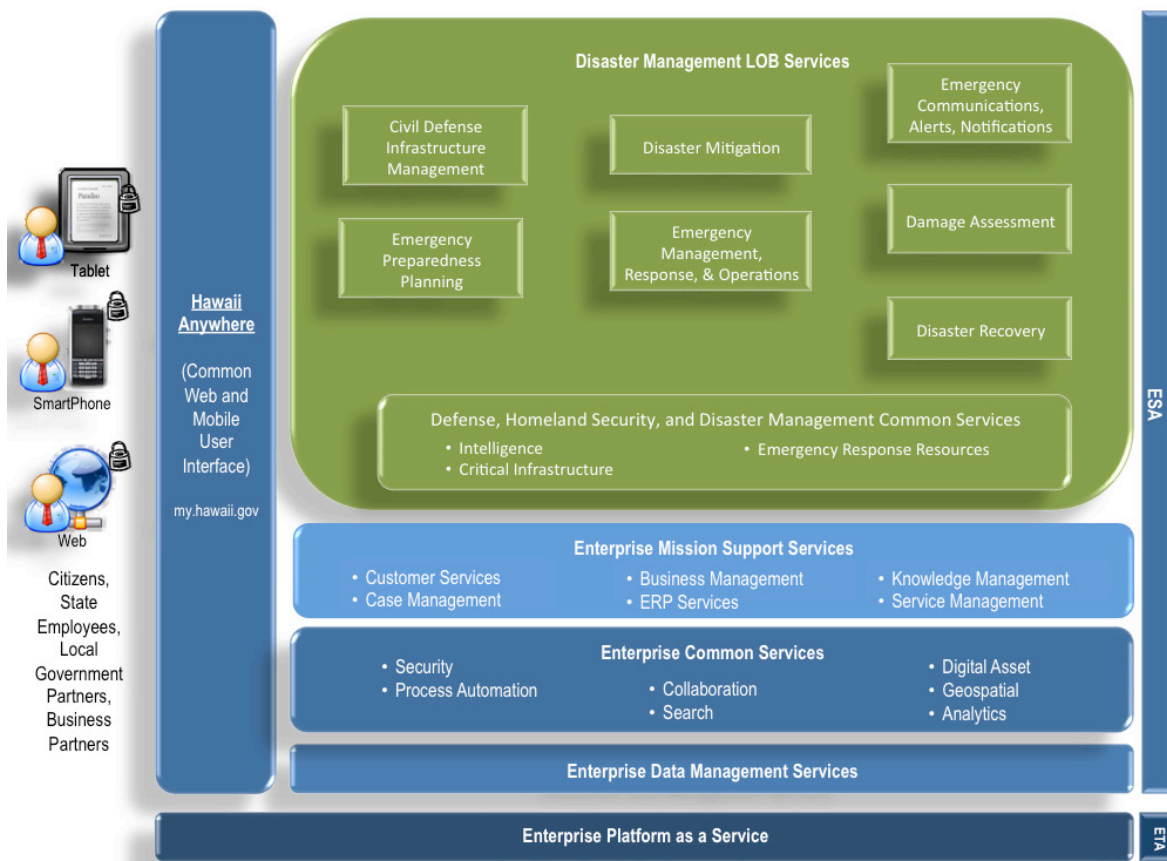
Figure 6: Disaster Management Future State Solutions Architecture

INFORMATION EXCHANGE

• State Department of Defense

• Federal Department of Defense

• State Homeland Security

• Federal Homeland Security

• Citizens of Hawaii

A.1.3.2 TRANSITION & SEQUENCING PLAN SUMMARY FOR DISASTER MANAGEMENT

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 6 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital

content management, and collaboration& email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 6: Disaster Management LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
Production Application Alignment:			
WebEOC – Web-based Emergency Operations Center	Emergency Management key support system. Includes needed data, documentation, collaboration. Enables Request for Assistance – State, counties, etc. Mission response tracking – level tracked, tasking, etc. COTS, developed by ESI – accepted by most States. Training Development	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 1
Command Responder	Developed through Congressional Ad – Fed level, graphics based, GIS like, but not really used.	On-going annual O&M: Pending Review	Status: Retire EA Compliance: 3 Priority: 5
EAS/CAP – Emergency Alert System	V/Radio. Have special client to send out notifications. EAS customized. CAP Server – off the shelf. CAP – Common Alerting Protocol, standardized messaging format.	On-going annual O&M: Pending Review	Status: Upgrade EA Compliance: 3 Priority: 1
HRSS – Hawaii Region Secure System	Facilitated by Pacific Disaster Center. SharePoint portal. Requested "Pending Review" from Homeland Security grant to refresh platform. DHS grant funded.	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Upgrade EA Compliance: 3 Priority: 1
VTC - Video Teleconferencing	Support of statewide disaster response activities.	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Upgrade EA Compliance: 3 Priority: 1
Hawaii Tsunami Evacuation Zone Maps	This application is based on recent scientific analysis by the University of Hawaii that utilizes bathimetry data with GIS presentations. The State interaction points include the U of H, NOA, Insurance Companies, and .County Emergency Management Agencies www5.hawaii.gov/tsunami (hosted by ICSD)	On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 1
Mobile Emergency Response Command Interface (MERCI)	MERCI – Mobile Emergency Response Command Interface – Damage Assessment – iPhone app. Information is used to assist and evaluate the amount of damage sustained to determine if a Presidential declaration is warranted. Initially supported by a Federally funded Hi-Tech Grant which OceanIT received in collaboration with the Hawaii State Civil Defense.	On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 1
ESRI GIS	GIS Applications - Use of off-the-shelf ESRI products to support situational mapping. (ARC INFO)	On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 1

Name	Description	Cost	Notes
Strategic Telecom Reserves	Federally Funded initiative to establish capacity to employ reserve systems to enhance or restore communications support. Reserves include: (1) Transportable repeater interoperable communications (TRIC) fielded low site cross band repeater capabilities. (2) Broadband Global Access Network (BGAN) SAT phones/data terminals to provide State-Wide communications. (3) Sixty (60) unit radio cache establish to access the State shared blended 700/800 MHz trunk radio system.	On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 1
Emergency Backup Satellite Phone System	Push to talk, satellite based radio network which ties the State Emergency Operating Center to all county Emergency Operating Centers and County warning points (Police Dispatch) State-Wide	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Upgrade EA Compliance: 3 Priority: 1
In Progress:			
None			
New:			
State Wide Disaster Warning System Modernization (Outdoor Siren System)	State Wide Disaster Warning System Modernization (Outdoor Siren System)	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 1
Incident Command Information Reporting System Implementation	An incident command information system to support public safety and other incident responders. Leverages public safety broadband initiatives (firstNet). This system will include field /mobile access devices that provide situational status reports to enable real-time data collection at remote sites that integrates across state agencies. Public Safety and Disaster Response information systems. Deployment of Mobile Technology and High Speed Wired and Wireless Networks.	One-time DME: Pending Review On-going annual O&M:Pending Review	EA Compliance: 3 Priority: 1
LOB Infrastructure:			
In Progress:			
None			
In Progress:			
None			

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 7.

Figure 7: Disaster Management Transition and Sequencing Plan Summary

A.1.4 LAW ENFORCEMENT

The purpose of the Law Enforcement LOB is to uphold justice and public safety by providing law enforcement services to Hawaii's communities with professionalism,integrity and fairness.

Table 7: Law Enforcement LOB Business Services

LOB: Law Enforcement Service Name	Service Definition
State Law Enforcement	Carries out law enforcement services statewide; Preserves the peace by protecting all persons and property within premises under the control of the Judiciary and all State facilities; providing process services and execution of court documents; handling detained persons; and providing secure transportation for persons in custody. Provides law enforcement services at various stages of the criminal justice system and at the Honolulu International Airport and a number of public hospitals. Assists the Department of Transportation Harbors Division with security and law enforcement functions.
Narcotics Enforcement	Protects the public by enforcing laws relating to controlled substances and regulated chemicals. Responsible for the registration and control of the manufacture, distribution, prescription, and dispensing of controlled substances and precursor of essential chemicals within the State.

A.1.4.1
FUTURE STATE VISION FOR LAW ENFORCEMENT

The systems used by this line of business are antiquated and most of their applications are over 10 years old. This LOB is in need of modernizing and upgrading their applications with migration and increased use of web applications and open source systems. Currently, all applications are developed in MS Access or Visual Studio and need to migrate to Web 3.0. Remote access to systems and document sharing is important for this LOB. The future state for this LOB includes the following considerations:

• The Justice Reinvestment Initiative (JRI) to review Hawai'i's criminal justice system has just begun; The Public Safety Department is trying to solve the problem of a lack of a common system for law enforcement and corrections; some data is being collected by PSD while some is reported by contractors. However, there is central collection of data. A central database is needed. A

Data Sharing Focus Group is identifying statute changes to address the blockage of pertinent information which is contributing to the problem.

• Expand the use of server virtualization

• Investigate Cloud solutions for some services

• Work with Hawai'i Broadband Initiative to migrate PSD frame relay sites to high-speed connections

n electronic records management system would result in savings in paper, time, space, and create overall efficiencies in the work force

• Need automatic software upgrades across the board

• Need more help desk support; current backlog of 60 calls

The future state solutions architecture is depicted in Figure 8 below. Two key features of this solution include:

• "Hawai'i Anywhere" common web and mobile user interface architecture.

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.

INFORMATION EXCHANGES

• Interfaces with all State departments and State judicial buildings to provide assistance with necessary security through law enforcement.

• Partners with the Federal government: U.S. Probation/Pretrial Services, U.S. Attorney Offices, Immigration and Naturalization.

• Partners with various city, county, community, and private agencies through contracts and volunteer services to provide additional services for both staff and inmates.

• Interfaces and collaborates with HCJDC regarding Hawai'i Justice Information System
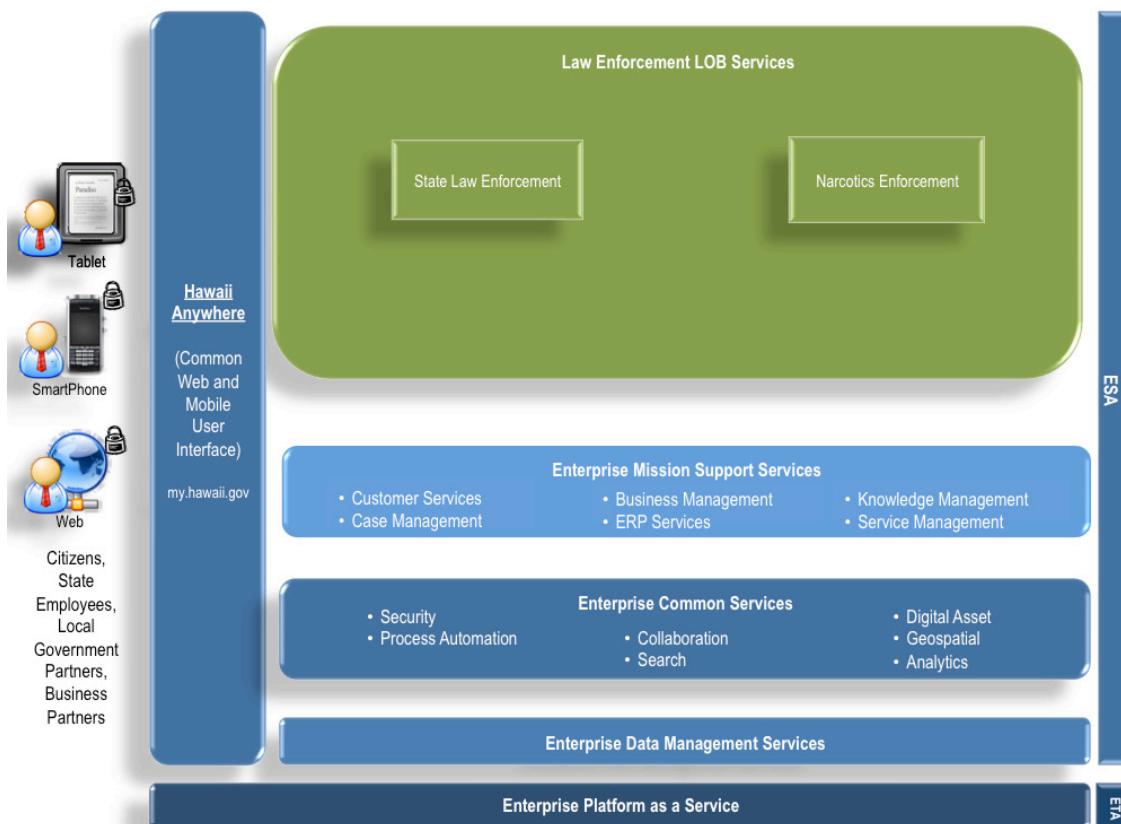
Figure 8: Law Enforcement Future State Solutions Architecture

A.1.4.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR LAW ENFORCEMENT

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 8 below.

• Initiate NED's controlled substance prescription monitoring database (Electronic Medical Records) to authorize physicians to have 24/7 access to improve patient treatment and deter attempts to visit multiple physicians to fraudulently obtain controlled substances (to be released soon).

• Need a solution to address the sun setting of XP in 2014

• Justice Reinvestment Initiative: This LOB is currently in the beginning phases of the Justice Reinvestment Initiative (JRI), which will review Hawaii's criminal justice systems by:

– Collecting and examining data that drive prison admissions and the length of time that the offenders are incarcerated

– Identify strategies to reduce overall prison population

– Identify high risk offenders

– Quantifying the number of programs slots available

– Identifying strategies to improve the effectiveness of supervision by probation and parole staff

– Examining the extent to which probation and parole revocations are using the best practices to respond to violations

– Examining the reported crime and arrest trends and engaging law enforcement agencies

– Examining any crime labs backlogs

– Mapping out geographically where crime is occurring can help to target hot spot areas

– Determine what percent of those arrested are on probation and parole at the time of their arrest and strengthening collaboration and data sharing among police, probation and parole.

• This initiative can be augmented by the State's segment architecture methodology to assess and recommend needed restructuring of the current systems to achieve the new strategic direction.

Table 8: Law Enforcement LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
Production Application Alignment:			
Department of Public Safety - Training and Staff Development	hawaii.gov/psd/tsd (hosted by ICSD)	Annual O&M: Pending Review	Status: Use As Is Priority: Medium EA Compliance: Medium
Crime Victim Compensation Commission	hawaii.gov/cvcc (hosted by ICSD)	Annual O&M: Pending Review	Status: Use As Is Priority: Medium EA Compliance: Medium
Department of Public Safety Web Site	hawaii.gov/psd/ (hosted by ICSD)	Annual O&M: Pending Review	Status: Replace Priority: Medium EA Compliance: Medium
Records Management System	Incident Reporting to Sheriffs - Recently Implemented with new DB and WEB App.	Annual O&M: Pending Review	Status: Use As Is Priority: Medium EA Compliance: Medium

Name	Description	Cost	Notes
In Progress:			
None			
New:			
None			
LOB Infrastructure:			
In Progress:			
None			
New:			
None			

TRANSITION AND SEQUENCING

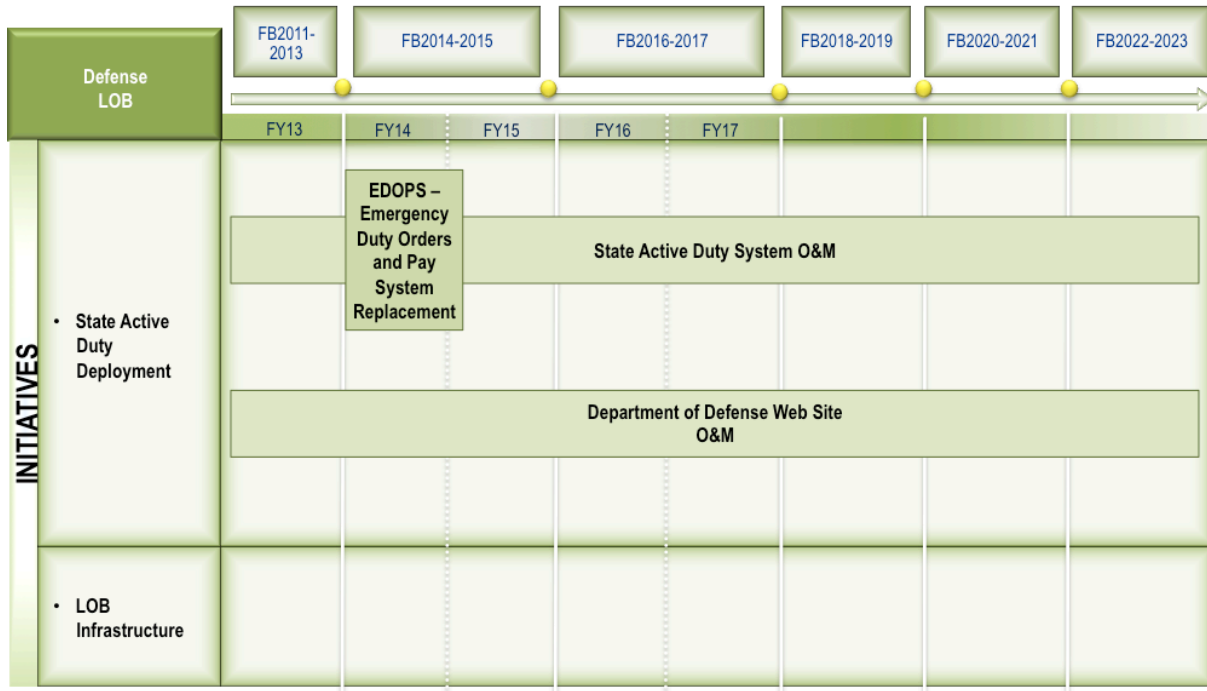The plan for transition and sequencing of initiatives is depicted below in Figure 9.
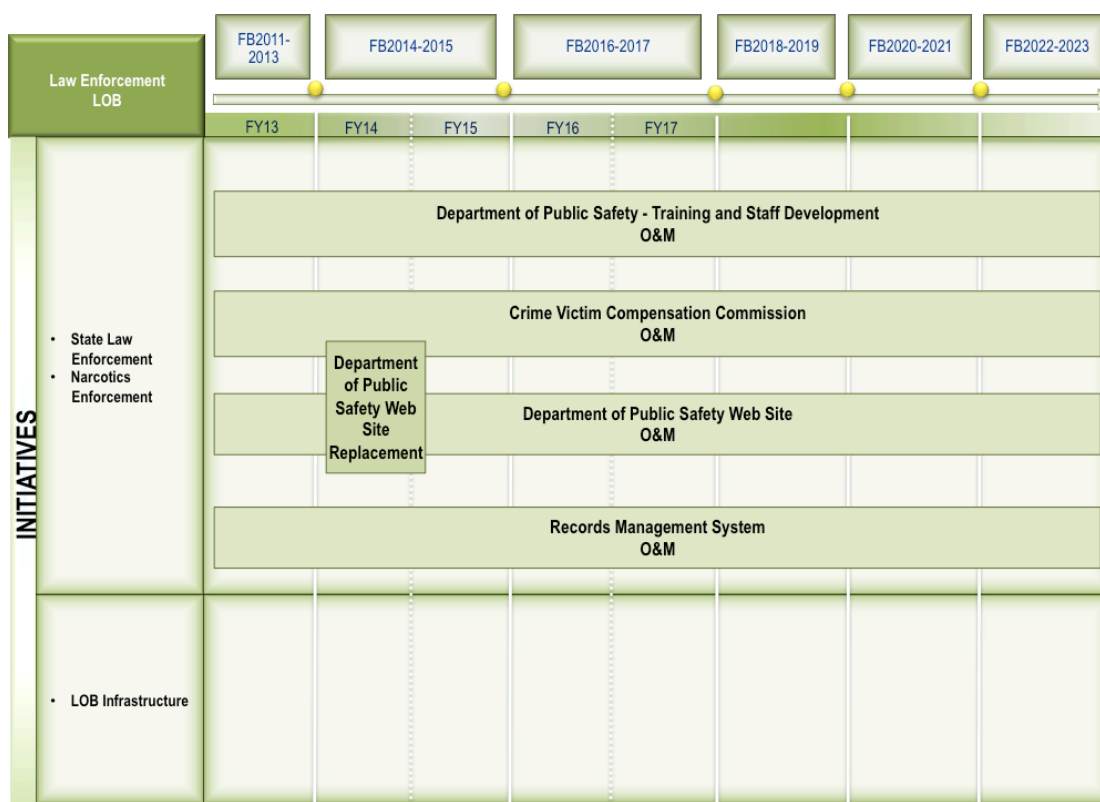
Figure 9: Law Enforcement Transition & Sequencing Plan Summary

A.1.5 CORRECTIONAL ACTIVITIES/PUBLIC SAFETY

The Correctional Activities/Public Safety LOB provides services for correctional activities to Hawaii's prison population and communities with professionalism, integrity and fairness.

Table 9: Correctional Activities/Public Safety LOB Business Services

LOB: Correctional Activities/ Public Safety Service Name	Service Definition
Community Supervision of Offenders	Responsible for community supervision of offenders in each of the four counties. Provides pretrial evaluations, assessments, and supervision. Provides evaluations, assessments of sentenced felons returning to the community.
Community-based Mental Health Programs	Oversees prison and jail diversion programs throughout the state and works closely with the Courts and the Adult Mental Health Division of the Department of Health in an effort to divert offenders with mental health needs to appropriate community-based programs. Note: this is an interface to Health.
Community-based Mental Health Programs	Oversees prison and jail diversion programs throughout the state and works closely with the Courts and the Adult Mental Health Division of the Department of Health in an effort to divert offenders with mental health needs to appropriate community-based programs. Note: this is an interface to Health.
Corrections Program Services Management	Coordinates the various programs available to inmates in the correctional facilities and offenders in the community. Implements and monitors a variety of programs, aimed at providing inmates with education, workforce development, nutrition, religion, substance abuse counseling, and sex offender treatment.
Courts and Law Enforcement	Coordinates with all courts and other law enforcement agencies, both state and federal, to ensure that all appropriate documentation is obtained to compute all inmates sentences accurately and in a timely manner and oversees the Public Safety policy and practices on sentence computation. Trains Public Safety Staff in proper sentence computation. Insures that sentences imposed by the Courts are properly applied during the offenders' incarceration time.
Departmental Staff Training	Continually train department staff in policy and practices and best practices for Corrections.
Inmate Classification	Monitors statewide custody designations and facility placement of inmates in accordance to Policies and Procedures to ensure uniformity in its application and integration into the operations of statewide correctional facilities.
Inmates Health Care Program	Develop and maintain health care programs involving both in-house and community resources (public health, private and contract specialty care providers and volunteers) for all correctional facilities.
Inmates Vocational Rehabilitation	Provides a vocational rehabilitation program in Hawaii's correctional facilities that provides real world work experience to inmates, teaching them transferable job skills and a positive work ethic to help them prepare for post release, reentry, and employment in the community. The ultimate goal is to return an economically self-sufficient individual to the community who will be able to immediately join the work force and become a productive, law-abiding member of society.

LOB: Correctional Activities/ Public Safety Service Name	Service Definition
Prison Management	Overseeing the following three prisons: Halawa Correctional Facility, Waiawa Correctional Facility, and Women's Community Correctional Center
Re-Entry Services	Oversees the Public Safety Re-Entry and transition services. Works collaboratively with PSD and other external agencies to improve case management services for offenders. This includes improved evaluation and assessment techniques and application for case management and proper data management source to better serve the offenders.
SAVIN - State Automated Victims Information Network	Offers victims and concerned citizens free, anonymous, and confidential access to timely information and notification 24-hours a day, 365 days a year on the custody and parole status of offenders under the jurisdiction of the State Of Hawai'i.

A.1.5.1
FUTURE STATE VISION FOR CORRECTIONAL ACTIVITIES/PUBLIC SAFETY

The near term vision is to upgrade applications to add new functionality and replace legacy desktop computers. Additionally, the future state vision includes the following considerations:

• All applications currently developed in MS Access or Visual Studio need to be upgraded to support Web 3.0 and current database technology.

• Use the Statewide Automated Victim Information Notification (SAVIN) application as a model for redesigning other applications used by this LOB. It is web-based application that gives victims and the public the ability to register to receive notifications when an inmate is moved or released. It is available 24x7 and notifies subscribers either by phone or email. The system also checks that data is being sent on a timely basis to ensure the data is current.

•Need to update systems so they can status the overall prison population (location, health, prison records, etc.) and meet the Electronic Medical Record federal directives for meaningful use.

• This LOB has a critical need for a system to use swipe cards when entering/leaving facilities to determine hours worked and provide for grace period or mechanism to prevent erroneous overtime to be automatically generated and tie to time sheets

for authorization. Note: a system like this could also meet the needs of the Law Enforcement LOB.

• More real-time data is needed in most of the systems used by this LOB, especially Offender Track.

• The Justice Reinvestment Initiative (JRI) is on-going to improve justice systems across the state in conjunction with federal initiatives which will provide for improved data sharing.

• Expand the use of server virtualization to reduce costs.

• Investigate Cloud solutions for some services.

• Work with Hawai`i Broadband Initiative to migrate PSD frame relay sites to high-speed connections.

• An electronic records management system would result in savings in paper, time, space, and create overall efficiencies in the work force.

• Need automatic software upgrades across the board.

The future state solutions architecture is depicted in Figure 10 below. Two key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
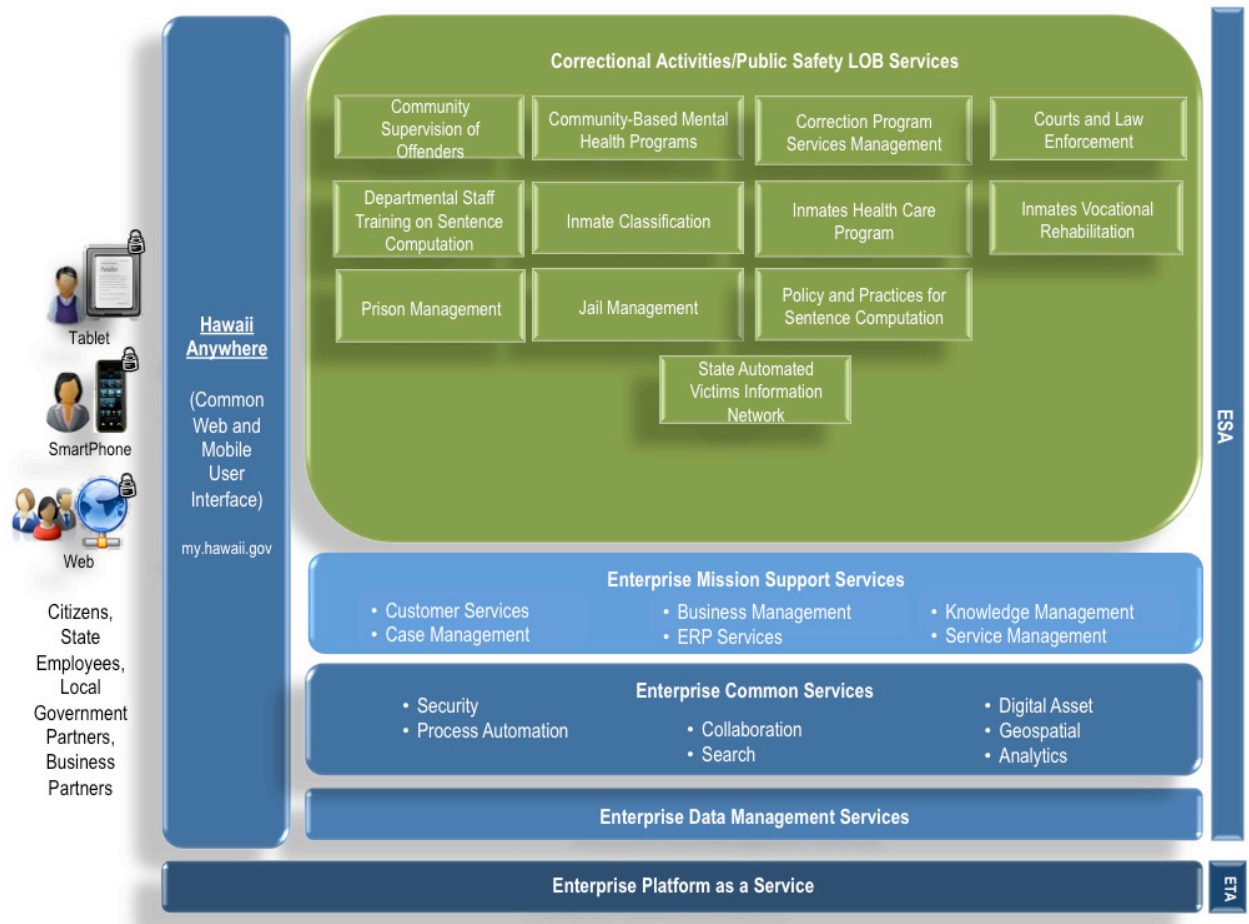
Figure 10: Correctional Activities/Public Safety Future State Solutions Architecture

INFORMATION EXCHANGES

• Correctional Activities partners with the Federal government: U.S. Probation/Pretrial Services, U.S. Attorney Offices, Immigration and Naturalization.

• Partners with various city, county, community, and private agencies through contracts and volunteer services to provide additional services for both staff and inmates.

• Interfaces and collaborates with HCJDC.

• Need more information sharing with other agencies and within the Department from medical services to inmate re-entry.

A.1.5.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR CORRECTIONAL ACTIVITIES/PUBLIC SAFETY

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

Near term projects include the following:

• Electronic Medical Records (eClinical Works) for Inmate Healthcare Program

• Installation of new Video conferencing equipment.

• Upgrading "Offendertrak " to accept gang information

• Pursuing replacements for older PCs

The needed initiatives for the LOB solutions and infrastructure are outlined in Table 10 below.

Table 10: Correctional Activities/Public Safety LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
Production Application Alignment:			
Statewide Automated Victim Information Notification (SAVIN)	Victims can register to receive notifications of when an inmate is moved or released, the system uses automatic emails, and notifies data owners if their data has not been updated in a timely manner (hosted by APPRISS)	Annual O&M: Pending Review	Status: Use As Is Priority: Medium EA Compliance: Medium
Department of Public Safety - Training and Staff Development	hawaii.gov/psd/tsd (hosted by ICSD)	Annual O&M: Pending Review	Status: Retire Priority: Low EA Compliance: Medium
Crime Victim Compensation Commission	hawaii.gov/cvcc (hosted by ICSD)	Annual O&M: Pending Review	Status: Retire Priority: Low EA Compliance: Medium
Department of Public Safety Web Site	hawaii.gov/psd/ (hosted by ICSD)	Annual O&M: Pending Review	Status: Retire Priority: Low EA Compliance: Medium
PSD Integrated Web Site	Web site integration Public Safety, Correctional Activities, and Law Enforcement (HTTP://Hawaii.gov/psd) replace three previous Web sites. ICSD	Annual O&M: Pending Review	Status: Use As IsPriority: High EA Compliance: Medium
Inmate Trust Account System	Individual inmate monetary accounts - Oracle 9 been around since 2000	Annual O&M: Pending Review	Status: Use As Is Priority: High EA Compliance: Medium
Intake Service Center System	Offender intake data capture, evaluation, and selective tracking - SQL DB C/S	Annual O&M: Pending Review	Status: Use As Is Priority: High EA Compliance: Medium
Hawaii Paroling Authority	Board decision making regarding setting of minimums and conditional release from prison; Community supervision and case management; revocation information - Currently an Access DB - Replace with SQL	One-time DME: Pending Review Annual O&M: Pending Review	Status: Replace Priority: High EA Compliance: Medium
POEMS	Personnel Operations Employee Management System - imports info from HRMS (DHRD)	Annual O&M: Pending Review	Status: Replace by ERP Priority: High EA Compliance: Medium
TAU-OCCC	Time & Attendance	Annual O&M: Pending Review	Status: Replace

Name	Description	Cost	Notes
			by ERP Priority: High EA Compliance: Medium
TAU-HCF	Time & Attendance	Annual O&M: Pending Review	Status: Replace by ERP Priority: High EA Compliance: Medium
TAU-WCCC	Time & Attendance	Annual O&M: Pending Review	Status: Replace by ERP Priority: High EA Compliance: Medium
TAU-HCCC	Time & Attendance	Annual O&M: Pending Review	Status: Replace by ERP Priority: High EA Compliance: Medium
TAU-CPS	Time & Attendance	Annual O&M: Pending Review	Status: Replace by ERP Priority: High EA Compliance: Medium
FIS	Financial Information System (Purchase Order Management)	Annual O&M: Pending Review	Status: Replace by ERP Priority: High EA Compliance: Medium
In Progress:			
eClinical Works	Electronic Medical Records	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: Medium
New:			
Gang Information	Upgrading Offendertrak to accept gang information	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High (2) EA Compliance: Medium
LOB Infrastructure:			
In Progress:			
RCUH Networking	Increase the bandwidth of all PSD facilities; some sites on the network at all	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: Medium

Name	Description	Cost	Notes
HPA-VCC	Installation of new Video conferencing equipment	One-time DME: Pending Review Annual O&M: Pending Review	Priority: Pending Review EA Compliance: Pending Review
New:			
PC Upgrade	Rotate older PC with new PC and standards	One-time DME: Pending Review Annual O&M: Pending Review	Priority: Medium-High EA Compliance: High

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 11. These initiatives include:

• Expanding our database, Offendertrak, to include gang information.

• Currently implementing a database to track medical information for offenders.

• Continue to improve our network connection with the facilities.

In addition, Correctional Activities/Public Safety LOB solutions have critical needs for the following new Enterprise-wide Solutions:

• Robust st email system that enables mobile access and integrates easily with enterprise systems

• Enterprise Data Management Services - robust database servers with data definition and data warehouse services

• Platform as a Service to support server virtualization

• Improved network and security services.
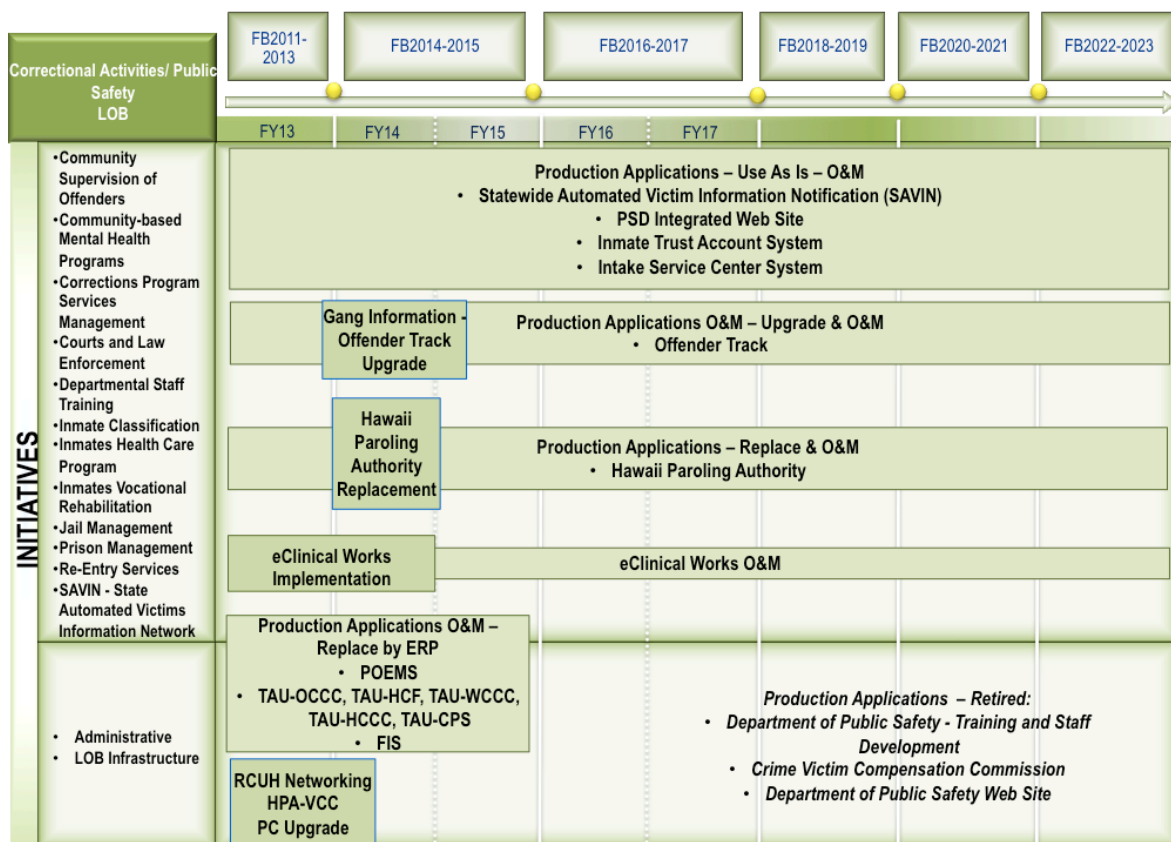
Figure 11: Correctional Activities/Public Safety Transition & Sequencing Plan Summary

A.1.6 LEGAL SERVICES

The Legal Services LOB provides legal and other services to the State, including the agencies, officers, and employees of the executive, legislative, and judicial branches of the Hawaii government. In addition, the Office of Public Defender provides legal services to indigent persons needing legal assistance.

NOTE: These two business services are organized in two separate departments (Executive Branch Legal Representation in the Department of the Attorney General and Public Defender in the Department of Budget and Finance). The IT needs are similar enough for joint consideration in one Line of Business but the significant separation of organizational responsibility makes the common direction problematic.

Table 11: Legal Services LOB Business Services

LOB: Legal Services Service Name	Service Definition
Executive Branch Legal Representation	Provides advice and counsel; legal representation. A law firm for the State. Conducts client discussions, surfaces problems, performs research, and provides advice, communications, provides a significant amount of litigation. Represents Governor, Legislature, and Departments. Provides mostly defense. Represents all of State Government.
Public Defender	Implements Federal and State constitutional mandates that any indigent person charged with a criminal offense or threatened with the loss of liberty shall be provided with the assistance of legal counsel.

A.1.6.1
FUTURE STATE VISION THE LEGAL SERVICES

The future State vision needs to correct some of the following problems:

• Legal Services operates like a very large law firm (170 attorneys), legal management tools like calendaring/scheduling across the line of business is currently non-existent. Need calendar/scheduling software (something with the functionality of TimeMatters to provide reminders for complaint/answer dates)

• There are issues with storing documents in native formats causing difficulty locating information and document retrieval due to the fact that searching does not work well in current COTS (e.g. iManage).

• Attorneys need remote access to case documents. Many attorneys work from remote locations or home as needed. There are barriers such as, lack of appropriate security measures and current policies that prevent this capability.

• Want to become a paperless office but need to think through the impacts; the goal should be an all-digital, paperless environment. There are challenges with tying information to case documents.

• Need to look at moving to better legal services' software packages that support trial documentation, research support, and practice management. (This LOB is heavily dependent upon COTS products, iManage and ProLaw. iManage has significant customization built on it inhibiting upgrades.)

• Confidentiality and security are serious concerns for this Department; eDiscovery, digital signatures, etc.

The IT needs for the attorneys and legal support within this Line of Business envisions an aggressive use of the most current professional tools and technologies. The future state solutions architecture is depicted in Figure 48 below.

• A mobile environment that fully supports the attorneys providing access to case files, research and real-time access to court calendars, reports, and orders – future state implementation depends on the Hawaii Anywhere vision – the common user interface supporting any access device

• A near paperless environment supported by reliable privacy and security services that provide access to case files and court records as needed by the attorneys – future state implementation depends on the enterprise digital asset (document) management service, and the enterprise security service providing role-based access control and the enterprise data management services providing data/information security markings

• The use of digital signatures, digitized case files, storage and retrieval services that facilitate the paperless vision – future state implementation depends on the enterprise digital content management service. Further, since the legal services LOB serves every other LOB in the state, it is imperative that this LOB provide legal interface services, refined over time, to every other LOB.
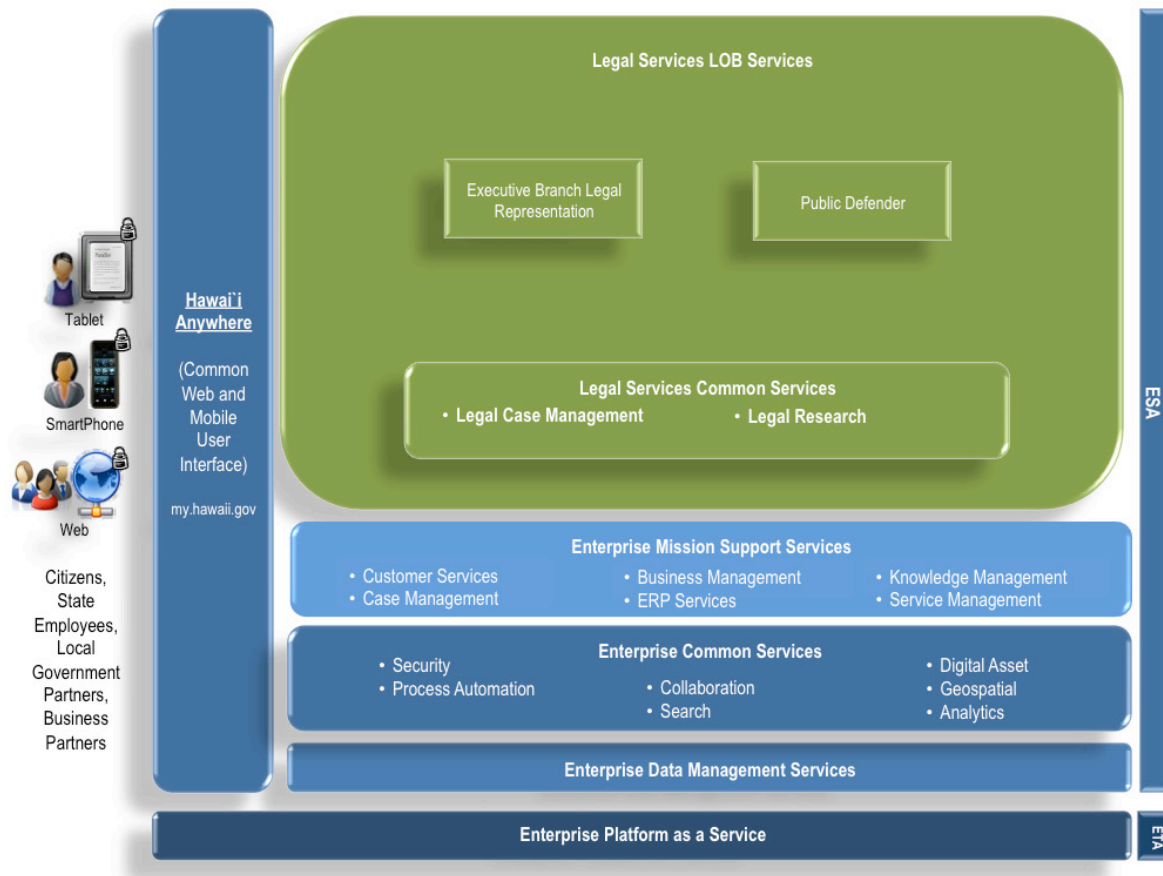
Figure 12: Legal Services Future State Solutions Architecture

INFORMATION EXCHANGES

• AG Legal Services interfaces with all other Departments in the State plus the Governor's office and the Legislature; Information consists of case records, legal memos, legal service requests.

A.1.6.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR LEGAL SERVICES

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 12 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 12: Legal Services LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
In Progress:			
Upgrade ProLaw	Upgrade Case Management System from ver. 9.6 to ver. 11 (support for existing version ended in Dec. 2011)	One-time DME: SW: Pending Review + 900 hours Annual O&M: SW: Pending Review + 100 hours	Priority: High EA Compliance: Low
Legal Services Case Management Software	Procure new case management software for legal services	One-time DME: Pending Review + 2000 hours Annual O&M: Pending Review + 100 hours	Priority: High EA Compliance: Low
New:			
Upgrade iManage	Upgrade Document Management System from ver. 8.0 to ver. 9.0.	One-time DME: Pending Review + 900 hours Annual O&M: Pending Review + 100 hours	Priority: Medium EA Compliance: Low
Litigation Support Software	Acquire New Litigation Support Software (i.e., Summation) 9.0.	One-time DME: Pending Review + 2000 hours Annual O&M: Pending Review + 100 hours	Priority: Medium EA Compliance: High
Westlaw	Legal Research Software	One-time DME: Pending Review Annual O&M: Pending Review + 100 hours	Status: Keep for Now & Use As Is; Plan for Future Replacement Priority: Medium EA Compliance: Low
AG Website	Department's Public Web Site (hosted by ICSD)	One-time DME: Pending Review Annual O&M: Pending Review	Status: Keep for Now & Use As Is; Plan for Future Replacement Priority: Medium EA Compliance: Low
Charities Website	Charity Registration System (developed and hosted by HIC)	One-time DME: Pending Review Annual O&M: Pending Review	Status: Keep for Now & Use As Is; Plan for Future Replacement Priority: Medium EA Compliance: Low
Legal Services Case Manager and eDiscovery	Modernize Legal Services Case Management System. Implement integration of digital imaging, case management, and email services for full picture of a case content manager. Implement a consistent and integrated capability using electronic legal services and document management system to maintain all documents and files related to a legal case.	One-time DME: SW: Pending Review + 2000 hours Annual O&M: Pending Review + 200 hours	Status: Plan for Future Replacement Priority: Medium EA Compliance: High

Name	Description	Cost	Notes
LOB Infrastructure:			
In Progress:			
Upgrade PCs for Legal Services	Acquire 389 Dell Optiplex PCs (i5, Windows 7).	One-time DME: Pending Review + 2000 hours Annual O&M: Pending Review + 200 hours	Priority: High EA Compliance: Low
Enable Mobility for Deputies	Acquire 16 Dell Latitude E6320 & MacBook Airs for Mobility	One-time DME: Pending Review + 200 hours Annual O&M: Pending Review + 100 hours	Priority: High EA Compliance: Low
Upgrade Standalone Servers for Legal Services Program	Upgrade & Virtualize Existing Servers	One-time DME: Pending Review + 200 hours Annual O&M: Pending Review + 100 hours	Priority: High EA Compliance: Low
New:			
Upgrade Microsoft Office	Upgrade Microsoft Office 2003 to Microsoft Office 2010	One-time DME: Pending Review + 200 hours Annual O&M: Pending Review	Priority: High EA Compliance: Medium
Upgrade Network Printers	Replace Existing HP 4100 B/W Network Printers	One-time DME: Pending Review + 200 hours Annual O&M: Pending Review + 100 hours	Priority: Medium EA Compliance: Low

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 13: Legal Services Transition and Sequencing Plan SummaryFigure 13. In addition, Legal Services LOB solutions have critical needs for the following new Enterprise-wide Solutions:

• More robust email system (than Lotus Notes) that enables mobile access (attorneys must have access to email at all times) and integrates with ProLaw and iManage; this is a dire need.

• Need to upgrade to latest versions of iManage and ProLaw (support for current version ended in December 2011); caution – there are issues in later versions of ProLaw that require administrative rights to Lotus Notes in order for the new versions of ProLaw to work with Lotus Notes. ICSD has to grant rights and is not satisfied with documentation from the ProLaw vendor; ProLaw does not have many accounts using Lotus Notes.

• Need to upgrade to Microsoft Office 2010 before support for our existing Microsoft Office 2003 release ends in 2014.
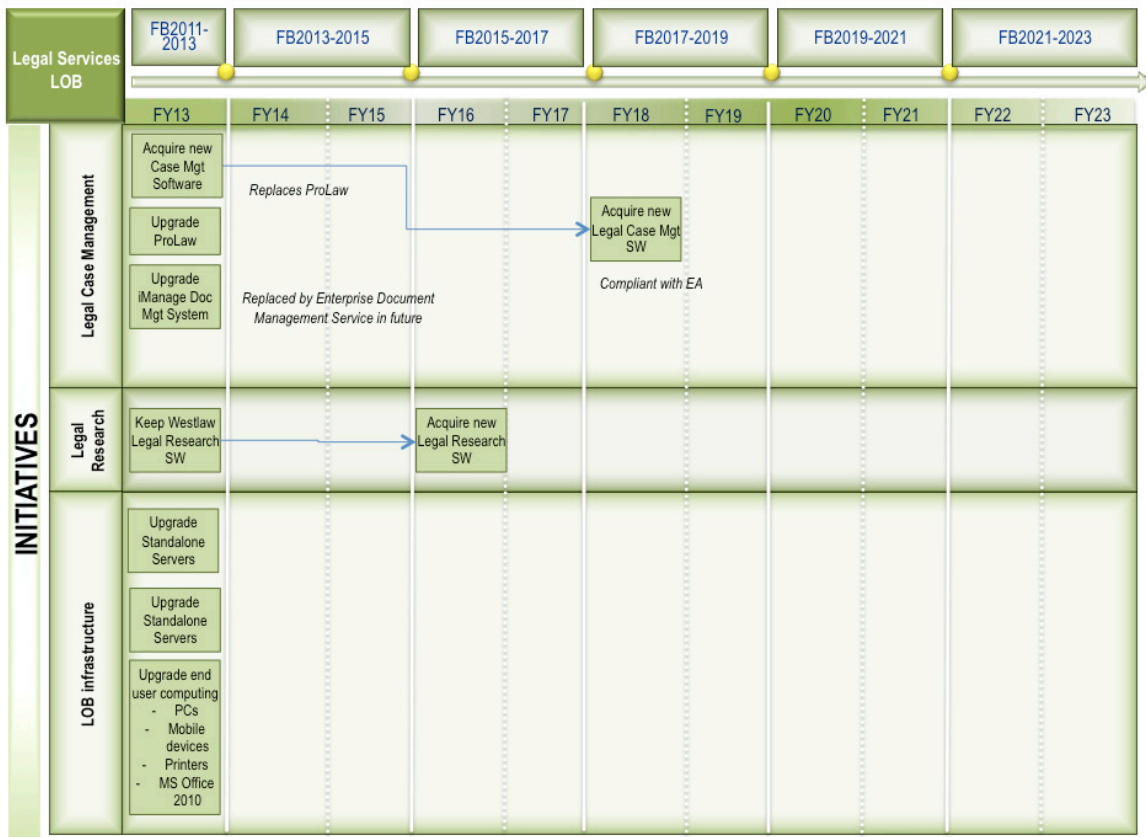
Figure 13: Legal Services Transition and Sequencing Plan Summary

A.1.7   JUSTICE

The mission of the Justice LOB is to improve the administration of justice in the State by assuring relevance, uniformity, reliability and timeliness in the collection, reporting and exchange of justice information between justice agencies, the public, chief executives, legislative and judicial bodies; to provide a statewide system of positive identification based on fingerprints; and to provide computerized justice information. The major activities of this LOB are as follows:

• Criminal Justice Information System-Hawaii (CJIS-Hawaii) – provide for the maintenance and operations of this automated information system which collects and disseminates individual criminal history record information for offenders arrested and fingerprinted statewide. Identification of arrested individuals is real-time via a "lights out" process. Electronic fingerprint images captured at the time of booking along with the associated demographic data is searched automatically against the State Automated Fingerprint Identification System (AFIS) and CJIS-Hawaii, thereby allowing an identification of the individual within minutes (at the State level) and hours (at the Federal level).

• Hawaii Integrated Justice Information Sharing (HIJIS) program – is designed to build statewide information sharing capabilities across the whole of the justice and public safety enterprise, facilitate information exchange with key agencies,

and to leverage national information sharing standards and best practices. HIJIS is providing statewide information sharing that will enable federated access and exchange of data between agencies systems in an efficient, timely and secure manner with the principal aim of getting the right information to the right people all of the time.

• Juvenile Justice Information System (JJIS) - provides the status of individual juveniles at any time or point in state's juvenile justice process to police officers, probation officers, judges, prosecutors, and correctional workers. Provides background information on arrest and court data, personal data, and social services provided, and can identify juveniles who are suicide risks or involved with drugs. The repository for statewide information on missing children. JJIS also provides recidivism reports on juveniles in rehabilitative programs.

• National Crime Information Center (NCIC) - provide connectivity and oversee operational responsibilities associated with access to the Federal Bureau of Investigation (FBI) NCIC System which contains national criminal justice information provided by all 50 states, U.S. territories and other agencies and the FBI Interstate Identification Index (III) which provides national criminal history record information via NCIC.

• Criminal History Record Checks – Includes the processing of criminal history record checks mandated by law for specific

programs, services or employment as outlined in Chapter 846, HRS. Public information includes conviction and sex offender registration information and is accessible via Public Access facilities at designated county police stations and the Internet.

• Expungements – Processing of an applicant's expungement of arrest records, pursuant to Section 831-3.2, HRS, which consists of the research of an applicant's criminal history, the evaluation of expungement criteria, the issuance of expungement orders and certificates and the sealing of records.

• Fingerprint Identification – Operation and coordination of the statewide fingerprint identification system of those arrested or adjudicated and other records from law enforcement, custodial and judicial agencies in the State. Included is the maintenance of the AFIS which stores the electronic fingerprint images of adult offenders and juvenile law violators, palm prints, with enhanced latent search capabilities.

• Sex Offender Registration - Maintenance and verification of information and records of individuals who are classified as covered offenders under Chapter 846E, HRS. Includes timely entry of covered offender information into the Registry, dissemination of covered offender information to law enforcement and the public, and tracking compliance of registered covered offenders.

• Research - Provides criminological data and other objective information on the nature and extent of crime in Hawaii. Available publications include the annual Crime in Hawaii Uniform Crime Report. The research provide critical, comprehensive data and analysis to criminal justice agencies and professionals, legislators, crime prevention and community mobilization groups, academic and research institutions, service providers, news media, and the general public.

• Community & Crime Prevention - Provides planning and implementation of informational and educational workshops and activities focused on community crime prevention. Facilitates information sharing and training on how individuals, businesses, agencies/organizations, neighborhoods and communities can prevent and reduce crimes.

• Missing Children - Locates and recovers missing children, reunites missing children with their families, and prevents child abductions. Coordinates the efforts of federal, state, and local law enforcement agencies as well as other public and private agencies, in the protection of children; develops and implements programs that promote community awareness about child abduction; and, maintains a system to notify the public when a child is missing.

Table 13: Justice LOB Business Services

LOB: Justice Service Name	Service Definition
Criminal History Record Checks	Provides criminal history record checks for positions such as school teachers, foster parents, care givers, and other positions who serve our vulnerable populations, as well as offering public access to conviction-only information.
Expungements	Facilitates expunging of criminal records, pursuant to 831-3.2, HRS.
Fingerprint Identification	Provides the statewide Automated Fingerprint Identification System (AFIS) for positive identification.
Integrated Justice Information Sharing	Leads coordination of enterprise level integrated justice sharing program (HIJIS).
Mugphotos	The Statewide Mugphoto System (SMS) is the statewide repository for mugphotos captured at the time of booking from all law enforcement agencies statewide. The SMS is used as an investigative tool to create lineups and mugbooks to identify possible suspects.
National Crime Information Center	Provides access to national criminal justice information.
Sex Offender Registration	Provides the statewide sex offender registry.
Juvenile Justice	Provides online access to the entire history of a juvenile within the justice system, from initial arrest through rehabilitation programs and additionally the statewide missing/runaway children repository.

LOB: Justice Service Name	Service Definition
Research	Provides criminological data and other objective information on the nature and extent of crime in Hawaii.
Community & Crime Prevention	Provides planning and implementation of informational and educational workshops and activities focused on community crime prevention.
Missing Children	Locates and recovers missing children, reunites missing children with their families, and prevents child abductions.

A.1.7.1 FUTURE STATE VISION FOR JUSTICE

The future state vision includes the following considerations:

• Launch of the Hawai`i Integrated Justice Information Sharing (HIJIS) program is one of the largest information-sharing initiatives in the State and includes all justice agencies in the State and also non-justice agencies participating at all levels.

• Facial Recognition – offer service along with mugphotos

• Launch of the Next Generation JJIS, a web-based information system for juvenile justice agencies (upgrade from mainframe system).

• Increased collaboration and data sharing

• Utilize IT to enhance the business goals and processes for criminal justice

• Utilize strategic "partnerships" to further the capabilities of HCJDC

• Stay current with technology and standards

• Coordinate efforts with new State CIO and participate in his strategic efforts

The future state solutions architecture is depicted in Figure 14 below. Two key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
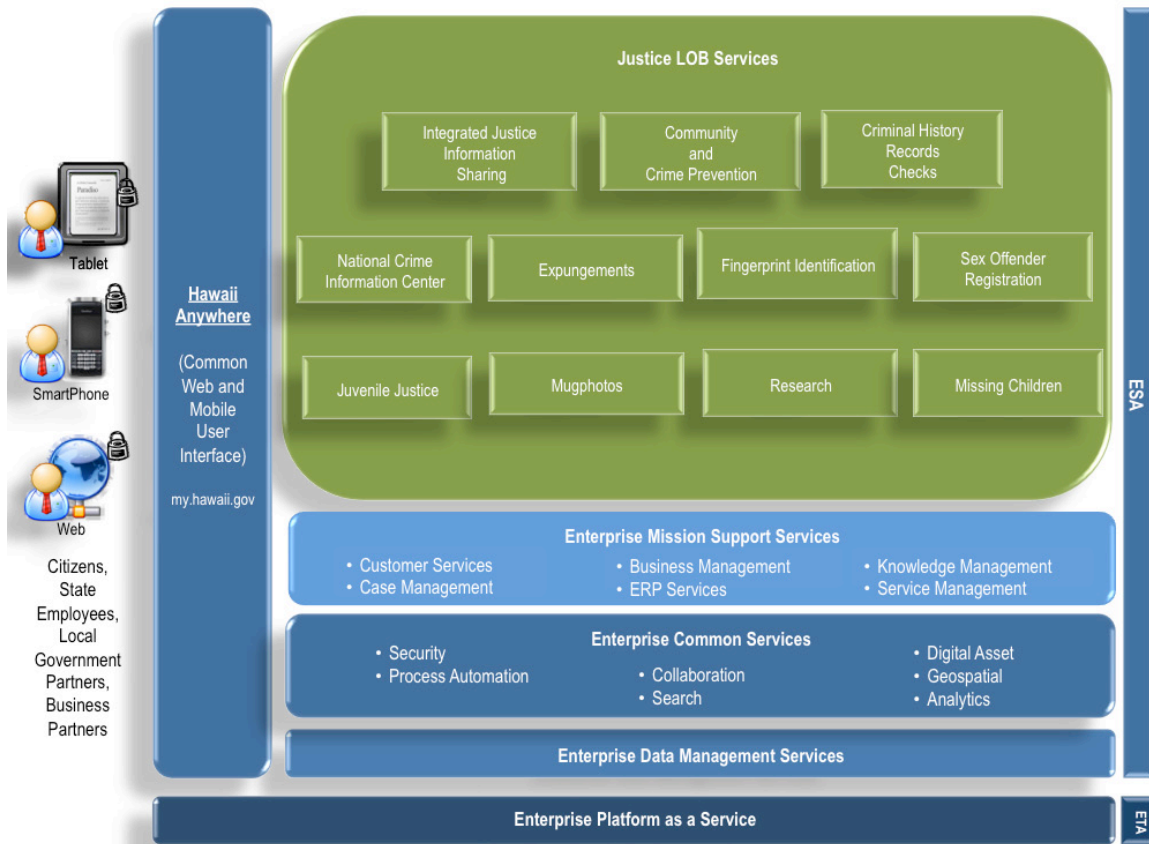
Figure 14: Justice Future State Solutions Architecture

INFORMATION EXCHANGES

• Systems must be available 24/7, due to justice information needs

• Collaboration with Judiciary, law enforcement, intake services, prosecution, public safety, and affiliated State, County and Federal agencies

• Support the National Juvenile Justice Information Sharing Initiative

  – Information sharing and collaboration for better youth outcomes

A.1.7.2
TRANSITION & SEQUENCING PLANNING FOR JUSTICE

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 14 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 14: Justice LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
Production Applications Alignment:			
National Crime Information Center/Nlets	Provides access to national criminal justice information maintained by the FBI.	One-time DME: Pending Review Annual O&M: Pending Review	Status: Upgrade Priority: High EA Compliance: High
Statewide Mugphoto System/ Facial Recognition	The SMS is the statewide repository for mugphotos captured at the time of booking from all law enforcement agencies statewide. The SMS is used as an investigative tool to create lineups and mugbooks to identify possible suspects. Enhancement to include facial recognition identification.	One-time DME: Pending Review Annual O&M: Pending Review	Status: Upgrade Priority: Medium EA Compliance: Medium-High
Lights Out Transaction Controller	The LOTC is responsible for managing the work flow for the automated lights out identification process. Through a set of business and work flow rules, the LOTC directs the AFIS, Green Box, CJIS-Hawaii, and Mugphoto systems to perform various tasks required for the lights out process. The LOTC also manages the sending of electronic fingerprint files to the FBI and receiving and distributing the identification results.	One-time DME: Pending Review Annual O&M: Pending Review	Status: Use As Is Priority: High EA Compliance: Medium-High
Green Box	Green Box is an integrated statewide booking system. Arresting agencies enter booking information directly into the Green Box system or information is transferred from the arresting agency's records management system to Green Box. Information is then used to populate CJIS-Hawaii. Green Box is one of the key components of the Lights Out process.	One-time DME: Pending Review Annual O&M: Pending Review	Status: Upgrade Priority: High EA Compliance: Medium
Sex Offender Registry	https://www.ehawaii.gov (developed, supported, and hosted by HIC)	One-time DME: Pending Review Annual O&M: Pending Review	Status: Use As Is Priority: Medium-High EA Compliance: Medium-high
Sex Offender Bulk Data	https://www.ehawaii.gov/SecureDownload/sof (developed, supported, and hosted by HIC)	One-time DME: Pending Review Annual O&M: Pending Review	Status: Use As Is Priority: Medium EA Compliance: Medium-high
eCrim - Limited Criminal History Search	http://ecrim.ehawaii.gov (developed, supported, and hosted by HIC)	One-time DME: Pending Review Annual O&M: Pending Review	Status: Use As Is Priority: Medium EA Compliance: Medium-high
Hawaii Integrated Justice Information Sharing	hawaii.gov/hijis (hosted by ICSD)	One-time DME: Pending Review Annual O&M: Pending Review	Status: Replace Priority: Medium-low EA Compliance: Medium-low

Name	Description	Cost	Notes
In Progress:			
Automated Fingerprint Identification System	The AFIS is the State's central repository for digitized fingerprints captured at the time of booking.	One-time DME: SW: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: Medium-High
Criminal Justice Information System - Hawaii	Migration of the State's criminal history central repository to a more industry standard application server and user interface.	One-time DME: SW: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: Medium-High
Hawaii Integrated Justice Information Sharing (HIJIS)	Provides statewide information sharing capabilities across the whole of the justice and public safety enterprise.	One-time DME: SW: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: High
New:			
None			
LOB Infrastructure:			
In Progress:			
None			
New:			
None			

More detail regarding the initiatives for this LOB are described below:

- The HIJIS program was launched in March 2007 to integrate various criminal information systems and support data sharing with various other departments to reduce redundancies and delays in getting data to key decision makers representing the principal justice agencies throughout Hawaii including judiciary, law enforcement, prosecution, intake services, public safety and affiliated State, County, and Federal agencies. This program has been very successful at getting disparate departments and systems to share and integrate data using service oriented architecture (SOA) technology (e.g. Open Justice Broker) and standards. (See the HIJIS Strategic Plan 2008 and HIJIS Overview brief June 2011.) Several pilot programs are underway. – See supplemental budget.

- The HIJIS program is incorporating the use of SOA and an enterprise services bus; these are complex requirements that cause issues with the lack of expertise within HCJDC division, ICSD, and with those organizations with whom they are trying to interface. HCJDC recently joined the Open Justice Broker Consortium (OJBC) which will provide much needed expertise including training at a significantly reduced price than previously researched or piloted options.

- The NCIC program is working to upgrade the hardware and software used to support the NCIC System. The system hardware is over 10 years old and without a hardware upgraded, we are unable to upgrade our existing software applications used by justice and law enforcement agencies statewide or the software used. Upgrade of the hardware and software will also allow better support and compatibility with national standards such as the National Information Exchange Model (NIEM) and information sharing initiatives.

- The CJIS-Hawaii system is currently being migrated to an industry standard application server and user interface software. The migration will enable CJIS-Hawaii to utilize current technologies such as server virtualization to reduce operating costs, increase reliability and performance, and establish a more robust and reliable disaster recovery environment. The migration will also enable CJIS-Hawaii to more freely exchange information with other criminal justice agencies through the HIJIS Program.

- The Next Generation Juvenile Justice Information System is currently being re-written using J2EE web server technologies and is planned to be deployed in 2013. Besides consolidating over 40 inquiry screens into one user customizable web page, the new system will include new subscribe and publish capabilities which can alert probation and parole officers of

events such as a specific juvenile's re-arrest or escape from a facility. The NG JJIS will also be able to display juvenile photographs. Additionally, the NG JJIS is designed with extensive new security capabilities that allow data providers to authorize display of juvenile data at very granular level.

- Following the 2013 release of the NG JJIS, future capabilities will include:

  – Document image retrieval

  – User research tools

  – Dashboards

  – Electronic forwarding of data via HIJIS

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 15 through Figure 16. The following items should be considered by the enterprise for the future state initiatives:

- Dependent upon security & privacy capability

- The following is HCJDC's sequencing in groupings based on each initiatives current status:

  – #1 = already underway

      – CJIS-Hawaii

      – HIJIS

      – LOTC

  – #2 = just underway

      – AFIS

      – NCIC

  – #3 = to be started soon

      – SMS/Facial Recognition

      – Green Box
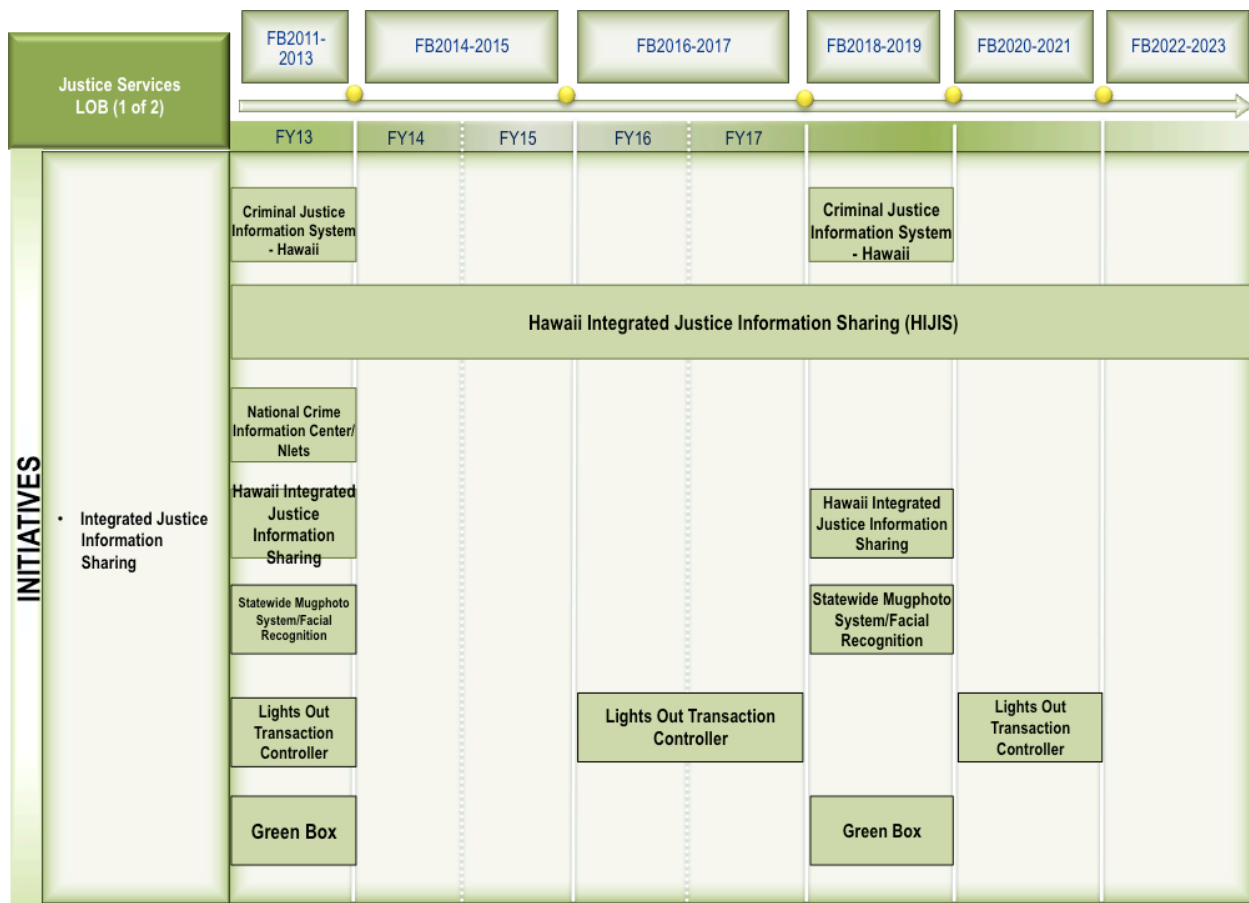
Figure 15: Justice Transition & Sequencing Plan Summary (1 of 2)
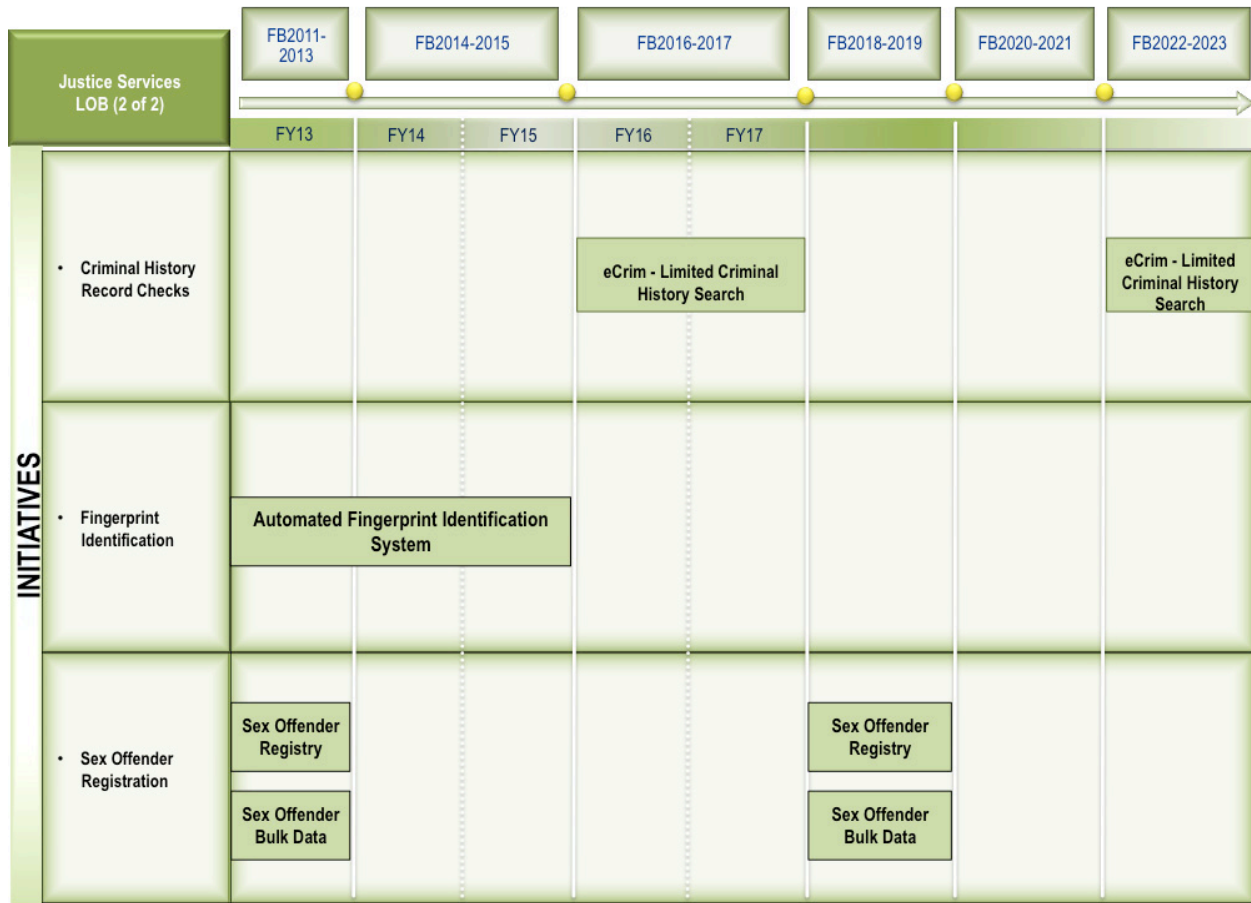
Figure 16: Justice Transition & Sequencing Plan Summary (2 of 2)

A.1.8 CHILD SUPPORT SERVICES

The Child Support Services LOB strives to promote the well-being of children and the self-sufficiency of families through the timely and accurate delivery of Child Support Services, while providing excellence in customer care.

Table 15: Child Support Services LOB Business Services

LOB: Child Support Service Name	Service Definition
Child Support Enforcement	Provides assistance to children by locating parents, establishing paternity and support obligations (both financial and medical), and enforcing those obligations.
Child Support Hearings Services	Provides fair and impartial administrative forum for the expeditious resolution of child support disputes; concurrent jurisdiction with the court in proceedings in which a support obligation is established, modified, or terminated. Attorney/Hearings Officers issue orders establishing, modifying, terminating, and enforcing child support obligations.
Decision Support to track cases with and without orders	Support Application to generate internal reports based on data extraction from the child support enforcement system.

A.1.8.1
FUTURE STATE VISION FOR CHILD SUPPORT SERVICES

The future state vision needs to factor in the following considerations:

• The mainframe-based application, KEIKI will be replaced utilizing the latest technology.

• CSEA's & ICSD's infrastructure will meet all IRS and NIST security requirements to protect Federal Tax Information.

• CSEA is rated (by Federal law) every year on cost effectiveness: amount spent vs. amount collected (collect ~"Pending Review"/year and spend ~"Pending Review"/year) ← this needs to continue or improve further

• All desktop/server hardware and software will be replaced as it reaches the end of its life cycle, and technological improvements/replacements will be considered for implementation.

• Research will continue in implementing solutions that would result in improving operating efficiency and/or services to the public.

The future state solutions architecture is depicted in Figure 17 below. Two key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
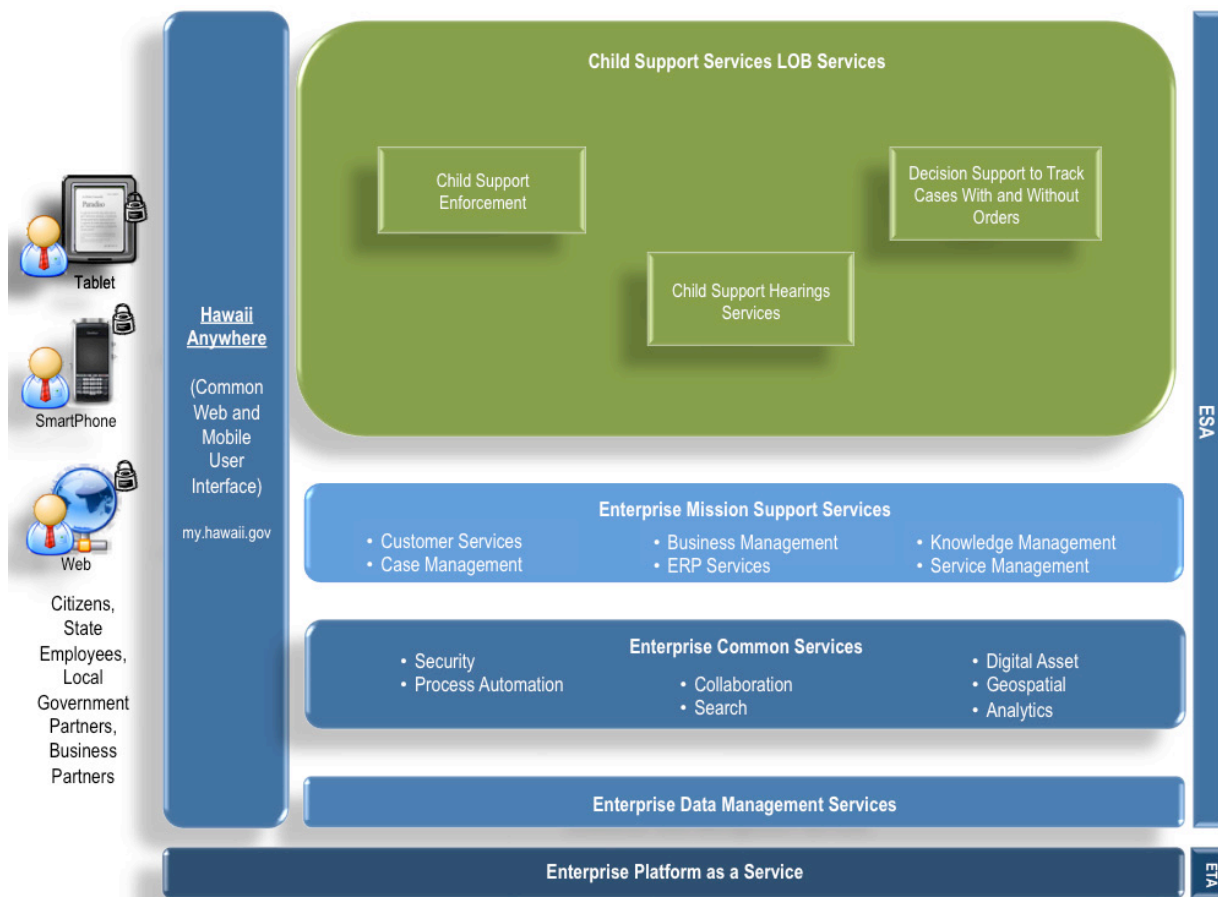
Figure 17: Child Support Services LOB Future State Solutions Architecture

INFORMATION EXCHANGES

• DHS, DOL, OCSE, DLIR, DAGS, DMV, DCCA, C&C DIT, Financial Institutions, Credit Bureaus, HIC, Employers for New Hires

A.1.8.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR CHILD SUPPORT SERVICES

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The needed initiatives for the Child Support Services LOB are outlined in Table 16 below. These initiatives are currently performing the following activities:

- Digital project underway for content management for all case records.

- Decision support system that looks across all cases to see trends and trouble spots.

- Child Support Enforcement Agency (CSEA) "Keiki" Hawaii Case Tracking System Modernization

  – Keiki software code maintenance is problematic. Expanded the overall system to include data warehousing and ad hoc reports, and Business Objects for data mining. Keiki was developed by another contractor in the Virgin Islands – the child support software must be certified. The contractor is no longer providing support. Software cost "Pending Review" to develop in 1988. Keiki contains millions of lines of code. (Project is for consideration and is not currently requested or funded.)

Table 16: Child Support Services LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
Production Alignment:			
See below.			
In Progress:			
Child Support Enforcement Services	https://csea.ehawaii.gov (developed, supported, and hosted by HIC)	One-time DME: Pending Review On-going annual O&M:Pending Review	EA Compliance: High Priority: High
KEIKI Maintenance / Enhancements	Federally certified system; Supported by ICSD. Improve documentation & enhance application & related processes per user requests (e.g. imaging) & external requirements (e.g. IRS Audit)	On-going annual O&M: Pending Review	EA Compliance: Pending Review Priority: High
New:			
SharePoint - Child Care Workflow Implementation	SharePoint - Child Care Workflow Implementation New initiative to streamline business processes for Child Care Services	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: High Priority: High
KEIKI Replacement Project	Federally certified system; Supported by ICSD.	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: Pending Review Priority: Medium
LOB Infrastructure:			
In Progress:			
Infrastructure Maintenance	Hardware/software maintenance, licenses & fees; ongoing professional service fees; circuits, etc.	On-going annual O&M: Pending Review	Status: Pending Review EA Compliance: Pending Review Priority: High

Name	Description	Cost	Notes
New:			
Interactive Voice Response Enhancement Project	Interactive Voice Response unit to deliver case information and forward callers to customer service representatives.	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: Pending Review Priority: Med-High
CSEA Infrastructure Enhancements	Hardware/software infrastructure; professional services; circuits, etc. Replace server / desktop hardware & software	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: Pending Review Priority: High

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 18. The following items should be considered by the enterprise for the future state initiatives:

• Content Management

• Decision Support System.

• SharePoint

• KEIKI Replacement Project
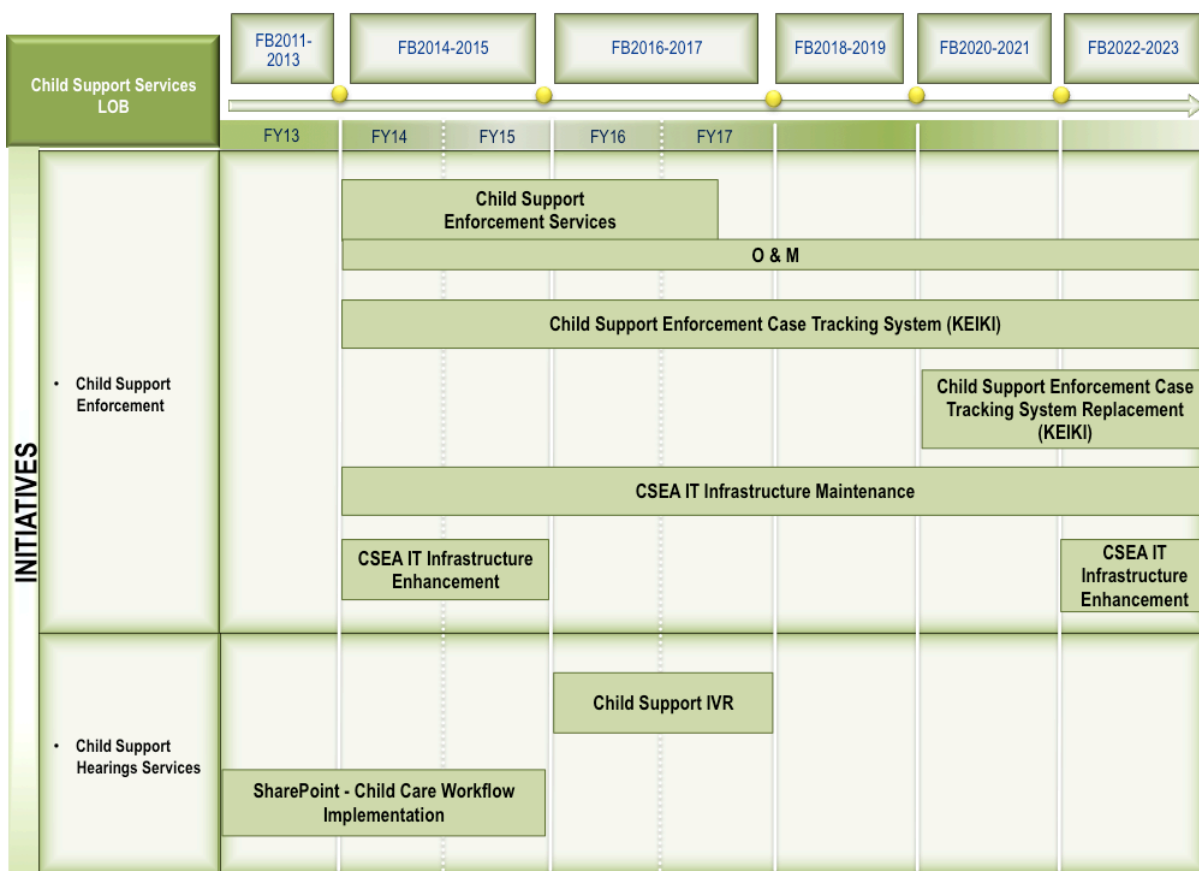
Figure 18: Child Support Services Transition & Sequencing Plan Summary

A.1.9   STADIUM OPERATIONS

The Stadium Operations LOB manages, administers, and operates the State of Hawai`i's Hula Bowl Stadium.

Table 17: Stadium Operations LOB Business Services

LOB: Stadium Operations Service Name	Service Definition
Stadium Operations	Administers, plans, assists and coordinates activities related to the State of Hawaii's Hula Bowl Stadium. Services administered are scheduling, facilities maintenance, parking, planning of events, safety and control and promotion of events happening at the stadium and adjoining property.

A.1.9   STADIUM OPERATIONS

The Stadium Operations LOB manages, administers, and operates the State of Hawai`i's Hula Bowl Stadium.

A.1.9.1
FUTURE STATE VISION
FOR STADIUM OPERATIONS

Pending Review.

INFORMATION EXCHANGES

• Financial data

• Facilities, equipment, and assets

• Maintenance

A.1.9.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR STADIUM OPERATIONS

INITIATIVES

Pending Review.

TRANSITION AND SEQUENCING

Pending Review.

A.1.10   TRANSPORTATION

Transportation is responsible to plan, design, construct, operate, and maintain State facilities in all modes of transportation, including air, water, and land. Coordination with other State, County, and Federal programs is maintained in order to achieve the objective.

Table 18: Transportation LOB Business Services

LOB: Transportation Service Name	Service Definition
Construction Management	Reviews detailed plans and specifications, and administration of construction projects; develops uniform standards and procedures for construction control; conducts periodic inspections and evaluations of field activities; coordinates Attorney General's requests for investigation of construction contract litigation with the divisional branches and district offices. Monitors construction contract administration. Reviews and processes federal-aid construction administration requests to the Federal Highway Administration for approval of contract change orders, time extension justifications, extra work item justifications, problem solutions or actions, and county federal-aid construction contracts.
Airport Operations	Manage, maintain, and operate a High Quality Integrated Statewide Air Transportation System and public airports with the Spirit of Aloha for Hawaii's Residents and visitors. Provides airport facilities that accommodate the safe, orderly and efficient movement of aircraft, vehicles and air travelers.
Highways Operations & Maintenance	Manages the operations and maintenance of the State Highway System. Selects, designates or lays out, in line with the requirements of the Federal Highway Act, a system or systems of highways in the State upon which Federal-Aid funds may be expended together with State and/or county funds. Maintains and/or directs and supervises the maintenance of highways

LOB: Transportation Service Name	Service Definition
	upon which Federal-Aid funds have been expended. Provide services to the public in fulfillment of the mission of the Highways Division to provide a safe, and efficient and accessible highway system. Manages approximately 2,433 miles of paved freeways, highways and roadways on Hawaii's six major islands.
Harbors Operations	Maintain, repair and operate the ten commercial harbors which comprise the statewide harbors system; plan, design and construct harbor facilities; provide program planning and administrative support; manage vessel traffic into, within, and out of harbor facilities; provide for and manage the efficient utilization of harbor facilities and lands, and maintain offices and facilities for the conduct of maritime business with the public. Effectively manage and operate a statewide commercial harbors system that facilitates the efficient movement of people and goods to, from and between the Hawaiian Islands; Support the State's economic prosperity and quality of life as well as promote the well-being of our cargo, fishing and passenger cruise industries, other maritime related service and support activities, and the enjoyment of certain waterfront facilities by the general public.

NOTE: Within each of these Lines Of Business other services exist that can be considered subcomponents of each Line of Business. The Department has taken an action item to examine each of these services in greater detail, evaluating them as possibilities to consolidate versus keeping them separate.

A.1.10.1   FUTURE STATE VISION FOR TRANSPORTATION

The future state vision includes the following considerations:

• Significant opportunity exists to improve overall integration of services at the LOB level to reduce redundancies when duplicating efforts to automate office automation processes such as electronic approval process and document tracking, project management and reporting, enterprise accounting practices, accounts receivables linked to concession and lease rent agreements, and others. Streamlining these work processes will result in quicker processing of project requests to support the capital improvement and construction management projects, posting of accounts receivables, and transportation planning initiatives.

• Maintain, repair and operate the ten commercial harbors which comprise the statewide harbors system; plan, design and construct harbor facilities; provide program planning and administrative support; manage vessel traffic into, within, and out of harbor facilities; provide for and manage the efficient utilization of harbor facilities and lands, and maintain offices and facilities for the conduct of maritime business with the public. Effectively manage and operate a statewide commercial harbors system that facilitates the efficient movement of people and goods to, from and between the Hawaiian Islands; Support the State's economic prosperity and quality of life as well as promote the well-being of our cargo, fishing and passenger cruise industries, other maritime related service and support activities, and the enjoyment of certain waterfront facilities by the general public.

• DOT-HAR's primary mission is to manage and maintain the state commercial harbor piers and landings, and another mission is to manage public lands under harbor facilities.

• Manage plans, control resources and schedules for multiple planning, design and construction projects; manage contracts, budgets and expenditures; monitor critical paths and project status.

• Provide reports on CIP status for executive management, Governor and the Legislature

• To allow customers to interface with our core applications, and provide customers with on-line access to look up account information and submit payments on line or by electronic funds transfer.

• The data uploaded from our customers are integrated into the Harbor core applications to help us analyze if our facilities are meeting our customer needs.

• Provide on-line access to pier assignments and apply to schedule the assignment of piers in a Harbor Management system. After a ship has docked customers can look up and submit wharfage and storage reports for that voyage.

• These wharfage and storage reports should be automated to upload reports into our Harbor Management and Accounting system.

The future state solutions architecture is depicted in Figure 19 below. Two key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as

LOB services, common LOB services, enterprise mission support(functional) services, and enterprise common (utility) services.
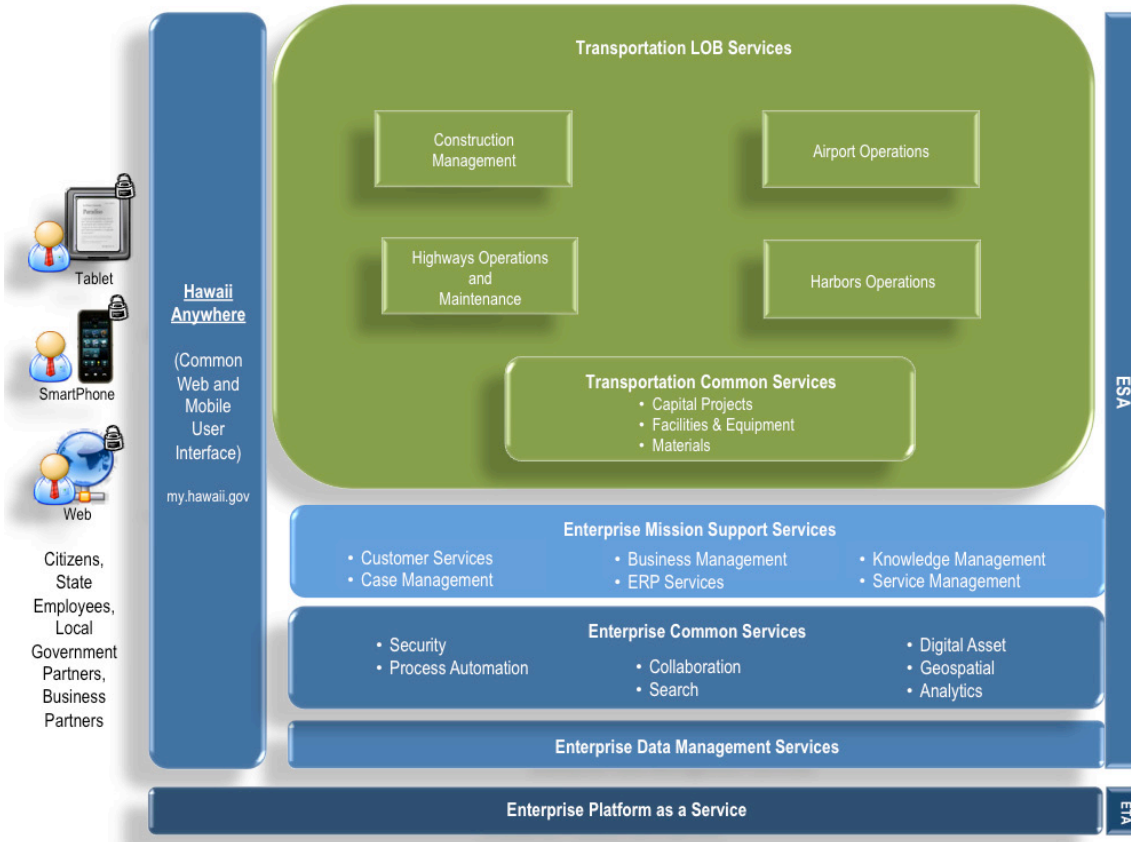

Figure 19: Transportation Future State Solutions Architecture

INFORMATION EXCHANGES

Major Interfaces:

• Federal government agencies include:

 – U.S. Department of Transportation

 – Federal Highway Administration

 – National Highway Traffic Safety Administration

 – Bureau of Transportation Statistics

 – Turner-Fairbank Highway Research Center

 – U.S. Army Corps of Engineers

 – U.S. Fish and Wildlife

 – National Oceanic and Atmospheric Administrationn

 – Federal Maritime Commission

 – U.S. Coast Guard

 – U.S. Maritime Administration

 – U.S. Department of Homeland Security

 – U.S. Treasury Department

 – U.S. Department of Agriculture

 – U.S. Customs and Border Protection

 – Environmental Protection Agency

 – Federal Transportation Security Administration

 – Federal Aviation Administration

 – Federal Drug Enforcement Agency

 – Federal Center for Disease Control and Prevention

 – Air Force (Hickam Air Force Base, Kona)

• State agencies include:

 – Department of Land and Natural Resources

- Department of Public Safety
- Department of Agriculture
- Department of Health
- State Civil Defense
- Department of the Attorney General
- Criminal Justice Data Center
- Department of Business, Economic Development and Tourism
- Department of Human Resources Development
- Department of Accounting and General Services
- Department of Budget and Finance
- All island counties
- Shipping lines and agents, cruise ship operators and agents, vessel operators, tugs, and other maritime and maritime business operators and transportation service providers
- Airlines, concessionaires, airport tenants

- Hawai`i Visitors Bureau
- Hawai`i Tourism Authority (HTA)
- Hawaii`i Harbor Users Group

A.1.10.2 TRANSITION & SEQUENCING PLANNING SUMMARY FOR TRANSPORTATION

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 19 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 19: Transportation LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
In Progress:			
Financial Management System	Financial Management Systems needs to be maintained and upgraded for continued vendor support. These systems may be replaced with Statewide ERP if requirements are met. The Transportation financial reporting requirements vary between the Divisions which are mandated for annual financial audits. The Highway and Airports financial management systems projects are currently being worked on. Highways legacy financial system and cost accounting system HWYAC replacement is FAST. Airports Financial Management System upgrade project is called AIRMIS21 Upgrade.	HWY-FAST Pending Review AIR AIRMIS21 Pending Review	Priority: High EA Compliance: High
PropWorks Upgrade	Upgrade Property and Lease Management System for Airports	Pending Review	Priority: High EA Compliance: Medium
Intranet Portal	Transportation intranet portal for information and collaboration (i.e., desktop video conferencing, virtual workplaces, etc.)		Priority: High EA Compliance: Medium

Name	Description	Cost	Notes
New:			
HAR - GIS	GIS/Asset Management for Harbor Management working with the Army-Corp of Engineers and is the State match to the program. Mapping assets with the first layer being storm water systems.	Pending Review	Priority: High EA Compliance: Medium
DOTCMS	Enhance the Transportation's Content Management System (DOTCMS). Introduce records management and paperless workflow.	Pending Review	Priority: High EA Compliance: Medium
CIP Tracking	Transportation Capital Improvement Project Tracking with interface to Transportation portal	Pending Review	Priority: High EA Compliance: Medium
Work Order/Trouble Call Tracking	Enhance and expand the Airports work order and trouble call tracking system to support the Airport Operations. Used to record and track progress and completion of work orders and trouble calls. Used as reference for liability claims against the Airports.	Pending Review	Priority: High EA Compliance: Medium
Certification Tracking/Training	Monitoring and tracking all Airport Operations employees (State and non-State) for compliance with airport certification classes	Pending Review	Priority: High EA Compliance: Medium
KOA Fuel System	Replacement of Kona International Airport's GasBoy System.	Pending Review	Priority: High EA Compliance: Medium
Hawaii Aviation History Website Upgrade	Upgrade of the Hawaii.gov/hawaiiaviation website hosted by ICSD. The current website is built on unsupported application code.	Pending Review	Priority: High EA Compliance: Medium
State Airport websites	Update look, and feel (navigation)of the current Hawaii.gov airport webpages that services the traveling public. Website hosted by ICSD.	Pending Review	Priority: High EA Compliance: Medium
Electronic Terminal Maps	Electronic Way Finding in public spaces	Pending Review	
AxiSM	Facilities asset management system	Pending Review	
Traffic Accident Reporting System	System to track and analyze traffic accidents by statistical analysis	Pending Review	
Harbors Comprehensive Financial System	Pending Review	Pending Review	
HAR Mgt - Automated cargo tracking system	Develop and implement automated cargo tracking system to ensure that all cargo is correctly reported and charged focus on cargo.	Pending Review	Priority: High EA Compliance: Medium

Name	Description	Cost	Notes
HAR Hardware and Software license audit inventory system	Computer Hardware and Software Inventory database for Harbors Division	Pending Review	Priority: High EA Compliance: High
HAR Help Desk System	A web based Help Desk management application to track and manage IT user request and trouble tickets with status/progress updates and reporting via email or web interface. It's also a reference database for IT equipment's life cycle and maintenance contracts.	Pending Review	Priority: High EA Compliance: Medium
HAR Mgt - Web based ships and Vessels Scheduling	To manage the scheduling and assignment of berths for homeported ships and vessels visiting our state harbor facilities.	Pending Review	
HAR Mgt - Web based Statewide cruise ship scheduling system	Develop a statewide cruise ship scheduling system with on-line access provided to cruise ship agents to book port calls at any of the statewide commercial harbor ports	Pending Review	
HAR Mgt - Harbor Operations management and maintenance system	Manage and maintain statistical information on harbor activities, including vessel traffic, tonnage, cargo, commodities, etc. for all shipping inbound and outbound.	Pending Review	Priority: High EA Compliance: High
HAR Property Management system	Automated database of all permits, leases, easements and property dispositions of harbor properties; captures tenant history, monitor rent reopening, rental step-ups, insurance renewal information, security deposit information. This system has to Interface with Accounting Billing module to generate charges based on individual rental agreements, and to identify revenues received from use of ceded harbor properties due to OHA under section 5(f) of the Admission Act, as well as to interface with GIS.		
Asset Management System	Harbors initiative to establish a system to manage major assets, infrastructure, utility systems, roadways, easements, etc. to capture life cycle history and major repairs and renovations made to such assets and infrastructure. This system will monitor the remaining life of harbor infrastructure to enable more effective planning, budgeting and scheduling of repairs, renovations or replacements, and to interface with GIS. Potential for Departmental solution.	Pending Review	Priority: High EA Compliance: High
HAR Project Management System	Manage plans, control resources and schedules for multiple planning, design and construction projects; manage contracts, budgets, expenditures and forecasts of future needs; monitor critical paths and project status. Provide reports on CIP status for executive management, Governor and the Legislature.	Pending Review	Priority: High EA Compliance: High

Name	Description	Cost	Notes
HAR Environmental Management System	Harbor's initiative to capture environmental data related to harbor properties such as pre-existing soil conditions, maintain record keeping and documentation of environmental inspections and enforcement actions; monitor storm water discharge and the surrounding environment, as the responsibility to manage public lands also includes compliance with all federal and state environmental laws and regulations to protect the land and surrounding areas from pollution. This system is also to Interface with GIS.	Pending Review	Priority: High EA Compliance: High
HAR Office Automation - Approval Tracking System	An electronic Tracking and Approval system for Staff Study documents, Travel Requests, Purchase Requisitions and Purchase Orders, Recommendations on Contract Award and Statements of Completed Travel	Pending Review	Priority: High EA Compliance: High
HAR Office Automation - Electronic Leave Record & Request system	This system is to provide timely updating of leave records which will result in near-real time leave balances for all Harbors employees. The benefits that will result from this application are that leave hours taken or requested to be taken that are submitted via Forms G-1 will be posted and deducted from employees' leave balances as soon as the appropriate supervisor approves the leave request in this system.	Pending Review	Priority: High EA Compliance: High
LOB Infrastructure:			
In Progress:			
Statewide Maritime Wireless Network System (MWNS)	Develop and implement a statewide regulated ports NWNS to enhance public safety throughout the regulated port infrastructure with respect to data and video signals. The MWNS will provide DOT with the opportunity to achieve meaningful and measurable improvements to the public safety surveillance system within the port infrastructure through the use of telecommunication resources and connectivity to the Hawaii Homeland Security Command Information Surveillance System. "Pending Review" has been released by the Governor for the MWNS Design and Construction, statewide with the Department of Defense being the lead agency to coordinate and manage the project.	Pending Review	DOD and Homeland Security are looking into to see if they have captured this.
New:			
Data Center Upgrade	Replace hardware and software in the Transportation data center	Pending Review	
DR Planning & Testing	Update disaster and recovery plans (e.g., Continuity of Operations Planning, COOP) for federal funding and to support financial system audits	Pending Review	
HAR Fiber Optic Cable Replacement	HAR is to accommodate a fiber optic cable to be replaced in accordance with NGN connection requirements, as long as Nimitz Highway conduit crossing.	Pending Review	

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 15 through Figure 16. The following items should be considered for the future state initiatives:

• Capital Improvement Project Tracking System

• Highways Financial System (FAST)

• Airports Accounts Receivable and Database Upgrade and Migration project

• Update Disaster Recovery and Business Continuity Plan

• Transportation Intranet Portal, to include dashboard for project tracking

• Replace the aging hardware in Transportation data center

• Collaboration and Social Networking Tools

• Traffic Accident Reporting System

• Improved communications with the State Civil Defense and possible County offices to support emergency response services and DOT centers

• Upgrade network bandwidth to neighbor island offices

• Airports Warehouse System upgrade
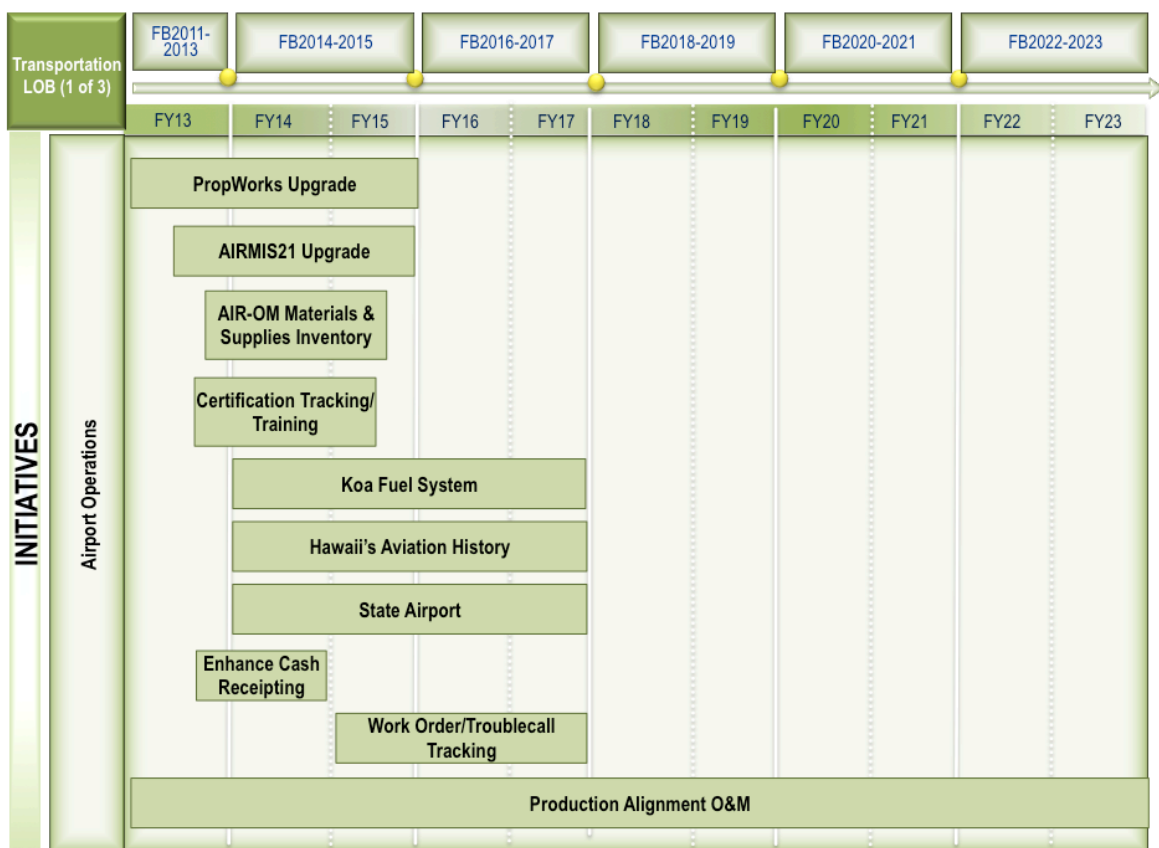
Figure 20: Transportation Transition & Sequencing Plan Summary (1 of 3)
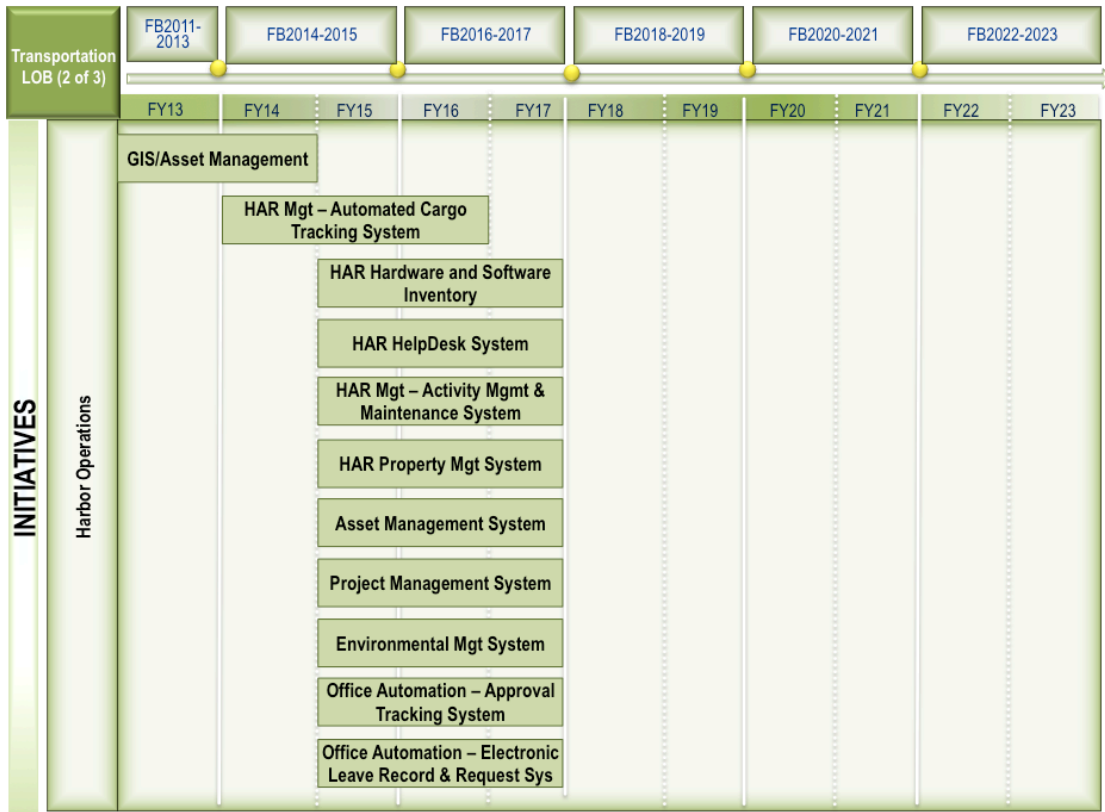
Figure 21: Transportation Transition & Sequencing Plan Summary (2 of 3)
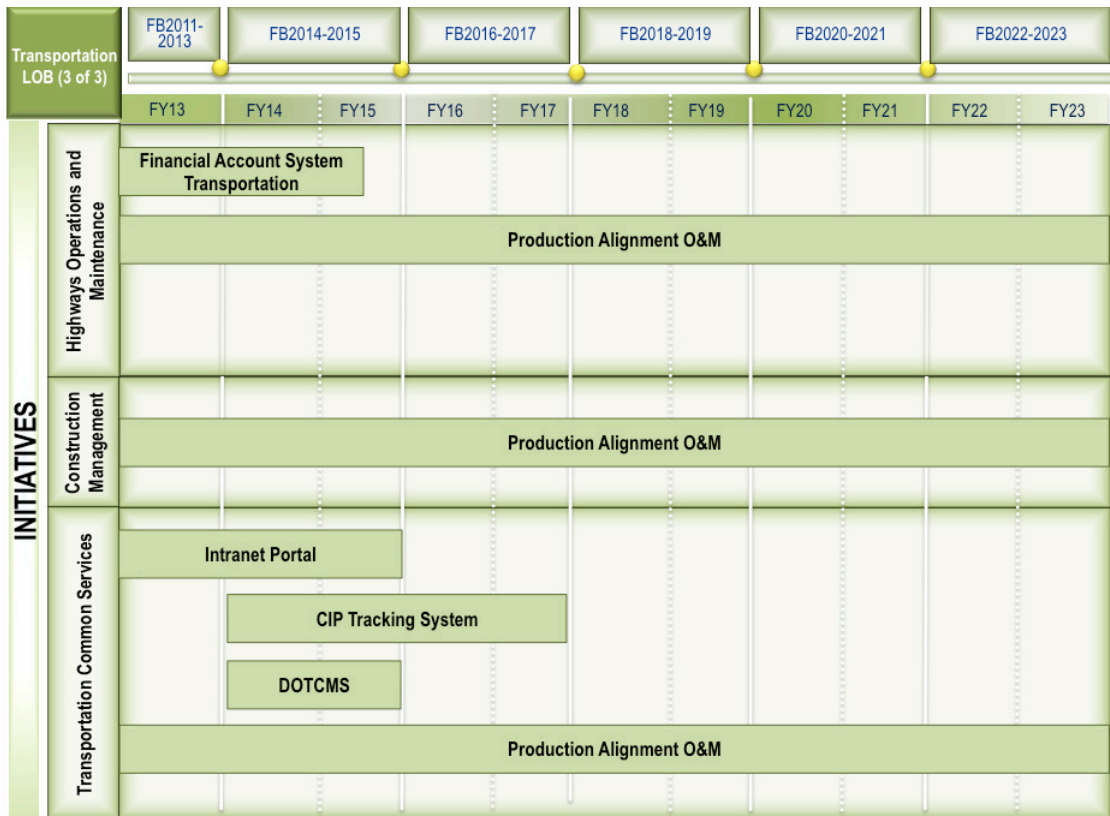
Figure 22: Transportation Transition & Sequencing Plan Summary (3 of 3)

A.1.11 ECONOMIC DEVELOPMENT

This LOB provides Hawaii's resource center for economic and statistical data, business development opportunities, energy and conservation information, and foreign trade advantages.

Table 20: Economic Development LOB Business Services

LOB: Economic Development Service Name	Service Definition
Economic Industry Development	Promotes industry development and economic diversification in Hawaii by supporting existing and emerging industries, attracting new investment and businesses that can create more skilled, quality jobs in the state, and work to increase exports of Hawaii products and services. Business support provides new and existing businesses direct loans, licensing and permit information and referral, business advocacy, planning and coordination of programs and projects aimed at specific business sectors or economically-distressed areas (including rural areas and areas affected by natural disaster).
Economic Research & Analysis Services	Works to enhance and contribute to the economic development of the State by providing analyses and policy recommendations on economic issues. Provides economic forecasts that contribute to long-term statewide planning and infrastructure needs assessment, and also conducts and reports on basic research into the economy of the state. These functions are conducted by collecting compiling, interpreting, and publishing data and statistics on all aspects of business activity, the economy and demographic characteristics of the State. Also develops and maintains a statewide statistical reporting system.
Economic Strategy and Planning	Supports statewide economic efficiency, productivity, development and diversification by promoting, attracting and facilitating the development of Hawaii Technology-based industries which engage in the sustainable development of Hawaii's energy, environmental, ocean, recyclable, and technological resources. Develops a sustainable venture capital industry in Hawaii which will stimulate the growth of viable new businesses.
Tourism Services	Creates a vision and develops a long-range plan for tourism for the State of Hawaii. Provides a board of directors to oversee the Tourism Special Fund.
Creative Industry Services	Promotes the development and growth of Hawaii's Creative Economy, whose primary and core sector consists of Copyright Based Industries, with a focus on businesses that create/design exportable products and services and depend on the protection of their Intellectual Property in order to market to a global community. IP protection is a crucial base to profitability and survival. These are the core businesses that contribute to our economy with job creation and tax revenue. This cluster is comprised of producers and service providers in film, video and digital media production, commercial and applied design firms and diverse range of creative (visual and performing) and cultural businesses in Hawaii. Surrounding this core sector are a great variety of arts and cultural organizations, service organizations, educational institutions, foundations, community groups and a variety of individual artisans.
Renewable Energy	Participates in the development and diversification of the economy of Hawaii by providing resources and facilities for energy and ocean related research, education, and commercial activities in an environmentally sound and culturally sensitive manner. Facilities are located at Keahole Point in Kona and in Puna, both on the Island of Hawaii. NELHA at Keahole Point

LOB: Economic Development Service Name	Service Definition
	is the only location in the world, which consistently pumps large quantities of warm and cold seawater ashore for use in aquaculture, marine biotechnology, and other related technologies.
Foreign-Trade Zone Services	Increases the amount of international trading activity in Hawaii, to encourage value-added activities, stimulate capital investment and generate employment opportunities by using the federal trade development program to reduce the costs associated with international trade. There are currently 13 sites on the islands of Oahu, Maui, and Hawaii that have received FTZ designation. Of the 13 sites, three general-purpose zones and four special-purpose subzones are active. Responsible for ensuring that U.S. Customs and Foreign-Trade Zones Board regulations are followed at these sites.

A.1.11.1
FUTURE STATE VISION FOR ECONOMIC DEVELOPMENT

The future vision for the Economic Development LOB is to apply state-of-the-art technology to address the following business objectives and issues:

• Diversity in terms of its mission and service delivery activities; the common thread is the need to reach beyond the boundaries of the islands.

• Produces the State of Hawai`i Data Book (900K hits/month).

• GIS governance and planning – by statute (Chapter 225M-2(4)(B)), OP is the statewide coordinating agency for GIS in State government.

• Largest and most diverse constituent pool of any agency in the State. The need for multi-language approaches in dealing with foreign countries, as well as multi-cultural aspects, is an implied business concern in development of the State economy.

• Better email solutions

• Ability to do email blasts

• Ability to store email greater than 20MG

• Electronic signatures coupled with Document Tracking System (DTS)

• Improved document management system

• Additional video conferencing capabilities, especially with neighbor islands and the mainland

• IT solution that supports use of credit cards

• Electronic signatures/paperless transactions

• Ability to handle video-intense files (videography)

• Faster network speeds

• Ability to work with external people via email, etc., and send large files

• Getting to a paperless environment

• Case management

The organization is very creative as they identify ways to use social media, forwarding their email to Gmail to enable receipt on an iPhone or Droid-type phone and increase email storage; saving mail to personal hard drives; using WIKI forms; outsourcing VOIP; using Google Docs for file share; using Skype.

For the State's GIS, historically ICSD provided file server and IT technical support, OP provided overall policy direction, database management, and user application support. Note that the file servers and databases are used by all State agencies. OP and ICSD jointly planned for system upgrades/growth/evolution. Infrastructure was generally part of ICSD's budget. In recent years, due to budget and staff cuts, ICSD has found it difficult to maintain previous level of support. In addition, there has been a significant deterioration in the partnership that had been in place for many (15+) years. There have been many system problems, with significant down time, so that State GIS users would like ICSD removed from support of the State GIS." OP has been investigating alternatives.

The future state solutions architecture is depicted in Figure 23 below. Two key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
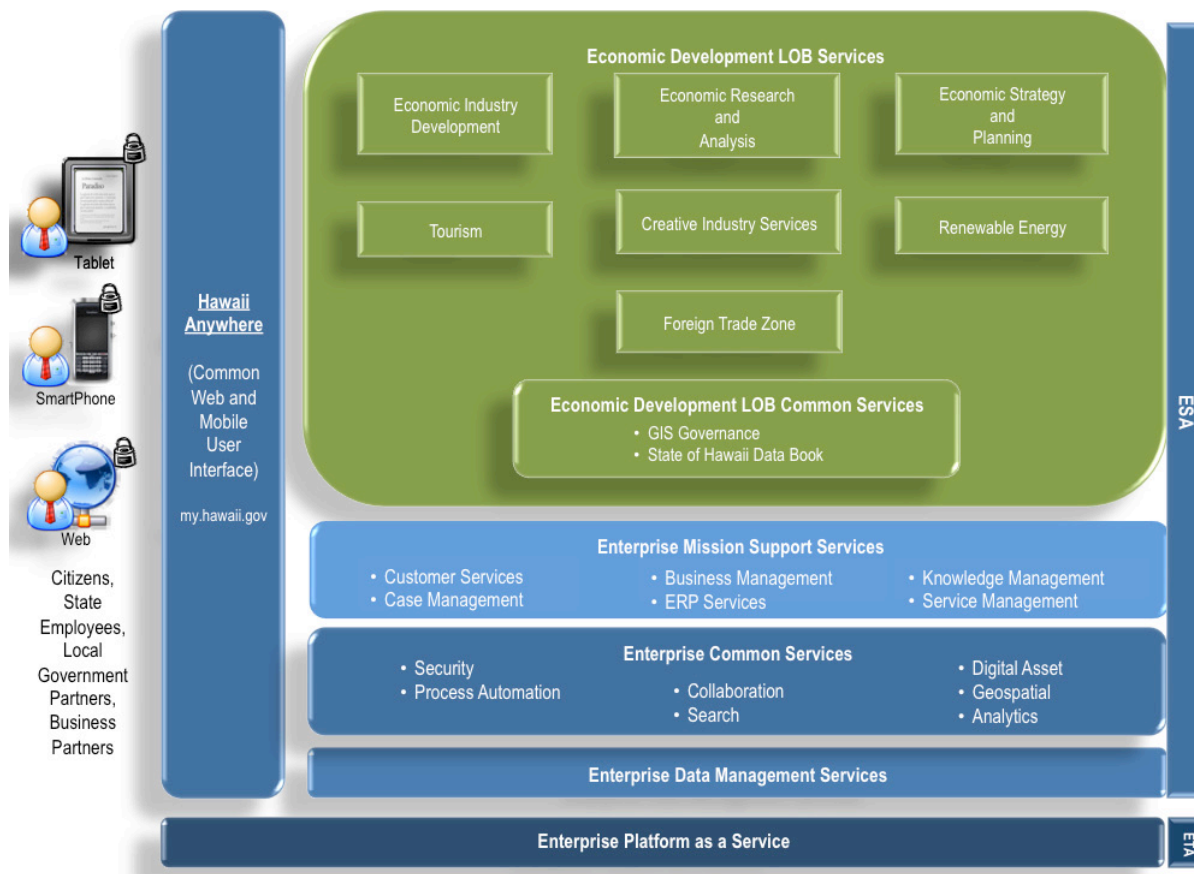
Figure 23: Economic Development Future State Solutions Architecture

INFORMATION EXCHANGES

• State GIS data

• State Data Book

A.1.11.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR ECONOMIC DEVELOPMENT

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The primary initiative for this LOB is the Hawai`i Broadband Initiative:

• Jointly sponsored by DBEDT and DCCA.

• A major economic development initiative to provide statewide access to affordable ultra, high-speed Internet by 2018. Positions Hawai`i to be the first state in the nation with 1 gigabit per second broadband connectivity at every public school, every public library, and every public university and college campus by using about "Pending Review" of federal monies received through the American Recovery and Reinvestment Act (ARRA).

Opportunity to leverage connectivity for State offices at remote islands and improvements for State NGN.

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 21 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 21: Economic Development LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
Production Applications Alignment:			
GIS	Various databases	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: GIS Deployment EA Compliance: 3 Priority: 2
Land Use Commission	hawaii.gov/luc (hosted by ICSD)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Production Web Site EA Compliance: 3 Priority: 3
Aloha Tower Development Corporation	alohatower.org (hosted by ICSD)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Production Web Site EA Compliance: 3 Priority: 3
Coastal Zone Management	hawaii.gov/dbedt/czm (hosted by ICSD)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Production Web Site EA Compliance: 3 Priority: 3
Hawaii Statewide GIS Program	hawaii.gov/dbedt/gis (hosted by ICSD)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Production Web Site EA Compliance: 3 Priority: 3
Office of Planning	hawaii.gov/dbedt/op (hosted by ICSD)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Production Web Site EA Compliance: 3 Priority: 3
Department of Business, Economic Development and Tourism	hawaii.gov/dbedt (hosted by ICSD)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Production Web Site EA Compliance: 3 Priority: 3
Hawaii Community Development Authority	hcdaweb.org (hosted by ICSD)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Production Web Site EA Compliance: 3 Priority: 3
Hawaii Film Office	hawaiifilmoffice.com (hosted by ICSD)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Production Web Site EA Compliance: 3 Priority: 3

Name	Description	Cost	Notes
Clean Energy Initiative	hawaiicleanenergyinitiative.org (hosted by ICSD.)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Production Web Site EA Compliance: 3 Priority: 3
DBEDT - Document Tracking System (DTS)	Custom Lotus Notes based application for tracking a documents life-cycle within the department	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Production Application – Move to Web App EA Compliance: 3 Priority: 3
DBEDT Legislative Tracking System -Lotus Notes Application being maintained by ICSD in DAGS	DBEDT Legislative Tracking System is a revised version of their Lotus Notes tracking system. This database allows the creation of a tracking document for a bill or resolution. The tracking document is then circulated within the department to gather testimonies and comments. This Lotus Notes application resides on DBEDT's Notes server.	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Production Application – Replace with Central Legislative Tracking System EA Compliance: 3 Priority: 2
LOB Infrastructure:			
In Progress:			
Infrastructure	Infrastructure upgrade	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Upgrade EA Compliance: 3 Priority: 1
Wireless	wi-fi installation	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Upgrade EA Compliance: 3 Priority: 1
Network Upgrades	firewall/router upgrades	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Upgrade EA Compliance: 3 Priority: 1
New:			
VOIP			

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 24.

Figure 24: Economic Development Transition and Sequencing Plan Summary

A.1.12   COMMERCE AND CONSUMER AFFAIRS

Commerce and Consumer Affairs promotes a strong and healthy business environment by upholding fairness and public confidence in the marketplace, and by increasing knowledge and opportunity for our businesses and citizens.

Table 22: Commerce and Consumer Affairs LOB Business Services

LOB: Commerce and Consumer Affairs Service Name	Service Definition
Broadband Infrastructure	Responsible for implementing activities to promote ubiquitous access to high speed broadband at affordable prices throughout the State by expanding and accelerating the deployment of broadband infrastructure.
Business Registry	Maintains the business registry for corporations, limited liability companies, general partnerships, limited partnerships, limited liability partnerships, and limited liability limited partnerships. In addition, the registry contains publicity rights, trade names, trademarks and service marks. This is a ministerial registry with no substantive review. Also runs one-on-one sessions to assist businesses in their business registrations needs.

LOB: Commerce and Consumer Affairs Service Name	Service Definition
Cable Television Services	Determines whether the initial issuance, renewal or transfer of a cable franchise is in the public's best interest, and enforces obligations of a cable franchise and ensures cable operators' compliance with rules and regulations relating to their practices and procedures.
Consumer Advocacy Services	Represents consumers of utility and state-regulated transportation services before the Hawaii Public Utilities Commission and various federal regulatory agencies.
Consumer Protection Services	Consumer counsel for the State of Hawaii: Investigates consumer complaints and enforces a broad range of consumer protection statutes prohibiting unfair or deceptive acts or practices against consumers; promotes consumer awareness, educates the general public on consumer protection issues and provides information to the public about the Hawaii Residential Landlord-Tenant Code.
DCCA Administrative Hearing Services	Conduct hearings and issue recommended decisions for all divisions within DCCA that are required to provide contested case hearings; administer medical tort claims through the Medical Claims Conciliation Panel; administer tort claims against design professionals through the Design Claim Conciliation Panel; hear and decide disputes arising from the State's procurement laws; hear and decide due process hearings involving the Individuals With Disabilities Education Act and the Department of Education; and hear disputes among manufacturers, distributors, or dealers of motor vehicles.
Financial Institution Services	Regulates state-chartered or state-licensed financial institutions in the State of Hawaii (including banks; savings banks; savings and loan associations; foreign bank branches, agency and representative offices; trust companies; depository and non-depository financial services loan companies; and credit unions), all escrow depositories, and all money transmitters, mortgage servicers, mortgage loan originators and mortgage loan originator companies.
HI Insurance Industry Oversight	Oversees the Hawaii insurance industry; issues licenses, examines the fiscal condition of Hawaii-based companies, reviews rate and policy filings, investigates insurance related complaints. Specializes in the licensure, regulation, and administration of Hawaii-based captive insurance companies, as well as, the prudent development of the State's captive insurance industry.
Professional & Vocational Licensing	Oversees the regulatory activities of 25 boards and commissions and 22 licensing programs.
Regulated Industries Complaint Services	Receives complaints, conducts investigations, and prosecutes licensing law violations for various licensed professions and vocations; prosecutes unlicensed activity through the issuance of citations and by filing civil lawsuits in the Circuit Courts; works to resolve consumer complaints where appropriate and provides consumer education about various issues relating to licensing and consumer protection; administers the State Certified Arbitration Program (SCAP) for "lemon" motor vehicle claims and provides the public with both licensing and enforcement (complaint) information.
Securities Compliance	Conducts substantive registration for securities, franchises, broker-dealers, sales agents, investment advisers and their representatives; conducts examinations of investment a dvisers and broker-dealers. Runs an investor education program.
Securities Enforcement	Investigates complaints regarding potential violations of the Hawaii securities laws; prosecutes securities violations.

A.1.12.1
FUTURE STATE VISION FOR COMMERCE AND CONSUMER AFFAIRS

The future state vision needs to correct some of the following problems:

• Annually, May–June bills are passed that can require expedited work on systems which causes surges in backlog of work requests to the ISCO.

• This LOB is able to leverage funding to make significant IT improvements through careful strategic planning and prioritizing improvements. A major goal for this LOB is to provide for paperless, streamlined business processes supported by integrated automation.

• Interdependencies between software and incompatible versions can slow progress and improvements to service delivery. Examples: current Oracle screens will not run on Windows 7, Oracle Reports only runs on IE 8 or lower, IBM Host on Demand only runs on IE 7, and some packages will not run with lower versions of MS Office.

• ICSD maintains the PVL license for system screens, maintains/backs up the main Oracle server (P590 AIX), maintains the web server, provides web site programming, and provides WAN and bridging services for VCC. ISCO provides all other maintenance and helps support ICSD.

• DCCA is agile in terms of IT but finds that interfaces to other departments cause bottlenecks due to paper processes and antiquated systems.

• DCCA focused on internet services and incurred significant costs to move off of ICSD's mainframe and Wang systems to a more internet-friendly platform.

• The licensing and registration databases are considered critical information and are relied on by businesses and government agencies to check on the licensure of business entities including new transparency initiatives being implemented by Hawaii Insurance Exchange.

• ISCO has requested replacement of the AIX system, but its replacement depends on ICSD and their ability to move forward.

• ISCO has a stable backlog of 350 work requests. One or two additional IT staff could reduce or eliminate the backlog, but improvements are needed in the business processes and the systems that support them.

• The connections between DCCA and HIC, located at DRFortress, are critical to maintain processing guarantees. DCCA also maintains data connectivity to the National Association of Insurance Commissioners, synchronizing the insurance data. (Synchronizing the data between the systems is complex so they are trying to move to the National format).

Processing guarantees on these systems is measured in days so they can handle disruptions of up to one week.

• Status of servers: HP stand-alone servers are ~6 years old; the SAN is ~6 years old. They are actively migrating to an HP Blade server running VMware. The SAN is planned for replacement next year.

• Refresh cycle on other IT: PCs are refreshed every 4 years; printers every 5 to 6 years. PCs are currently running Windows XP due to problems with Oracle. MS Office is budgeted for replacement in FY13.

• Attempts to unify business information across Departments by creating a central repository, have floundered due to lack of agreement by divisions to agree on the management of master data. However, successful implementation was completed for automated exchange of business-entity information and a standardized database model.

• IT staff for this LOB are dedicated, very knowledgeable, and experienced therefore, would like to participate in making the future state vision a reality for the State.

• This LOB is interested in moving some services to a Cloud-based model; funding from this LOB could provide the first State Cloud-based solution. However, the AG's review and approval is required.

• Need better data sharing between LOBs. For example, Commerce and Consumer Affairs holds business filing information that Revenue Collection needs; however, their applications do not have access to enable correlating business-owner individual tax with business tax paid.

• ISCO is seeing a growing trend toward use of national databases; with registrations, they are moving toward a strategy that uses the national databases and will keep only Hawai`i-specific information locally.

• Need better video conferencing to drive down the cost of flying people from neighbor islands.

• Need better communication and more timely input of data between legislature and Commerce and Consumer Affairs.

The IT needs for this Line of Business envisions an aggressive use of the most current application development environments, database servers, cloud service, tools and technologies. The future state solutions architecture is depicted in Figure 48 below. Two key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
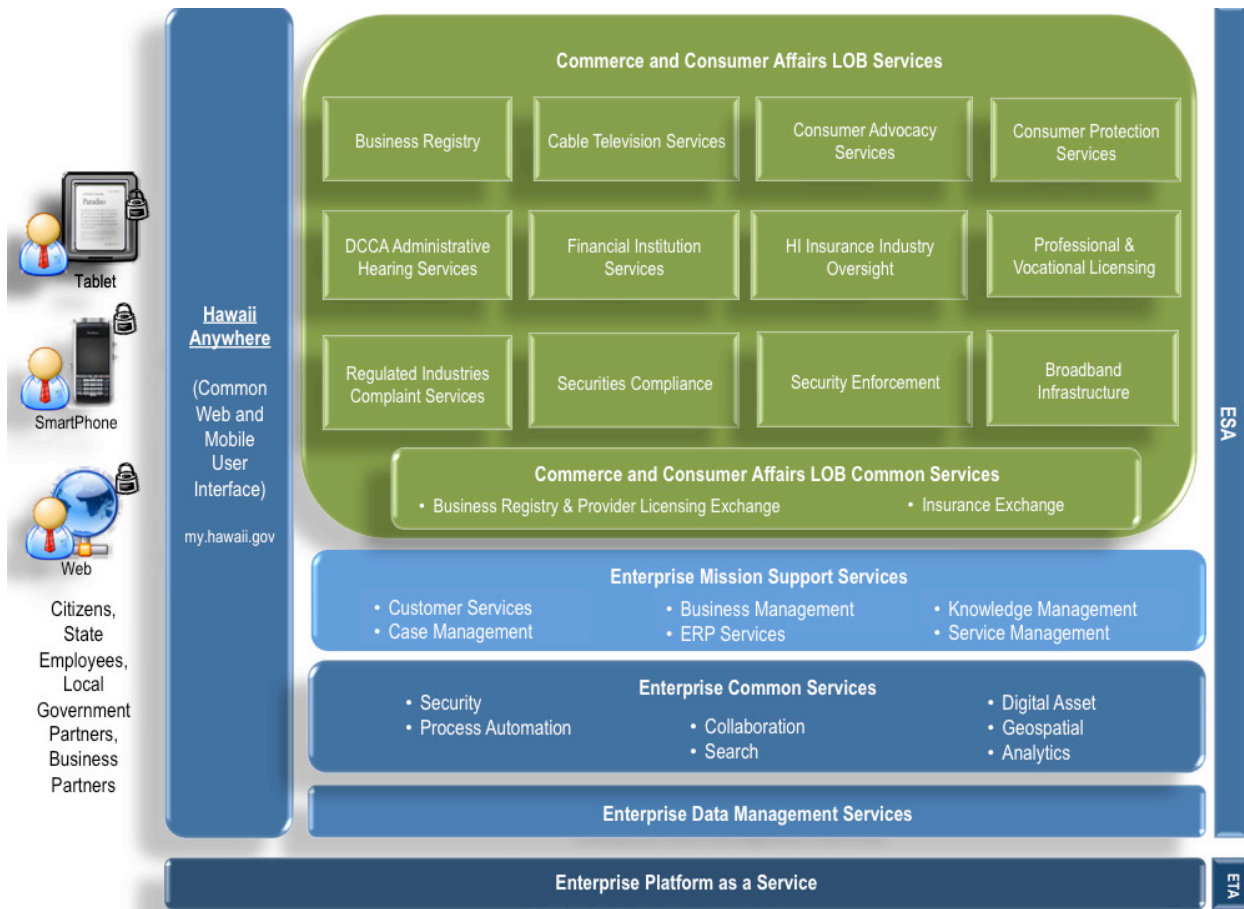
Figure 25: Commerce and Consumer Affairs LOB Future State Solutions Architecture

INFORMATION EXCHANGES

• State legislature is a critical interface to this LOB; tracks bills and makes preparations to support new laws and requirements; often there is a short cycle between bill passage and enforcement of new policies. This demands immediate attention and quick response from DCCA's Information Systems and Communication Office (ISCO).

• Hawai'i Information Consortium (HIC) takes in Commerce and Consumer Affairs online transactions for a fee ("Pending Review").

• Information should be shared in a common database with other LOBs such as Revenue Collection and Employment Rights and Benefits.

• DCCA Insurance Division shares data with the National Association of Insurance Commissioners (NAIC). This is a two-way exchange as there are Insurance providers who file with NAIC and we pull those filings back into our HIDS system.

• DCCA Insurance Division shares Insurance Premium Tax information with TriTech a private sector data clearing house for Tax compliance purposes.

• Information is exchanged with First Hawaiian Bank for ACH transactions.

• Future State – provider licensing information needs to be shared with Hawaii Health Information Exchange (HHIE) and insurance licensing information needs to be shared with Hawaii Insurance Exchange (HIX).

A.1.12.2
TRANSITION & SEQUENCING PLAN FOR COMMERCE AND CONSUMER AFFAIRS

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 23 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 23: Commerce and Consumer Affairs LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
In Progress:			
Health Insurance Premium Rate Review BPMS Pilot	Pilot Business Process Management System (BPMS) to update portions of the existing HIDS system that deal with Health Insurance rate filings, data collection, validation, analysis and reporting. The new system will be replacing the outdated Oracle Forms technology and transforming the user interfaces by re-engineering the processes and creating Microsoft.Net persona oriented browser-based information worker portals.	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: High
New:			
ALIAS Migration	Applicant/Licensee Interactive Automated System (ALIAS) Forms Migration Project - Business Process Management System (BPMS) to update the existing ALIAS system. The new system will be replacing the outdated Oracle Forms technology and transforming the user interfaces by re-engineering the processes and creating Microsoft.Net persona oriented browser-based information worker portals.	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: High
Oracle Managed Services – Database as a Service	Database as a Service (DaaS) in order to meet DCCA's SLA requirements.	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: Medium High
Complaint Management System (CMS) Forms Migration Project	CMS Forms for RICO, OCP, CATV, DFI and BREG-SEB - Migrate existing Oracle Forms user interface to MS.Net platform possible BPMS candidate.	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: High
BRIMS Migration	Business Registration Information Management System (BRIMS) Forms Migration Project	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: High
RDPMS Migration	Registration Document Processing and Management System (RDPMS) Forms Migration Project - Migrate existing Oracle Forms user interface to MS.Net platform possible BPMS candidate.	One-time DME: Pending Review Annual O&M: Pending Review	One-time DME: Pending Review Annual O&M: Pending Review
FIMS - Financial Institutions Management System Migration	Financial Institutions Management System (FIMS) Forms Migration Project - Migrate existing Oracle Forms user interface to MS.Net platform possible BPMS candidate.	DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: High
Computer Account Request (CAR) Application Modernization	Computer Account Request (CAR) - Lotus Notes Application Modernization (Migrate to .Net) - Migrate existing Lotus Notes database application to MS.Net platform possible BPMS candidate.	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: Medium High
RFA – ISCO Request for Action	ISCO Request For Action (RFA) - Lotus Notes Application Modernization (Migrate to .Net) - Migrate existing Lotus Notes database application to MS.Net platform possible	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: Medium High

Name	Description	Cost	Notes
	BPMS candidate.		
LTS – Legislative (Bill) Tracking System	Legislative (Bill) Tracking System (LTS) - Lotus Notes Application Modernization (Migrate to .Net) - Migrate existing Lotus Notes database application to MS.Net platform possible BPMS candidate.	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: Medium High
ELS - Employee Leave System Modernization	Employee Leave System (ELS) - Lotus Notes Application Modernization (Migrate to .Net) - Migrate existing Lotus Notes database application to MS.Net platform possible BPMS candidate.	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: Medium High
DRS - Director's Office Referral System	Director's Office Referral System (DRS) - Lotus Notes Application Modernization (Migrate to .Net) - Migrate existing Lotus Notes database application to MS.Net platform possible BPMS candidate.	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: Medium High
IN-OUT Board Application Modernization	IN-OUT Board - Lotus Notes Application Modernization (Migrate to .Net) - Migrate existing Lotus Notes database application to MS.Net platform possible BPMS candidate.	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: Medium High
ITS – Incident Bug Tracking System	Incident (Bug) Tracking System (ITS) - Lotus Notes Application Modernization (Migrate to .Net) - Migrate existing Lotus Notes database application to MS.Net platform possible BPMS candidate.	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: Medium High
Licensing Advisory Board Members Database	Licensing Advisory Board Members Database (License Boards) - Lotus Notes Application Modernization (Migrate to .Net) - Migrate existing Lotus Notes database application to MS.Net platform possible BPMS candidate.	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: Medium High
Citation - RICO Citation Database	RICO Citation Database (Citation) - Lotus Notes Application Modernization (Migrate to .Net) - Migrate existing Lotus Notes database application to MS.Net platform possible BPMS candidate.	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: Medium High
RFS1 – Request for Services (Insurance Office Services/Clerical)	Request for Services (Insurance Office Services/Clerical) (RFS1) - Lotus Notes Application Modernization (Migrate to .Net) - Migrate existing Lotus Notes database application to MS.Net platform possible BPMS candidate.	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: Medium High
RFS2 – Request for Services (Insurance Legal)	Request for Services (Insurance Legal) (RFS2) - Lotus Notes Application Modernization (Migrate to .Net) - Migrate existing Lotus Notes database application to MS.Net platform possible BPMS candidate.	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: Medium High
CRERS – Conference Room/Equipment Reservation System	Conference Room/Equipment Reservation System (CRERS) - Lotus Notes Application Modernization (Migrate to .Net) - Migrate existing Lotus Notes database application to MS.Net platform possible BPMS candidate.	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: Medium High

Name	Description	Cost	Notes
SCAP - State Certified Arbitration Program (Auto Lemon Law Database)	State Certified Arbitration Program (Auto Lemon Law) (SCAP) - MS Access Application Modernization (Migrate to .Net) - Migrate existing MS Access database application to MS.Net platform possible BPMS candidate.	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: Medium High
IA/BD/MF/FR Application Modernization	IA/BD/MF/FR - Investment Advisors / Broker Dealers / Mutual Funds / Franchises - MS Access Application Modernization (Migrate to .Net) - Migrate existing MS Access database application to MS.Net platform possible BPMS candidate.	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: Medium High
Real Estate Continued Education Tracking System	Real Estate Continued Education Tracking System - MS Access Application Modernization (Migrate to .Net) - Migrate existing MS Access database application to MS.Net platform possible BPMS candidate.	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: Medium High
LOB Infrastructure:			
In Progress:			
None			
New:			
None			

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 26 through Figure 28. The following items should be considered by the enterprise for the future state initiatives:

• DCCA has a strategic plan with weighted priorities. There are active projects for each initiative in the strategic plan.

• DCCA has mature custom applications built on Oracle databases. Each system is currently undergoing at least three major enhancements.

• Use of national databases; with registrations, moving toward a strategy that uses the national databases and maintaining only Hawai`i-specific information locally

• ISCO is looking at ways to improve the financial system; the biggest problem is that DAGS will not give them additional accounts for payments; insurance, financials, etc., are all entered into one account. Paper money is not deposited quickly. To eliminate duplicate data entry, DCCA's financial system needs to be integrated with FAMIS.

• XP will sunset in 2014 and their screens only run in XP; they are looking at using VMV - Virtual PCs as part of remote virtual desktop (financial institution inspectors use them successfully now).

• Need to perform business process re-engineering to provide efficiencies and upgrades to enable analysis and reporting of business performance.

• Allow online applications for (initial) Professional and Vocational Licensing for both Condominium Associations and Continued Education purposes.

In addition, Commerce and Consumer Affairs LOB solutions have critical needs for the following new Enterprise-wide Solutions:

• Robust email system

• Cloud service

• Data Management services

• Mobile technologies

• Web application servers

• Application Development Environments
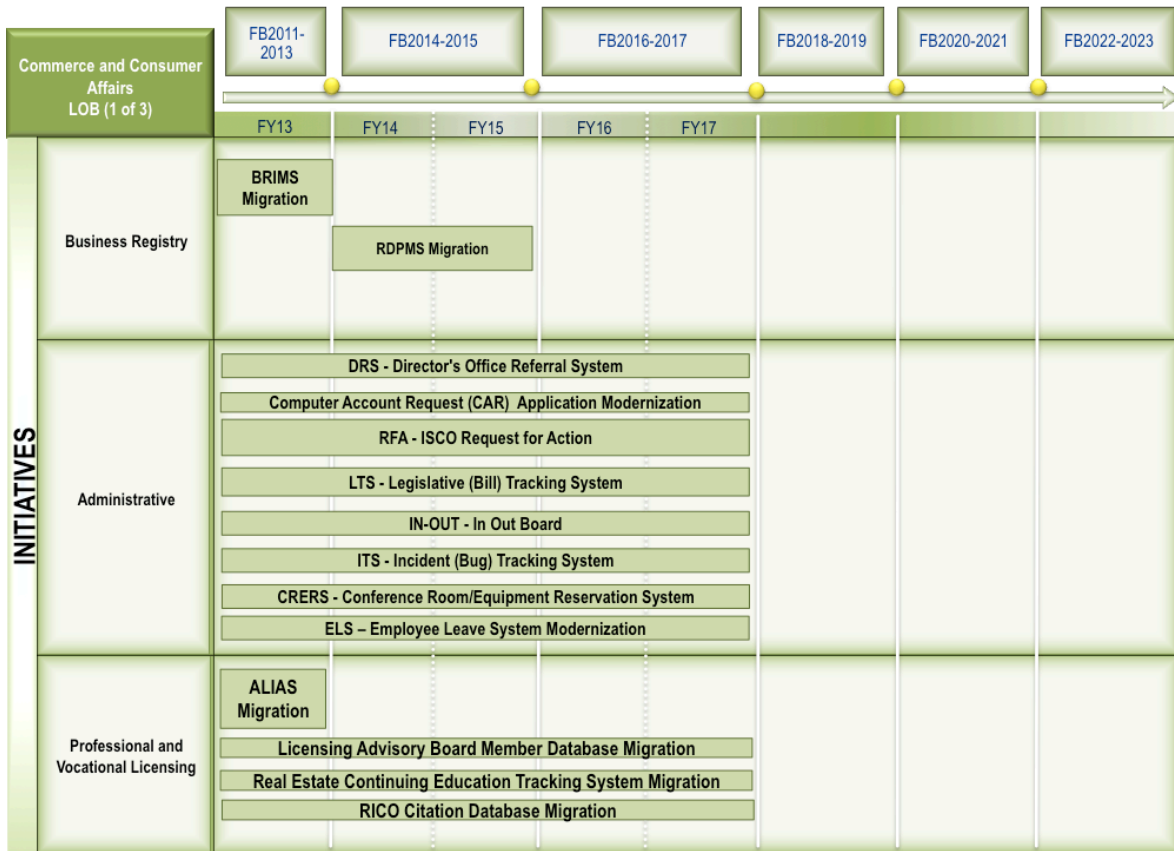
Figure 26: Commerce and Consumer Affairs Transition and Sequencing Plan Summary (1 of 3)

Figure 27: Commerce and Consumer Affairs Transition and Sequencing Plan Summary (2 of 3)

Figure 28: Commerce and Consumer Affairs Transition and Sequencing Plan Summary (3 of 3)

A.1.13 HUMAN SERVICES

The purpose of the Human Services LOB is to provide timely, efficient and effective programs, services and benefits, for the purpose of achieving the outcome of empowering those who are the most vulnerable in our State to expand their capacity for self-sufficiency, self-determination, independence, healthy choices, quality of life and personal dignity.

Table 24: Human Services LOB Business Services

LOB: Human Services Service Name	Service Definition
Human Services Case Management	Case management services support the case life cycle of a client's application, placement, and participation in one or many DHS programs.
Medical Assistance	Provides eligibility determination and payment of medical, long term care, dental, and behavioral services through contracted managed care health plans and individual practitioners and facilities for Title XIX, Title XXI and state funded health care programs.
Financial Assistance	Eligibility determination and benefit authorization for and issuance of financial assistance (TANF, TAONF, GA and AABD) and Supplemental Nutrition Assistance Program (formerly foods stamps). This service also includes medical evaluation and assessment through a contractor. Case management, work preparation and job placement services to TANF, TAONF and SNAP recipients.
Homeless Services	Provides emergency and/or transitional shelter to stabilize the homeless. Makes available to eligible homeless families and individuals, monetary assistance to prevent, avoid, or remedy

LOB: Human Services Service Name	Service Definition
	homelessness. Provides services to homeless individuals and families including adequate meals or cooking facilities; client assessment/social services planning; case management; job training; medical and social services referrals; childcare; educational and life skills classes; and monitoring and follow-up after transitioning to permanent housing. Provides supplementary funding for shelter operations and special programs which include job training, education to attain a GED, substance abuse counseling programs and help in transitioning to employment.
Child and Adult Protective Services	Provides protection from abuse and neglect for children and dependent adults. Also provides safe living arrangements with the goal of reducing abuse, neglect and maltreatment.
Foster Care	The main goal of the foster care and adoptive services is to find forever families for children and connect those interested in adoption with a committed entity that will ensure a child (or children, hopefully) has a loving permanent home. Includes managing individual foster child cases; selection and licensing of resource families; care oversight; and financial support.
Food and Nutrition Assistance	Provides Supplemental Nutrition Assistance Program (SNAP) which provides low-income households with coupons that can be used like cash at most grocery stores to ensure that they have access to a healthy diet. SNAP represents the pledge that hunger will not be tolerated in America. It is the tangible expression of the unalterable belief that everyone has a right to food for themselves and their families. The program is the cornerstone of the Federal government's food assistance programs. The U. S. Department of Agriculture (USDA) administers the SNAP at the Federal level through its Food and Nutrition Service (FNS). State agencies administer the program at the State and local levels, including determination of eligibility and allotments.
Child Care Assistance	The goal of the child care licensing is to protect the health, safety, and well-being of children enrolled in licensed facilities by developing and enforcing minimum standards for licensed facilities. Licensing staff monitors compliance with the law and the administrative rules and provides consultation and technical assistance to child care providers. Child care assistance provides families with: subsidies to help with child care expenses; guidance in selecting a child care provider; information about quality child care programs; and referrals to community resources for help with other concerns. The highest priority is given to children who need out-of-home care for protective service reasons, to assure children safety, comfort, and health.
Work and Employment Placement Programs	Provides work programs and employment and training designed to assist able-bodied adults to become attached to the workforce. Puts emphasis on: employment, skill-building, training, on-the-job training, and job search activities. Also provides supportive services such as child care, transportation reimbursement, and work-related expenses. Includes several work-incentive and job-readiness programs to recipients through partnerships and contracts with public and private agencies.
Vocational Rehabilitation	Vocational rehabilitation and independent living services for individuals with disabilities, who require assistance to prepare for, secure, retain or regain employment.
Services for the Visually and Hearing Impaired	Provides rehabilitation and related services for persons who are blind and visually impaired to persons who are deaf or hard of hearing statewide. These services include, but are not limited to, education, vocational rehabilitation services leading to job placement, clinic examinations, and skill training to empower consumers toward independence and success in their vocations and their lives.

LOB: Human Services Service Name	Service Definition
Affordable Housing Assistance	Provides the development and management programs that provide housing to those who are unable to provide housing for themselves including the rental of single-family or multifamily properties, and the management and operation of federally supported housing properties.
Youth Services	Provides and coordinates a continuum of services and programs for youth-at-risk to prevent delinquency and reduce the incidence of recidivism. Also strives to provide a clear sense of responsibility and accountability for all youth services in Hawaii.

A.1.13.1 FUTURE STATE VISION FOR HUMAN SERVICES

The future vision for Human Services is to apply state-of-the-art technology to the fullest extent to accomplish the following critical business objectives and to address current state issues.

• Key processes: Eligibility determination and benefit issuance, case management, procurement of health and human services, consulting contracts, fiscal management and reporting, budget management, program audit, quality control, IT support, and personnel management.

• Key process issue to improve: Dealing with lawsuits related to lack of timely processing and backlog of people receiving benefits.

• New processes, working relationships, and interfaces need to be addressed for the Patient Protection and Affordable Care Act (PPACA) such as an insurance exchange worked through DCCA.

• Treaty with Pacific Island Nations and impact upon DHS: people can freely migrate and the U.S. is required to provide State services, healthcare, and education to 7,000-12,000 people. This is an uncompensated cost of "Pending Review" a year.

• Department's staff is geographically distributed in each of the counties (namely Oahu, Maui [including Lanai and Molokai], Kauai [including Niihau], and Hawai`i).

• BESSD, electronic forms, need help with language proficiency; nine languages need to be supported in Hawai`i.

• Section 508 of the Rehabilitation Act Compliance is required due to constituency.

• Electronic consumer interface and management tools, with website that is easy to navigate, and interfaces with various databases and systems to manage the work flow process more efficiently.

• Provide online access for consumers and modern communication tools/applications such as texting, emailing, or tweeting.

• Explore the possibility of a new phone system (e.g., VoIP) and telecommuting.

• Provide online access and depository for foster children and BESSD clients to save their vital records, photographs, employment records, resumes, etc., so that they have portable digital files/records.

• Ability to oversee, monitor, and audit service provision partners. Need improved data about those companies providing services from either the State procurement system or DCCA.

• Better Access to Department (Gateway Portal). (Provides access to DHS both internally and externally [Fed partners].)

• Dashboard (Data Warehouse—not yet started).

• Need language accessible services and disability access.

• Medicaid staff are on a separate implementation of Lotus Notes which creates issues in communications with them and other DHS staff.

The future state solutions architecture is depicted in Figure 29 below. Two key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services
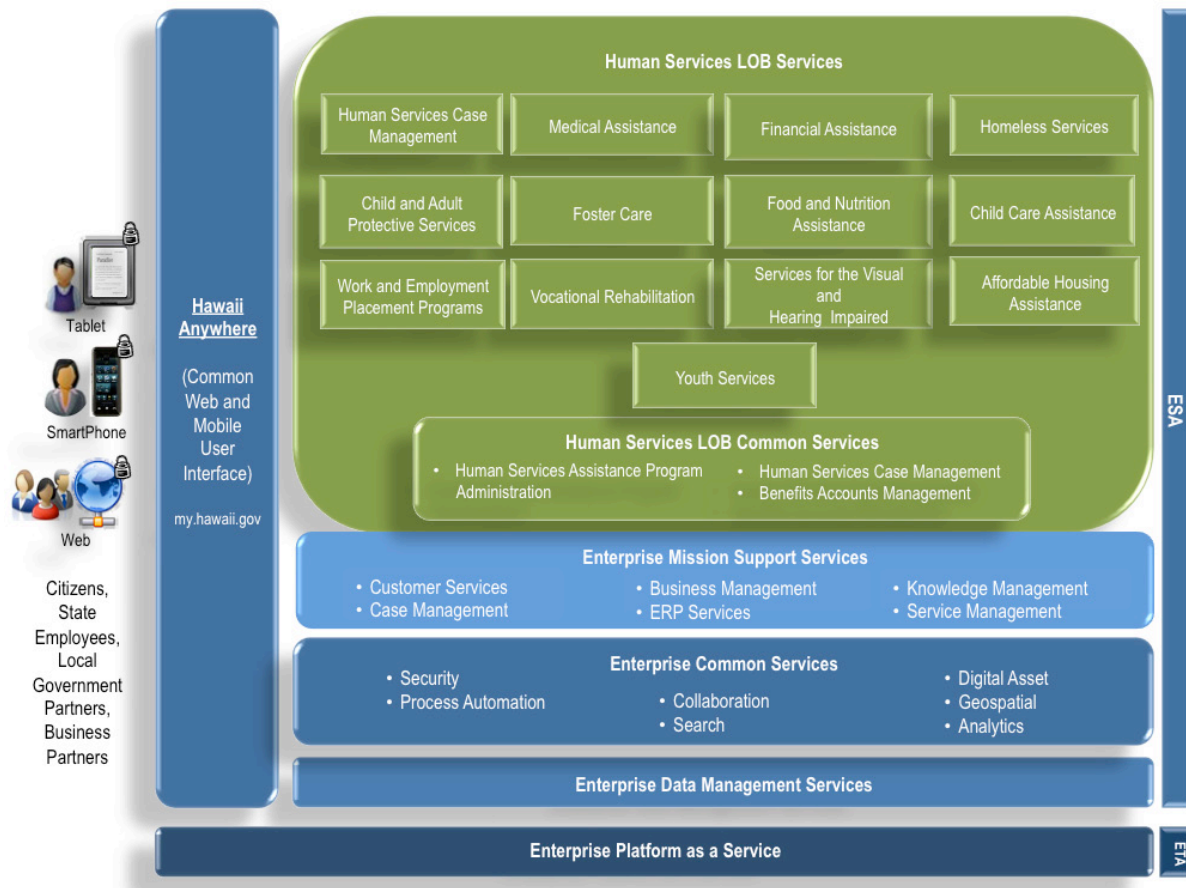
Figure 29: Human Services Future State Solutions Architecture

INFORMATION EXCHANGES

• State: B&F, DAGS, DOE, DOH (death records), DLIR, DCCA (contractors), UH, DOD State Civil Defense

• City and County of Honolulu, County of Kauai, County of Maui (includes Molokai and Lanai), County of Hawai`i

• State of Hawai`i Judiciary

• US DHHS (Center for Medicaid and Medicare Services, Administration for Children and Families – Office of Family Assistance, Child Care Bureau, and Head Start Bureau), USDA (Food and Nutrition Service), US DOI (Compact of Free Associated matters), SSA (income and eligibility verification)

• Multiple private for-profit and not-for-profit organizations.

• Needs among the DHS Divisions and administratively attached agencies as well. (Example: internal awareness of enrollment of a person in one program when they apply for another – when someone applies for a childcare license knowing that they are already registered as a foster care home.)

• Ability to oversee, monitor, and audit service provision partners. Need improved data about those companies providing services from either the State procurement system or DCCA.

• Electronic availability of demographic data, case load, reports, real-time fiscal (revenue and expenditure) information, DOH death records, and electronic records related to companies doing business with the State.

• VR works with the following departments but does not have any information-sharing capabilities:

– Department of Labor: VR is reimbursed approximately "Pending Review" per year by the Social Security Administration when SSI/SSDI recipients are employed. VR needs the client's current wage information that DOL possesses. If VR were able to access the client's wage information, the SS reimbursement rate would be greater.

– Department of Education: VR works with DOE students with disabilities ages 14 -21.

– Department of Health: VR works with adults and students with developmental disabilities and/or with mental health disabilities.

• Need an interface with Judiciary.

A.1.13.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR HUMAN SERVICES

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

• New MedQuest Eligibility System

 – "Pending Reivew" new eligibility system to increase timeliness and transparency, electronically verify information, and interface with health insurance exchange, in alignment with Patient Protection and Affordable Care Act. Replaces current 23 year old system. Opportunity to establish and leverage enterprise application integration capabilities.

 – MQD has "Pending Review" budgeted to comply with the Affordable Care Act requirements by redesigning the eligibility system.

• Benefit, Employment, and Support Services Division BPR Project

 – BPR evaluation of the existing financial assistance and SNAP eligibility process, redesign work flow processes for efficiencies in issuing benefits; address document imaging and e-forms and portable devices to allow DHS staff to be more mobile in addressing routine tasks (e.g. child care licensing) and for responding to emergency disasters (e.g. emergency food stamps); explore the possibility of expanding the concept of telecommuting with the availability of portable devices. Opportunity to establish and leverage enterprise capabilities in BPR methodology, mobile apps, and telecommuting.

• Replacement Applications Systems (BESSD, MQD, VR, SSD):

 – Integration with Hawai`i Health Insurance Exchange

 – Hawai`i Prepaid Medical Management Information System (HPMMIS) enhancement/replacement

 – VR has just begun the process of procuring the services of a vendor to build an Automated Case Management System (ACMS).

 – SSD is in the intermediate stages of building their new Child Protective Services System. (Note: new development is being done with Ruby on Rails, SQL Server database, and .Net - all technologies that would be non-standard today.)

• Business Process Re-engineering Project. BESSD has hired a consultant to evaluate the existing eligibility process pertaining to financial assistance and SNAP benefits and help redesign the work flow processes to accomplish the goal of issuing benefits in a timely manner with diminished resources:

 – Address document imaging and e-forms as well as portable devices to allow DHS staff to be more mobile in addressing routine tasks (e.g. child care licensing) and for responding to emergency disasters (e.g. emergency food stamps).

 – Explore the possibility of expanding the concept of telecommuting with the availability of portable devices. This would address some of the lease rental issues.

• Request for grant ("Pending Review") from USDA to demonstrate content and imaging via Xerox machines they already have.

• Implement new application and database (Maximo) to capture inventory and manage civil defense emergency preparedness.

• New Purchase Order Log, in addition to the Hawai`i Compliance Express, repository for procurement documents that are routinely needed to execute contracts and make payments. Investigate use of Maximo.

• Better Access to Department (Gateway Portal). (Provides access to DHS both internally and externally [Fed partners].)

• Dashboard (Data Warehouse-not yet started).

• Need language accessible services and disability access.

• Medicaid staff are on a separate implementation of Lotus Notes which creates issues in communications with them and other DHS staff.

• VR virtual desktop environment

• BESSD document imaging and content management

• Short term/immediate needs:

 – Old equipment and software

 – Routine repair and maintenance of hardware such as PCs, servers and routers need to be done or new equipment purchased

 – Purchase backup tapes for the mainframe

 – Basic software maintenance costs

 – Equipment and infrastructure needed for relocated staff due to the SSD consolidation and reorganization

• Longer term needs:

 – BESSD needs to review and assess the viability of the HAWI and HANA systems on the mainframe. BESSD needs to address the cost issues and the potential inability to maintain the legacy system as-is.

 – Online training would assist the Division in addressing staffing needs and ability of the Division to maintain operations.

 – Moving to the IFL and considering Cloud computing would address some cost issues.

– Long-term decision for MQD network and email; i.e., join DHS network or remain independent. (Medicaid staff are on a separate implementation of Lotus Notes which creates issues in communications with them and other DHS staff.)

– SSD: Complete building and implement the new child protective services system (SHAKA)

– SSD Adult Community Care Services Branch (ACCSB): CPSS data system needs to be replaced. Discussion is to have ACCSB data from CPSS included in CWSB's new SHAKA information system. Cost estimate to modify SHAKA to accommodate ACCSB-APS information is not known.

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 25 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 25: Human Services LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
Production Applications Alignment:			
Health Insurance Premium Rate HANA - Hawaii Automated Network for Assistance	Re-Platform Database, Mandated & Productivity Enhancements	One-time DME: Pending Review On-going annual O&M:	Status: Enhancement EA Compliance: 3 Priority: 1
HAWI - Hawaii Automated Welfare Information System	Phase 1: Replace HAWI to meet new Federal ACA Requirements, "Pending Review" Phase 2: Move remaining programs from HAWI "Pending Review"	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Replace EA Compliance: 4 Priority: 1
HAWI - Hawaii Automated Welfare Information System	Phase 1: Replace HAWI to meet new Federal ACA Requirements, "Pending Review" Phase 2: Move remaining programs from HAWI "Pending Review"	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Replace EA Compliance: 4 Priority: 1
HARI - Hawaii Accounts Receivable Information System	Supports the Entitlements & Benefits Overpayment Claims generated from HAWI, HANA, CPSS, etc.	(Covered by HAWI O&M)	Status: Use As-Is EA Compliance: 4 Priority: 3
CPSS - Child Protective Services System	Supports the Child Welfare Services Abuse & Neglect, Foster Care and Adoptions Programs, supports the Adult Protective Services Adult Day Care, Foster Grandparent, Respite Companion Service, Nursing Home Without Walls, Developmentally Disabled/Mentally re (Project evaluation to determine a path forward)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Replace EA Compliance: 4 Priority: 1
VRISS - Vocational Rehabilitation Information & Statistical System	Supports the Assessment, Counseling & Guidance for Rehabilitative Services, Supported Employment Services, Job Placement, Services for the Blind and the Disability Determination (Title II and Title XVI) programs.	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Replace EA Compliance: 4 Priority: 1
Missing Children	hawaii.gov/missing-children (hosted by ICSD.)	On-going annual O&M: Pending Review	Status: Use As-Is EA Compliance: 3 Priority: 3

Name	Description	Cost	Notes
Department of Human Services Website	hawaii.gov/dhs (hosted by ICSD.)	On-going annual O&M: Pending Review	Status: Use As-Is EA Compliance: 3 Priority: 3
Adult Abuse and Neglect Registry		Covered by CPSS.	Status: Use As-Is
Electronic Benefit Transfer	Benefits Transfer Services	On-going annual O&M: Pending Review	Status: Use As-Is
Document Imaging and Content Management	Electronic Client and Case Folders	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: In-Progress EA Compliance: 3 Priority: 1
POLog	Automate DHS Purchase Process	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Replace EA Compliance: 5 Priority: 1
Budget Creation & Tracking	Pilot to Automate DHS Budget Process	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: In-Progress EA Compliance: 5 Priority: 1
HPMMIS	Pilot to Automate DHS Budget Process	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Enhancement EA Compliance: 3 Priority: 1
Hawaii Housing Authority Accounting System (migration)			
LOB Infrastructure:			
New:			
DHS Portal	Upgrade System Software Version and Enhance Functionality	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Upgrade EA Compliance: 3 Priority: 1
PC Replacement	Meet immediate needs to replace and upgrade old equipment and software. Routine repair and maintenance of hardware such as PCs, servers and routers need to be done or new equipment purchased.	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Upgrade EA Compliance: 3 Priority: 1

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 30 and Figure 31.
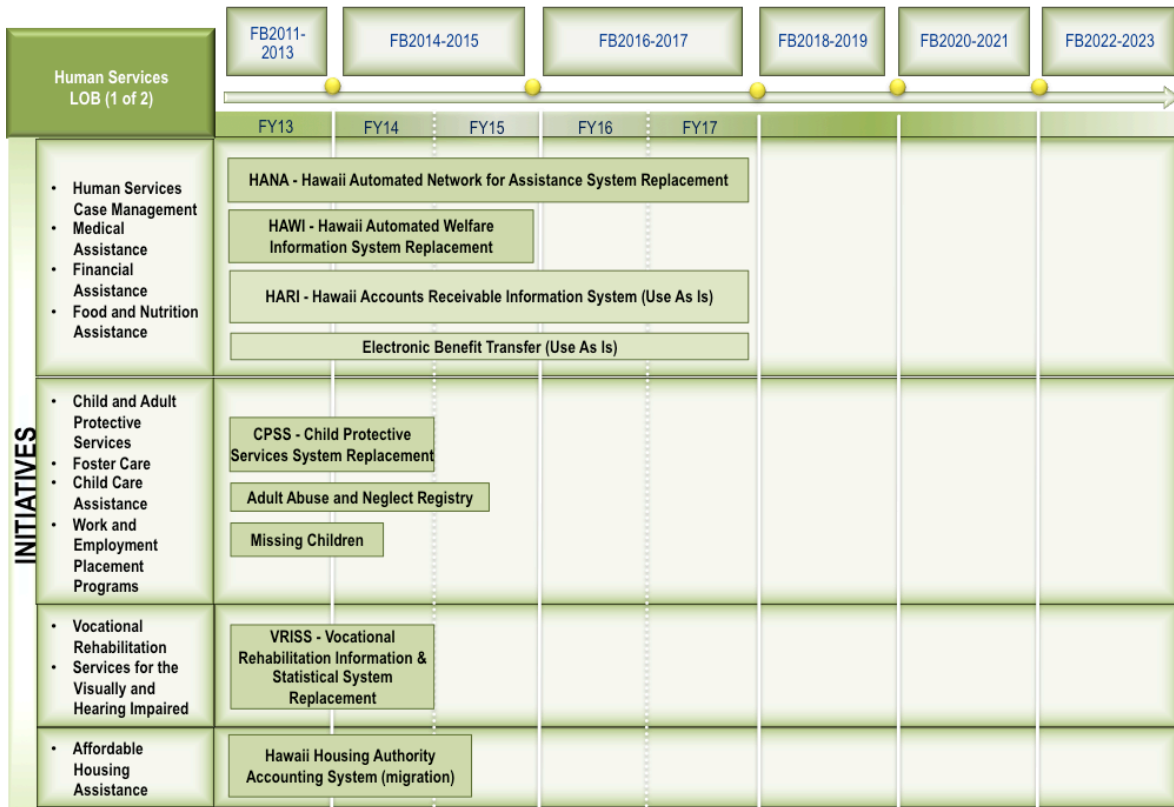
Figure 30: Human Services Transition and Sequencing Plan Summary (1 of 2)

Figure 31: Human Services Transition and Sequencing Plan Summary (2 of 2)

A.1.14   EMPLOYMENT RIGHTS AND BENEFITS

The Employment Rights & Benefits line of business protects the economic security, physical, economic and social well-being of workers and supports good labor-management relations. This includes developing and disseminating labor market information and assisting job seekers, workers and employers to facilitate workforce development.

Table 26: Employment Rights & Benefits LOB Business Services

LOB: Employment Rights & Benefits Service Name	Service Definition
Workforce Development	Develops and maintains various partnerships with the private sector, educators, and labor unions to identify emerging employment trends and needed skill sets, technological advances, declining industries and economic issues. Assists job seekers (including disadvantaged, low-income, dislocated, immigrant, and refugee residents), workers and industries by providing employment related services, including but not limited to, adult basic education, employment referral and placement service, job training that links qualified job seekers with employers. Develops grant proposals in coordination with other agencies to acquire additional resources to carry out employment and job training activities. Also involved in strategically planning for economic dislocations of workers in declining industries, making appropriate services available to dislocated workers. Provides career and jobs information online: HireNet Hawaii, Hawaii Workforce InfoNet (HIWI), greenjobshawaii.org, careerkokua.org, myfuturehawaii.org, Kumu Au (State Eligible Training Provider list), America's Career ONESTOP, America's Career InfoNet, My Next Move, the Hawaii Directory of Green Employers, and mySkills myFuture or O*NET OnLine.
Occupational Safety and Health	Provides Hawaii Occupational Safety and Health services and enforces that portion of HRS that regulates safety and health in the workplace. Adjudicates appeals from decisions rendered by the Director of DLIR relating to Boiler and Elevator Safety Law.
Labor Research and Statistics Analysis	Provides information that can help with research, business planning, job search and career decisions; produce data such as: wages, employment, unemployment, work injuries and illness, labor market information, career information, education and training, as mandated by the Workforce Investment Act (WIA) and HRS 373C; and Act 68 (SLH, 2010) to determine work shortages in the construction industry.
Prepaid Health Care	Administers the Prepaid Health Care (PHC) laws by establishing necessary policies and guidelines for program effectiveness and efficiency; and conducting evaluations and developing procedures, standards, and methods to improve operational areas. Proposes legislative and rule changes to improve, clarify, or expand the PHC program. Administers the Prepaid Health Care Premium Supplementation Fund, by processing and directing payments to qualified disabled workers from the fund. Prepares and conducts statewide Chapter 91 PHC hearings. Conducts statewide activities related to PHC plans, appealed case management, insurance, statistical reports, computer inputs and outputs, payments and management of the PHC Premium Supplementation Fund and financial audits, and enforcement of the PHC laws and regulations.
Prepaid Health Care	Administers the Prepaid Health Care (PHC) laws by establishing necessary policies and guidelines for program effectiveness and efficiency; and conducting evaluations and developing procedures, standards, and methods to improve operational areas. Proposes legislative and rule changes to improve, clarify, or expand the PHC program. Administers the Prepaid Health Care Premium Supplementation Fund, by processing and directing payments to qualified disabled workers from the fund. Prepares and conducts statewide Chapter 91 PHC hearings. Conducts statewide activities related to PHC plans, appealed

LOB: Employment Rights & Benefits Service Name	Service Definition
	case management, insurance, statistical reports, computer inputs and outputs, payments and management of the PHC Premium Supplementation Fund and financial audits, and enforcement of the PHC laws and regulations.
Prepaid Health Care	Administers the Prepaid Health Care (PHC) laws by establishing necessary policies and guidelines for program effectiveness and efficiency; and conducting evaluations and developing procedures, standards, and methods to improve operational areas. Proposes legislative and rule changes to improve, clarify, or expand the PHC program. Administers the Prepaid Health Care Premium Supplementation Fund, by processing and directing payments to qualified disabled workers from the fund. Prepares and conducts statewide Chapter 91 PHC hearings. Conducts statewide activities related to PHC plans, appealed case management, insurance, statistical reports, computer inputs and outputs, payments and management of the PHC Premium Supplementation Fund and financial audits, and enforcement of the PHC laws and regulations.
Temporary Disability Insurance	Administers the Temporary Disability Insurance (TDI) laws by establishing necessary policies and guidelines for program effectiveness and efficiency; and conducting evaluations and developing procedures, standards, and methods to improve operational areas. Proposes legislative and rule changes to improve, clarify, or expand the TDI program. Administers the TDI Special Disability Fund by processing and directing payments to qualified disabled workers from the fund. Conducts statewide activities related to TDI plans, appealed case management, insurance, statistical reports, computer inputs and outputs, payments and management of the TDI Special Fund and financial audits, and enforcement of the TDI laws and regulations.
Unemployment Insurance	Includes the collection of contributions from subject employers and the payment of unemployment benefits to eligible persons in order to alleviate the economic hardships that result from loss of wage income during periods of involuntary unemployment. Also, conducts quasi-judicial hearings on appeals by claimants and employers relative to the DLIR's decisions on unemployment benefit, coverage and related matters, and renders formal decisions to affirm, reverse or modify the department's decisions.
Wage and Standards Enforcement	Assures a lawful working environment by equitably administering and enforcing the following labor laws: overtime, minimum wage, child labor permits, on-site drug testing, Hawaii family leave, payment of wages, illegal termination due to suffering a work injury, deduction from wages, lie detector tests, prevailing wages on Public Works, direct deposit, and breaks.
Workers' Compensation	Administers the Workers' Compensation (WC) Law by establishing necessary policies and guidelines for program effectiveness and efficiency; enforcing the WC laws and regulations; and conducting evaluations and developing procedures, standards, and methods to improve operational areas. Proposes legislative and rule changes to improve, clarify, or expand the WC program. Administers the WC Special Compensation Fund (SCF) by processing and directing payments to disabled workers from the SCF. Conducts statewide case management activities related to WC claims, insurance, records management and control, statistical reports, computer inputs and outputs, payments and management of the SCF and financial audits. Conducts statewide activities related to WC guidelines on frequency of treatment and the qualification of health care providers. Prepares and conducts statewide administrative WC hearings. Adjudicates WC claims for benefits, coverage and related matters, and WC appeals from decisions rendered by the Director of DLIR pursuant to the State workers' compensation law (Chapter 386, Hawaii Revised Statutes).

LOB: Employment Rights & Benefits Service Name	Service Definition
Hawaii Labor Relations	Administers the Hawaii Employment Relations Act (HRS Chapter 377) and Collective Bargaining in Public Employment (HRS Chapter 89) by conducting union representation elections and adjudicating unfair labor and prohibited practice complaints. Also administers appeals to occupational safety and health citations issued by the DLIR Director under HRS Chapter 896.
Equal Opportunity and Civil Rights Enforcement	Investigates, conciliates, and litigates complaints of discrimination in employment, housing, public accommodations, and access to state services.
Equal Opportunity and Civil Rights Enforcement	Investigates, conciliates, and litigates complaints of discrimination in employment, housing, public accommodations, and access to state services.

A.1.14.1
FUTURE STATE VISION FOR EMPLOYMENT RIGHTS & BENEFITS

The future vision for Employment Rights & Benefits is to apply state-of-the-art technology to the fullest extent to:

1. Increase efficiency, effectiveness and productivity;

2. Expedite/facilitate and enhance delivery of service to clients/customers;

3. Maximize utilization of scarce resources (dollars and employees);

4. Minimize data redundancy and maximize information sharing across programs, divisions, offices and governmental departments/agencies;

5. Utilize the Internet capabilities in a secure environment; and

6. Aggressively protect confidentiality, security and integrity of data.

The future state solutions architecture is depicted in Figure 32 below. Two key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
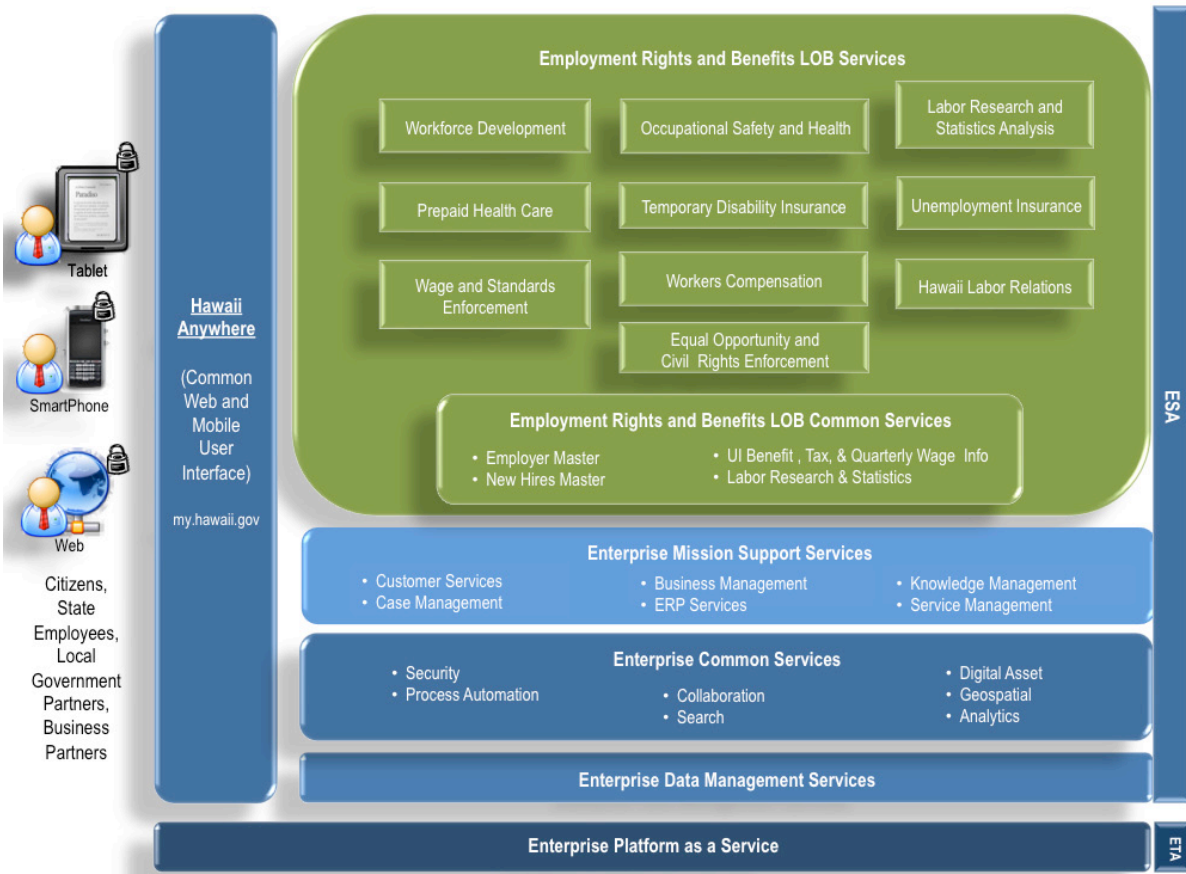
Figure 32: Employment Rights and Benefits Future State Solutions Architecture

INFORMATION EXCHANGES

The Wage Standards Division (WSD) currently uses Disability Compensation Division's (DCD) employer data to identify the correct employer in their investigations. In addition, WSD provides notification of unregistered employers that are found in the investigations to DCD and Unemployment Insurance (UI).

The UI Division currently uses information from the State and National Directory of New Hires to insure that claimants are not receiving UI benefits while employed. The State's child support agency processes the new hire reports received from Hawaii based employers.

The UI Division also cross matches all new claims with the Social Security Administration to insure that the claimant's social security number is valid.

The UI Division provides all UI Benefit and Quarterly Wage information to the following agencies on a quarterly basis:

• Internal Revenues Service

• Social Security Administration

• National Directory of New Hires

The UI Divisions provides online access to the UI Benefit and Quarterly Wage information to certain agency staff of the Department of Human Services.

The UI Division provides extracts of UI Benefit, UI Tax and/or Quarterly Wage information to the following agencies at regular intervals or as one-time requests:

• State Department of Taxation

• University of Hawaii

• Federal Department of Homeland Security

• Federal Bureau of Investigation

• State Attorney General

• City and County of Honolulu Prosecutor

• State Department of Labor Work Force Development Division

• State Department of Labor Disability Compensation Division

• State Department of Labor Research and Statistics

• State Department of Business Economic Development and Tourism

• State Department of Transportation

HIOSH uses statistics compiled by the Research and Statistics Division and the Worker's Compensation Division to schedule occupational safety and health inspections.

The HCRC Enforcement Database is designed to capture information on complaint investigations, maintain records, and produce reports. The system interfaces with web-based U.S. EEOC IMS and HUD TEAPOTS databases.

Labor Research and Statistics (R&S) Analysis information exchange:

- Provides access to the Career Kokua website to schools and organizations statewide and to the general public. Surveys employers to gather updated occupational information. Surveys schools and training providers to gather updated training programs and related educational information.

- Ability to access data sources such as R&S, BLS, employer web sites, other state agencies such as DCCA, and other sources to gather occupational, employment, and industry data.

- R&S information for Quarterly Census of Employment and Wages (QCEW) program information is extracted from Unemployment Insurance (UI) Tax System and Quarterly Wage Reporting System (QWRS).

- R&S information for Local Area Unemployment Statistics (LAUS) and Mass Layoff Statistics (MLS) programs are extracted from Unemployment Insurance (UI) Benefit System.

- R&S information on employment and wages for employers covered under Hawaii Unemployment.

- Insurance; monthly job count, hours and earnings survey data; potential mass layoff events, and summary reports on unemployment insurance claims are provided to the Bureau of Labor Statistics (BLS) under Cooperative Agreement.

The Disability Compensation Information System (DCIS) uses the following data or information that is external to its environment:

- Unemployment Insurance (UI) Tax employer information that is passed to the Employer file and shared by the DCIS.

- Employer/MIF Database: that is shared with DC employer demographics.

A.1.14.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR EMPLOYMENT RIGHTS AND BENEFITS

The DLIR programs are responsible for prioritizing and planning their initiative(s). Each of the DLIR programs will be supported by contracted consultant services and in-house IT support staff (EDPSO). Consideration will be given first to unemployment applications and secondly to disability compensation systems.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 27 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 27: Employment Rights and Benefits LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
Production Applications Alignment:			
Agent Reporting System	The Agent Reporting System gathers information from the Internet system. This information is used for such things as calculating insured unemployment rates by county and producing reports detailing the characteristics of unemployment insurance claimants.	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Web App and Virtual Servers Priority: High (1) EA Compliance: Medium (3)
Child Support Enforcement Intercept	The Child Support Enforcement Intercept gathers information which will be used by the Department of the Attorney General, Child Support Enforcement Agency (CSEA). The project cross matches the DLIR-UI Benefit Master file against a CSEA individual file. The extract information is written to an extract file which is used by CSEA.	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Web App and Virtual Servers Priority: High (1) EA Compliance: Medium (3)
Cross Match of DHS & UI Wage & Employment Data Base	The system was designed as a vehicle to cross match social security numbers obtained from the Department of Human Services (DHS), Vocational Rehabilitation and Services for the Blind Division and matched to the Unemployment Insurance wage record and employment data bases.	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Web App and Virtual Servers Priority: High (1) EA Compliance: Medium (3)

Table 27: Employment Rights and Benefits LOB Investment Initiatives

Name	Description	Cost	Notes
ES-202 Employment and Wages Program	The ES-202 is a federal and state cooperative program between the Department of Labor and Industrial Relations (DLIR) and the Federal Bureau of Labor Statistics. This system extracts base information from the Unemployment Insurance (UI) Contributions file and generates mandated Federal reports on UI-covered employment, wages, and contributions.	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Web App and Virtual Servers Priority: Medium (3) EA Compliance: Medium (3)
ES-203	The ES-203 system is a federally mandated program of the Research and Statistics Office of the Department of Labor and Industrial Relations (DLIR). This system extracts base information from the Unemployment Insurance (UI) Benefits system. The information is then used to produce tables used in reporting on the characteristics of the insured unemployed.	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Web App and Virtual Servers Priority: Medium (3) EA Compliance: Medium (3)
ETA-204 Research and Statistics System	The ETA-204 system is a federally mandated program of the Research and Statistics Office of the Department of Labor and Industrial Relations (DLIR). This system provides the Research and Statistics Office with various reports concerning employer information such as total taxable wages earned, taxes paid, benefit payments made, total covered employees, and the employer's status. Also, reports showing employers categorized statewide by account number, industry code, and island are generated.	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Web App and Virtual Servers Priority: Medium (3) EA Compliance: Medium (3)
Interstate Benefit Internet	This application is part of a nationwide network. The system was designed as a vehicle for participating states to transmit Interstate Benefits (IB) Internet data from one state to another.	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Web App and Virtual Servers Priority: High (1) EA Compliance: Medium (3)
Unemployment Insurance Benefits	The Unemployment Insurance (UI) Benefits system is a fully integrated system featuring extensive on-line update and inquiry facilities. This system automates most of the tasks involved in keeping track of UI Benefit claims. The system is designed to allow complex on-line inquiries, as well as the editing and validation of data before updating the files.	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Web App and Virtual Servers Priority: High (1) EA Compliance: Medium (3)
Unemployment Insurance Quarterly Wage System	The Quarterly Wage Reporting System services the Unemployment Insurance (UI) Division of the Department of Labor and Industrial Relations. The primary function of this system is the capture and maintenance of employee quarterly wage data for use and distribution by the UI Benefit and UI Tax systems. Other functions include controlled distribution to other qualifying agencies, penalizing non-compliant employers, and providing summary data for statistical evaluations.	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Web App and Virtual Servers Priority: High (1) EA Compliance: Medium (3)

Name	Description	Cost	Notes
Unemployment Insurance Tax System	The Unemployment Insurance (UI) Tax System will maintain the UI employer data base, track the accounting and collection of UI taxes, penalize delinquent employers, assist in the tracking of audits, assist the auditors in their functions, and maintain statistics for Federal and State reports.	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Web App and Virtual Servers Priority: High (1) EA Compliance: Medium (3)
Hawaii Unemployment Insurance Express (Quarterly Wage Reports)	http://hui.ehawaii.gov/hui/app/ (developed, supported, and hosted by HIC)	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Use As Is Priority: Medium (3) EA Compliance: Medium (3)
Department of Labor and Industrial Relations	hawaii.gov/dlir (hosted by ICSD)	Annual on-going O&M: Pending Review	Status: Use As Is Priority: Medium (2) EA Compliance: Medium (2)
State Employment Security Fund	Supported by ICSD. - State employee security fund. Unemployment Benefits	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Web App and Virtual Servers Priority: High (1) EA Compliance: Medium (3)
Federal Parent Locator	Supported by ICSD. Locating parents that are delinquent with child support	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Web App and Virtual Servers Priority: High (1) EA Compliance: Medium (3)
Unemployment Insurance Interactive Voice Response System	Front end system which allows users to request benefits via telephone. (AIX Server/Client)	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Web App and Virtual Servers Priority: Medium (3) EA Compliance: Medium (3)
Certificate of Age Registration System	Certificate of Age Registration System is operated from the director's server and is a MySQL based program to take in requests and issue Child Labor Work Permits for minors ages 16 to 17	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Web App and Virtual Servers Priority: Low (4) EA Compliance: Medium (3)
WSD Information Management System	WSD Information Management System is the division's data base system for all hearings, wage investigations, child labor work permits for minors age 14 to 15 years old, and special minimum wage & payment of wages exceptions.	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Web App and Virtual Servers Priority: Low (4) EA Compliance: Medium (3)

Name	Description	Cost	Notes
Disability Compensation Lotus Notes DCDNet Program	The DCDNet program is a client-server program developed to utilize data from the Division's mainframe program (DCIS) to manage the WC case and hearings systems, and to provide robust and responsive management reports. This system was developed in response to the division's IT Master Plan (2002) to migrate off of the mainframe (DCIS).	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Web App and Virtual Servers Priority: Low (4) EA Compliance: Medium (3)
Disability Compensation System	The Disability Compensation Information System (DCIS) is a mainframe application that maintains case, claimant, entity, insurance and employer information for the Workers' Compensation (WC), Temporary Disability Insurance (TDI), and Prepaid Health Care (PHC) programs. The DCIS provides a full range of real-time update/query and batch reporting capabilities and shares an employer data base with the information processing systems of the Unemployment Insurance (UI) Division. Supported by ICSD.	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Web App and Virtual Servers Priority: High (2) EA Compliance: Medium (3)
Hawaii Occupational Safety and Health Division	This application is part of a nationwide network. The system was designed as a vehicle for participating state and federal programs to transmit data to a national database. The system is based on Unix programming language, is text based only with no graphics, icons or color. Data can be retrieved either through the system or by accessing a website, http://www.osha.gov.	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Web App and Virtual Servers Priority: Low (4) EA Compliance: Medium (3)
Local Area Unemployment Statistics	The Local Area Unemployment Statistics Program (LAUS) is a federal and state cooperative program between the Department of Labor and Industrial Relations (DLIR) and the USDOL Bureau of Labor Statistics (BLS) to produce total unemployment estimates for the state, counties and islands. These systems extract claims information from the Unemployment Insurance (UI) Benefits system. The main applications used to process data are PROMIS (see below), LAUSOne, and Stars. LAUSOne and Stars are web-based systems. LSS-Plus is a pc-based system that is being discontinued and replaced by LAUSOne.	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Dashboard Analytics App Priority: Low (4) EA Compliance: Medium (3)
Program Management Information System	PROMIS is a pc-based system that uses claims data extracted from UI Benefits system and formats it for input to the LAUS program LAUSOne system and the MLS program WinMLS system.	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Dashboard Analytics App Priority: Medium (3) EA Compliance: Medium (3)
Mass Layoffs Statistics	The Mass Layoff Statistics Program (MLS) is a federal and state cooperative program between the Department of Labor and Industrial Relations (DLIR) and the USDOL Bureau of Labor Statistics (BLS) to produce data on mass layoffs. These systems extract claims information from the Unemployment Insurance (UI) Benefits system. The main applications used to process data are PROMIS (see below), WinMLS, MLSTRS and MLS-LTS. WinMLS	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Dashboard Analytics App Priority: Medium (3) EA Compliance: Medium (3)

Name	Description	Cost	Notes
	is a pc-based system and MLSTRS is an add-on application to WinMLS and MLS-LTS runs on a network server.		
Alchemy Document Imaging and Management System	Alchemy is a pre-packaged software document imaging and management system used to reduce paper and manage document filing and retrieval.	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Dashboard Analytics App Priority: Medium (3) EA Compliance: Medium (3)
Estimate Delivery System	The Estimate Delivery System utilizes data files from the SPAM output to produce customized employment and wage reports for the state, county, and support the ALMIS and Labor projection units.	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Dashboard Analytics App Priority: Medium (3) EA Compliance: Medium (3)
Career Kokua, the Hawaii Career Information Delivery System	Career Kokua is the State's statutorily authorized career information delivery system. It provides localized career and related educational information for career planning and career decision making. Career Kokua's information and assessments are used by over 230 schools and agencies statewide.	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Dashboard Analytics App Priority: Medium (3) EA Compliance: Medium (3)
Projections Suite	The Projections Suite software is used to generate both short-term and long-term industry and occupational employment projections for the State and counties. It was developed through the PMP (Projections Managing Partnership) which is a partnership between the U.S. Department of Labor, Employment and Training Administration (ETA), the U.S. Department of Labor, Bureau of Labor Statistics (BLS), the National Association of State Workforce Agencies (NASWA), and the State Projections Consortium.	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Dashboard Analytics App Priority: Medium (3) EA Compliance: Medium (3)
Hawaii Workforce Infonet	The HIWI website provides labor market information for the State and counties which is utilized by employers, job seekers, career counselors, education providers, students, planners, and others. The web site is hosted by Geographic Solutions, Inc. (GSI)	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Dashboard Analytics App Priority: Medium (3) EA Compliance: Medium (1)
Hawaii Directory of Green Employers	The Directory of Green Employers features information on local green employers. Employers themselves are able to post and update profiles that describe their operations, specify their core occupations, and describe the skills and education they want in employees. The web site is hosted by the Hawaii Information Consortium (HIC).	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Web App & Virtual Servers Priority: Medium (3) EA Compliance: Medium (3)
HireNet Hawaii	Capture all participant and employer data, produce federal, state, and local reports; develop and maintain job board with self-entry portals for employers and jobseekers.	Annual on-going O&M: Pending Review	Status: Use As Is Priority: Medium (3) EA Compliance: Medium (3)

Name	Description	Cost	Notes
In Progress:			
OCS Contract Tracking System	Services (DHS), Vocational Rehabilitation and Services for the Blind Division and matched to the Unemployment Insurance wage record and employment data bases.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High (1) EA Compliance: Medium (3)
Direct Deposit of UI Benefit Payments	Provide claimants with the option of having their UI benefit payments directly deposited into their bank accounts. This initiative will result in increased productivity, reduce fraud, and improve the timeliness of delivering benefit payments to its claimants. Estimated implementation is 9/30/2012.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High (1) EA Compliance: Medium (3)
UI Online Appeals Filing and Scheduling System	Provide claimants and employers with the option of filing their appeals online. The system will also include an appeals scheduling system. This initiative will result in increased productivity and improve the timeliness of completing appeal decisions. Estimated implementation is 3/31/2013.	One time DME: Pending Review Annual on-going O&M: v	Priority: High (1) EA Compliance: Medium (3)
Internet Initial Claims Desktop Application	Provide agency staff with a desktop application, which is an enhanced version of the internet application that claimants use to file their initial claims. This initiative will improve the timeliness of delivering initial claims filing services to claimants who report in person or use the telephone to file their claims. Estimated implementation is 6/30/2012.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High (1) EA Compliance: Low (5)
HCRC Electronic Filing and Document Storage	This project initiative is designed to help reduce administrative cost by developing an HCRC Enforcement database that is connect through a Web-based application that will electronically collect, process, file, store, track, and create reports from information captured on complaint investigations.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High (1) EA Compliance: Medium (3)
HIOSH (Hawaii Occupational Safety and Health) Boiler/ Elevator (B&E) Web Development	HIOSH's Boiler/Elevator Section has started a Web-based application project that will be hosted and developed by Hawaii Information Consortium (HIC). The application is designed to provide B&E inspectors with the ability to post schedules of their upcoming inspections. The web-based application will simplify the process to request inspection, view possible findings and make it easy to access archival or historical data. The application will also provide the B&E section with the ability to levy fees for their inspections. The cost for the development and the hosting of the web-based application by HIC will be paid by the fees collected. Inspectors in the entire division, not just B&E Branch, will be able to use mobile devices such as a Macintosh iPads to document and offload the inspection information to a collection database.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High (1) EA Compliance: Medium (3)

Name	Description	Cost	Notes
New:			
Electronic Low Earnings Report System	Enable employers to file their weekly low earnings report online instead of having to complete and submit hardcopy reports which agency staff must data enter into our UI benefit system. The system will also notify employers who have not submitted their reports in a timely manner. This initiative will result in increased productivity, reduce fraud and improve the timeliness of making benefit payments to its claimants. Status: In the process of selecting a vendor via RFP.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High (1) EA Compliance: Medium (3)
Unemployment Tax (SUTA) Dumping	Enable agency staff to modify employer tax records to include partially transferring employer experience rate information and to assess penalties for violating employer reporting requirements. This initiative will result in increased staff productivity in administering the UI Tax laws. Status: In the process of acquiring the services of a vendor.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High (1) EA Compliance: Medium (3)
State Information Data Exchange System (SIDES)	Enable employer to submit their Separation Information online instead of having to complete and submit hardcopy reports that agency staff must review. This initiative will result in increased productivity, reduce fraud and improve the timeliness of making benefit payments to its claimants.	One time DME: Pending Review Annual on-going O&M: Pending Review	One time DME: Pending Review Annual on-going O&M: Pending Review
HLRB Electronic Filing and Document Storage	Is designed to help reduce administrative and operational cost by developing a Collective Bargaining (CB) web-based application that will electronically collect, process, file, store, and track documents and also integrate with the Appellate Court's JIMS and JEFS systems. This application will allow for electronic processing of complaints, decisions, orders and reports. Additionally, it will allow parties to file and receive documents including complaints, answers, motions replies, exhibits and to receive Board notices, decisions and orders and to review a trial and conference calendar.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High (1) EA Compliance: Medium (3)
HLRB Video Conferencing and Digital Recordings	This project initiative will help HLRB to reduce administrative and travel cost to conduct hearings remotely using video conferencing and to digitally record the hearings. It will also enable non-Oahu employees to reduce their travel costs generated by filing a prohibited practice complaint and non-Oahu employees who are subpoenaed to testify before the Board.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High (1) EA Compliance: Medium (3)
HIOSH Safety, Health and Consultation & Training Migration to Web-Based Application	Safety, Health and Consultation & Training Branches have NCR/Informix database collection systems that are currently uploaded to a mainframe on the East Coast. This is an old system that is text based. During the new 2 -3 years the system will be migrating to a web application. The transition is being managed by OSHA, the Federal agency that partially funds the state program through grants. Computer requirements for the web application may or may not be compatible with State systems.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High (1) EA Compliance: Medium (3)

Name	Description	Cost	Notes
LIRAB Electronic filing and Document Storage	This project initiative is designed to help reduce administrative and operational cost by developing a Workers' Compensation (WC) web-based application that will electronically collect, process, file, store, and track documents and integrate with the Appellate Court's JIMS and JEFS systems and DCD (Disability Compensation Division). This application will also allow for electronic processing of claims, reports, and treatment denials or approval. Additional capabilities of the WC web-based application: Allow secure access for WC litigants to access trial and conference calendar and to view case files; and Capability to send text message reminders to WC litigants of upcoming conference and trials.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High (1) EA Compliance: Medium (3)
Local Employment Dynamics	The LED system is a partnership between the DLIR and the Census Bureau to produce quarterly workforce indicators for the counties in Hawaii, create maps and tabulations. The system extracts wage records from the UI Quarterly Wage Reporting System (QWRS).	One time DME: Pending Review Annual on-going O&M: Pending Review	Status: Move to Dashboard Analytics App Priority: High (1) EA Compliance: Medium (1)
Workforce Longitudinal Data System	The WorLDS is a statewide longitudinal data system to provide greater information about the state's workforce, education, and training. WorLDS will integrate data sets from within the DLIR, DHS, DOH, Public Safety, County Workforce Development Programs, and non-profit agencies. These data sets will also be integrated with the UH and DOE.		
Construction Building Permits Database	The Construction Building Permits Database will collect data from all counties in the state to help with the inspection scheduling of construction sites.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High (1) EA Compliance: Medium (3)
iQ System	Quarterly Census of Employment and Wages (QCEW) program processing system will be updated from a mainframe application to a web-based system called iQ in summer 2013.	One time DME: Pending Review Annual on-going O&M: Pending Review	One time DME: Pending Review Annual on-going O&M: Pending Review
Mass Layoff Statistics – Longitudinal Tracking System	The MLS-LTS provides an automated and standardized method of analyzing layoff events for longer-term impact of such dislocation on employment and wages. Hawaii is part of a pilot program developing this system for potential deployment of a nationwide system.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High (1) EA Compliance: Medium (3)
LOB Infrastructure:			
In Progress:			
Alternative Site for UI IVR and Internet Servers (In Progress)	Relocate the UI IVR and Internet servers to the basement of the State Kalanimoku Building in order to eliminate a single point of failure for UI's critical Internet and IVR claim filing systems in its current location in the Keelikolani building. This initiative will enable agency staff in remote offices to continue to process claims and tax information and enable claimants to continue to access critical unemployment claim filing and benefit payment services in the event of	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High (1) EA Compliance: Low (5)

Name	Description	Cost	Notes
	a power outage in the Keelikolani building. Estimated implementation is 12/31/2012. Estimated cost is "Pending Review."	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High (1) EA Compliance: Medium (3)
DCD Network and Data Migration	This is a network and data migration of the existing wide area network (WAN) to a virtualized platform WAN and upgrade of the Domino server and SQL applications. The purpose of this engagement is to provide comprehensive network and data migration of an existing WAN to a virtualized platform WAN and upgrade of its Domino Server and SQL applications. The Contractor will be replacing and upgrading the existing server environment for the State of Hawaii, Department of Labor and Industrial Relations, Disability Compensation Division (DLIR DCD). The current information technology environment is a client-server setup that primarily runs a Windows Server system, with adjunct Linux servers. Upgrading our server applications is critical as the DLIR DCD utilizes a proprietary Domino application that interfaces with Microsoft SQL and Lotus Enterprise Integrator. The new LAN/WAN system will be a Virtualization Platform, replacing all servers in the present setup. Contractor will be designing, specifying, configuring, testing, installing, documenting, training, and deploying the hardware components, utilizing Windows 2008 R2 Enterprise, Active Directory, virtualization software (VMware, vSphere 5), application software (Domino 8.5, SQL 2008 R2, Office 2010). The contracting will also be migrating existing data to a new environment and backup system. The DLIR DCD Domino/LEI application presently is running Domino 6.5 and LEI 6.5 on a Windows 2000 Advanced server platform and must be upgraded to the latest version, which are presently Domino 8.5 and LEI 8.5. The application is written in Lotus Script and uses its agents extensively. The Domino/LEI application database interfaces with a Microsoft SQL server using it as a back-end database. The Contractor will also be recommending and installing other new features that would be appropriate to expand or leverage Domino/LEI capabilities.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High (1) EA Compliance: Low (5)
DCD Replacement/Virtualization for Servers, Network Equipment, PC Client Equipment	This project is to replace the division's PCs, Printers, Servers, and Network Switches with equipment that will create a virtual environment.	One time DME: Pending Review Annual on-going O&M: Pending Review	One time DME: Pending Review Annual on-going O&M: Pending Review
WSD Workstations/ Server Upgrade	This project will replace existing aged workstations, laptops, and server to include the upgrading of existing Microsoft systems. It will also include the procurement of new types of IT equipment or hardware to support the daily office activities such as educational workshops, seminars, and meetings.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High (1) EA Compliance: Medium (3)

Name	Description	Cost	Notes
WDD IT Equipment Updating	Desktops, laptops, network printers, servers, and other peripheral equipment will be replaced as they age and funds become available.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High (1) EA Compliance: Medium (3)
New:			
HIOSH Inspectors' Desktop and Laptop Procurement	The branch must also obtain 11 more desktop CPU computers or docking stations and plan to get laptops for inspectors.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High (1) EA Compliance: Medium (3)

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 33 through Figure 35.
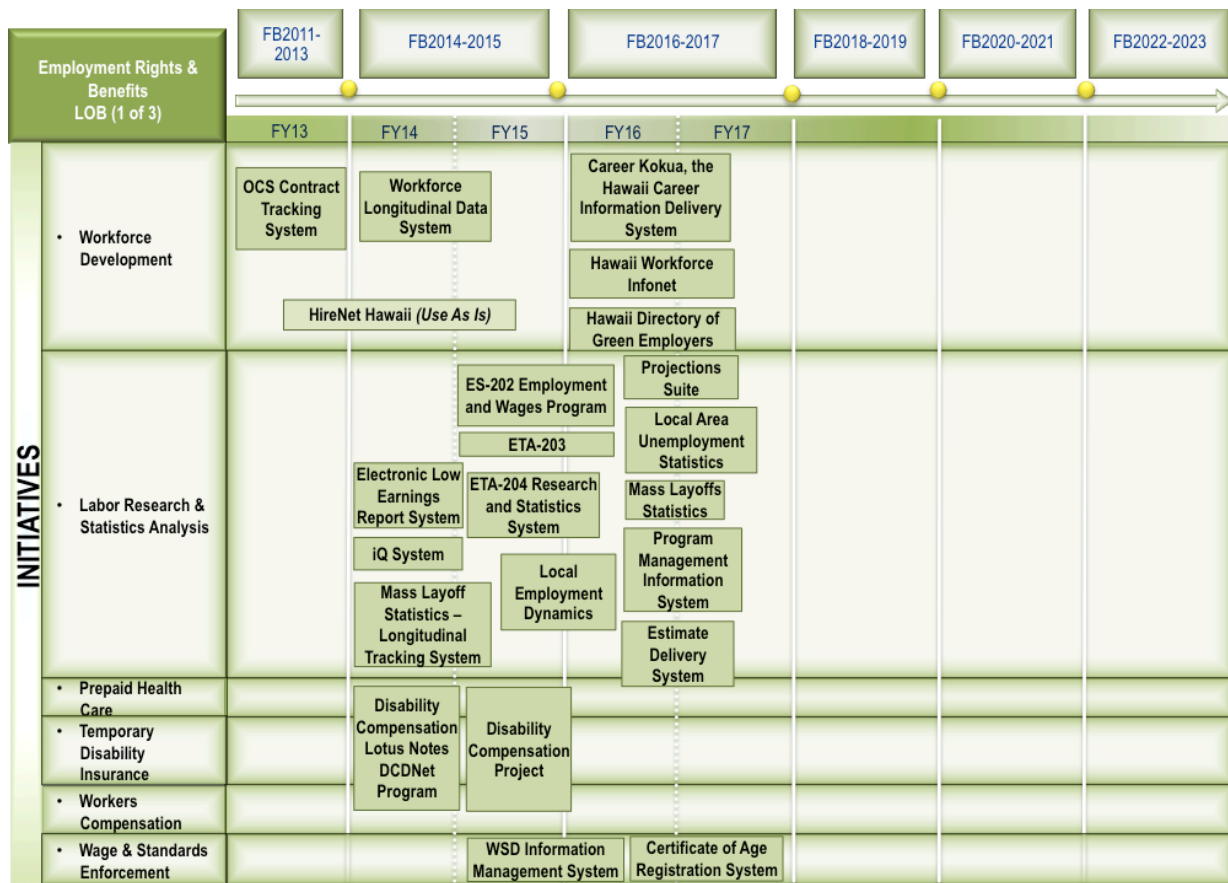
Figure 33: Employment Rights and Benefits Transition and Sequencing Plan Summary (1 of 3)
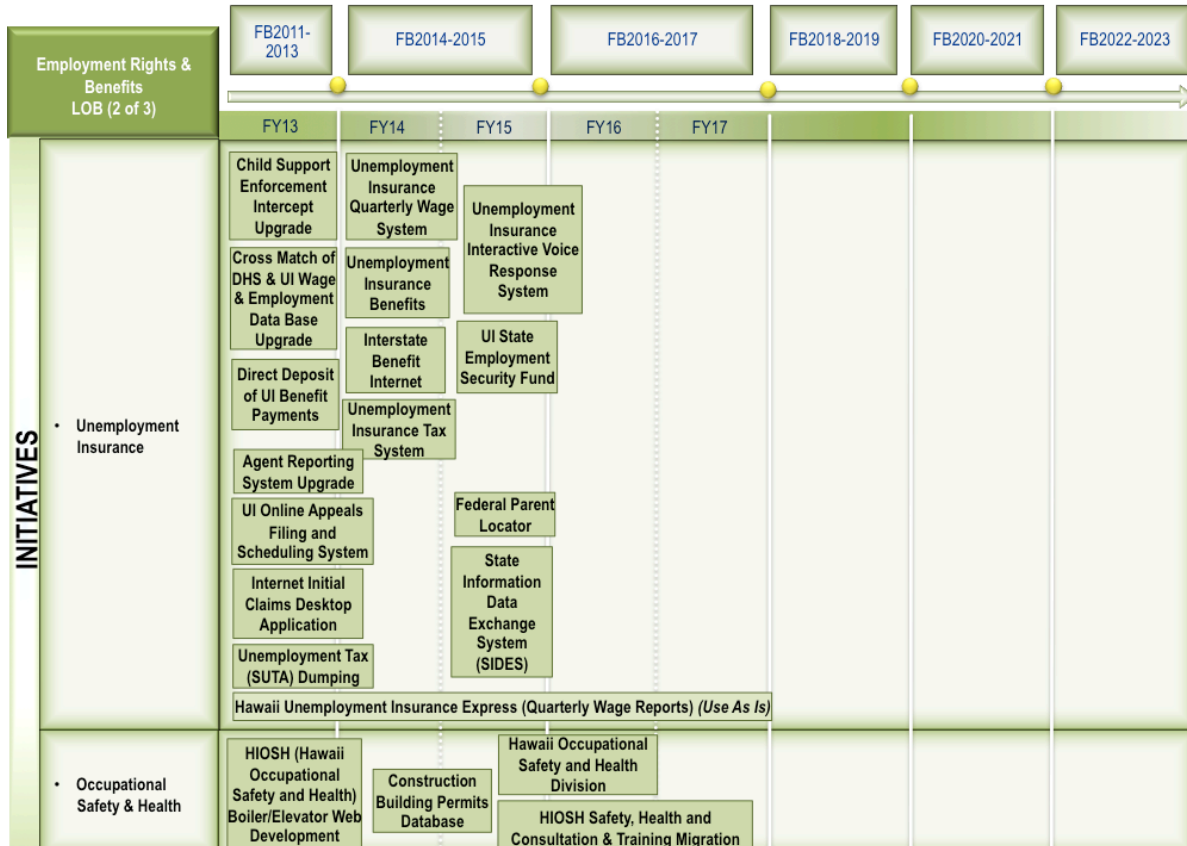
Figure 34: Employment Rights and Benefits Transition and Sequencing Plan Summary (2 of 3)
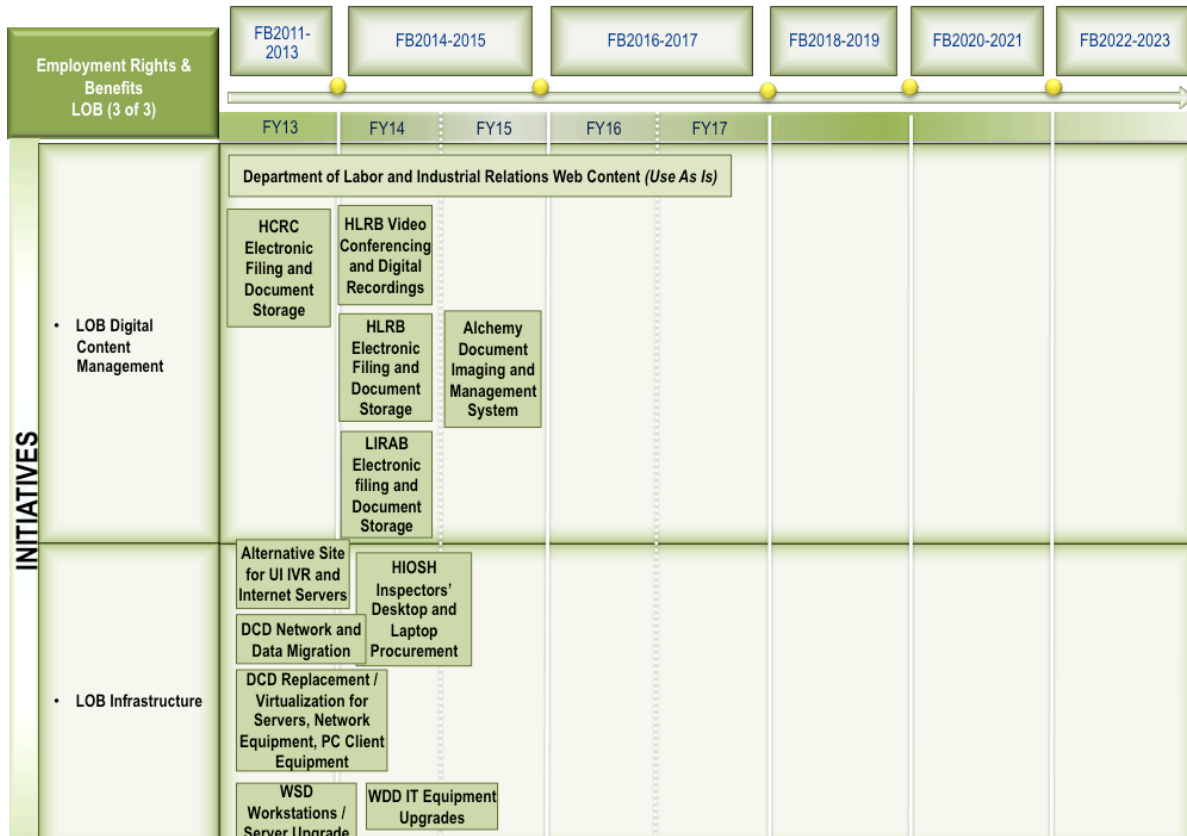
Figure 35: Employment Rights and Benefits Transition and Sequencing Plan Summary (3 of 3)

A.1.15   EDUCATION

The mission for the Department of Education is for all public school graduates to:

• Realize their individual goals and aspirations;

• Possess the attitudes, knowledge, and skills necessary to contribute positively and compete in a global society;

• Exercise the rights and responsibilities of citizenship; and

• Pursue post-secondary education and/or careers

Table 28: Education LOB Business Services

LOB: Education Service Name	Service Definition
Primary, Secondary Education	The provision of facilities, teachers, curriculum, and supplies to educate children in grades Kindergarten to 12th grade
Vocational Education	The provision of facilities, teachers, curriculum, and supplies to educate people in vocational trades and crafts.
Continuing Education	Promotes the education of the adults, including both earned and unearned benefit programs.

A.1.15.1   FUTURE STATE VISION FOR EDUCATION

The future vision for the Education LOB is to apply state-of-the-art technology to the fullest extent to accomplish the following critical business objectives and to address current state issues.

• To begin to use SharePoint beyond it simply being used to it being maximized for collaboration and reporting/coordination for Race to the Top. As well as to effectively implemented Kronos as a time and attendance solution and has created a payroll module to feed the ICSD payroll application.

• The DOE collects comprehensive metrics and feedback from their Centralized Support Desk on services provided. The DOE uses a balanced score card approach to measure performance against strategic plan targets and to be able to hit the targets and performance measures outlined.

• OITS uses Solar Wind's Orion Network Management System to monitor traffic in the Wide Area Network (WAN). To have a fully implemented and functioning BMC Remedy system for used along with Atrium Configuration Management Data Base (CMDB), which is part of BMC's Remedy system, was purchased but not fully implemented.

• Centralizing on Cisco equipment as well as effectively implementing video conferencing between schools to maximize teaching talent and student-to-teacher ratios.

• Two data centers (one primary and one backup; McKinley High School is the backup, and the primary is in the DOE Building on Miller Street), plus ICSD and space within a third-party data center.

• The superintendent or CEO is appointed/hired by the Board of Education (BOE). (The BOE is now appointed by the Governor; the last appointment was May 2011.) so as to optimally support the education and management of Hawai`i's school system. Hawaii's school system is unique among the states and serves more than 178,000 students (255 regular schools, two special schools, and 31 charter schools). Hawai`i's school system is approximately the tenth largest school system in the nation.

• Hawai`i's state Board of Education formulates policy for the public schools and state library system. DOE is treated almost independently in that they do their own building and grounds maintenance (not DAGS Central Services); they also do their own procurement functions with only some oversight from the Office of Procurement.

• For DOE to build a new data center in the cafeteria of an old elementary school that has space available for ICSD to use as an alternate site (Phase 1 will house 2,000 to 3,000 square feet with Phase 2 expandable to 5,000 square feet). With a DOE CIO has advisory council of key CIOs in the public and private sectors that meets monthly to review plans and strategies and to provide their opinions and recommendations.

• A seamless teaming relationship between DOE and UH has and continues to improve both organizations. DOE is looking closely at UH Google Mail and Apps deployment as a model for them. Along with the Superintendent is extremely engaged and involved in IT governance/ direction setting within the Department.

The future state solutions architecture is depicted in Figure 36 below. Two key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture

- "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
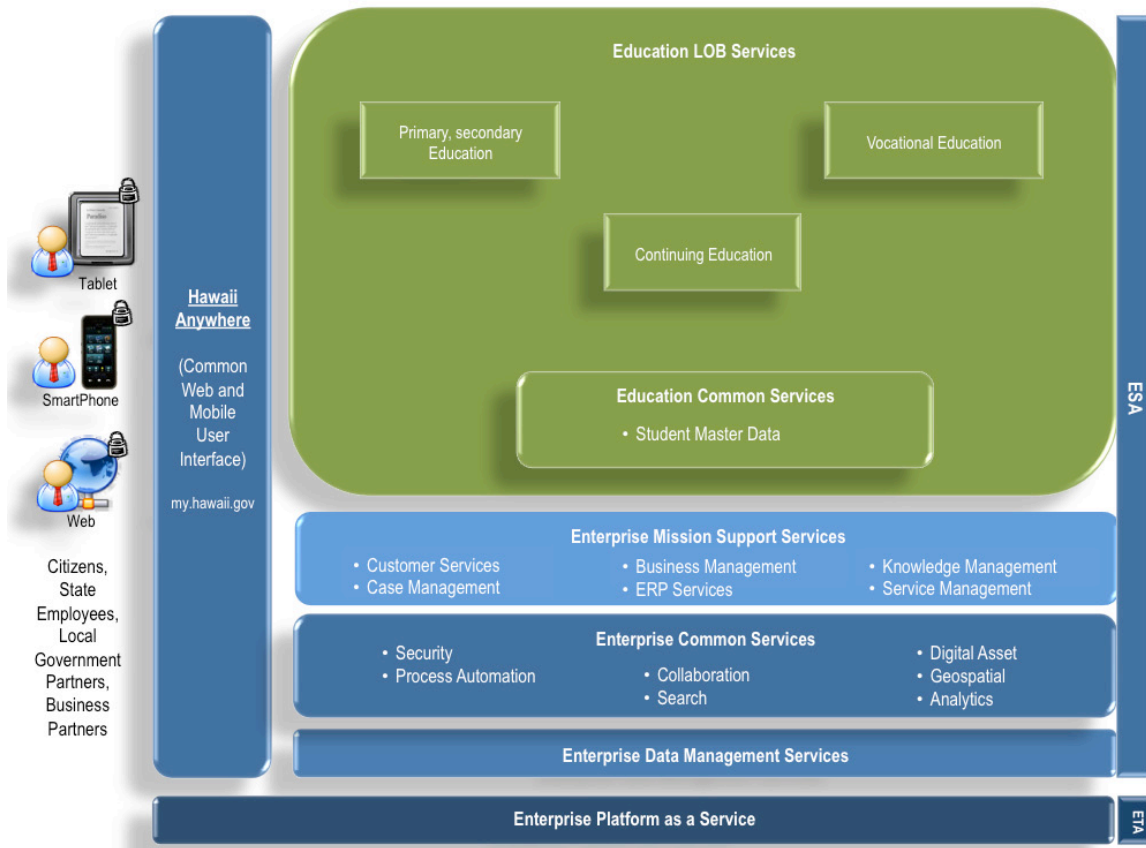
Figure 36: Education Future State Solutions Architecture

INFORMATION EXCHANGES

- UH – graduates from DOE as Federal grant partners.

- Other critical interfaces are with the Department of Human Services (DHS) and Department of Health (DOH) to be able to understand a child's holistic environment and better serve the student to achieve goal One. (This interface is not as robust as it should be.)

- Department of Hawai`i Homelands (DHHL) from a cultural basis relative to DHHL's mission.

- Other critical interfaces on the non-mission side are with the Department of Business, Economic Development, and Tourism to understand changes to community environments.

- Budget and Finance from a budgeting perspective.

- DAGS and its Office of Accounting (FAMIS, payroll, warrants) and to some extent the Office of Procurement.

- Office of Hawaiian Affairs.

A.15.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR EDUCATION

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 29 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

The implementation roadmap should include:

• Longitudinal Data Enterprise Solution

– DOE and UH working a longitudinal solution (e.g., DOE, UH). Multiple organizations must provide information/files in order to ensure accurate and complete longitudinal reporting as required by Federal grants. Assess how to more effectively collect longitudinal information in an automated manner from a truly enterprise perspective.

• New financial system, specifically an ERP solution, is on top of the DOE list (leveraging Gartner Study from 2009 and upgrading the specifications).

• Building out a new primary data center.

• Organization is pursuing a form of electronic signatures via two pilot projects.

• Organization is pursuing a form of electronic signatures via two pilot projects.

Table 29: Education LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
Production Applications Alignment:			
T-SEAS Substitute Teacher System	SubstituteTeacher Finder/Call-Out System based on priority lists -Owned by HR	Annual O&M: Pending Review	Use-As-Is Priority: 5 EA Compliance: 5
PDE3 Professional Development System	Course Registration and Tracking for Professional Development (Subscription License including license usage, hosting, and maintenance/enhancements. Supports race to the top initiatives.	Annual O&M: Pending Review	Enhancement Priority: 1 EA Compliance: 3
Student Information System (eSIS)	Transaction system for student enrollment, demographics, attendance, grading, report cards, etc. (Replacement strategy will replace as part of an integrated Instructional Improvement System (IIS))	One-time DME: Pending Review Annual O&M: Pending Review	Replace Priority: 1 EA Compliance: 3
Statewide Student Enrollment System (SSES)	Integrates student data from multiple student information systems in use at DOE regular schools and charter schools.	Pending Review	Use-As-Is Priority: 1 EA Compliance: 3
Electronic Comprehensive Student Support System (eCSSS)	Transaction Case Management System for all student support services and interventions. (Replacement strategy will replace as part of an integrated Instructional Improvement System (IIS))	One-time DME: Pending Review Annual O&M: Pending Review	One-time DME: Pending Review Annual O&M: Pending Review
Data for School Improvement System (DSI)	System for classroom teachers to develop and deliver formative assessments based on standard assessment item banks. (Replacement strategy will replace as part of an integrated Instructional Improvement System (IIS))	One-time DME: Pending Review Annual O&M: Pending Review	Replace Priority: 1 EA Compliance: 3
Hawaii State Assessment	Statewide high stakes annual student assessments (What do the students know?) Replaced strategy : DOE is part of the National Smarter Balanced Consortium which is developing a common assessment content and delivery platform that Hawaii will adopt.	One-time DME: Pending Review Annual O&M: Pending Review	Replace Priority: 1 EA Compliance: 3
Data Warehouse/Longitudinal Data System	Collects and stores on-going data for students, employees, financial information, facilities, etc. and provides analytics and dashboard/business intelligence.	Annual O&M: Pending Review	Upgrade Priority: 1 EA Compliance: 3

Name	Description	Cost	Notes
e-HR	Human Resource Management System for certificated (teachers & principals) classified, support services personnel (Replaced eventually with State's future ERP system)	Annual O&M: Pending Review	Replace with DOE ERP Priority: 1 EA Compliance: 3
Financial Management System (FMS)	On-line purchasing, payments, fixed assets, cash receipts, and DOE general ledger accounting system. (DB2)	One-time DME: Pending Review Annual O&M: Pending Review	Replace with DOE ERP Priority: 4 EA Compliance: 3
Budget Execution and Preparation System	Budget Execution and Preparation System (Replacement cost included in DOE10)	See DOE ERP. Annual O&M: Pending Review	See DOE ERP. Annual O&M: Pending Review
Financial Reporting System (FRS)	Data from financial and budgeting systems are populated in a DOE data-warehouse. This is modern technology that will be a bolt on to a new ERP.	One-time DME: Pending Review Annual O&M: Pending Review	One-time DME: Pending Review Annual O&M: Pending Review
Lotus Notes	Provides email, central workflow, school newsletters, lunch counts, etc.	Annual O&M: Pending Review	Replace Priority: 4 EA Compliance: 3
Maximo	Facilities maintenance and build project management system		Use-As-Is Priority: Pending Review EA Compliance: Pending Review
In Progress:			
SIF-Operational Data Store	School Interoperability Framework compliant ODS/Enterprise Service bus	One-time DME: Pending Review Annual O&M: Pending Review	Priority: 1 EA Compliance: 3
DOE Enterprise Portal	DOE Enterprise Portal WEB based site structure for internal and external communications. (Race to the top funding)	One-time DME: Pending Review Annual O&M:	Priority: 1 EA Compliance: 3
1DOE Identity Management/ Single Sign-On	Implementation single sign on and identity access management for all core DOE data systems	One-time DME: Pending Review Annual O&M: Pending Review	Priority: 1 EA Compliance: 3
Electronic Signature	Organization is pursuing a form of electronic signatures via two pilot projects	Pending Review	Priority: 1 EA Compliance: 3
Data Governance Council	The Superintendent has just launched a data governance council.	Annual O&M: Pending Review	Estimated Labor by hours and loaded rate
New:			
Longitudinal Data Enterprise Solution	DOE and UH working a longitudinal solution (e.g., DOE, UH). Multiple organizations must provide information/files in order to ensure accurate and complete longitudinal reporting as required by Federal grants. Assess how to more effectively collect longitudinal information in an automated manner from a truly enterprise perspective.	One-time DME: Pending Review Annual O&M: Pending Review	Priority: 1 EA Compliance: 3

Name	Description	Cost	Notes
Financial Management System	New financial system, specifically an ERP solution, is on top of the DOE list (leveraging Gartner Study from 2009 and upgrading the specifications)	One-time DME: Pending Review Annual O&M: Pending Review	Priority: 1 EA Compliance: 3
LOB Infrastructure			
In Progress:			
School Networking	Upgrading the network in every school over the next 3 years – 3 schools per month (wireless is also part of the equation)		Priority: 1 EA Compliance: 3
New:			
Data Center	Building out a new primary data center	One-time DME: Pending Review	Priority: 1 EA Compliance: 3

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 37. The following items should be considered by the enterprise for the future state initiatives:

• FMS – current financial system (interfaces via FTP transmittals to FAMIS and Payroll)

• Educational Focused Systems: DSI (Learning Management), eSIS (Student Information Management), eCSSS (Student Case Management), FMS (ERP Financials and Procurement) and K-12 LDS (Longitudinal Data Analysis)

• Maximo for facilities repair and capital dollar tracking

• Replacement of E-HR system to recruit and hire teachers, aides, and administrators
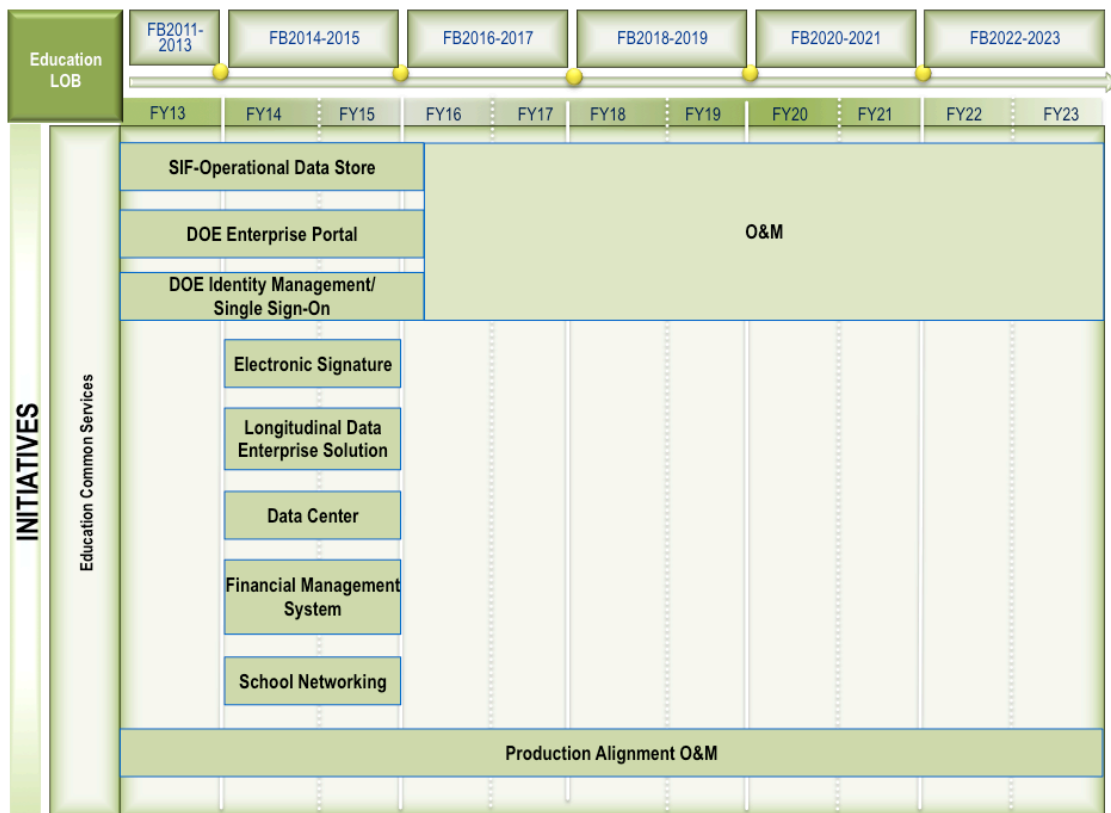
Figure 37: Education Transition and Sequencing Plan Summary

A.1.16 HIGHER EDUCATION

The primary mission of the University is to provide environments in which faculty, staff and students can discover, examine critically, preserve and transmit the knowledge, wisdom, and values that will help ensure the survival of present and future generations with improvement in the quality of life.

Table 30: Higher Education LOB Business Services

LOB: Higher Education Service Name	Service Definition
Higher Education – Educational Capital	Increase the educational capital of the State through the provision of education and training beyond the secondary level including community college through graduate and professional programs for degrees, certificates and lifelong learning
Higher Education – Economic Development	Increase the role and impact of research and innovation in expanding and diversifying the state's economy and addressing the challenges that face Hawaii today

A.1.16.1 FUTURE STATE VISION FOR HIGHER EDUCATION

Hawaii's citizens have a high level of educational attainment, our workforce is globally competitive, and research drives our economy and provides solutions to our communities' challenges.

• Innovative technologies for teaching and learning (UH focus area).

• Uses real-time web conferencing (Adobe Connect Pro); also has conventional H.323 videoconferencing.

• Has VoIP (Avaya).

• Has WiFi authentication service for laptops, smart phones, PDAs.

• Establishing an advanced broadband capability.

• ICSD does their payroll and DHRD helps with miscellaneous hiring.

• Dr. Greenwood created the President's Advisory Council on Hawai`i Innovation and Technology Advancement.

• Key research university with involvement in High Performance Computing and Internet2.

• Dr. Lassner chairs the Business Process Committee (BPC) at UH:

  – Meets once a month; canceled if no agenda items.

  – In existence for six years.

  – Members: CFO, Budget, HR, Controller, VP Admin, Disbursing, and IT.

  – Right level of authority and representation to make actionable decisions.

  – http://www.Hawaii.edu/bpc/.

• New building being built for IT organization.

• UH has constitutional autonomy.

INFORMATION EXCHANGES

State Government:
Department of Accounting & General Services
Information and Communication Services Division
Budget and Finance
Research Corp of the University of Hawaii
Department of Human Resources Development
Department of Labor and Industrial Relations
Employees Retirement System
Department of Attorney General-Child Support
    Enforcement Agency

Federal Government:
Various federal agencies depending on multiple funded research projects

Private Sector:
Various financial institutions

Other:
Various universities

A.1.16.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR HIGHER EDUCATION

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The initiatives are structured to address the following key needs:

• Cloud: moving to Google for email and calendaring for 80,000 students, faculty, and staff; working to shut down current email system later this year; students moved to Google mail in February 2011.

• Financial system: Java, web-based; switching to new system July 1, 2012; Kuali is the new system which is open source and web-enabled; already used by Michigan St., Cornell, Colorado St., USC, and the University of Arizona. Significant enhancements slated for upcoming FY13.

• Research administration: The Kuali Research Administration system (Coeus) was implemented in November 2012. Interface with the financial Kuali towards the end of FY13/14.

• Web enablement initiatives: get applications off the mainframe including leave accrual; 100% hit rate on grants and delivering on those, especially with broadband; information security. Redesigning system wide portal to include mobile access FY13/14

• Data governance: System wide data governance effort underway within the University/ coordinates with DOE Data Governance FY13.

• IT-enablement of research "big data:" high-performance computing; data visualization; analytics; support of economic development; suite of technologies and interactive distance learning. FY13/14

• 100% hit rate on ARRA broadband grants: faster connections to mainland and now connecting schools, libraries and UH sites on all islands at gigabit speeds and- need to check with DOE and library for counting purpose FY13

• Security: Information security program has implemented training, server registration, scanning and remediation for identified risks.

• Document imaging is on the future plan.

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 31 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 31: Higher Education LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
In Progress:			
e-Mail Migration	The University is moving to Google for email and calendaring for 80,000 students, faculty, and staff; working to shut down current email system later this year; students moved to Google mail in February 2011 with the rest of the University moving in late FY13	Pending Review	Google higher education offering
Financial Management System	Java, web-based; switching to new system July 1, 2012; Kuali is the new system which is open source and web-enabled; already used by Michigan St., Cornell, Colorado St., USC, and the University of Arizona.	Pending Review	Labor participation in Kuali
Research Administration	The Kuali Research Administration system (Coeus).	Pending Review	Labor participation in Kuali
Data Governance	System wide data governance effort underway within the University also coordinates with DOE Data Governance	Pending Review	Labor
New:			
Web Enablement Initiative	Migration of web applications off the mainframe including leave accrual.	Pending Review	

Name	Description	Cost	Notes
Document Imaging	Document imaging capability for the University	Pending Review	
LOB Infrastructure:			
In Progress:			
ARRA Broadband Grant	Faster connections to mainland and now connecting schools, libraries and UH sites on all islands at gigabit speeds.		
Cyber Security	Information security program has implemented training, server registration, scanning and remediation for identified risks ongoing.	Pending Review	Labor
New:			
Big Data	IT-enablement of research "big data:" high-performance computing; data visualization; analytics; support of economic development; suite of technologies and interactive distance learning.	Pending Review	Industry number

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 38. The following items should be considered by the enterprise for the future state initiatives:

• Cloud: moving to Google for email and calendaring for 80,000 students, faculty, and staff; working to shut down current email system later this year; students moved to Google mail in February 2011.

• Financial system: Java, web-based; switching to new system July 1, 2012; Kuali is the new system which is open source and web-enabled; already used by Michigan St., Cornell, Colorado St., USC, and the University of Arizona. Significant enhancements slated for upcoming FY13.

• Research administration: The Kuali Research Administration system (Coeus) was implemented in November 2012. Interface with the financial Kuali towards the end of FY13/14.

• Web enablement initiatives: get applications off the mainframe including leave accrual; 100% hit rate on grants and delivering on those, especially with broadband; information security. Redesigning system wide portal to include mobile access FY13/14.

• Data governance: System wide data governance effort underway within the University/coordinates with DOE Data Governance FY13, labor

• IT-enablement of research "big data:" high-performance computing; data visualization; analytics; support of economic development; suite of technologies and interactive distance learning.FY13/14.

• 100% hit rate on ARRA broadband grants: faster connections to mainland and now connecting schools, libraries and UH sites on all islands at gigabit speeds and- need to check with DOE and library for counting purpose FY13.

• Security: Information security program has implemented training, server registration, scanning and remediation for identified risks ongoing 3FTE +1.

• Document imaging is on the future plan.
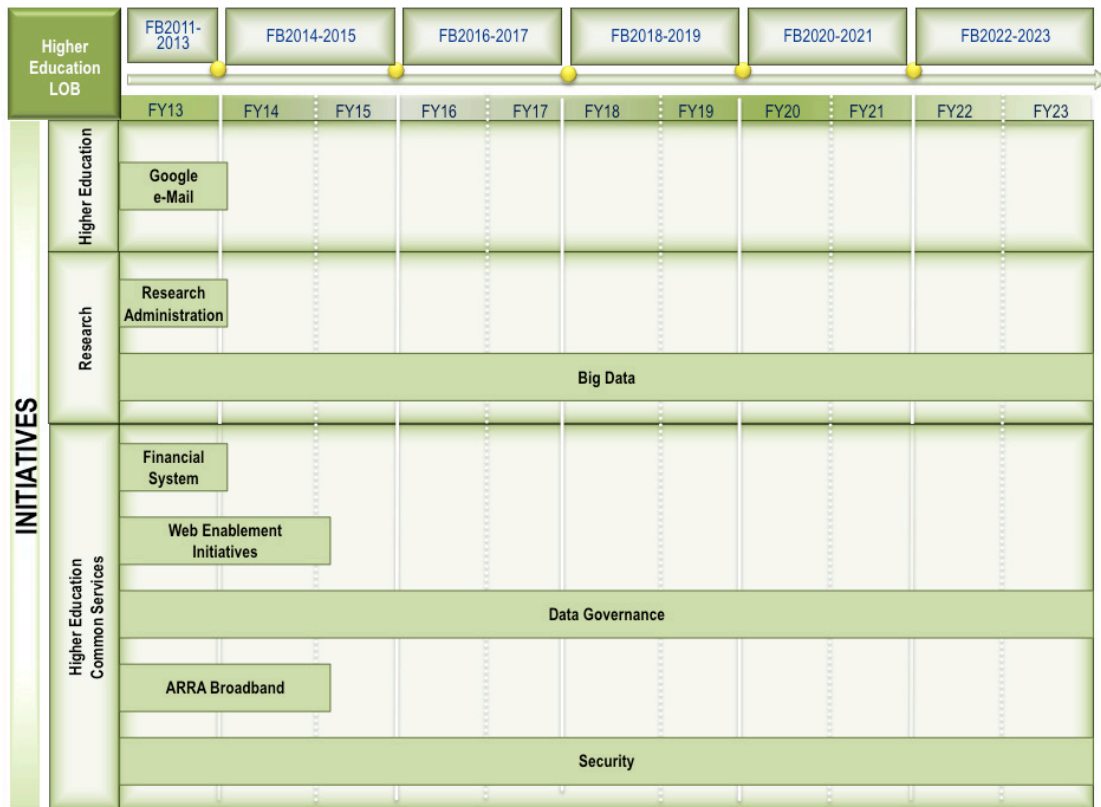
Figure 38: Higher Education Transition and Sequencing Plan Summary

A.1.17 PUBLIC HEALTH

The Public Health LOB strives to eliminate disparities and improve health of all groups throughout the state. This LOB provides direct services to "at risk" population and other community groups, as well as, providing supporting services related to Health. This LOB is moving from a reactive focus (driven largely by federal funding) to a more strategic approach for all of its business services. The table below describes each of the business services provided by the LOB.

Note: DOH has developed additional details on its business and information management solutions for public health and environmental management in the DOH Business Services and Data Systems Service Oriented Architecture (SOA) Diagrams and the Public Health Domain Matrix for IT Systems and Initiatives. These documents are provided in the Supplemental Addendum links at the end of this section.

Table 32: Public Health LOB Business Services

LOB: Public Health Service Name	Service Definition
Health Systems Planning and Development	• Develops and maintains strategic planning for health systems, planning, development and implementation
Health Services for at Risk Underinsured Populations	• Adult Mental Health Services: Provides a comprehensive, integrated mental health system supporting the recovery of adults with severe mental illness both, inpatient and outpatient. • Child & Adolescent Mental Health Services: Provides mental health services to children and youth through a system of care that includes both school-based services provided by the Department of Education (DOE) and an array of more intensive mental health services contracted by the Department of Health (DOH) Child and Adolescent Mental Health Division (CAMHD).

LOB: Public Health Service Name	Service Definition
	• Developmental Disability Services: Planning, coordinating, monitoring, evaluating, advocating, and reporting on behalf of individuals with DD; engages in advocacy, capacity-building, and systems change activities to improve system of care for DD individuals.

• Developmental Disability Services: Planning, coordinating, monitoring, evaluating, advocating, and reporting on behalf of individuals with DD; engages in advocacy, capacity-building, and systems change activities to improve system of care for DD individuals.

• Alcohol & Drug Abuse Prevention Services: Provides the leadership necessary for the development and delivery of quality substance abuse prevention, intervention and treatment services for the residents of the State of Hawaii.

• Dental Health Services: Develops public policy to help assure adequate access to basic dental care and through the development and implementation of early detection, disease prevention and treatment programs targeting high risk populations.

• Public Health Nursing Services: Administers the public health nursing services through the Public Health Nursing Sections, statewide. The staff is made up of Public Health Nurses, who are Registered Nurses, Licensed Practical Nurses, Para-medical Assistants, and Health Aides in the public schools, and clerical support staff.

• Family Women and Children Service: Reduces health disparities for women, children, and families of Hawaii. Programs provide core public health services which include: assurance activities through contract monitoring; systems development through mobilizing community partnerships and coalitions; monitoring health status, service delivery and utilization; and developing strategies to improve health status

• Women Infant Child and Nutrition Services: Provides Hawaii residents with nourishing supplemental foods, nutrition education, breastfeeding promotion and health and social service referrals through the federally funded Special Supplemental Nutrition Program for Women, Infants and Children (WIC). Participants of WIC are either pregnant, breastfeeding, or postpartum women, and infants and children under age five who meet income guidelines and have a medical or nutritional risk. Safeguards the health of low-income women, infants and children ages 1-4 who are at nutritional risk; provides supplemental food, nutrition education and referral to health care and other social services.

• TB/STD/Aids Hansen (Screening/Registry): Monitors the number of cases of tuberculosis and Hansen's disease, and other transmittable diseases (such as STDs and AIDS).

• Primary Care in Rural Health: Coordinates local, state and federal resources to improve primary care service delivery and workforce availability to meet the needs of underserved populations. |
| Monitoring Health Events and Health Forecasting | • Epidemiological Services: Provides epidemiological profiles for substance abuse prevention.

• Vital Records Registry: Maintains Vital Records. Issues marriage, birth, death certificates, and civil unions.

• Health Surveillance: Health Case Management - Assists people with developmental disabilities and/or intellectual disabilities, and their families or guardians by tracking cases. |
| Health Related Quality Assurance and Control | • Emergency Medical Services: Minimizes death, injury, and disability due to life threatening situations by assuring the availability of high quality emergency medical care through the development of a system capable of providing coordinated emergency medical and health services. |

LOB: Public Health Service Name	Service Definition
	• Licensing / Accreditation and Certification • DCAB - American with Disabilities Act (ADA) Support • EOA – Elderly • SHPDA - Service Delivery • OEQC – Environmental Impact • OHCA – Health Care Facilities • Community Relations: Facilitates community coalition building and partnership mobilization with volunteer organizations.
Emergency Preparedness and Response	• All Hazards: Monitor and respond to hazards. • Disease Outbreak Control: Works together to monitor, investigate, prevent, and control infectious diseases in Hawaii, especially those preventable through immunizations, and to ensure Hawaii's ability to respond to emergencies that threaten the public's health; works to strengthen the relationships between the Department of Health and other partners including laboratories, hospitals, schools, emergency response agencies, private organizations, and the military. – Disease Surveillance: conducts investigation, surveillance, prevention, and control of general communicable diseases of public health importance. Monitors incoming disease reports for occurrence of unusual or rare diseases, disease clusters, and outbreaks in the community. – Immunization: Provides immunizations for qualifying children; those with no health insurance, have Medicaid or QUEST, or those whose health insurance does NOT pay for childhood immunizations, or your child is American Indian or Alaska Native, your child may qualify to receive free/low cost shots through the Vaccines for Children (VFC) Program.
Health Promotion and Chronic Disease Prevention	• Chronic Disease: Chronic disease Prevention, management and control services that focus on risk areas of nutrition, physical activity and tobacco; chronic disease areas of asthma, cancer, diabetes, heart disease and stroke; conducts public health surveillance, data analysis and programmatic evaluation. • Injury Prevention and Control: Provides statewide leadership in preventing death and disability associated with injuries in Hawai'i. This is accomplished by educating, supporting and mobilizing individuals and organizations to incorporate comprehensive injury prevention strategies in their on-going efforts. • Healthy Lifestyle: Educate and promote healthy lifestyles (Healthy Hawaii Initiative). • Behavioral Risk Reduction: Provide services to assist in the care of children with Special Health Care Needs. Children with Special Health Care Needs are children who have or are at risk for chronic physical, developmental, behavioral, or emotional conditions and require health and related services beyond that required by children generally.

A.1.17.1 FUTURE STATE VISION FOR PUBLIC HEALTH

The future state vision for Public Health needs to correct the following problems:

• Eliminate duplication of data in disparate databases

• Eliminate duplication of functions within applications

• Eliminate or reduce the manual efforts to generate paper reports and interim files for distribution by manually generated emails to other departments in the state

• Eliminate or reduce the replication of databases in external locations

• Reduce the manual implementation of generating and forwarding federally required, periodic reports

• Reduce overall risk to the state in terms of disaster recovery and protection of personally identifiable information (PII) used on a daily basis.

The IT needs for managerial, clinical, case workers, providers within the Public Health LOB envision aggressive use of EMR initiatives and the enterprise infrastructure to play a major role in meeting the state's goals for health transformation. The Health Information Systems Office (HISO) is working with the DOH Director's Committee and the Department Executive Committee to ensure a shared vision for how IT can support their mission and that IT is moving forward to improve the technical infrastructure, SOA, systems, network, and the end user access. This includes:

• Standards-based enterprise architecture

• SOA and web services deployed and continue to migrate to and improve the SOA vision defined for Public Health

• DOH stores and utilizes personally identifiable information (PII) on a daily basis, likelihood of breaches; DOH has information assurance/security policies in place that are well-documented (based on HIPPA guidelines). (See DOH Security Policies and Procedures.) (HISO is sharing these policies and procedures with other Departments); need to continue to improve and enforce security and privacy protections.

• Improve project management, tracking and oversight of 206 Agency contractors and more than 10,000 vendors

• Need DR for all critical applications and services; DOH has replication sites but not a formal disaster recovery plan; DOH relies on real-time data to perform critical tasks that have far-reaching implications for the public

• Approximately 50% of the Department's applications are COTS; would like to increase this number and lessen customization

• Microsoft ASP .NET is the primary development environment and Oracle ADF is secondary. SharePoint is also used as a portal framework and development environment

where applicable; Need to migrate toward more Web 3.0 applications/services especially for public facing applications

• Using integrated strategy regarding Microsoft Exchange, SharePoint, and Office; upgrading and maintaining software to the latest levels.

• Increased use of video conferencing and facilitate increased use of video streams where appropriate to increase frequency of mental health services while reducing travel cost especially in remote areas: for example, Behavioral Health is developing/piloting TeleHealth using telepresence to provide psychiatrists in group therapy; catalyst for sharing to provide care for kids in Special Ed

• Providing an interface point for Electronic Medical Records (EMR) especially Client EMR; creating information exchange capability by providing a single point of entry to Public Health from and to related LOBs as well as approved external organizations such as, HHIE.

• Migrate to Electronic Bank Transfer (EBT) especially for WIC services and migrate to a web-enabled approach.

• Integrate social media into public information dissemination/education with assigned staff to maintain the information and keep it current

• Increase use of video and audio files to share information.

• Enhance Vital Records to ensure that organizations within the state are notified upon death and other changes in vital status as appropriate

• Use of SharePoint (underway) to increase collaboration and document sharing/tracking, documentation management.; increase user-developed applications that can leverage the capability of SharePoint

• Expand the use of server virtualization

• Investigate Cloud solutions for some services; explore replacing HISO bank of servers in the Cloud

• Work with Hawai`i Broadband Initiative to migrate DOH frame relay sites to high-speed connections

• Begin strategic move to paperless environment and automate document workflow and tracking.

• Improve intranet; improve outlying offices' connectivity

• Upgrade Department website

• Cell phone consolidation

• Incorporate enterprise social networking policies, procedures, and training to facilitate appropriate use of social networking (e.g., Facebook, Twitter, YouTube)

The future state solutions architecture is depicted in Figure 39 below. Two key features of this solution include:

- "Hawai`i Anywhere" common web and mobile user interface architecture.

- "Everything as a Service" common solutions framework that facilitates application assembly through reusing application

"services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
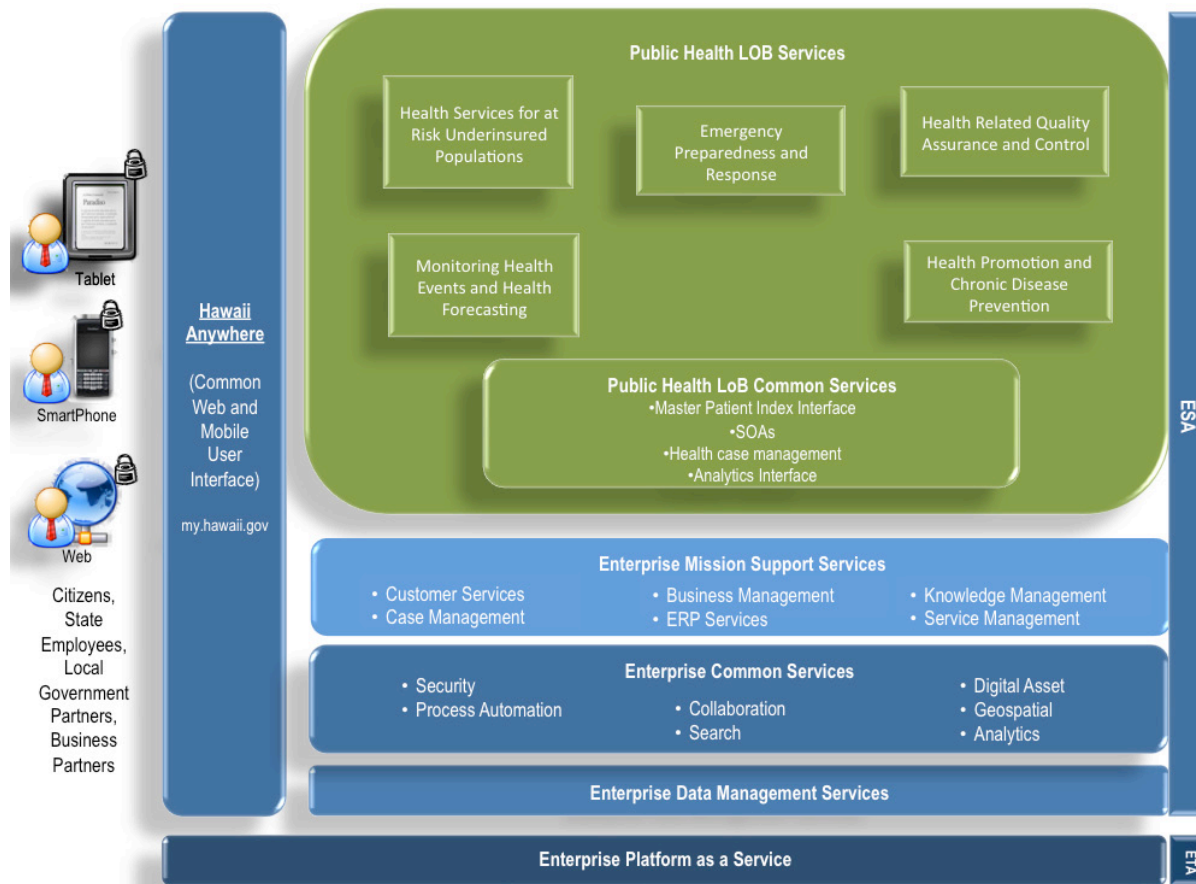
Figure 39: Public Health Future State Solutions Architecture

INFORMATION EXCHANGES

- Critical interfaces with organizations and stakeholders is broad and far-reaching; encompasses coalitions, working groups, businesses, non-profits and others making up the health care community, environmental protection, and human services safety net. Interfaces include:

  – State: Human Services, Public Safety, Education, Defense, DLNR, DAGS, B&F, DHRD, HHSC, DHHL, SCD, UH/ JABSOM, SPH, DOA, DBEDT, and the DOT.

  –City and County: Kauai, Maui, Hawai`i, Honolulu: Emergency preparedness and emergency response

  – Federal: CDC, HRSA, DOE, ACF, SAMSHA, CMS, USDA, FEMA, EPA, FDA, and the Army Corps of Engineers

  – Private: HI Primary Care Assoc., HI Disease Surveillance Assoc. of Hospitals, Health/Human Service Organizations, HI Medical Assoc., Papaolokahi Child Care Centers, Substance Abuse Treatment |Coalition, and the Mental Health Assoc. of Hawai`i

  – Non-profits: Hawai'i Health Information Exchange (HHIE), Hawai'i Health Systems Corporation (HHSC).

- Systems that interface with other State agencies:

  – Vital Records: tracks births, marriages, and deaths.

  – Client Tracking: Medicare/Medicaid reimbursement from DHS assists HI State Hospital with understanding treatments/needs of people.

  – Immunization Records: School entrance requirements.

  – Need increased access to data:

    – Hospital and community health data

    – Insurance/claims data

    – County-level data

    – DOE student data

    – DHS Medicaid and child welfare data.

- Other important interfaces:

  – Program accomplishments/success stories, best practices, and case studies

  – Current/future sponsored conferences, speaker sessions, trainings, public meetings and events

  – Employee dialog and views on public health initiatives.

A.1.17.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR PUBLIC HEALTH

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The initiatives for Public Health strive toward the Strategic Vision for this LOB outlined in the Department of Health Strategic Plan (need to get correct reference). The initiatives support the following objectives:

- Health IT

  – Health information technology initiative to improve the quality and efficiency of health care through electronic health record (EHR), in alignment with Federal Patient Protection and Affordable Care Act. Opportunity to establish and leverage enterprise application integration capabilities.

- Hawai`i Health Data Warehouse

  – Strategic initiative to standardize the collection and management of Hawai`i's health data; dedicated to providing useful data to support public health professionals, the community and health agencies to become more effective in the application of health data.

  – One of the most successful data sharing initiatives in the State – opportunity to establish as a pattern for broader adoption.

- Syndromic Reporting

  – Data mining and real time analysis of cases reported across Hawaii medical facilities for early warning and health response.

- Public Health Social Media Applications

  – Integrate social media into public information dissemination/education

- Vital Records

  – Provide increased automation and data sharing with other LOBs; especially automatic notifications of deaths to all applicable systems

  – Electronic Verification of Vital Events (EVVE); HI is one of eight states participating in the national initiative.

The needed initiatives for LOB solutions are outlined in Table 33 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 33: Public Health LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
In Progress:			
MAVEN	Replace PHS3 as the Disease Surveillance System	DME: Pending Review O&M: Pending Review/year	Priority: High EA Compliance: High
ELR	Replace Current Electronic Lab Reporting	DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: High
Hawaii Immunization Registry (HIR)	Increase participation in Hawaii Immunization Registry and modify system to conform to CDC new requirements	DME: Pending Review O&M: Pending Review over next 3 years (Pending Review/year)	Priority: High EA Compliance: High

Name	Description	Cost	Notes
Behavioral Health Management Information System (BHMIS/AVATAR/ECURA)	Upgrade electronic medical records system to an EMR certified version	DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: Medium High
Child Adolescent Mental Health Information System (CAMHIS) eVista	Upgrade electronic medical records system to an EMR certified version	DME: Pending Review O&M: Pending Review/year	Priority: High EA Compliance: Medium High
WEB Information for Treatment Service (WITS)	Implement WITS to be in compliance with Federal Funding Requirements	DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: Medium High
TB Screening / Registry (TIMS/TBMIS)	Replace DOS based system with a WEB based system	DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: High
Vital Statistics System (VSS)	Upgrade client server based system to web based and virtualize servers	DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: High
Production Alignment	General support for existing applications	O&M: Pending Review	Priority: High EA Compliance: Medium to Medium High
New:			
HIEAMHD	Health Information Exchange interface for DOH Electronic Medical Record for AVATAR	DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: High
HIECAMHD	Health Information Exchange interface for DOH Electronic Medical Record for eVista	DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: High
HHESS	Syndromic Surveillance Information Exchange for Meaningful Use	DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: High
HIEELR	Electronic Lab Reporting Information Exchange for Meaningful Use	DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: High
HIEHIR	Immunization information exchange for Meaningful Use	DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: High
WICEBT	WIC System Replacement to a Web Based one with Electronic Benefit Transfer Capabilities	DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: High
HEQSYS	Socio-ecological Assessment System using the Hawaii Health Data Warehouse	DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: High
Mobile Apps	Mobile Apps for reporting Health irregularities	DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: High
LYNC Integration	Integrate and Implement LYNC capabilities with MS Exchange and SharePoint	DME: Pending Review O&M: Pending Review/year	Priority: High EA Compliance: High

Name	Description	Cost	Notes
eBirth	Upgrade eBirth Application	DME: Pending Review O&M: Pending Review/year	Priority: High EA Compliance: High
LOB Infrastructure:			
In Progress:			
None Known			
New:			
None Known			

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 40 through Figure 42. In addition, Public Health LOB solutions have critical needs for the following new Enterprise-wide Solutions:

- Enterprise Mission Support Services – Case Management

- Enterprise Common Services - Collaboration tools (e.g. SharePoint and Workflow tools) and Analytics

- Enterprise Data Management Services – Data definition and Data warehouse services
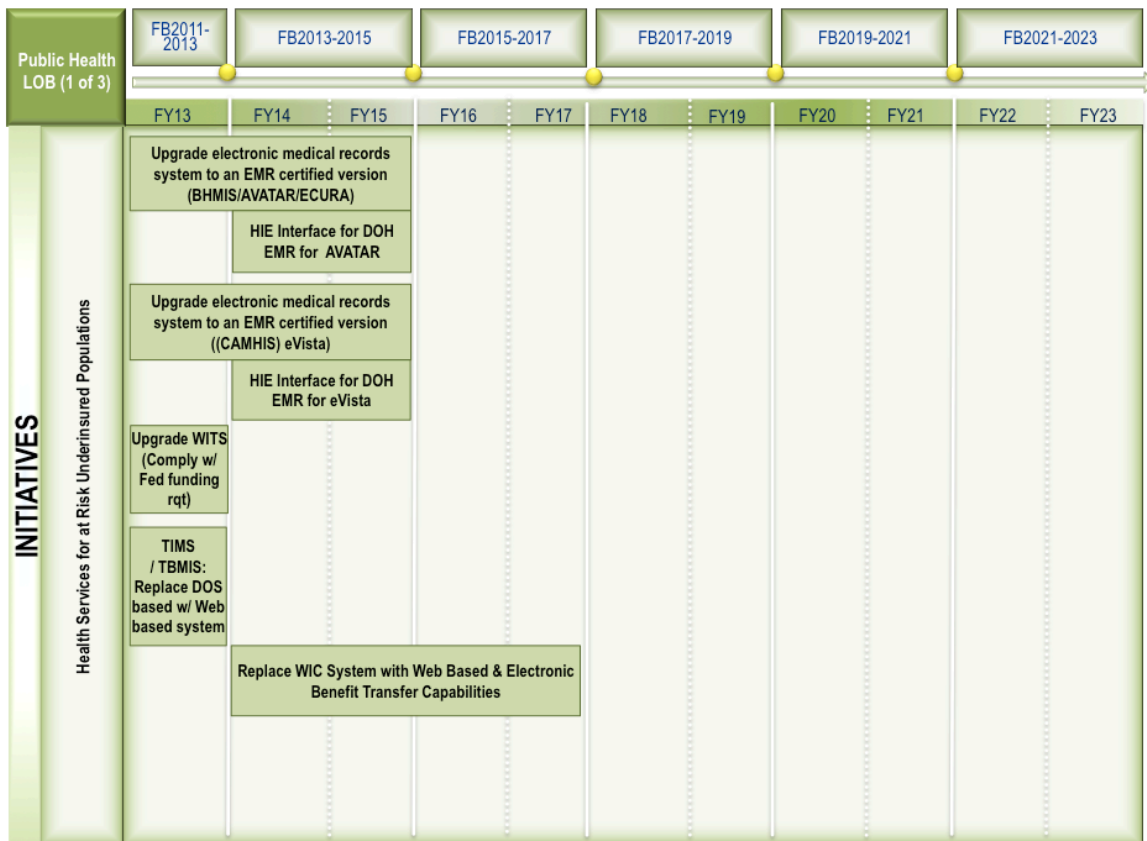
Figure 40: Public Transition and Sequencing Plan Summary (1 of 3)
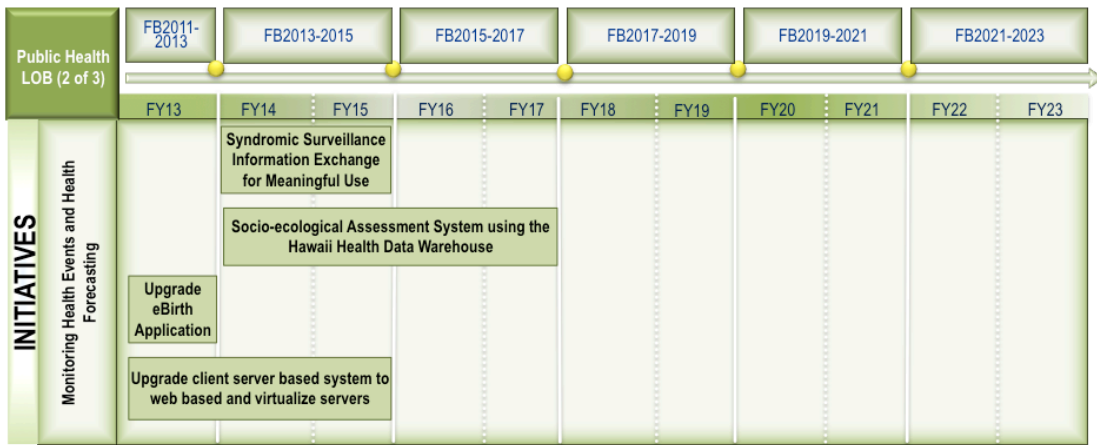
Figure 41: Public Transition and Sequencing Plan Summary (2 of 3)
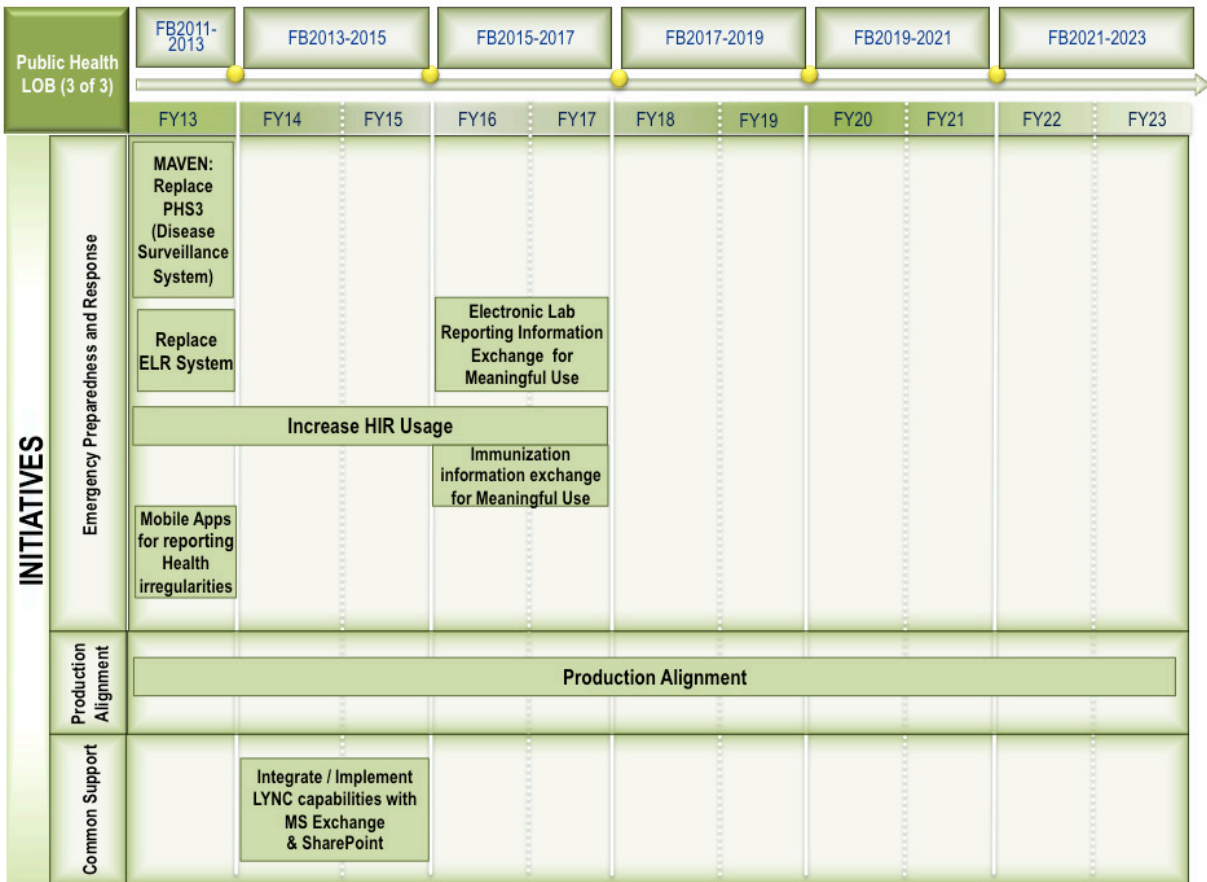
Figure 42: Public Transition and Sequencing Plan Summary (3 of 3)

A.1.18 ENVIRONMENTAL HEALTH MANAGEMENT

The mission for Environmental Health Management is to protect and improve the environment for all people in the State of Hawaii. The strategic goal of this LOB is to create social and physical environments that promote and support good health.

Note: DOH has developed additional details on its business and information management solutions for public health and environmental management in the DOH Business Services and Data Systems Service Oriented Architecture (SOA) Diagrams and the Public Health Domain Matrix for IT Systems and Initiatives.

Table 34: Environmental Health Management LOB Business Services

LOB: Environmental Management Service Name	Service Definition
Air/Water (Clean, Safe Drinking, Waste) Solid (Hazardous, Waste) Monitoring	Protects the environment, workplace, air, food and water. Provides consumer protection, hazardous material and solid waste management, risk surveillance which includes Clear Air, Clean Water, Safe Drinking Water, Waste Water, and Solid Hazardous Waste.
Public Health Laboratory	Conducts laboratory testing in support of environmental and public health programs statewide. Provides consultation, licensing, and other related laboratory services focused on environmental health and communicable disease control provided to various federal, state, city, county, and private organizations; also, conducts research, laboratory science investigations, and participates in emergency response efforts such as bioterrorism preparedness and monitoring air quality effects of volcanic activity.
Variance Permitting	Works with agency such as the EPA to determine compliance with Clean Air and Clean Water Acts and to request variances as appropriate; Provides compliance tracking and enforcement of EPA standards. Includes: • Regulatory Enforcement: Assists small businesses to overcome the hurdles they face in their efforts to succeed in business while following environmental regulations. • Hazard Evaluation & Response Services: Provides leadership, support, and partnership in preventing, planning for, responding to, and enforcing environmental laws relating to releases or threats of releases of hazardous substances.
Environmental Health Services Permitting / Inspection & Compliant Tracking / Enforcement	Protects the environment, workplace, air, food, and water. Provides consumer protection, hazardous material and solid waste management, risk surveillance which includes Food and Drug, Noise Radiation Indoor Air, Sanitation, and Vector Control. Includes: • Food and Drug • Sanitation • Vector Control • Noise Radiation • Indoor Air Permitting • Inspection & Compliant Tracking • Enforcement

A.1.18.1
FUTURE STATE VISION FOR ENVIRONMENTAL MANAGEMENT

The future state vision needs to factor in the following considerations:

• Standards-based enterprise architecture

• SOA and web services deployed

• Lack of DR for all critical applications and services

• Relies on real-time data to perform critical tasks that have far-reaching implications for the public

• Microsoft ASP .NET is the primary development environment and Oracle ADF is secondary. SharePoint is also used as a portal framework and development environment where applicable.

• Using integrated strategy regarding Microsoft Exchange, SharePoint, and Office

• OITS uses SolarWinds' Orion Network Management System to monitor traffic in the WAN

• Permits and Licensing: ePermitting System soon to be released.

• Complaints Tracking, Compliance Enforcement.

• Integrate social media into public information dissemination/education with assigned staff to keep information current

• Increase use of video and audio files to share information.

• Use of SharePoint (underway) to increase collaboration and document sharing/tracking, documentation management;

Expand/facilitate SharePoint initiatives; Continue to build on the SharePoint intranet portal; Continue to leverage features that promote document sharing and collaboration; More user-developed applications that can leverage the capability of SharePoint.

• Expand the use of server virtualization

• Investigate Cloud solutions for some services; explore replacing HISO bank of servers in the Cloud

• Work with Hawai`i Broadband Initiative to migrate frame relay sites to high-speed connections

• Begin strategic move to paperless environment and automate document workflow and tracking.

• Improve intranet; improve outlying offices' connectivity

• Upgrade Department website.

• Cell phone consolidation.

• Facilitate increased use of video streams

• Create social networking policies, procedures, and training (e.g., Facebook, Twitter, YouTube)

The future state solutions architecture is depicted in Figure 39 below. Two key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
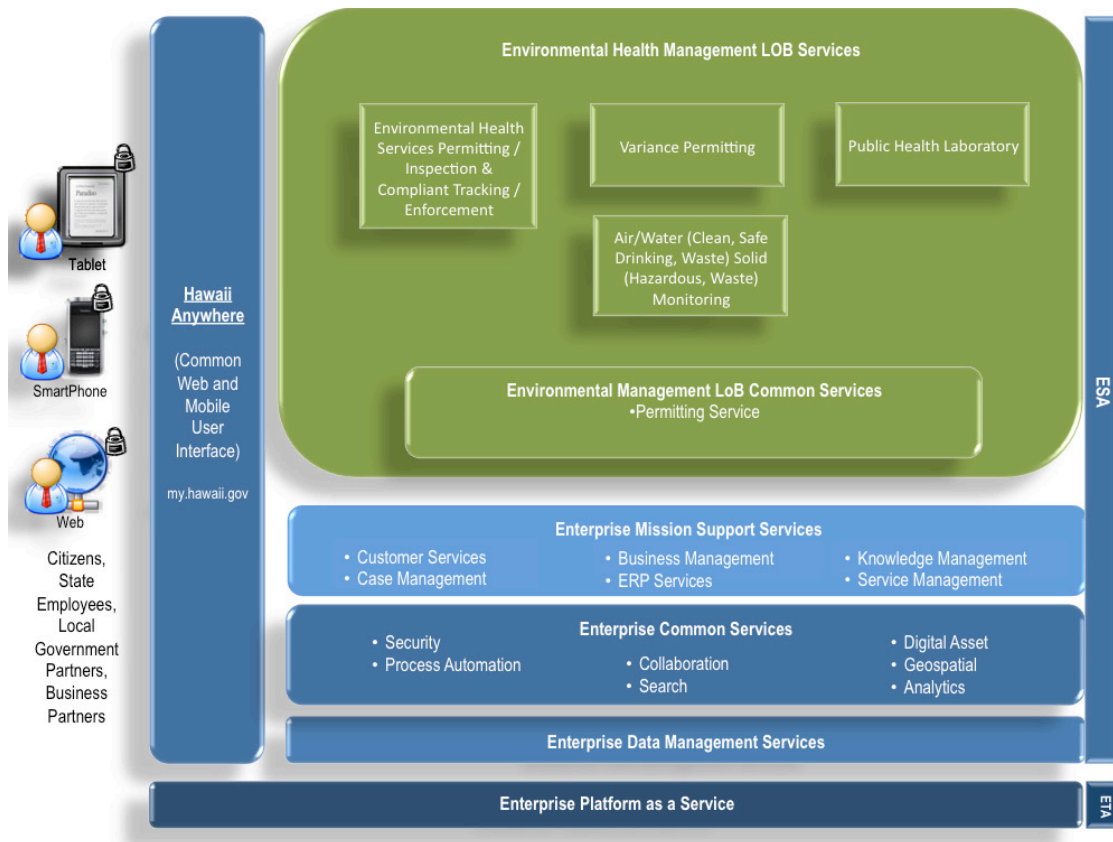
Figure 43: Environmental Health Management Future State Solutions Architecture

INFORMATION EXCHANGES

• Critical interfaces with organizations and stakeholders is broad and far-reaching; encompasses coalitions, working groups, businesses, non-profits and others making up the health care community, environmental protection, and human services safety net. Interfaces include:

– State: Human Services, Public Safety, Education, Defense, DLNR, DAGS, B&F, DHRD, HHSC, DHHL, SCD, UH/JABSOM, SPH, DOA, DBEDT, and the DOT.

– City and County: Kauai, Maui, Hawai`i, Honolulu: Emergency preparedness and emergency response.

– Federal: CDC, HRSA, DOE, ACF, SAMSHA, CMS, USDA, FEMA, EPA, FDA, and the Army Corps of Engineers.

– Private: HI Primary Care Assoc., HI Disease Surveillance Assoc. of Hospitals, Health/Human Service Organizations, HI Medical Assoc., Papaolokahi Child Care Centers, Substance Abuse Treatment Coalition, and the Mental Health Assoc. of Hawai`i.

• Increased access to data:

– Hospital and community health data.

– County-level data.

– Program accomplishments/success stories, best practices, and case studies.

– Current/future sponsored conferences, speaker sessions, trainings, public meetings and events.

– Employee dialog and views on public health initiatives.

A.1.18.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR ENVIRONMENTAL MANAGEMENT

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 35 below.

Table 35: Public Health LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
In Progress:			
Air Monitoring Reporting System	Capture air quality data for statewide reporting of air quality. (Air Data Management System (ADMS)) Public Health Domain: Environmental Health Monitoring and Reporting	O&M: Pending Review	Priority: High EA Compliance: High
ePermitting System	Provides online permit & licensing applications	DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: High
Hawaii Environmental Information Exchange (HEIX)	EPA exchange network allowing the exchange of Hawaii a regulated environmental data with EPA and other states. Public Health Domain: Environmental Health Monitoring and Reporting	DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: High
Hawaii Environmental Health Warehouse (HEHW)	Profile of every environmental interest in Hawaii from facilities to sites with special viewer for water quality and safe drinking water. Public Health Domain: Environmental Health Monitoring and Reporting	O&M: Pending Review/ year	Priority: High EA Compliance: High
Starlims Environmental Lab Testing	Add environmental sample testing into this laboratory management information system	DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: High
Inspection and Complaint Tracking System	Food establishment Inspection and complaint tracking	O&M: Pending Review	Priority: High EA Compliance: High
Water Pollution Control System (WPC)	Application to manage Pollutant elimination systems and Water Quality Certification including permit complaints, inspections, and enforcement processing.	O&M: Pending Review year	Priority: High EA Compliance: High
Safe Drinking Water Information System	Manages the process of testing analyzing and reporting drinking water quality throughout the State's water testing points	O&M: Pending Review year	Priority: High EA Compliance: High
Environmental Impact Statement (EIS)	A reference library data base of every environmental impact statement in Hawaii. Public Health Domain: Permits and Licensing	O&M: Pending Review year	Priority: High EA Compliance: High
Inspection and Complaint Tracking System	Food establishment Inspection and complaint tracking	O&M: Pending Review year	Priority: High EA Compliance: High
New:			
Complaints Tracking and Compliance Enforcement of Environmental Variances		DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: High

Name	Description	Cost	Notes
Hazardous Evaluation and Emergency Response Information Systems		DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: High
LOB Solutions:			
In Progress:			
Clean Air Branch Management Information Systems		DME: Pending Review O&M: Pending Review/ year	Priority: High EA Compliance: High
Upgrade to the Environmental Health Data Warehouse to implement a public facing version of the existing EHDW		DME: Pending Review O&M: Pending Review/ year	Priority: High EA Compliance: High
Safe Drinking Water Information System phase II - Sample collection and Reservation System		DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: High
LOB Infrastructure:			
In Progress:			
None Known			
New:			
None Known			

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing initiatives is depicted below in Figure 2.
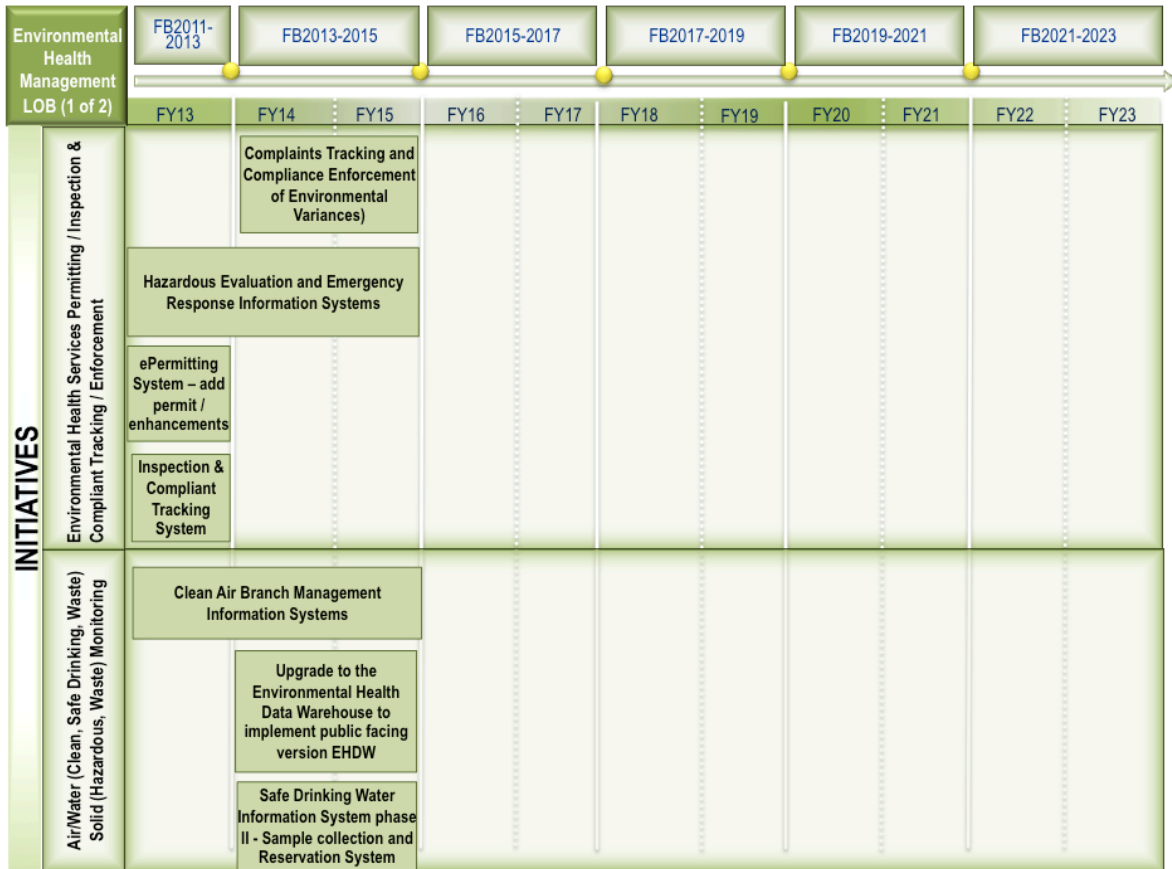
Figure 44: Environmental Health Management Transition & Sequencing Plan Summary (1 of 2)
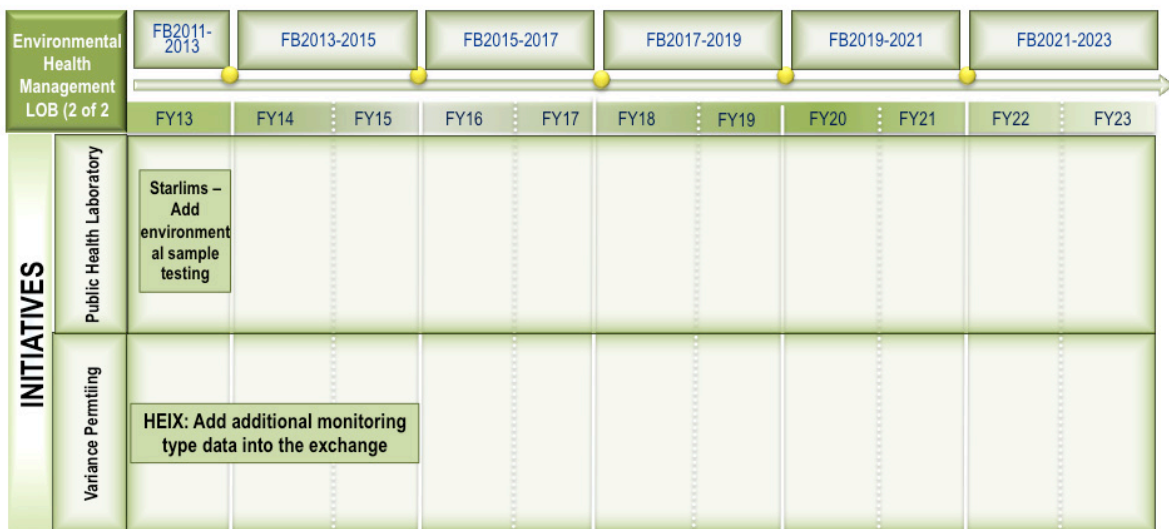
Figure 45: Environmental Health Management Transition & Sequencing Plan Summary (2 of 2)

A.1.19   AGRICULTURE

Agriculture line of business works to support, enhance, and promote Hawai`i's agriculture and aquaculture industries and is responsible for animal quarantine, plant, and pest control, and are a resource for travel and shipping information. The business services are described in the table below.

Table 36: Agriculture LOB Services

LOB: Agriculture Service Name	Service Definition
Plant Quarantine and Importation Control	Protects agricultural industries, natural resources, and the public of Hawai`i from the entry and establishment of detrimental plants, animals, insects, weeds, and other pests through inspections and certification programs. Also, provides service for fee inspections for the seed industry. The service involves field and seed inspections to preserve genetic purity and identity.
Animal Quarantine and Importation Control	Protects the public and animal population from potentially serious health problems associated with the introduction and spread of rabies and other agents through its Animal Quarantine program.
Animal Health	Prevent, detect, diagnose, control and eradicate livestock and aquaculture diseases in order to promote the health and economic well-being, marketing and export of Hawai`i's livestock, poultry and aquaculture industries and their products. Surveillance for regulatory diseases is conducted routinely to identify diseases which constitute a threat to the State's animal industries and public health.
Brand Registration	Reviews brand applications and approves brands after determining that the brand is not the same or similar to others that are registered and provides book of brands. Branding continues to be the most practical and approved means by which cattle ownership is determined.
Financial Assistance – Agricultural Loan	Administers the Agricultural Loan Program and the Aquaculture Loan Program to promote agricultural and aquacultural development of the State by providing credit at reasonable rates and terms to qualifying individuals or entities. Through the establishment of a revolving loan fund, credit is made available by supplementing private lender sector loan funds or by providing direct funding.
Agricultural Development	Provides assistance in the marketing of quality agricultural commodities through local, domestic and international programs and activities, promotes the economic viability of commercial agriculture in Hawai`i by sponsoring joint marketing programs for agricultural products with high revenue growth potentials. Administers the Seal of Quality program.
Quality Assurance Commodities and Measurement Standards	• Looks after the interests of the consumer by inspecting and grading commodities in wholesale and retail establishments assisting in the marketing of quality agricultural commodities and promotion of fair trade and honest business practices. Assists in the development of agricultural industries through quality assurance of agricultural commodities; licensing of dealers in agricultural products; and milk producer price and quota control to maintain stability within the dairy industry. • Assures accuracy of measurement, packaging, labeling and pricing of commercial goods to prevent unfair practice. Works to minimize losses to both the buyer and seller in transactions of goods or services based on a measurement process or quality standards enforced by the Measurement Standards Branch such as "Made in Hawaii" products, scales, gasoline, taximeters,. Octane levels, and pricing at grocery stores.

LOB: Agriculture Service Name	Service Definition
Plant Pest Control	Eradicates, contains, or controls pests of plants which could cause significant economic damage to agriculture, our environment, and quality of life. This is achieved through statewide programs using chemical, mechanical, biological, and integrated control measures to eradicate or control plant pests, including insects and mites, mollusks, weeds, and plant pathogens.
Pesticides	Regulates the manufacture, sale, and use of pesticides in the State of Hawaii Regulates to ensure safety and availability of important pesticides.
Agricultural Resource Management	Charged with preserving land and water resources to sustaining agricultural operations and ensure the viability of Hawai`i's diversified agricultural industry. Operates the State's Agricultural and Non-Agricultural Park Lands Program and the State's Irrigation Systems to assist people who are interested in leasing land for farming ventures by providing reasonably priced farmland and agricultural water to encourage competition within the industry. There are currently over 1,000 parcels of leaseable land and/or parcels receiving irrigation water.
Agribusiness Development	Facilitates and coordinates the development and expansion of Hawaii's agricultural industry by directly participating in the shift from plantation-based production and infrastructure to a multi-farm/multi-crop industry.

A.1.19.1   FUTURE STATE VISION FOR AGRICULTURE

The following represents the foundational elements for the Agriculture LOB future state:

• Provide better tools to enable the IT staff for this LOB to work seamlessly with ICSD, contractors (under maintenance contracts), and other IT staff in other Departments increase efficiency of IT support

• Implement new technologies effectively to enable access to agriculture services to a wide diversity of people across the state. One example is how to provide access for poor farmers.

• Enable common internal business functions and remove variation in the processes from division to division.

• Facilitate more private sector/businesses that are industry partners with them to co-develop solutions.

• Need more inspection facilities; sometimes producers wait too long to get an inspection.

• Improve web development and phase out Plone – the tool that is used to manage the State's websites (difficult to use and they get a lot complaints about it).

• Develop more efficient ways to reduce the manpower required to check scanners and scales in stores to see if correct pricing, correct labeling, and product measurements/weights are accurate.

• Facilitate more efficient ways to calibrate scales, taxi meters, and gas pumps.

• Implement and facilitate collaboration to participate more efficiently in research (pesticides, insect identification, etc.) with the University of Hawai`i.

• Improve Business processes and use technology to reduce the amount of paper used and provide more efficient use of storage and retrieval.

• The DOA would like to implement online submittal of forms and payments similar to DCCA. Programs. Areas that would benefit include Animal Quarantine (quarantine fees) and Plant Quarantine (permits and inspections). Currently, only the Animal Quarantine Branch accepts credit card payments.

• The DOA is very interested in adopting a system used in CA because it tracks produce statistically; food safety is Federally mandated so a process must be developed; Invicta is working toward this.

• Foster and facilitate the vision to lessen HI's dependence on imports, UH/College of Tropical Agriculture and Human Resources (CTAHR) have been tasked with developing a statistical analysis of imports and the economy. People want to buy locally grown produce, but farmers have to make money or it won't work.

• Transfer ARMIS accounts to DLNR's SLIMS. HDOA user accounts were setup and training was conducted but work to establish customer accounts was not done. SLIMS is more comprehensive and will improve land management and inventory of State's land.

- Develop more public-facing web applications to get information out to the community (e.g. farmers markets, product available, agricultural regulations) and better web management; currently treated like an afterthought.

- Investigate and implement Cloud solutions for some services.

- Expand the use of server virtualization.

- Need failover for all applications supporting critical services such as, food safety inspections.

- Enable receipt and processing of online payments for existing applications.

- Increase use of mobile technologies and strategies for the inspectors in the field.

- Introduce and expand the use of AutoCad and GIS capability to help improve irrigation, dams, reservoirs, etc.

- Introduce use of social media such as, Facebook and Twitter.

The future state solutions architecture is depicted in Figure 46 below. Two key features of this solution include:

- "Hawai`i Anywhere" common web and mobile user interface architecture

- "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
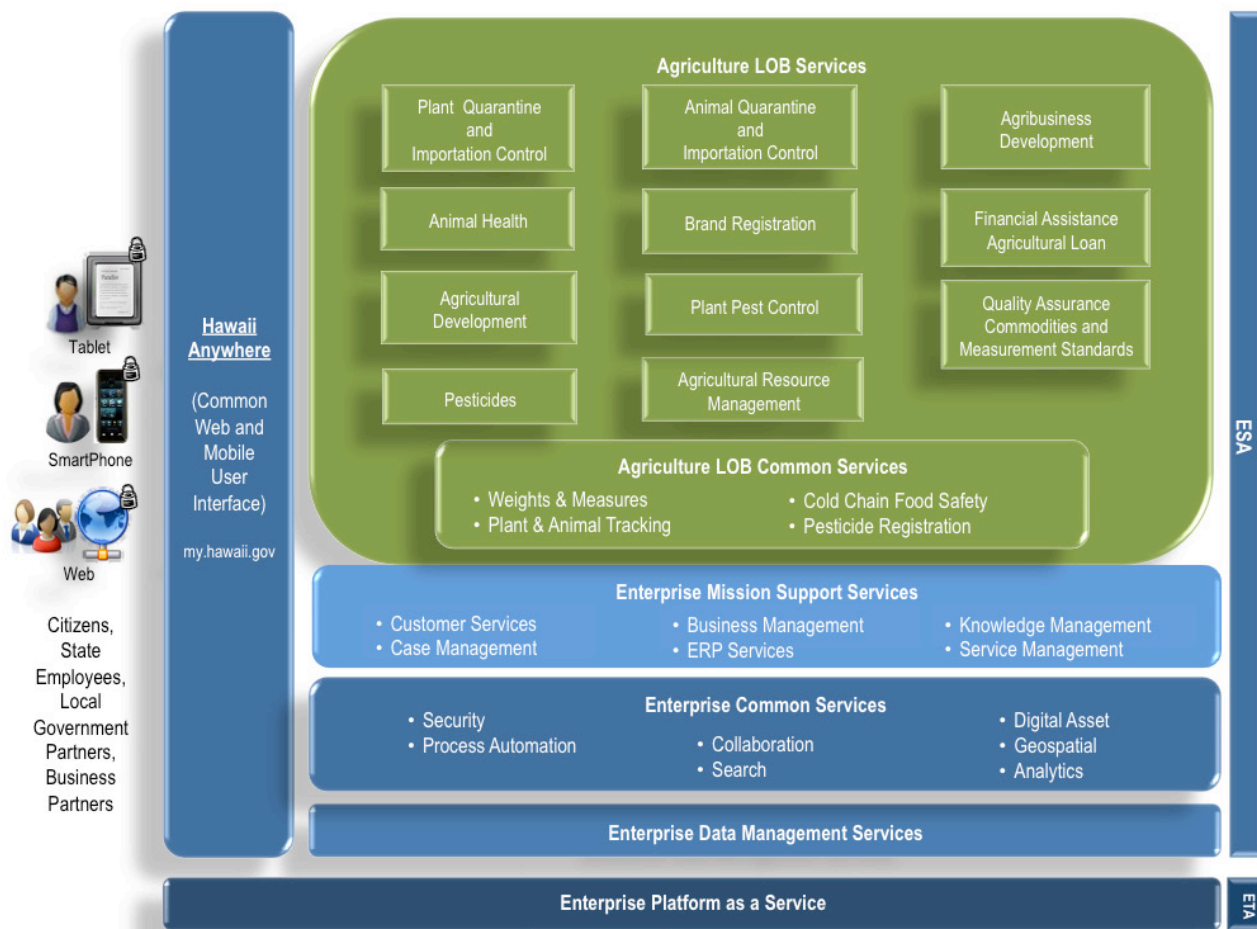
Figure 46: Agriculture LOB Future State Solutions Architecture

INFORMATION EXCHANGES

• Agriculture interfaces with Federal government agencies especially USDA and provides a number of reports to them.

• Agriculture interfaces with Federal government agencies especially USDA and provides a number of reports to them.

• Agriculture interfaces with Land and Natural Resources

A.1.19.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR AGRICULTURE

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 37 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 37: Agriculture LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
In Progress:			
Invicta	The Invicta system supports the agricultural permit and inspection process in the State of Hawaii. Logs inspection results, allows online access to permits conditions and provides statistics to assist administrators in monitoring daily activities. (.net)	Annual O&M: Pending Review	Priority: Medium EA Compliance: Medium-High
ColdChain	A Food Safety RFID pilot system that is currently operational at Armstrong Produce; tracks food temperature.	Annual O&M: Pending Review	Priority: Medium EA Compliance: Medium
Department of Agriculture	hawaii.gov/hdoa Plone; Hosted by ICSD; hdoa.info@hawaii.gov	Annual O&M: Pending Review	Priority: Medium EA Compliance: Medium
Pesticides Registrations (PESTREG)	Registration processing of pesticides in Hawaii.	Annual O&M: Pending Review	Priority: Medium EA Compliance: Medium
Dealer Licensing	Processing of Dealer licensing for Commodities.	Annual O&M: Pending Review	Priority: Medium EA Compliance: Medium
Brand Database	Compilation of registered livestock brands mandated by law. Generates Brand Book with brand images and index. Report published to the web.	Annual O&M: Pending Review	Priority: Medium EA Compliance: Medium
Veterinary Laboratory Information System	Compiles data generated from tests performed at the Veterinary Laboratory.	Annual O&M: Pending Review	Priority: Medium EA Compliance: Medium

Name	Description	Cost	Notes
Hawaii Agricultural Food and Products Database	Searchable database of producers, wholesalers of Hawaii's food and products. (Created by ICSD from HDOA's Access Database)	Annual O&M: Pending Review	Priority: Medium EA Compliance: Medium
HDOA Inventory	Inventory records uploaded from DAGS and allows inventory managers to indicate users, location and/or actions regarding an item.	Annual O&M: Pending Review	Priority: Medium EA Compliance: Medium
HDOA Property Management	Keeps track and saves telecom requests and disposal requests submitted to DAGS.	Annual O&M: Pending Review	Priority: Medium EA Compliance: Medium
New:			
Agriculture Resource Management Information System (ARMIS)	Customer information and accounting for Ag park and irrigation systems. Updates payments and prints invoices. Databases include Waimea Irrigation, Honokaa/Paauilo Farms, Honokaa/Paauilo Livestock, Molokai Irrigation, Non-Ag Parks, Ag Parks, Waimanalo Irrigation.	One-time DME: Pending Review Annual O&M: Pending Review	Priority: Medium EA Compliance: Medium-High
Agricultural Loan Management System (ALA)	Customer information and accounting for ag park and irrigation systems. Databases include Ag Loan - General, General Fund Emergency Loans, Kauai Task Force Loans, North Kohala Loan & Grant, Hawaii Ag Products, Aquaculture, Act 19 Sugar Loan, and Special.	One-time DME: Pending Review Annual O&M: Pending Review	Priority: Medium EA Compliance: Medium-High
Animal Quarantine Information System (AQSIS)	Individual Pet/owner information and accounting for the Animal Quarantine Station. Databases incl. Animal entry information, Quarantine Operations, Accounts Receivable, animal veterinary qualification data for quarantine programs (incl. vaccination, rabies).	One-time DME: Pending Review Annual O&M: Pending Review	Priority: Medium EA Compliance: Medium-High
ASO APPX	ASO APPX Applications Conversion and Enhancement	One-time DME: Pending Review Annual O&M: Pending Review	Priority: Medium EA Compliance: Medium-High
WINWAM	Weights and Measurements application to monitor Taxi Meters, track and license devices. (APPX Client/Linux Server) COTS: WinWam/Datahouse	One-time DME: Pending Review Annual O&M: Pending Review	Priority: Medium EA Compliance: Medium-High
LOB Infrastructure:			
In Progress:			
Agriculture LAN Conversion	Conversion from Novell/Linux to Microsoft AD	One-time DME: Pending Review Annual O&M: Pending Review	Priority: High EA Compliance: High
New:			
None			

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 47 through Error! Reference source not found.. In addition, Agriculture LOB solutions have critical

needs for the following new Enterprise-wide Solutions:

• GIS

• Mobile technology

• Computer aided Design tool

• Web 3.0 capability

• Cloud solution

• Social Media Policies and access

• Training (current training for IT staff ends in 2014)
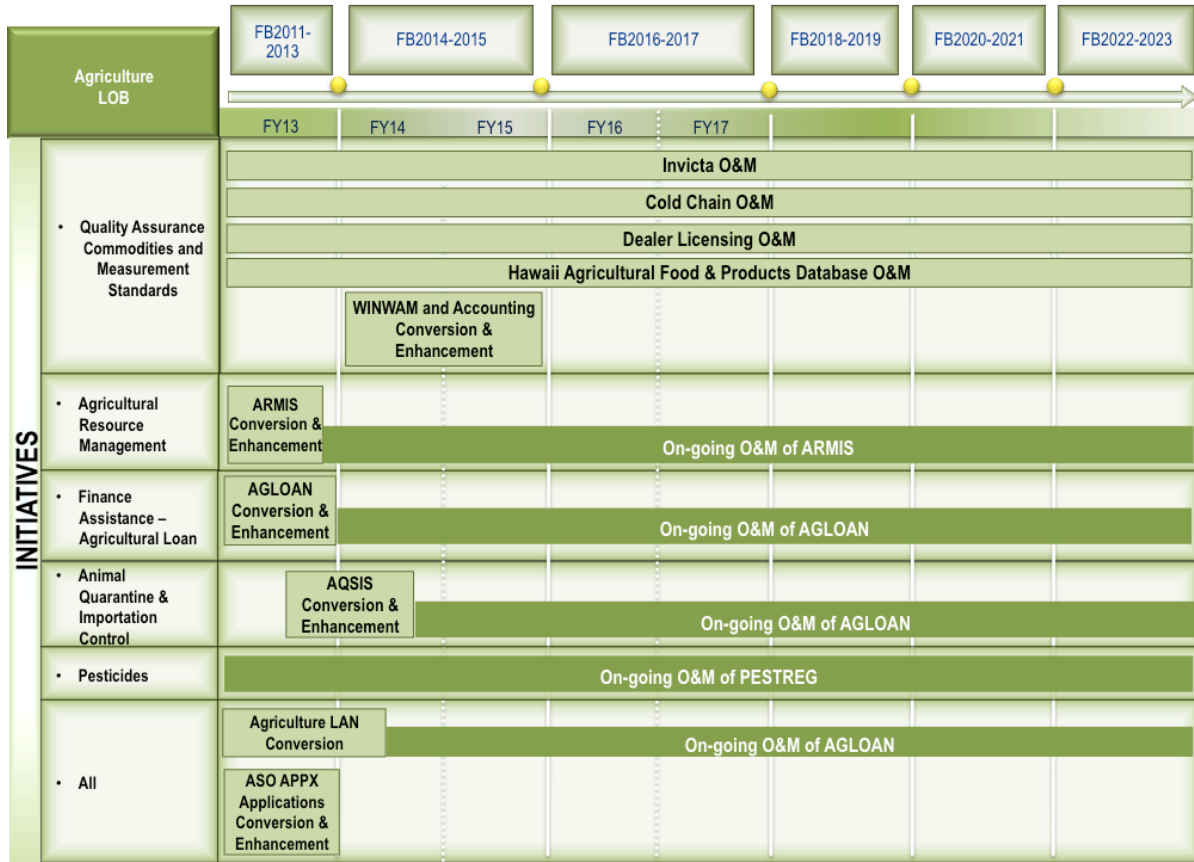
Figure 47: Agriculture Transition and Sequencing Plan Summary

Table 38: Land and Natural Resources LOB Services

LOB: Land and Natural Resources Service Name	Service Definition
Boating and Ocean Recreation	Registers vessels, trailer stickers, commercial boating permits, and event permits. Vessel registration system, accounts receivable system.
Conservation & Coastal Land Services	Processes Conservation Land Use Applications, enforces violations of uses in conservation district (usually by contested case now starting Civil Resource Violation System). Approximately 2 million acres falls into the conservation district, not all of it is State lands and not all State lands are conservation either.
Conservation and Resources Enforcement	Responds to administrative penalties as enforcement officers for State lands. Enforcement Management Information System, utilizes DLNR radio system.

LOB: Land and Natural Resources Service Name	Service Definition
Aquatic Resources	Manages three programs: (1) Commercial Fishery and Resources Enhancement, (2) Aquatic Resources and Environmental Protection, and (3) Recreational Fishery. Issues commercial fishing licenses, freshwater fishing license, aquarium collection permits, various other collecting permits, and receives commercial catch reports.
Forestry & Wildlife Management	Manages 5 major program areas: (1) Forestry, (2) Wildlife, (3) Native Ecosystems Management, (4) the Na Ala Hele Trail system, and (5) Fire management. Management jurisdiction includes approximately, 1,000,000 acres of Forest Reserves, Wildlife Sanctuaries, Game Management Areas, and Natural Area Reserves and approximately 1,000,000 acres of private lands in watersheds partnerships. In addition, has regulatory jurisdiction and authority statewide for the protection of terrestrial wildlife and endangered plants. For these services, issues commercial trail permits, NARS and Forest Reserves access permits, collecting permits, Habitat Conservation Plans, Forestry support services (CREP, etc.), Forest Reserve camping permits, wildlife sanctuary permits, land acquisition, legacy land program grants, support services for watershed partnerships.
Historic Preservation Services	Manages 3 major program areas: (1) Architecture, (2) Archaeology, and (3) History and Culture. Responsible for reviewing approximately 6,000 projects annually with the potential to affect a historic resource. Also keeps a register of historic properties, inventory, and surveys, public library (all need to be available electronically to the public.) GIS, intake system.
Land Management Services	Manages 1.3 million acres of state lands, database is critical to keep track of leases, E.O.s to other departments, etc. Also processes lease applications, beach wedding applications, and shoreline certifications (working with OCCL). Also serves as an office of record dating back to the Great Mahele of 1848. Surveys state lands to keep accurate records for land management. Land Information Management System, Land trust information system
Natural Development Engineering Services	Manages 3 programs (1) Water and Land Development, (2) Mineral Resources development, and (3) Prevention of Natural Disasters. The Water and Land Development program is responsible to update the State Water Projects Plan as required under the State Water Code (Chapter 174C, HRS) and provides administrative support to the 16 soil and water conservation districts. The Mineral Resources program is responsible for the effective management of geothermal resources. The Prevention of Natural Disasters administers programs for Dam Safety, National Flood Insurance (NFIP), and General Flood Control. The Engineering division also coordinates CIP with the divisions and contractors.
Bureau of Conveyances Property Records	Records property transactions, and public records. The Bureau of Conveyance is the States sole recording office for deeds, mortgages, assignments, modifications, notices of lien, releases of lien, uniform commercial code financing statements, security agreements, judgments and decrees from courts, military discharge papers (DD-214), Federal and State tax liens, child support enforcement liens, satisfactions and releases of such liens. The Bureau staff examines, records, indexes and digitizes Regular System and Land Court documents and maps; issues Land Court Certificates of Title; certifies copies of matters of record; and researches uniform commercial code information. Records an average of 370,000 documents per year. Records system
State Parks Services	Manages the State Parks system; includes 67 state parks and other areas of responsibilities that encompass nearly 34,000 acres ranging from landscaped grounds with parking areas, rest rooms and other developed facilities to wild land areas and cultural sites with only trails and primitive facilities. Issues permits to individuals for recreation use includes camping permits, group gathering permits, photography/film permits, in some cases access is by permit only (e.g. Kaawaloa at Kealakekua Bay). Also, issues concession contracts/permits for commercial uses. Parks reservation system.

LOB: Land and Natural Resources Service Name	Service Definition
Water Resource Management	Protects, conserves and enhances the water resources of the State through wise and responsible management and provides for the maximum beneficial use of water by present and future generations. Performs data collection, inventory, assessments and long term planning and regulates and protects water resources by responding to petitions for new and manage water use in existing designated water management areas, issues permits for well construction, pump installation, water use, stream channel alterations, and stream diversion works statewide, and investigating complaints and violations. Water management reporting system.

NOTE: Land Survey Services was removed from the Land and Natural Resources LOB due to organizational alignment issues. All the business services above are within DLNR, and the Land Survey Services business service is in DAGS. The potential overlap of common land management functionality resulting in duplicative and non-interoperable information system investments should lead to greater cooperation and coordination across these two related areas.

A.1.20.1
FUTURE STATE VISION FOR LAND AND NATURAL RESOURCES

Technology services will continue to coordinate the computerization of departmental business functions; implement systems currently in development; meet FCC radio requirements for narrow banding; increase the network bandwidth for remote offices; and develop the geographic information system to provide greater management capabilities and services to the public.

The future state solutions architecture is depicted in Figure 48 below. Two key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture.

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.

Figure 48: Land and Natural Resources Future State Solutions Architecture

INFORMATION EXCHANGES

Receives and provides information to the public and government agencies.

A.1.20.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR LAND AND NATURAL RESOURCES

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

• Utilizes DRFortress as a disaster recovery off-site location. The second stage consists of developing a business continuity structure that will create a network system for backup and remote accessibility utilizing replication and virtualization services in an effort toward real-time data retrieval.

• Implemented a Polycom HDx8000 statewide video conferencing system including the RMX2000 bridge, which serves as a backup to ICSD's bridging capabilities. In the process of expanding video conferencing sites on the neighbor islands.

• Establishing FCC narrowbanding compliance for DLNR's radio system; used to provide enforcement to the State's natural resources.

• DLNR uses GIS for program decision making, participated in the statewide strategic planning process for enterprise GIS and OIMT's working group and plans to develop GIS interfaces to DLNR databases as well as mobile technologies.

• DLNR uses HIC for a variety of transaction-based web applications providing online services to the public; HIC receives a portion of the collected fee and is also paid by DLNR; HIC has created more than 10 systems for DLNR.

• Systems development projects in progress for enhanced automation of division programs.

• Improve the network infrastructure in the areas of bandwidth, services, and security. There are more than 40 remote sites using DSL; upgrading to an Ethernet solution to increase work productivity.

• Expand the Civil Resource Violation System to improve compliance with State laws and rules protecting Hawai`i's natural resources, in support of the Office of Civil Compliance.

• Under development/recently deployed: Bureau of Conveyances' electronic recordation and management system; Boating's accounts receivable system; Conservation and Resources Enforcement's electronic management information system; Water Resources' well reporting system; Public land trust information system.

• Provide data replication through virtualization and storage area networks.

• A new initiative is to acquire in-house business analysts and application. developers.

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 39 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 39: Land and Natural Resources LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
Production Applications Alignment:			
Payroll Database DLNR	Fiscal backend database, monitors payroll funding source / DLNR	One-time DME: (in ERP) On-going annual O&M: Pending Review	Status: Replace with ERP EA Compliance: 1 Priority: 1
Automated Revenue Accounting System	ICSD	One-time DME: (in ERP) On-going annual O&M: Pending Review	Status: Replace with ERP EA Compliance: 1 Priority: 1

Name	Description	Cost	Notes
Time and Leave System for DLNR	Lotus Notes leave reporting system / ICSD	One-time DME: (in ERP) On-going annual O&M:Pending Review	Status: Replace with ERP EA Compliance: 1 Priority: 1
Recreational Freshwater Game Fishing License	Online freshwater fishing license. https://www.ehawaii.gov/ dlnr/fish/exe/fresh_main_page.cgi. (developed, supported, and hosted by HIC)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Commercial Fisheries Licenses & Permits	Online commercial fishing license. https://dlnr.ehawaii.gov/ cmls-fr/app/license-search.html. (developed, supported, and hosted by HIC)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Conveyance Recording	Land recording. Every land Real Estate Transaction is recorded via this application. https://boc.ehawaii.gov/ landlink. (developed, supported, and hosted by HIC.)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Conveyance Documents Search & Order	Online land title records search and ordering. https://boc. ehawaii.gov/docsearch/nameSearch.html. (developed, supported, and hosted by HIC)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Uniform Commercial Code Recording	Online UCC financing statement recording. https://boc. ehawaii.gov/ucc-recording/index.html. (developed, supported, and hosted by HIC)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Vessel Registration	Online vessel renewals. http://vessel.ehawaii.gov. (developed, supported, and hosted by HIC)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Civil Resource Violation System	Online citation or case status / HIC - Very Large. Integrate department's permits and licensing systems with Civil Resource Violation System.	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Well permit applications & forms	Online water resource forms / DLNR	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is – Web page EA Compliance: 3 Priority: 3
Hunter Education Student & Exceptions Database	Conservation and Resources Enforcement backend database Hunter Ed course, ID, FW use / DLNR	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
FEMA Flood Designation	Engineering, public properties with GIS to reduce future flood risks in hazard areas / DLNR	One-time DME: Pending Review	Status: Use As Is EA Compliance: 3

Name	Description	Cost	Notes
		On-going annual O&M: Pending Review	Priority: 1
NFIP: National Flood Insurance program	Engineering assessment tool for plain management of Federal, State & local flood regulations, ordinances and a newsletter / DLNR	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 1
NaAlaHele Commercial Hiking Permits	Online trail and access system. http://hawaiitrails.org. (developed, supported, and hosted by HIC)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Reports to City Tax Office	Additions, deletions, changes to encumbrances on State land / DLNR - Older Oracle database and report generation application. Tied to SLIMS	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Replace EA Compliance: 3 Priority: 1
Appropriation Ledger	This batch system produces monthly fiscal reports for DLNR from tapes produced by FAMIS. The system provides Operating Fund and CIP reports on expenditures, appropriations, allotments, & encumbrances by division cost center and project levels / DLNR	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Replace with ERP EA Compliance: 3 Priority: 1
BOC Subscriber Services	https://boc.ehawaii.gov/LandShark. (developed, supported, and hosted by HIC)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Commercial Marine Licensing System	http://dlnr.ehawaii.gov/cmls (developed, supported, and hosted by HIC)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Online Hunting Licenses	http://hunting.ehawaii.gov (developed, supported, and hosted by HIC)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Land Use Permits	http://dlnr.ehawaii.gov/permits (developed, supported, and hosted by HIC)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Land Use Permits	http://dlnr.ehawaii.gov/permits (developed, supported, and hosted by HIC)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Statewide Camping Reservation System	https://camping.ehawaii.gov/camping/welcome.html (developed, supported, and hosted by HIC)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3

Name	Description	Cost	Notes
Department of Land and Natural Resources	www6.hawaii.gov/dlnr (hosted by ICSD)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Commission on Water Resource Management	hawaii.gov/dlnr/cwrm. (hosted by ICSD)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Division of Boating and Ocean Recreation	hawaii.gov/dlnr/dbor. (hosted by ICSD)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Division of Forestry & Wildlife	www6.hawaii.gov/dlnr/dofaw. (hosted by ICSD)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Historic Preservation Division	hawaii.gov/dlnr/hpd. (hosted by ICSD)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Maui Forest Bird Recovery Project	www6.hawaii.gov/dlnr/mfbp. (hosted by ICSD)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Office of Conservation and Coastal Lands	www6.hawaii.gov/dlnr/occl. (hosted by ICSD)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Office of Conservation and Coastal Lands	www6.hawaii.gov/dlnr/occl. (hosted by ICSD)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Registration Index System	Not used - Retired		
Land Court System	Not used - Retired		
DLNR Legislative Tracking System	"The Department of Land and Natural Resources (DLNR) Legislative Tracking System is based on the Department of Business Economic Development and Tourism (DBEDT) Lotus Notes Legislative Tracking System / ICSD	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
FAMIS Vendor Database	Supported by ICSD.	One-time DME: Pending Review	Status: Replace with ERP

Name	Description	Cost	Notes
		On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 1
Correspondence Log DLNR	Tracks all correspondence via the Chairperson's Office / DLNR	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Track Referrals, Activities, and Correspondence for DLNR	"The Track Referrals, Activities, & Correspondence (TRAC) system monitors items requiring a response, records various activities within the organization, and logs notices received/ sent / ICSD	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Replace with Central Legislative Tracking System EA Compliance: 3 Priority: 3
Accounts Receivable System	Boating commercial licensing and fees for small boat harbors / HIC In-Progress - Automate Boaters Fees and Licensing for payment on-line. See Harbor Pro/BARS.	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
In Progress:			
Enforcement Management Information System	Conservation and Resources Enforcement System / DLNR	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 1
Harbor Pro/ BARS	http://dobor.ehawaii.gov (developed, supported, and hosted by HIC)	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 1
Enforcement Management Information System	Systems development projects in progress for enhanced automation of division programs. Enforcement IMS, Water Resources Well Reporting, and HIC Web Based applications	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 1
Civil Resource Violation System	Expand the Civil Resource Violation System to improve compliance with State laws and rules protecting Hawai`i's natural resources, in support of the Office of Civil Compliance. HIC Supported - Need to add additional HIC applications to the Violation System	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 1
Electronic Recordation Management System	Under development/recently deployed: Bureau of Conveyances' electronic recordation and management system; Boating's accounts receivable system; Conservation and Resources Enforcement's electronic management information system	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Move to Web App EA Compliance: 3 Priority: 3
New:			
DLNR GIS	DLNR uses GIS for program decision making, participated in the statewide strategic planning process for enterprise GIS and OIMT's working group and plans to develop	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 1

Name	Description	Cost	Notes
	GIS interfaces to DLNR databases as well as mobile technologies.		Status: Use As Is EA Compliance: 3 Priority: 1
Land Trust IMS	Public Land Trust IMS	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 1

LOB Infrastructure:

In Progress:

Name	Description	Cost	Notes
DNLR Disaster Recovery	Utilizes DRFortress as a disaster recovery off-site location. The second stage consists of developing a business continuity structure that will create a network system for backup and remote accessibility utilizing replication and virtualization services in an effort toward real-time data retrieval.	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 1
Video Conferencing	Implemented a Polycom HDx8000 statewide video conferencing system including the RMX2000 bridge, which serves as a backup to ICSD's bridging capabilities. In the process of expanding video conferencing sites on the neighbor islands.	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 1
DLNR Radio System	Establishing FCC narrowbanding compliance for DLNR's radio system; used to provide enforcement to the State's natural resources.	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 1
Network Infrastructure Upgrade	Improve the network infrastructure in the areas of bandwidth, services, and security. There are more than 40 remote sites using DSL; upgrading to an Ethernet solution to increase work productivity.	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 1
Data Visualization System	Provide data replication through virtualization and storage area networks	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 1

TRANSITION AND SEQUENCING

The first 10 initiatives above are in various stages of its lifecycle and are funded. Funding is needed for the initiative to acquire in-house business analysts and application developers.

The plan for future state transition and sequencing of initiatives is depicted below in Figure 13 through Figure 49.

Figure 49: Land and Natural Resources Transition and Sequencing Plan Summary (1 of 3)
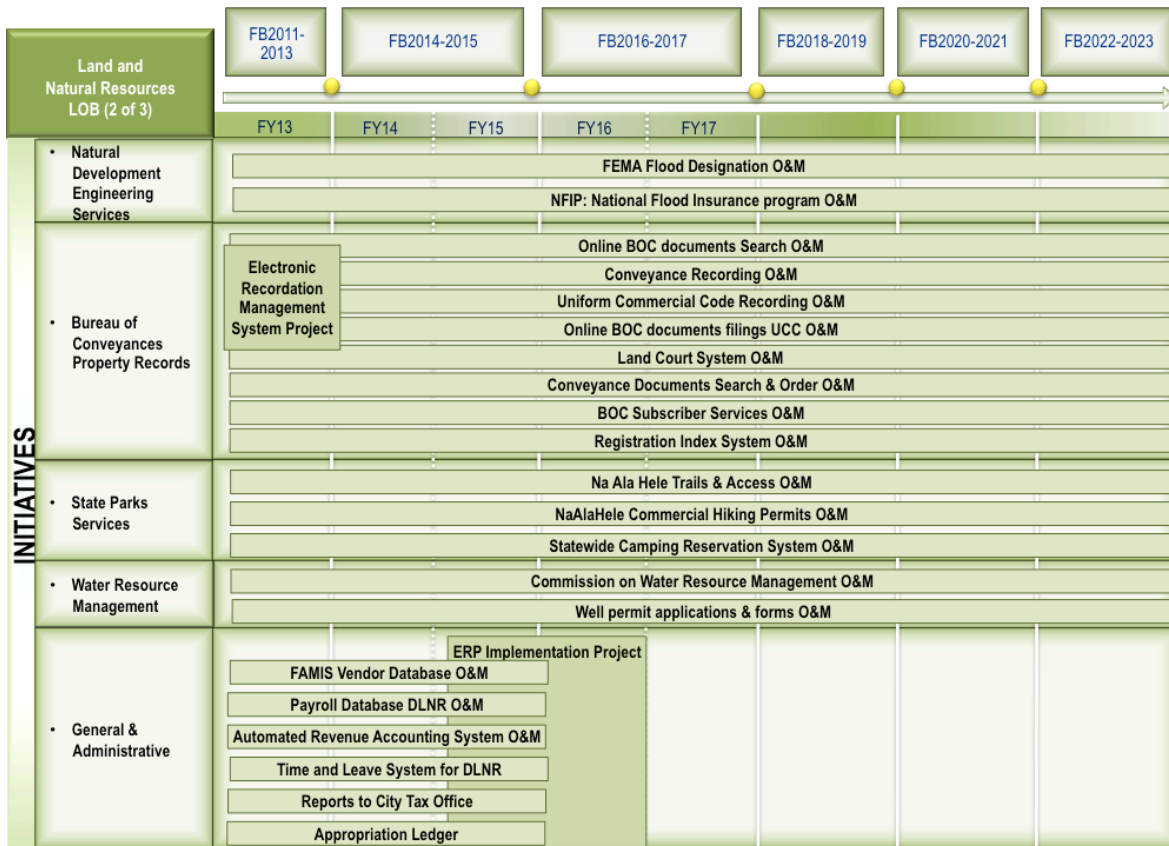
Figure 50: Land and Natural Resources Transition and Sequencing Plan Summary (2 of 3)
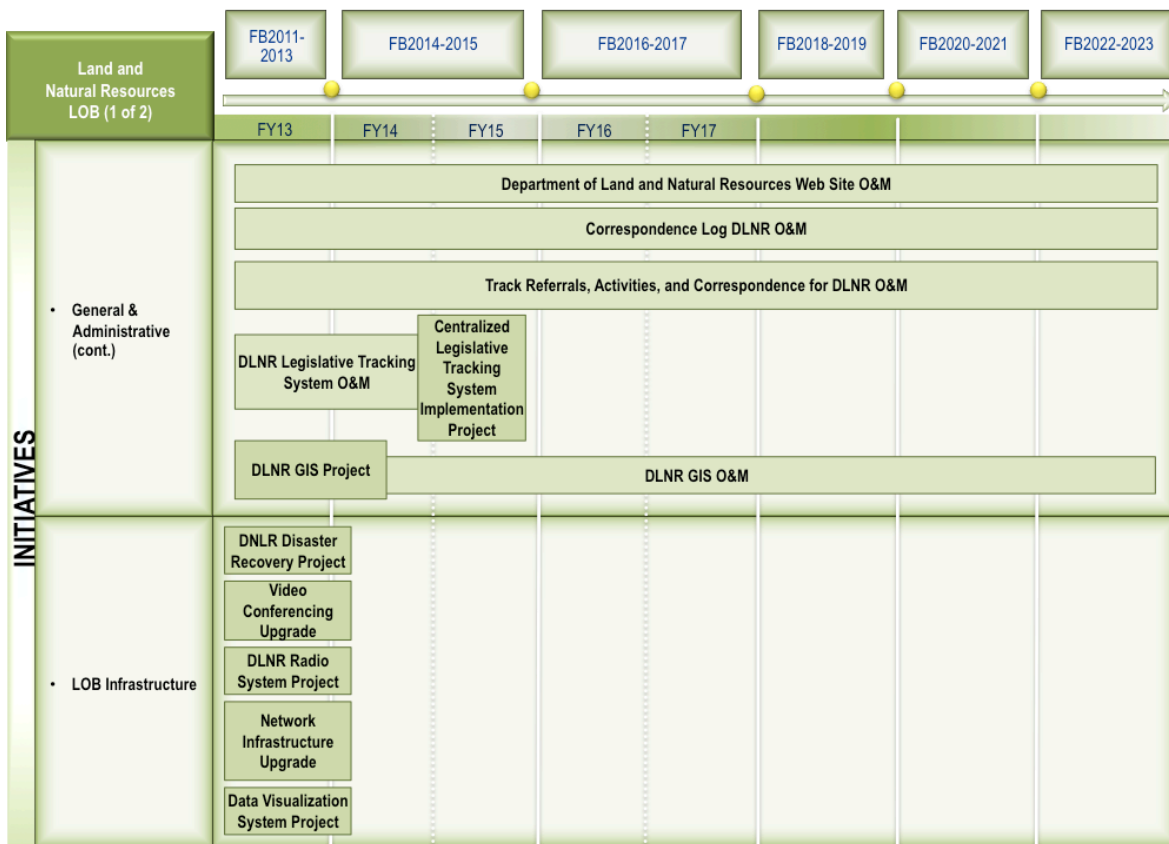
Figure 51: Land and Natural Resources Transition and Sequencing Plan Summary (3 of 3)

A.1.21 HAWAIIAN HOME LANDS

The Hawaiian Home Lands LOB manages the Hawaiian Home Lands trust effectively and develops and delivers lands to native Hawaiians.

Table 40: Hawaiian Home Lands LOB Services

LOB: Hawaiian Home Lands Service Name	Service Definition
Development & Demographic Research & Planning	Conducts research and planning studies in DHHL program development. Provides for review and updating of the DHHL General Plan. Produces master plans for the development of planned communities and subdivisions. Develops and administers approved pilot projects. Conducts studies to compile and evaluate data about native Hawaiians, including demographics, needs, as well as current and future trends and developments affecting beneficiaries and their communities. Compiles and disseminates information on DHHL resources, including, but not limited to, land, water, minerals, archaeological and historic sites, and other resources.
Hawaiian Home Lands Applications & Eligibility	Manages the list of people eligible for DHHL programs. Strive to move as many Hawaiians off the list as possible.
Hawaiian Home Lands Commission Support	Important component is functioning of Hawaiian Homes Commission. Oversight body that sets policy, a judicial body making decisions on awards and cancellations, and approves contracts. Managing the Commissions data is an important need.
Hawaiian Home Lands Development Planning	Development of Hawaiian home lands for homesteading and income-producing purposes.
Hawaiian Home Lands Maintenance	Maintains DHHL grounds, common areas, buildings and facilities, roads, and other public works.
Hawaiian Home Lands Lease Management	Provides lease life cycle management for Hawaiian Home Lands. Recommends actions relating to surrender, transfer, cancellation, and designation of successors to homestead leases.
Hawaiian Home Lands Loan Administration	Provides for the receipt, processing, and review of loan applications and applications for loan guarantees; recommends approval or disapproval of for documentation of loans approved by the Commission; administers and enforces applications and provides terms and conditions of loans, including the monitoring of and collecting on delinquent loan accounts.

A.1.21.1
FUTURE STATE VISION FOR HAWAIIAN HOME LANDS

The future vision for Hawaiian Home Lands is to apply state-of-the-art technology to the fullest extent to address the following key areas:

• There are defined beneficiaries with a defined trust. The purpose is to provide beneficiaries with homesteading opportunities of three kinds: residential, agricultural, and pastoral.

• Keeping the eligibility list current and accurate is a real need; at present there are multiple lists with no authoritative source.

• DHHL generates revenue through rents and delinquencies and gets to keep the monies generated.

• Revenue collection is a major activity. There are 740 general lease, license, and revocable permit accounts that need to be managed.

The future state solutions architecture is depicted in Figure 52 below. Two key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture.

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
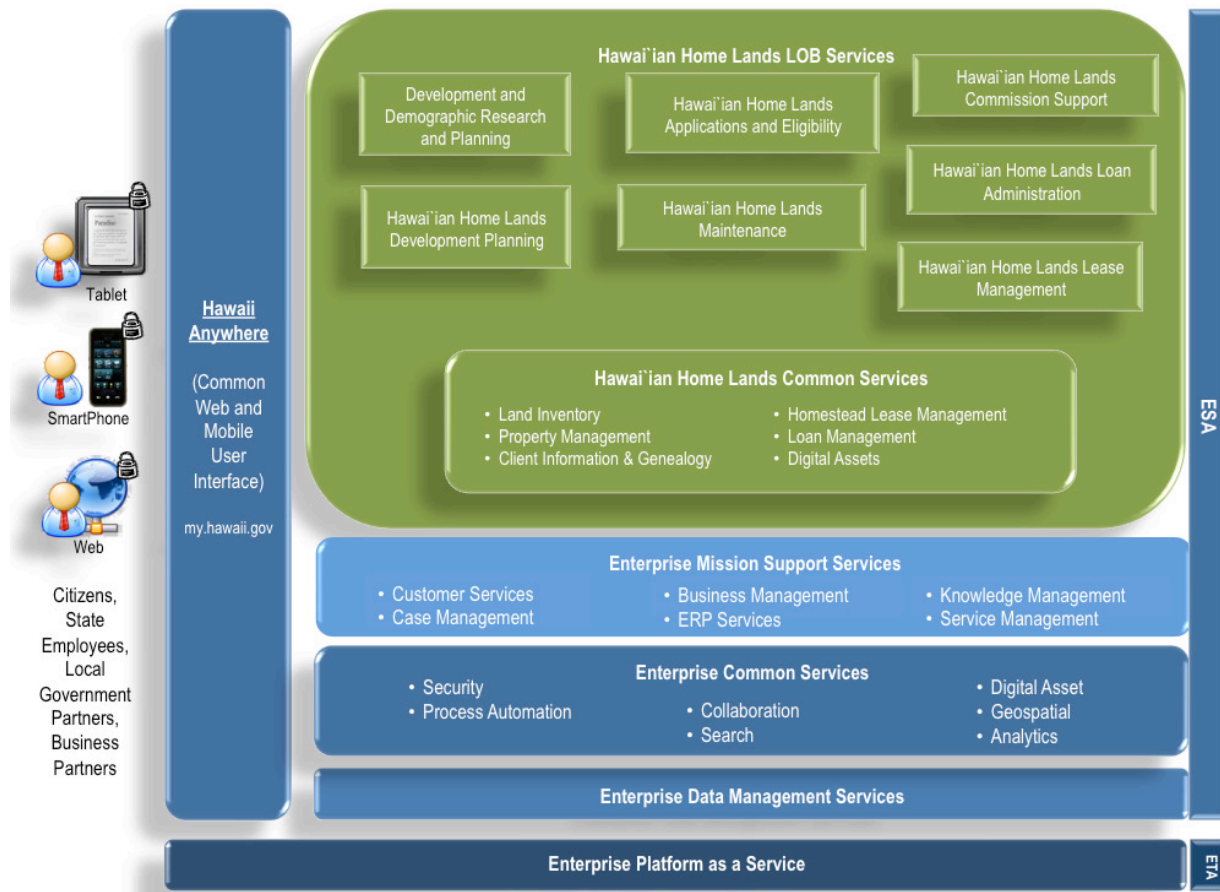
Figure 52: Hawaiian Home Lands Future State Solutions Architecture

INFORMATION EXCHANGES

The Hawaiian Home Lands core mission LOB shares common information exchanges with the mission support areas to include Planning & Resource Allocation, Budget & Finance, Financial Management, Human Resources Management, Procurement, Asset Management & Inventory Control.

The Hawaiian Home Lands LOB shares unique needs for geospatial imaging and land and property information with DLNR and DAGS.

Common information shared within the LOB include Land Inventory and Management, Property Management, Client (Applicant) Information and Genealogy, Homestead Lease Management, Loan Management, and Document Imaging and Management.

A.1.21.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR HAWAIIAN HOME LANDS

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 39 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

The initiatives are structured to address the following key needs:

• Document Imaging of Applicant and Lessee files as well as other important shared documents is needed.

• DHHL needs a concrete electronic methodology for managing the Eligibility List

• DHHL would like to devise a way to track and/or communicate why lands are handled in a certain way. They need to be able to provide rationale so that outside entities will understand and to help address the backlog.

• A real need is integrated data (GIS, loans, demographic information, leases, applications, and genealogy).

• Another area of need is the ability to view online who owns surrounding lands to be able to work with other departments.

• Would like to be able to provide central servers for sharing information among distributed teams as well as provide a system upgrade due to capacity issues.

• In working toward the mission, applicants qualify by being 50% Hawaiian and by meeting financial qualifications.They are then put on a waiting list (i.e., "the list"). A measurement of success is how many applicants have been moved off the list. There is no means for applicants to apply/status information online. Managing the list is an issue due to lack of information between entities.

• Wait List Improvements

  – Biggest data need for DHHL is managing the list of those people eligible for their programs. At present, there are multiple sources of the list being maintained with siloed processes. Need to assess improvement options, and implement a "master data management" approach regarding the Wait List which is the integration point with all other systems. Need a better picture of the profile of the people on the list. Need to support being market driven. Need to be able to have models to meet different requirements. Need to know demographic details about the people. (Supplemental budget request for Assessment of Waitlist. "Pending Review.")

• Provide online access for current constituents including minutes and community information.

• Provide an interface for current constituents to add/update their information.

Table 41: Hawaiian Home Lands LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
In Progress:			
Integrated Data (MIS) DHHL	The DHHL Integrated Data consists of major system functions that provide a related set of services or capabilities. Also known as the Management Information System (MIS). It includes Asset Management, Client Services, Financial Management, and Office Automation and Administrative Support Systems. Replaces current APEX based systems: Applicant/Lessee System, and Mortgage Loan System.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High EA Compliance: Medium
New:			
Land Handling Tracking DHHL		One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High EA Compliance: Medium
Land Ownership Online DHHL		One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High EA Compliance: Med
Document Imaging	Digital creation, management, and storage of documents enabling employee access in a timely and efficient manner. To convert documents to electronic and/or digital documents supported by automated business rules and workflow management integrated with internal systems as well as external systems.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High EA Compliance: Med

Name	Description	Cost	Notes
Production Applications Alignment:			
Financial Management System	General Ledger, Accounts Receivable, Accounts Payable, Purchasing Based on Oracle Financials modules. Use As Is. Evaluation of future state financial management modules of ERP for integration/consolidation.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High EA Compliance: Medium
Utility 2000	Water Billing System. Continue and use as is.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High EA Compliance: Medium
Lotus Notes w/Collaboration	Email and collaboration system. ICSD handles all the overhead and support. DHHL houses the clients only.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High EA Compliance: Medium
Department of Hawaiian Home Lands Website	The website on hawaii.gov/dhhl replaced by www.hawaiianhomelands.org site.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High EA Compliance: Medium
LOB Infrastructure:			
In Progress:			
Virtualize Desktops & Servers DHHL	This project virtualizes the neighbor island branch offices, select Oahu office servers and upgrades the Oahu office physical servers, tape libraries and Storage Area Network (SAN).	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High (1) EA Compliance: Medium (3)
New:			
Online Access DHHL	The branch must also obtain 11 more desktop CPU computers or docking stations and plan to get laptops for inspectors.	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: High (1) EA Compliance: Medium (3)
Provide Central Servers DHHL			
System Upgrades DHHL			

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 53.

Figure 53: Hawaiian Home Lands Transition and Sequencing Plan Summary

A.1.22   HAWAII STATE PUBLIC LIBRARY SYSTEM

The mission of the Hawaii State Public Library System is to provide Hawaii's residents, in all walks of life, and at each stage of their lives, with access to education, information, programs, and services and to teach and nurture the love of reading and the habit of life-long learning.

Table 42: Hawaii State Public Library System LOB Services

Hawaii State Public Library System Services LOB:	Service Description	State "New Day/Recovery & Reinvestment" Plan objectives that inspire technology initiatives within service	Federal Objectives that inspire technology initiatives within service
In-house Patron Services	• Physical collection distribution • Physical collection distribution • Reference/reader's advisory • Weekly Programs and Events • Passport application services • Meeting Rooms Service	• Being a focal point for statewide pride, simultaneously providing learning opportunities and valuable community services	• Libraries as strong community anchors that encourage civic engagement • Strategic alignment of resources and prioritization of programmatic activities, maximizing value for patrons

Hawaii State Public Library System Services LOB:	Service Description	State "New Day/Recovery & Reinvestment" Plan objectives that inspire technology initiatives within service	Federal Objectives that inspire technology initiatives within service
	• Fines & fees • Microfilm Reader, Copier, TeleCopying services • PC Reservation/Sign-Up • Wireless access based upon patron status • Use of public computers with privacy assurance components		
Remote Access Patron Services	• Electronic Media Collections (audio-books, e-books, mp3, etc.) • Reference/reader's advisory • Delivery of Academic Databases • Comprehensive Portal services • Inter-library Digital Social Communities that foster literacy	• Develop opportunities for the aging communities • Increase digital services • Teach business skills	• Increase public access to information and ideas • Build digital communities • Facilitate the discovery of knowledge
Outreach & Bookmobiles	• Outreach circulation & reference services to rural communities	• Use of virtualization • Cloud services	• Access to information services in underserved communities
Life-long Educational Services	• HI-Tech Academy (Digital Literacy and IT Academy) • Computing Centers across the state • Summer Reading Program • Children Story-time Services • Targeted Outreach (demographic specific (seniors, college, etc.)) • Non-targeted outreach (theme specific)	• Commitment to early childhood education • Maximum participation of the private sector • Investment in workforce development	• Create a nation of learners • Citizens that learn continually, adapt to change readily, evaluate information critically
Materials Collection Development	• Time sensitive, publisher specific materials acquisition. Development, decision-making, logistics, delivery of materials	• Strict spending philosophy requiring comprehensive vision of use • Comprehensive consolidation of workloads	• Open Data - Promote greater transparency and accountability
Digitization	• Audio oral history collections • Unique and fragile archive of rare historical/cultural materials	• Partial move to cloud paradigm • Green IT and reduction of carbon footprint	• Stewardship of Cultural Heritage • Support the care and management of the nation's collections

Hawaii State Public Library System Services LOB:	Service Description	State "New Day/Recovery & Reinvestment" Plan objectives that inspire technology initiatives within service	Federal Objectives that inspire technology initiatives within service
Distribution hub for Government Information	• Community, State and Federal hub of information for residents and citizens • Federal Depository Collection	• Assistance in the advancement of the high tech sector • Create inter-agency collaboration	• Support and extend national digital information infrastructure with reliable, persistent and widely available access
Specialty Library Services	• Acquisitions, Circulation, and Special Services for the Blind and Physically Handicapped • Daily Radio Program (broadcasting and digital receiver equipment services) • Regional service provider for sub-regionals in the U.S. Affiliate Pacific Island States • Assistive Software for all public stations	• Use the bonding power of the state to help fund necessary improvements in information technology systems • Accessibility for all customers	• Investment in projects that provide inclusive and accessible learning opportunities

A.1.22.1
FUTURE STATE VISION FOR THE HAWAII STATE PUBLIC LIBRARY SYSTEM

The future state vision for the Hawaii State Public Library System is: "A society where communities and individuals thrive with broad public access to knowledge, cultural heritage and lifelong learning"

The future vision for the Hawaii State Public Library System is to apply state-of-the-art technology to the fullest extent to address the following key areas:

• The Public Library System is to sustain its strong strategic technology alignment with state and federal goals and initiatives, and to cultivate a culture of planning, evaluation, and evidence-based practice to maximize the impact of public technology investments

• HSPLS must continue to support inclusive and accessible learning opportunities to the state and meet the needs of diverse communities in the rapidly changing digital environment.

• HSPLS will continue to add no-charge educational services to the existing informational ones, providing unique and necessary community resources for workforce skill augmentation and educational growth. HSPLS is committed to developing a nation of learners and provide the necessary technological means to accomplish it.

• HSPLS must persevere in being a community anchor that enhances civic engagement, cultural opportunities, and economic vitality.

• The libraries will act as communication centers providing teleconference and other technology services to fulfill the needs of communities and continue to be a key institution in the state.

• HSPLS is to support and extend a local and national digital infrastructure that leverages libraries as key providers of access to digital information and services. The libraries are to partake in the national effort to build digitally inclusive communities.

• HSPLS is to increase its partnerships with more state agencies to further the workforce, educational, and social needs of the communities.

• The library system is to garner more support for providing safe conditions to rare collections

• HSPLS will continue to act as a resource center for government information and dissemination of data, along with live capitol webcasts and other pertinent resources

• HSPLS is committed to increase the technology services and education that promote life-long learning – from keiki to kupuna - and that position the agency as a vital part of the state.

- HSPLS is to become a center of attraction for developers and other IT citizens that wish to collaborate and have technology development civic engagement through the libraries.

- The libraries are to propel state initiatives with regards to matching a civic need with an existing resource, as in the case of inter-agency collaborations.

The future state solutions architecture is depicted in Figure 54 below. Two key features of this solution include:

- "Hawai`i Anywhere" common web and mobile user interface architecture.

- "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
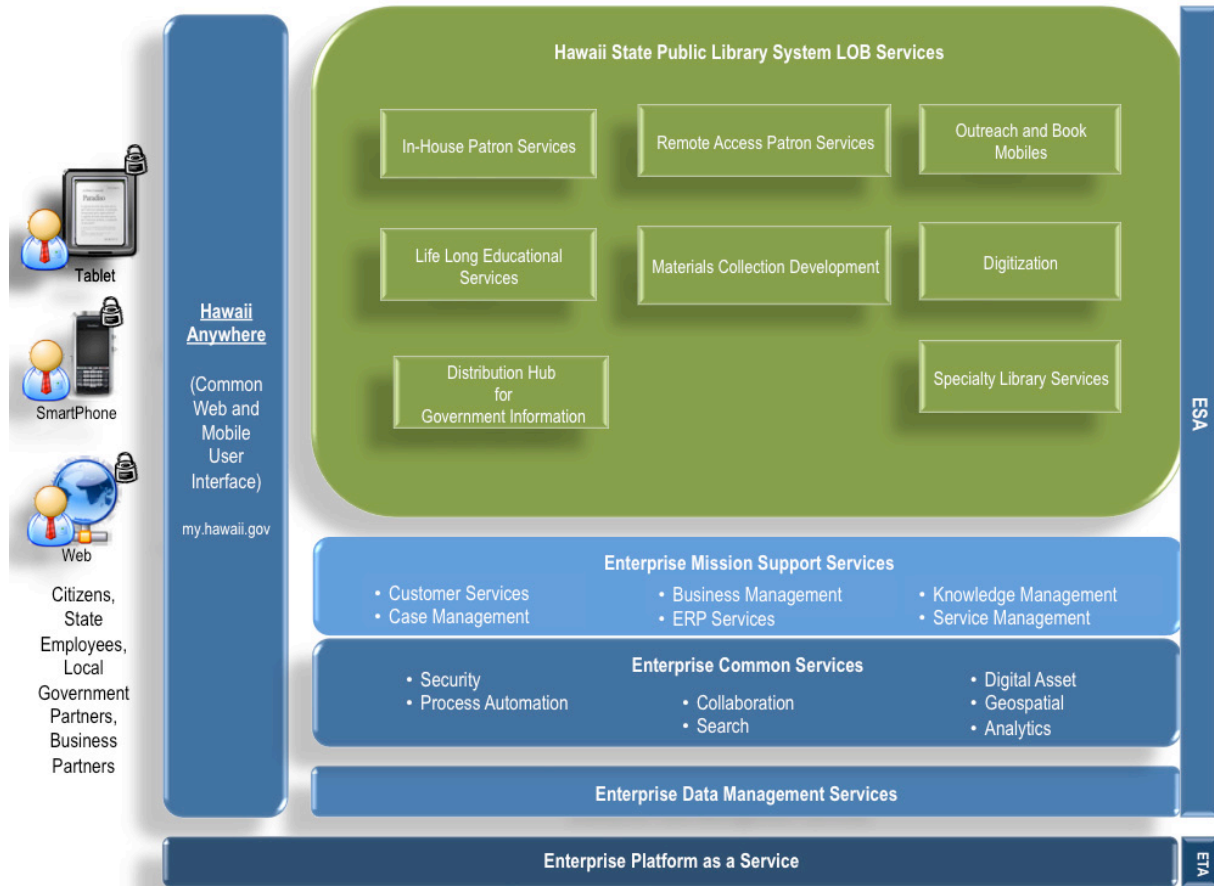
Figure 54: Hawaii State Public Library System LOB Future State Solutions Architecture

INFORMATION EXCHANGES

- G2C: HSPLS is committed to engage in the open data state initiatives to increase government visibility to citizens

- G2G: Presently all data exchanges with other agencies within the state reside in the shared services category and not in the line of business. These include payroll, financial services, and human resources.

- C2G: HSPLS is to act as a repository and promoter of IT civic engagement by providing the ability and resources to patrons to shape and improve government services.

A.2.1.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR THE HAWAII STATE PUBLIC LIBRARY SYSTEM

The Public Library System presently possesses technology that already complies with most of the state and federal 'best practices' recommendations. With almost complete virtualization, consolidated storage, digitization, and other modern practices, its IT equipment has been upgraded to the latest versions and its infrastructure has been re-built, leaving HSPLS in good condition to be able to easily

migrate to the state the elements that will become part of shared IT services. The line of business technology will need to undergo yearly upgrades to ensure that the public facing components are delivering the services that the public has come to expect and demand. This is a summary of what will be needed in the coming years:

• Backend yearly upgrades for ILS – Integrated Library Systems software

• All portal services maintenance and upgrade

• Digitization efforts and augmentation of practice

• Continued use of shared platform for workflow development, such as SharePoint

• Continued use of private cloud services for innovative use and development

• Mobility services

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 43 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

• Cultural and Civic Engagement – Technologies that allow for digital solutions for Libraries in an era of participatory culture

• 21st Century Skills – Learning Transformed – enabling a culture of digital transformation through public library services

• Demonstrating Public Value – through purpose driven technology deployments that meet immediate needs of public service

• Building digital communities – inter-library and inter-agency communications amongst government customers

• Preserving State's Cultural Heritage through Digitization efforts in public libraries

• Partnerships with state departments to improve early learning, special conditions, elderly education, among others.

• Development of modern technology enabled-libraries in upcoming new buildings

Table 43: Hawaii State Public Library System LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
In Progress:			
Integrated Library System	Modular system including: acquisitions, cataloging, serials, circulation, cluster services	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: (3) EA Compliance: (3)
Comprise - Patron Reservation Management	Management of public units, reservations, sign-up, authentication based on patron type and status	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: (1) EA Compliance: (1)
Portfolio	Repository of digitized items, reports, links, etc. Private/Public cloud service for all archival purposes that face public view	One time DME: Pending Review Annual on-going O&M: Pending Review	Priority: (1) EA Compliance: (1)
HI-Tech Academy	Digital Literacy Program and IT Academy Program	Annual on-going O&M: Pending Review	Priority: (1) EA Compliance: (1)

TRANSITION AND SEQUENCING

The following is the sequencing strategy for the Hawaii State Public Library System:

- Capacity Planning

- Digitization Efforts

- Development, Modernization, and Enhancements of Present Technology

- Infrastructure improvements

The plan for future state transition and sequencing of initiatives is depicted below in Figure 53.
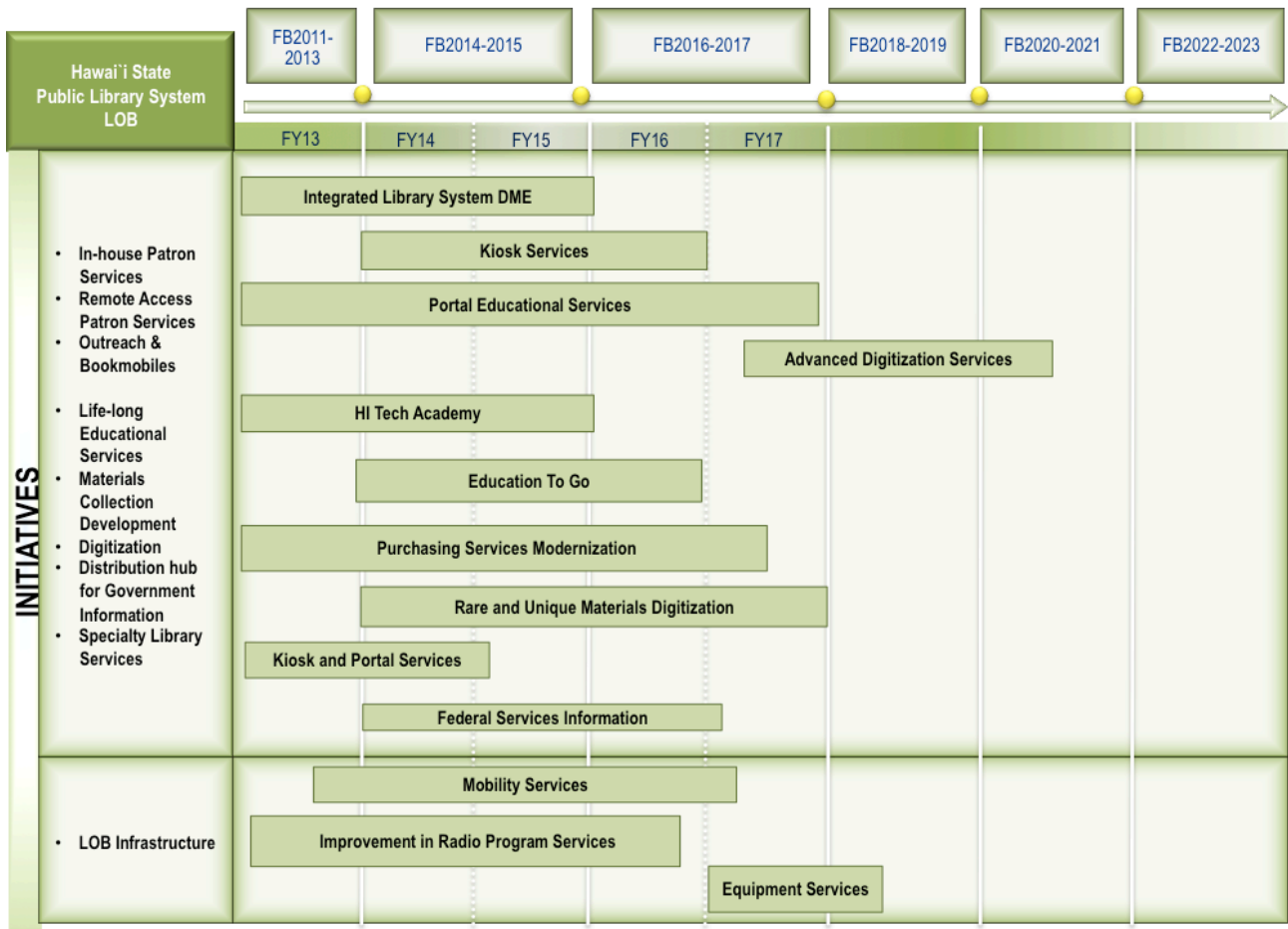
Figure 55: Hawai`i State Public Library System Transition and Sequencing Plan Summary

A.2   SUPPORT SERVICE AREAS

A.2.1   LEGISLATIVE RELATIONS

Legislative Relations coordinates legislative activity for the Department of
State and advises the Secretary, the Deputy, as well as the Under Secretaries and Assistant Secretaries on legislative strategy. Legislative Relations facilitates effective communication between State Department officials and the Members of Congress and their staffs.

Table 44: Legislative Relations LOB Services

LOB: Legislative Relations Service Name	Service Definition
Legislative Tracking	Monitors and tracks legislation from introduction to enactment. Includes tracking hearings and testimonies.
State Congressional Interaction	Involves all activities associated with supporting the formal relationship between a state agency and the State Congress.
Audit Services	Responsible for inspections and auditing – involves the methodical examination and review of regulated activities to ensure compliance with standards for regulated activity.

A.2.1.1
FUTURE STATE VISION FOR LEGISLATIVE RELATIONS

The Legislative Relations Line of Business needs an automated legislative tracking system to effectively support the flow of legislation through the State Government. The complete life cycle from inception, proposal, review, approval, disapproval, and final disposition of legislative activities is needed to efficiently serve constituents, stake holders and citizens. In addition, an integrated workflow and document management system will support automation of efficient business processes and official document life cycles.

The future state solutions architecture is depicted in Figure 48 below. Two key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture.

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
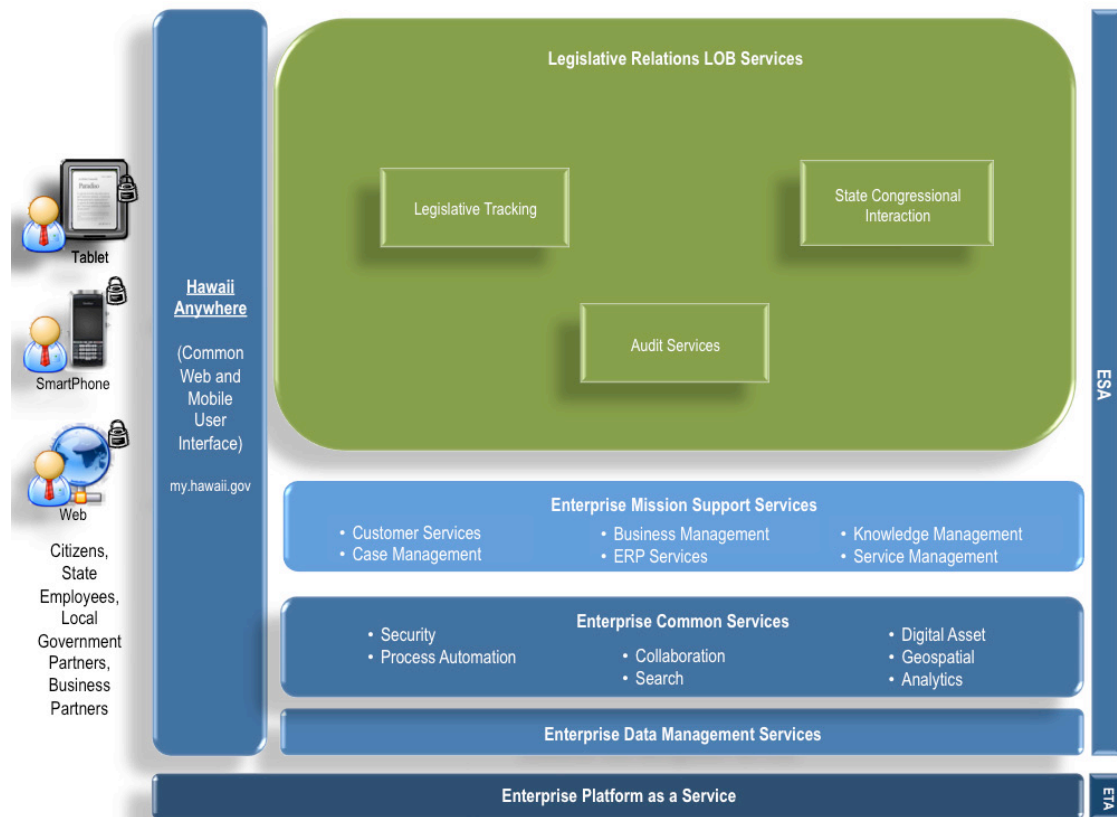
Figure 56: Legislative Relations Future State Solutions Architecture

INFORMATION EXCHANGES

Information exchanges occur within the State Government, with State Agencies, and with the citizens of Hawaii.

A.2.1.2
RANSITION & SEQUENCING PLANNING SUMMARY FOR LEGISLATIVE RELATIONS

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

Procure, install and configure a Legislative Tracking system that support the complete life cycle of legislative activities. In addition workflow and document management capabilities are needed to support efficient workflow process and tracking and disposition of official documents.

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 45below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB nfrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 45: Legislative Relations LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
Production Applications Alignment – Kept:			
Accounting and Audit Review Committee Web Site	aarc.hawaii.gov. (hosted by ICSD)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Office of the Auditor Web Site	hawaii.gov/auditor (hosted by ICSD)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Office of the Ombudsman Web Site	ombudsman.hawaii.gov (hosted by ICSD)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Legislative Reference Bureau Web Site	hawaii.gov/lrb (hosted by ICSD)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Hawaii State Ethics Commission Web Site	hawaii.gov/ethics (hosted by ICSD)	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 3
Production Applications Alignment – Replaced by Enterprise Legislative Relations System:			
DAGS Legislature Bill Tracking	Tracks legislative bills generated by the department or related to the department - [Lotus Scripting]	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: To be Replaced EA Compliance: 3 Priority: 3

Name	Description	Cost	Notes
DBEDT Legislative Tracking System	Lotus Notes Application being maintained by ICSD in DAGS. DBEDT Legislative Tracking System is a revised version of their Lotus Notes tracking system. This database allows the creation of a tracking document for a bill or resolution.	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: To be Replaced EA Compliance: 3 Priority: 3
DCCA Legislative (Bill) Tracking System	LTS tracks bills in the Hawaii State Legislature in which DCCA has an interest. LTS is used throughout DCCA as a collaboration tool.	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: To be Replaced EA Compliance: 3 Priority: 3
DLIR Legislative Tracking System	The Department of Labor and Industrial Relations (DLIR) Legislative Tracking System is based on the Department of Business, Economic Development and Tourism (DBEDT) Lotus Notes Legislative Tracking System. This database allows the creation of a tracking.	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: To be Replaced EA Compliance: 3 Priority: 3
DLNR Legislative Tracking System	The Department of Land and Natural Resources (DLNR) Legislative Tracking System is based on the Department of Business Economic Development and Tourism (DBEDT) Lotus Notes Legislative Tracking System.	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: To be Replaced EA Compliance: 3 Priority: 3
DOH Legislative Tracking System (LTS)	Track legislative bills during session and support hearing .	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: To be Replaced EA Compliance: 3 Priority: 3
DOT Legislative Tracking System	The Department of Transportation (DOT) Legislative Tracking System is based on the Department of Business Economic Development and Tourism Lotus Notes Legislative Tracking System.	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: To be Replaced EA Compliance: 3 Priority: 3
HDOA Legislative Tracking System	The Department of Agriculture (HDOA) Legislative Tracking System is based on the Department of Business, Economic Development and Tourism (DBEDT) Lotus Notes Legislative Tracking System.	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: To be Replaced EA Compliance: 3 Priority: 3
PSD Legislative Tracking System	The Department of Public Safety (PSD) Legislative Tracking System is based on the Department of Business, Economic Development and Tourism (DBEDT) Lotus Notes Legislative Tracking System.	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: To be Replaced EA Compliance: 3 Priority: 3
New:			
Enterprise Legislative Relations System	Implement an enterprise-wide automated legislative relations system to effectively support the flow of legislation through the State Government. The complete life cycle from inception, proposal, review, approval, disapproval, and final disposition of legislative activities is needed to efficiently serve constituents, stake holders and citizens. In addition, an integrated workflow and document management system will support automation of efficient business processes and official document life cycles.	One-time DME: Pending Review On-going annual O&M: Pending Review	Status: Use As Is EA Compliance: 3 Priority: 1

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 57. The implementation roadmap should address the following considerations:

- Pursue a comprehensive legislative tracking system
- Pursue a workflow management system
- Pursue a document management system that is integrated with legislative tracking, workflow management and document management.
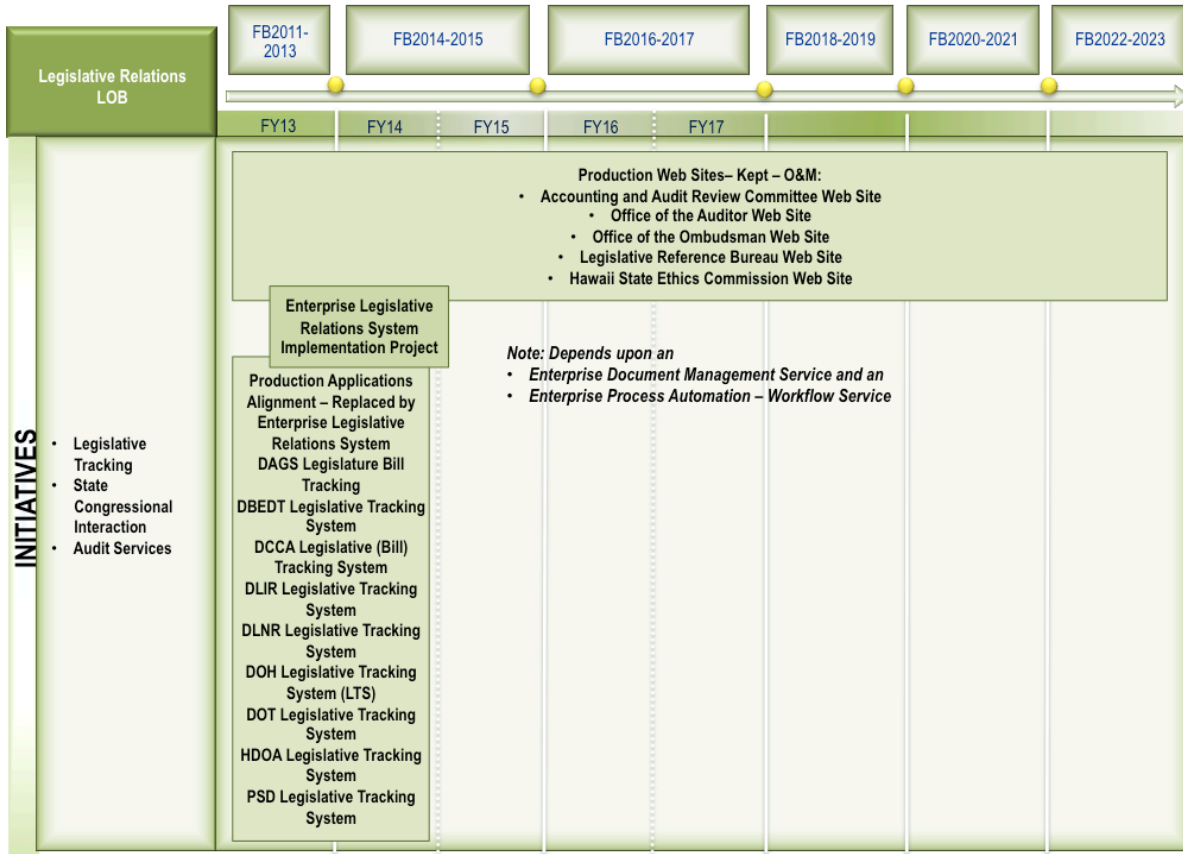
Figure 57: Legislative Relations Transition and Sequencing Plan Summary

A.2.2   PUBLIC AFFAIRS

Public Affairs involves the exchange of information and communication between the state government, citizens and stakeholders in direct support of citizen services, public policy, and/or state interest.

Table 46: Public Affairs LOB Services

LOB: Public Affairs Service Name	Service Definition
Customer Service	Supports activities associated with providing an agency's customers with information regarding the agency's service offerings and managing the interactions and relationships with those customers.
Public Communications	Includes all efforts to provide official government information to external stakeholders through the use of various types of media, such as video, paper, web, etc.

LOB: Public Affairs Service Name	Service Definition
Public Outreach	Relates to the marketing of government services products, and programs to the general public in an attempt to promote awareness and increase the number of customers/beneficiaries of those services and programs.
Constituent Response	Involves the efforts to promote an organization's image through the effective handling of citizen concerns.

A.2.1.1
FUTURE STATE VISION FOR LEGISLATIVE RELATIONS

The Public Affairs Line of Business needs to improve the capabilities for all state departments, agencies, and programs to interact with the public – citizens, residents, and tourists – regarding the state's service offerings, including support for general public communications and outreach programs, and managing the life cycle of service or support request from a constituent. Future state considerations for such a capability include a single point of contact for constituents through defined channels such as a common phone number, web portal, texting, and other social media such as Twitter.

The future state solutions architecture is depicted in Figure 58 below. Two key features of this solution include:

- "Hawai`i Anywhere" common web and mobile user interface architecture.

- "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
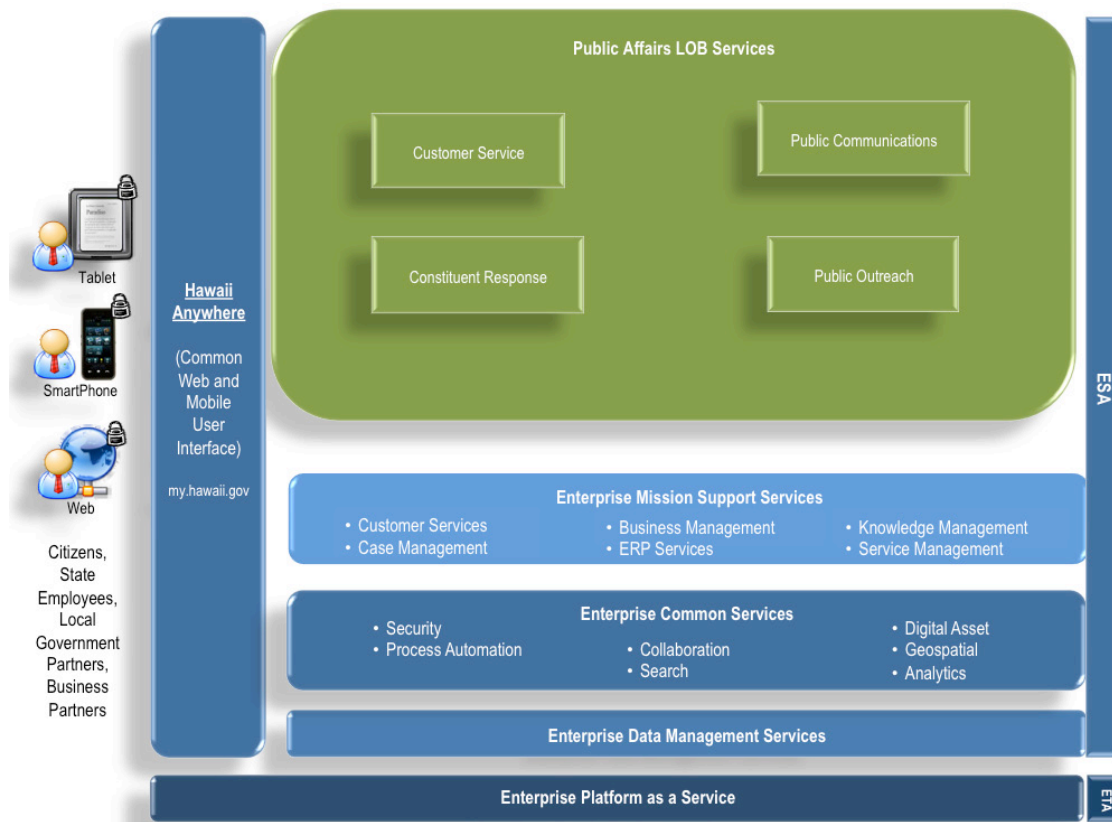
Figure 58: Public Affairs Future State Solutions Architecture

INFORMATION EXCHANGES

Information exchanges occur within the State Government, with State Agencies, and with the citizens of Hawaii.

A.2.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR PUBLIC AFFAIRS

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The current systems spread across the departments today with overlapping capabilities for tracking constituent response and correspondence are listed below in Table 47.

Table 47: Public Affairs Current Systems

Name	Description
LOB Solutions:	
Production Applications Alignment – Replaced by new enterprise web portals NOTE: The applications below come from several different departments and represent potential cost savings and operational streamlining by moving to a common enterprise solution for tracking constituent service management and response. Annual O&M cost for each application is estimated at "Pending Review". That represents a total of approximately "Pending Review."	
TRAC for DAGS/Public Works Division	The Track Referrals, Activities, & Correspondence (TRAC) system for DAGS/Public Works Division monitors items requiring a response, records various activities within the organization, and logs notices received/sent. The TRAC system helps ensure timely re
Track Referrals, Activities, and Correspondence	The Track Referrals, Activities, and Correspondence (TRAC) System monitors items requiring a response, records various activities within the organization, and logs notices received/sent. TRAC helps ensure timely responses, provides status on items of i
Interagency Council on Intermediate Sanctions	hawaii.gov/icis (hosted by ICSD)
Correspondence Log DLNR	Tracks all correspondence via the Chairperson's Office.
Track Referrals, Activities, and Correspondence for DLNR	"The Track Referrals, Activities, & Correspondence (TRAC) system monitors items requiring a response, records various activities within the organization, and logs notices received/sent. TRAC helps ensure timely responses, provides status on items of interest
Correspondence/Contract Log	Administrative Support
AIR Correspondence Logs	This Correspondence Log supports logging functions for both Outgoing and Incoming documents. It will keep track of documents originating from and received by your section. The fields for each document will provide information on dates and persons involve
CSS Letter Log	This letter log will keep track documents originating from this section
Department of Transportation Content Management System, DOTCMS	The DOT stores its contracts, correspondence, project documents, program documents, etc. in DOTCMS. Runs on IBM FileNet, Kofax Ascent Capture, Oracle Database. DOT is in the process of updating the DOTCMS application with Filenet version 4.5.
DIR-C Letter Log	Letter Log for the DIR-C office
DIR-P Request Log	Tracks issues, complaints, and notifications having to do with the public or the media, for the Public Affairs Office

Name	Description
Harbors Correspondence log	This database is for the use of the Harbors Division Administrator and Office Service Staff in maintaining a log of correspondence.
Harbors Discussion Issues	Harbors Discussion Issues
ITAC Discussion Items	Meeting minutes of the DOT IT Advisory Committee, ITAC.
OCR Letter Log	This letter log keeps track of documents originating from the Office of Civil Rights. The fields for each document will provide information on dates and persons involved for tracking purposes and historical information for archiving.
PER Letter Log	This letter log keeps track of documents originating from the Personnel Office. The fields for each document will provide information on dates and persons involved for tracking purposes and historical information for archiving.
Public Affairs Office Log	Log used to track complaints during the H-1 Widening Project for the Public Affairs Office
Request a Message, Commendation or proclamation	http://hawaii.gov/gov/contact/msg-comm-proc (developed, supported, and hosted by HIC)
Request a meeting with the Governor	http://hawaii.gov/gov/contact/request-meeting (developed, supported, and hosted by HIC)
Governor Flag Requests	http://hawaii.gov/gov/contact/flag-requests (developed, supported, and hosted by HIC)
Email Signup for Governor	http://hawaii.gov/gov/contact/email-updates (developed, supported, and hosted by HIC)
Contact the Governor	http://hawaii.gov/gov/contact/contact-gov (developed, supported, and hosted by HIC)
Online Volunteers in Public Services	http://vips.ehawaii.gov (developed, supported, and hosted by HIC)
Stay Connected	stayconnected.hawaii.gov (hosted by ICSD)
Office of the Governor	hawaii.gov/gov (hosted by ICSD)
Office of the Governor Photo Gallery	hawaii.gov/govgallery (hosted by ICSD)
50th Anniversary of Statehood	statehood.hawaii.gov (hosted by ICSD)
Robotics Organizing Committee	robotics.hawaii.gov (hosted by ICSD)
Correspondence Log	Tracking of incoming and outgoing correspondences from the Chairperson's Office with PDF files of correspondences. (Microsoft Access Client/Linux File Server)
Online State Calendar System	http://www.ehawaii.gov/calendar (developed, supported, and hosted by HIC)

Name	Description
Request a meeting with the Lt. Governor	http://hawaii.gov/ltgov/contact/request-meeting (developed, supported, and hosted by HIC)
Email Signup for Lt. Governor	http://hawaii.gov/ltgov/contact/email-updates (developed, supported, and hosted by HIC)
Contact the Lt. Governor	http://hawaii.gov/ltgov/contact/contact-lg (developed, supported, and hosted by HIC)
Office of Information Practices	hawaii.gov/oip (hosted by ICSD)
Office of the Lieutenant Governor	hawaii.gov/ltgov (hosted by ICSD)
Vivian Aiona	hawaii.gov/vivian_aiona (hosted by ICSD)
Hawaii Drug Control Strategy	hawaii.gov/hawaiidrugcontrolstrategy (hosted by ICSD)
Enterprise Legislative Relations System	Implement an enterprise-wide automated legislative relations system to effectively support the flow of legislation through the State Government. The complete life cycle from inception, proposal, review, approval, disapproval, and final disposition of legislative activities is needed to efficiently serve constituents, stake holders and citizens. In addition, an integrated workflow and document management system will support automation of efficient business processes and official document life cycles.

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 48 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 48: Public Affairs LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
New:			
iQ Implementation	Internet Quorum - Data Capture System to manage inputs and responses. Basically a CRM type application for constituent response tracking.	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 1
Enterprise Mail Improvements	Need a replacement for Lotus Notes (Takes too long to send mass mailings) 100s of emails per day brings staff desktop computer to a slow crawl. Issues with administration of Lotus Notes – deletes emails after 60 days.	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 1
Public Affairs Collaboration System Implementation	Need a good collaboration, scheduling, and tracking system. SharePoint would be a good choice.	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 1

Name	Description	Cost	Notes
LOB Infrastructure:			
New:			
LG LAN Improvements	Need a good LAN system (60 users)	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 1
LG Phone System Improvements	Need a phone system with voice menuing.	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 1
LG Mobile Device Deployment	Mobile Devices with camera, video conferencing and voice for Field Support (10)	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 1

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 59.

Figure 59: Public Affairs Transition and Sequencing Plan Summary

A.2.3 POLICY, CONTROLS, AND OVERSIGHT

The Policy, Controls, and Oversight LOB involves activities associated with developing regulations, policies, and guidance to implement laws and ensuring that the operations and programs of the state government and its external business partners comply with applicable laws and regulations and prevent waste, fraud, and abuse.

LOB: Policy, Controls and Oversight Service Name	Service Definition
Policy Creation and Rule Development	Policy and Guidance Development involves the creation and dissemination of guidelines to assist in the interpretation and implementation of regulations.
Program Monitoring, Evaluation, Compliance, and Reporting	Involves the data gathering activities required to determine the effectiveness of internal and external programs and the extent to which they comply with related laws, regulations, and policies.

A.2.3.1
FUTURE STATE VISION FOR POLICY, CONTROLS, AND OVERSIGHT

The Policy, Control, and Oversight (PCO) Line of Business needs to improve common capabilities for all state departments, agencies, and programs in governance and assurance of compliance to all applicable laws and regulations.

NOTE: Policy Control and Oversight (PCO) does not have applications within the LTG organization. The PCO LOB needs to be centralized to enable the creation, review, approval and notification of standards for the State of Hawaii and its internal agencies.

The future state solutions architecture is depicted in Figure 60 below. Two key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture.

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
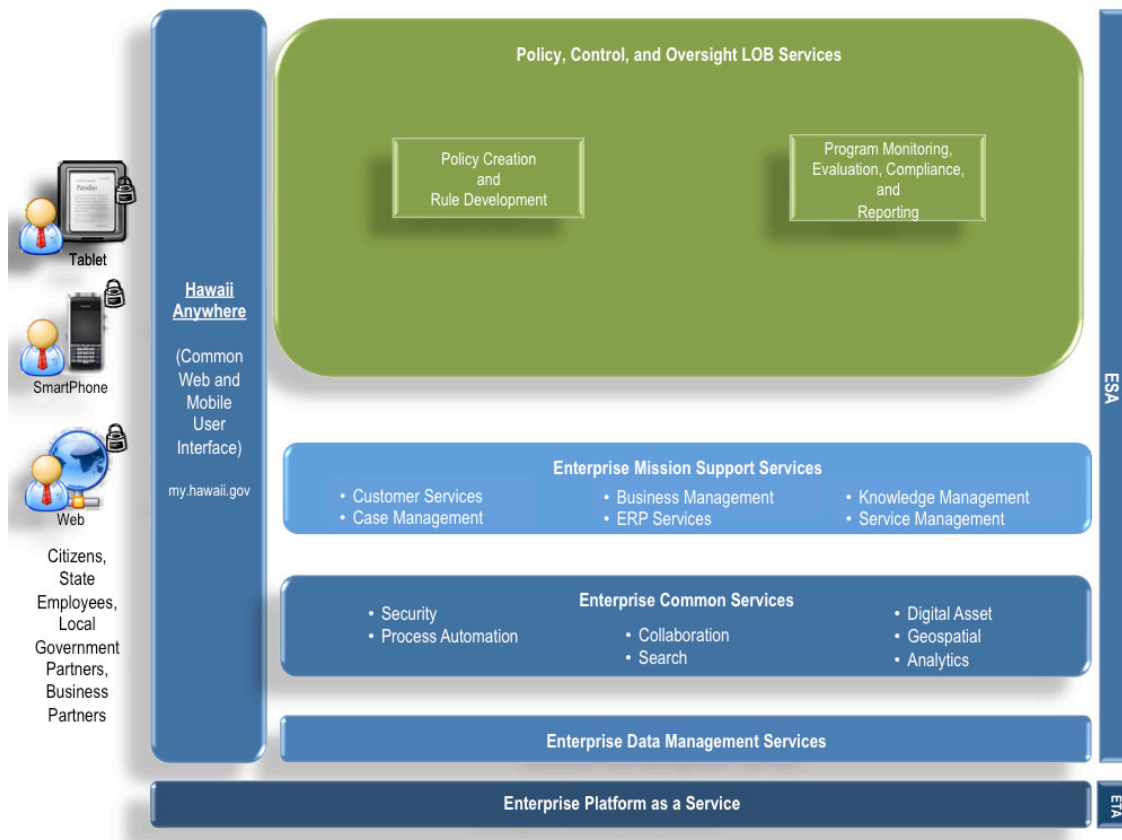
Figure 60: Policy, Control, and Oversight Future State Solutions Architecture

INFORMATION EXCHANGES

Information exchanges occur within the State Government, with State Agencies, and with the citizens of Hawaii.

A.2.3.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR POLICY, CONTROLS, AND OVERSIGHT

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 49 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 49: Policy, Control, and Oversight LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
New:			
Statewide Policy Control Workflow System	A Policy control Workflow System will provide for the tracking of the complete lifecycle of Statewide and Agency specific policies, standards, and guidelines. This includes creation, review, approval and dissemination of policies and guidelines	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 2

Name	Description	Cost	Notes
Statewide Policy Control Document Management System	A document management system is needed to manage the complete set of polices, standards, and guidelines	One-time DME: Pending Review On-going annual O&M: v	EA Compliance: 3 Priority: 1
Statewide Policy Control Notification System	A Web based Policy Control Notification System is needed to provide on-line access to the State's policies and information regarding standards, and guidelines. Essentially, this Web application will become an information center supporting statewide policy control and oversight.	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 1

TRANSITION AND SEQUENCINGV

The plan for future state transition and sequencing of initiatives is depicted below in Figure 61.
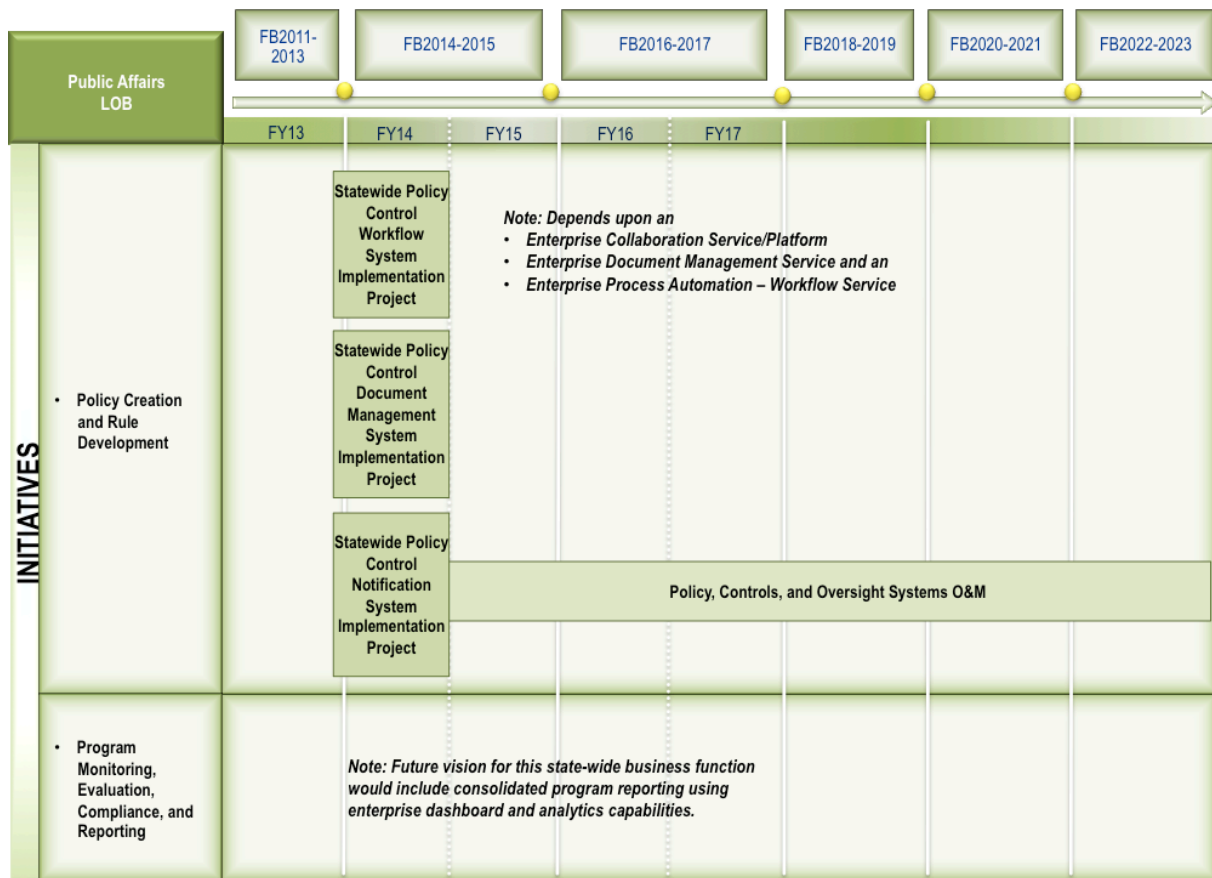
Figure 61: Policy, Controls, and Oversight Transition and Sequencing Plan Summary

A.2.4   PLANNING & RESOURCE ALLOCATION

Planning and Resource Allocation involves the activities of determining strategic direction, identifying and establishing programs and processes, and allocating resources (capital and labor) among those programs and processes.

Strategic Planning, Enterprise Architecture, Capital Planning, Budget Formulation, Workforce, Management Improvement,

Program/Project Planning, and Contract Management are services provided by this LOB. A unique activity that cross cuts all services is budget planning, development, roll up, review, and approval. It is the essence of business management services.

The Planning and Resource Allocation Line of Business is included in the Budget and Finance ERP estimates. A project team will be formed to represent the requirements for these services.

Table 50: Planning and Resource Allocation LOB Business Services

LOB: Planning and Resource Allocation Service Name	Service Definition
Capital Planning	Capital Planning involves the processes of ensuring that appropriate investments are selected for capital expenditures.
Budget Formulation	Budget formulation involves all activities undertaken to determine priorities for future spending and to develop an itemized forecast of future funding and expenditures during a targeted period of time.
Program/Project Planning	Strategy management; performance improvement activities; oversees policy analysis and development; assures compliance; risk management practices; grant tracking; and legislative tracking.
Workforce Planning	Workforce Planning involves the processes for identifying the workforce competencies required to meet the agency's strategic goals and for developing the strategies to meet these requirements.
Strategic Planning	Strategic Planning entails the determination of annual and long-term goals and the identification of the best approach for achieving those goals.
Contract Management	Contract Management involves the oversight and/or management of contractors and service providers from the private sector.

A.2.4.1
FUTURE STATE VISION FOR PLANNING & RESOURCE ALLOCATION

Planning & Resource Allocation services will provide the leadership, planning, scheduling, and implementation of a layered planning and budgeting process. This process will be implemented with integrated solutions to support local budget developments, roll ups, standard summaries, and an online review and approval capability.

The future state solutions architecture is depicted in Figure 62 below. Key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
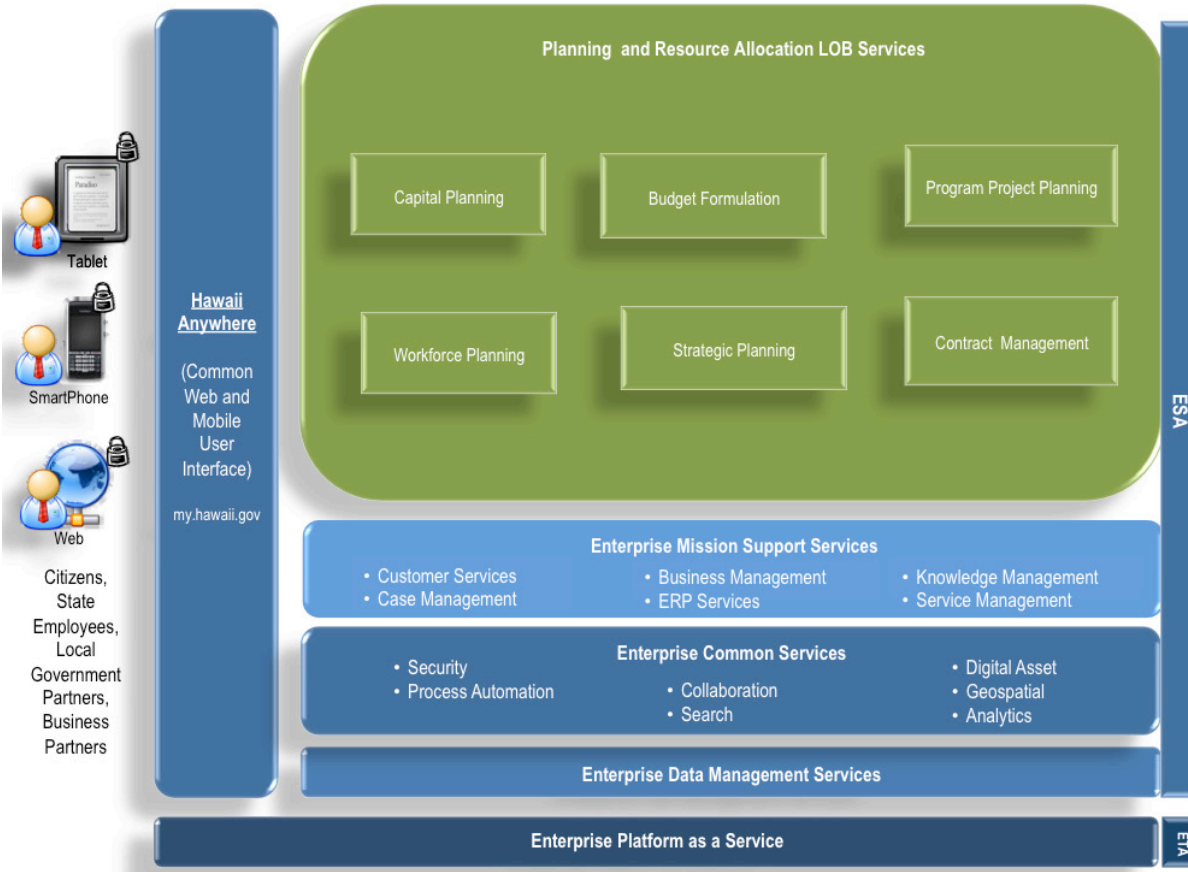
Figure 62: Planning and Resource Allocation Future State Solutions Architecture

INFORMATION EXCHANGES

• Strategic Planning cross cuts all segments of the State enterprise

• Program and project authorization processes are results of planning, budgeting, and approvals for all services for State employees and Hawaii citizens.

• An information exchange occurs with each LOB to enable an orchestrated planning and budgeting process.

A.2.4.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR PLANNING & RESOURCE ALLOCATION

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The current systems that support various aspects of the support services within this LOB are spread across the departments today with overlapping capabilities for planning, budgeting, and resource allocation. A sampling of those current systems are listed below in Table 51.

Table 51: Planning and Resource Allocation Current Systems

Name	Description
LOB Solutions:	
Production Applications Alignment – Potential for Replacement by the ERP Implementation NOTE: The applications below come from several different departments and represent potential cost savings and operational streamlining by moving to a common enterprise resource planning solution. Annual O&M cost for each application is estimated at "Pending Review." That represents a total of approximately "Pending Review."	
Planning System	Tracks the status of Project Initiation Requests, Request for Planning Studies, and informal requests for Planning - [Java]

Name	Description
Capital Improvement Projects System (CIP)	http://cip.ehawaii.gov (developed, supported, and hosted by HIC)
RFA - ISCO Request for Action	Allows IS contacts to submit work requests to ISCO. Work requests are automatically routed to ISCO staff based on subject. Also allows for IS contact and ISCO staff feedback during processing with acceptance and rejection processing. The RFA system is a
RFS1 - Request for Services (Insurance Office Services / Clerical)	Copy of ISCO RFA system for Insurance's Office services branch
RFS2 - Request for Services (Insurance Legal)	Copy of ISCO RFA system for Insurance's legal branch
BUS DataMart	This database provides the PPB Management Office of the Department of Transportation a budget expenditure plan. This database is a tool to create a budget expenditure plan and communicate this plan between the PPB Management Office and the Staff offices.
CSS Budget	Custom Access application used by the Computer systems & Services Office to create, maintain, report, and submit yearly budget requests.
DOT Budget System Library	DOT Budget System Project Information Repository
DOT O&M Budget System	The DOT O&M Budget System is used by the DOT's budget analysts to create and maintain Operations & Maintenance budget information that is submitted to the Dept of Budget & Finance. Data is stored in an Oracle database on a IBM P-Series Server.
HAR Datamart	This database was originally named HAR 03 Expenditure Plan to provide the Harbors Division of the Department of Transportation with an shared budget expenditure plan. This database was intended to be a tool to create a budget expenditure plan and communicate it
Highways AS/400	District-Level financial system used to maintain budgets, generate and approve purchase orders, track vehicle maintenance costs, and employee timesheets.
HWY Budget Expend Plan	This database provides the Highways Division of the Department of Transportation a budget expenditure plan. This database is a tool to create a budget expenditure plan and communicate this plan between the PPB Management Office and the Highways Division.
PPB Management Database	Tracks budget requests related to the DOT's Capital Improvements Program (CIP) Projects, for the PPB Management Analytical Office.
PPB Operating Log	Tracks budget requests related to the Operations & Maintenance (O&M) program, for the PPB Management Analytical Office.
Travel Request Log	Tracks budget requests related to travel (intra- and inter-state) for the PPB Management Analytical Office.
Workflow Project Documentation	Project documentation database for a dynamic workflow application.

TRANSITION AND SEQUENCING

As part of the ERP implementation, these critical cross-cutting business functions which every program performs will be included in the scope of the ERP. Functional support through the ERP package will be evaluated. Any substantial functional "gap" will be identified – as represented by the functionality of the above systems, and an overall solution architecture and implementation plan will be developed to address the needed functionality in a common manner.

• The sequencing of these initiatives will be part of a comprehensive modernization road map.

• A priority scheme will target flagship initiatives such as infrastructure modernization, ERP planning, and Health IT requirements.

• The Planning and Resource Allocation Line of Business is included in the Budget and Finance ERP estimates.

A.2.5   GRANTS MANAGEMENT

The management of federal and state grant services provides provision, management and reporting to federal and state agencies and congress. Grant management depends on a sound financial system, purchasing system, merit-based personnel practices, appropriate property management capability, sound security, health and safety practices, the ability to perform audit and resolution services, and to provide quality review and control activities. All departments in the Hawaii State Government participate in Grants Management

At present each organization provides grant management services. While each organization should be responsible for pursuing grants, a central Grants Management service will provide standards, guidelines, subject areas of interest, grant proposal examples, and a public offering organizing and describing State Grant opportunities for the citizens of Hawaii. Examples can be extracted from other State's experiences.

Table 52: Grants Management LOB Business Services

LOB: Planning and Resource Allocation Service Name	Service Definition
Federal Grants Pursuit and Oversight	The management of federal grant services provides provision, management and reporting to federal agencies and congress. Grant management depends on a sound financial system, purchasing system, merit-based personnel practices, appropriate property management capability, sound security, health and safety practices, the ability to perform audit and resolution services, and to provide quality review and
State Grants Transfers and Oversight	The objective of managing state grants is to standardize, streamline, and improve state grant-making practices to improve public awareness about state-grant opportunities.

A.2.5.1
FUTURE STATE VISION FOR GRANTS MANAGEMENT

The future vision for Grants Management is to apply state-of-the-art technology to the fullest extent towards a common capability across the state departments, agencies, and programs to accomplish the following critical business objectives and to address current state issues.

• Provide central grants management services with a central Web site to provide support to each organization with regard to grant opportunities, standards, contact information, grant examples, and training.

• Provide grant management tools and services to support the complete life cycle including reporting, milestone tracking, and expenditures.

• Provide collaboration capabilities to support grant preparation, reviews, approvals, initial submissions, responses to questions, and final approvals and authorizations.

• Manage associated funding, expenditures, and financial transactions associated with grant monies.

• Integrate Grants Management with the new ERP.

Transition and Sequencing from a disparate grant life cycle to a Central support service for each LOB will increase the ability of the State to increase the percentage of acceptances with regard to submissions.

The future state solutions architecture is depicted in Figure 63 below. Key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture.

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
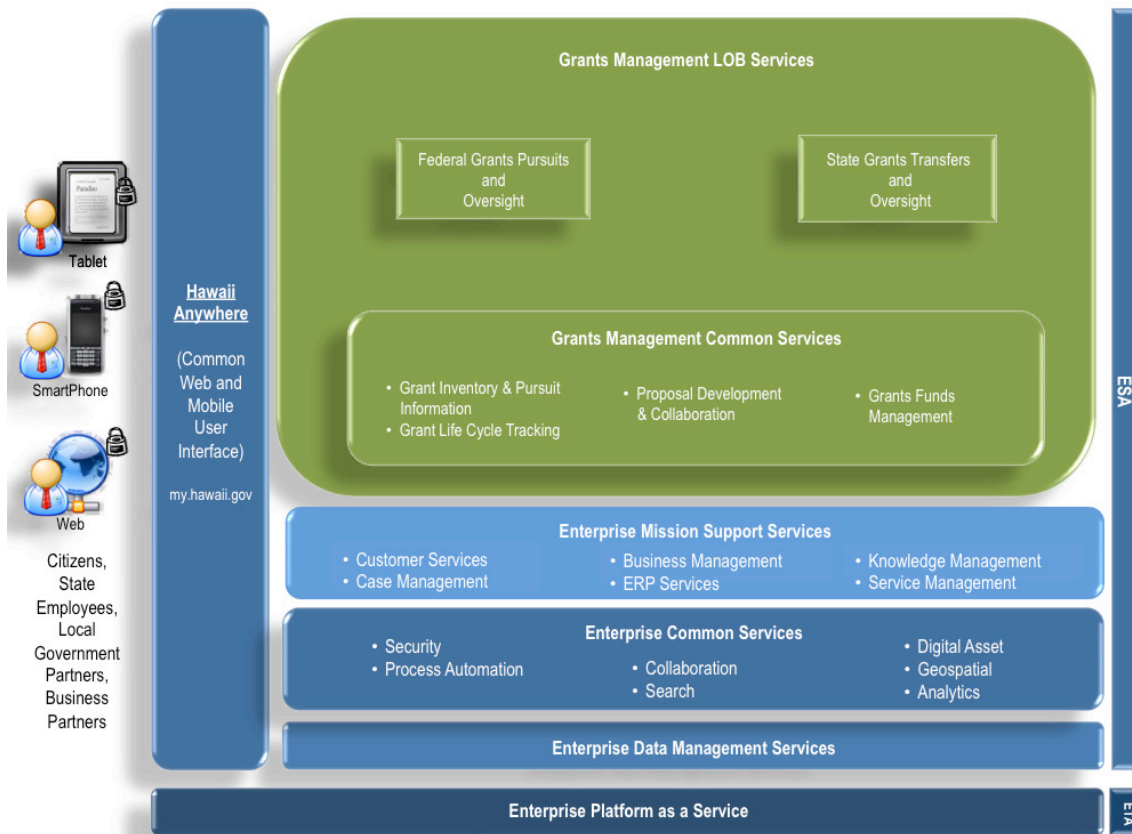
Figure 63: Grants Management Future State Solutions Architecture

INFORMATION EXCHANGE

• Grant management is a service area that touches all core mission LOBs. Each area has need for support to move efficiently and effectively in the delivery of a quality product.

• Leveraging the collective experience of the best of the best across the enterprise will only enhance the State of Hawaii's opportunities to realize successful grant approvals.

A.2.5.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR GRANTS MANAGEMENT

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 53 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

The implementation roadmap should include:

• Initiate planning to establish a central grant management service for each LOB.

• Extract the best of the best expertise in establishing standards, guidelines, examples, contact information, and grant categories available from the Federal Government.

• Establish a central Web portal for the citizens of Hawaii to examine grant opportunities that may be of interest.

Table 53: Grants Management Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
Production Alignment:			
Grants Management Services Production Applications Portfolio	There are currently no central Grants Management applications. Each State Agency has embedded applications that are essentially operating separately without support from a central financial, budgeting, or project management capability. The Federal government is calling for increased transparency and accountability regarding the use of federal funds. In June 2011, the Digital Accountability and Transparency Act of 2011 (DATA Act) was introduced and referred to the House Committee on Oversight and Government Reform. If enacted, the DATA Act would apply the type of intensive recipient reporting that is required for American Recovery and Reinvestment Act (ARRA) awards to all federal grants, contracts and loans and establish an independent body to track all federal spending on a single website. It is critical that the State of Hawaii maximize the federal funds that the State receives and use these funds efficiently. Therefore a Grant Management capability as part of the new integrated ERP is essential to the future success of all Federal Grant activities. The estimated O&M is based on embedded project activities for each State Agency, Division, and Section pursuing and managing Grants.	One-time Annual DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: Low
New:			
ERP Phase II Grants Management Architecture and Project Planning	Initiate planning, perform Business Process Re-Engineering, prepare vendor specifications, evaluate and select vendor, and initiate conference room pilots	One Time DME: SW$ HW: Effort: Pending Review Portfolio Costs are captured in the ERP Section.	Priority: High EA Compliance: High
ERP Phase II Grants Management Project Life Cycle	The management of federal and state grant services provides provision, management and reporting to federal agencies and congress. Grant management depends on a sound financial system, purchasing system, merit-based personnel practices, appropriate property management capability, sound security, health and safety practices, the ability to perform audit and resolution services, and to provide quality review and oversight. The objective of managing state grants is to standardize, streamline, and improve state grant-making practices to improve public awareness about state-grant opportunities.	One Time DME: SW: Pending Review HW: Pending Review Effort: Pending Review Portfolio Costs are captured in the ERP Section.	Priority: High EA Compliance: High

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 57. The implementation roadmap should address the following considerations:

• Form a Grant Management Project team

• Create grant life cycle content supporting each phase of the grant management process

• Research grant management tools for preparation, review, approvals and submissions

• Provide project and financial life cycle management to support the complete life cycle

• Pursue working with the new ERP team to ensure the Grant Management Life Cycle requirements are included in the specification and follow on pilots and deployments.
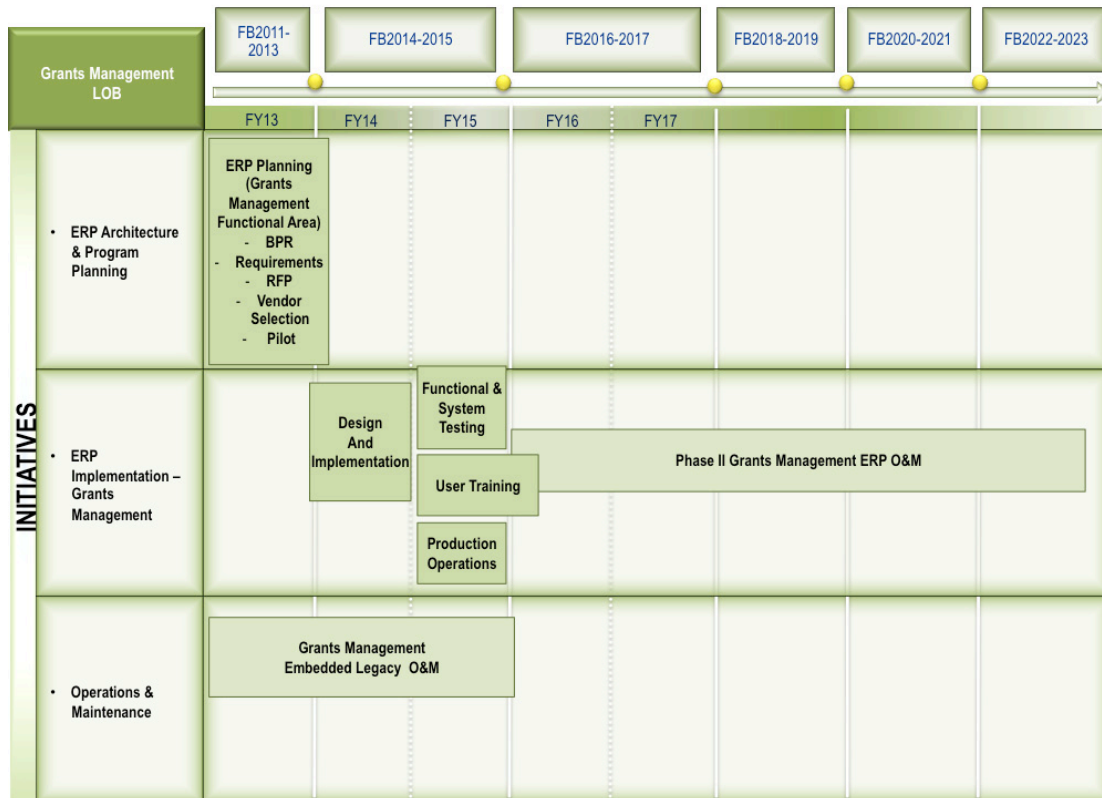
Figure 64: Grants Management Transition and Sequencing Plan Summary

A.2.6   REVENUE COLLECTION

Revenue Collection includes the collection of Government income from all sources. For the State of Hawaii this includes collections, receivables, fund transfers, asset sales and debt collection.

• Administrative Services Office – facilitates the internal business of DOTAX; e.g., human resources/personnel, procurement, Departmental budget.

• Information Technology Services Office – provides IT support for the entire Tax organization.

• Tax Research and Planning Office – performs tax research and provides forecasts.

• System Administration Office –Liaison between the user and ITSO. Performs testing, users assistance, and business analysis.

• Rules Office – oversees all tax laws and ensures their implementation within the State and performs enforcement (civil and criminal) activities

• External Training and Outreach Office – performs training relative to tax law, etc.

• Tax Services & Processing Division – provides document processing, taxpayer services, and revenue accounting

• Compliance – oversees collections, audit, field audit, and the oversight of the district offices relative to the tax collection activities

Table 54: Revenue Collection LOB Business Services

LOB: Revenue Collection Service Name	Service Definition
User Fee Collection	User fee collection involves the collection of fees assessed on individuals or organizations for the provision of Government services and for the use of Government goods or resources. (i.e. National Parks)
Taxation Collection	Tax collection oversees collections, audit, field audit, and the oversight of the district offices relative to the tax collection. Activities include tax research, forecasts, collections and refunds. The service is responsible for overseeing all tax laws and ensures their implementation within the State and performs enforcement (civil and criminal) activities.
State Asset Sales	Asset sales encompasses the activities associated with the acquisition, oversight, tracking, and sale of non-internal assets managed by the State Government with a commercial value and sold to the private sector.
Debt Collection	Debt Collection supports activities associated with the collection of money owed to the State Government from both foreign and domestic sources.

A.2.6.1
FUTURE STATE VISION FOR REVENUE COLLECTION

The overarching objective is to modernize the revenue collection (tax) system. An integrated Tax Information and Management System is a high priority. As the Tax Modernization Team aggressively assesses the need for new software, coordination with DAGS/Accounting and B&F regarding integration of a new Tax system with an ERP solution is critical.

NOTE: Following the Federal Business Reference Model, all services related to the collection of income from all sources are included in the scope of this LOB. However, the focus for modernization in alignment with the DOTAX mission is modernizing Tax Collection. The other revenue collection services are very distributed across many departments today, and considerations for consolidation of those services will be addressed appropriately as part of the ERP implementation.

The expectation of the Tax Modernization is to build a more stable and robust Integrated Tax Processing system that can provide:

• Speedier processing,

• Greater integration among tax processing, tax collection, and tax audits

• More accurate and better accounting functions such Account Receivable and account Payable.

• Better reporting system for the decision making

• Better tax analytic functions to improve the tax audit and collection

• More flexible and efficient to handle the tax law changes

• Provide better services for tax payers, such as on-line tax information system

• Desired services include:

– Increased e-filing

– Electronic payments

– Improved collections analytics

– Tax information management system

– Improved case management processes

– Improved network connectivity

– Improve the revenue accounting system in DOTAX

The future state solutions architecture is depicted in Figure 65 below. Key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
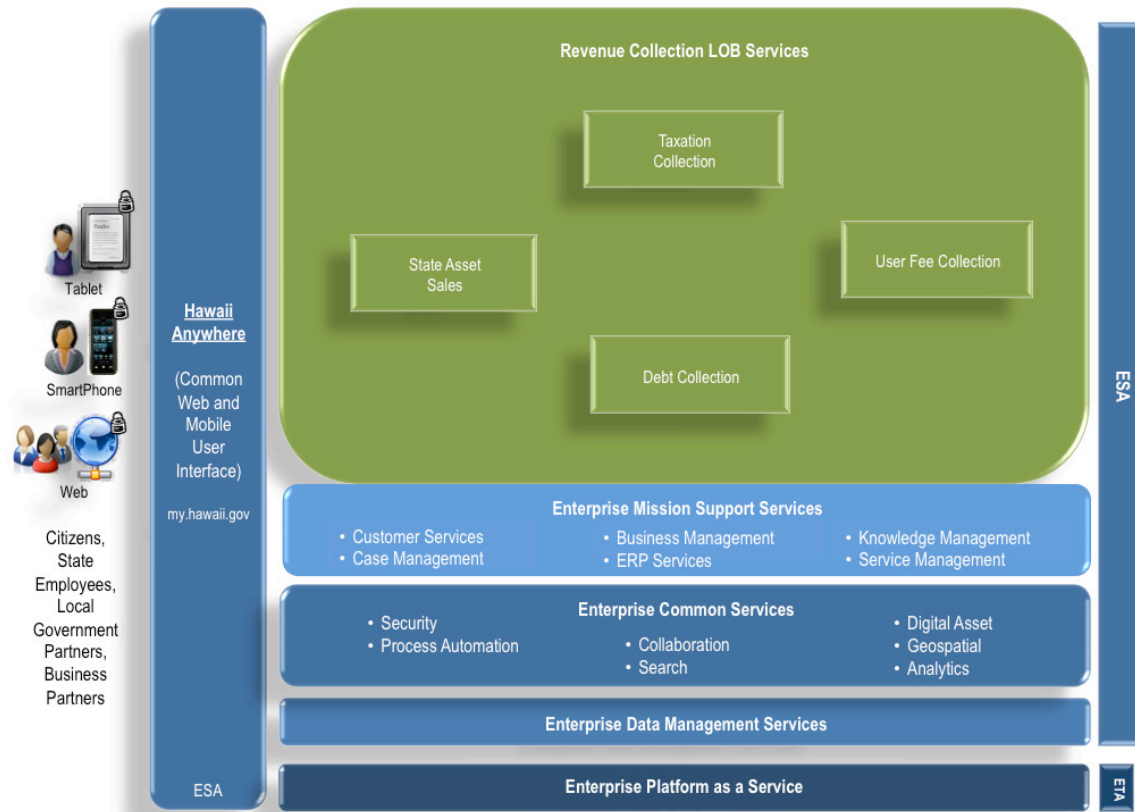
Figure 65: Revenue Collection Future State Solutions Architecture

INFORMATION EXCHANGES

• Information exchanges include interfaces with Federal agencies such as the IRS and FBI as well as other State agencies (specifically, B&F, DAGS, DCCA, DBEDT, AG, and the Legislature).

• Additionally, there are interfaces with tax software vendors (e.g., Quicken Books, TurboTax, etc.), tax form preparers, and local financial institutions and citizens.

• Approximately "Pending Review"in tax revenues are processed daily.

• Revenue collection services have the largest customer base.

• Millions of forms and checks are processed each year, collecting over "Pending Review" in revenue with a budget of only "Pending Review."

A.2.6.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR REVENUE COLLECTION

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

The steps include:

• Evaluate and select a path forward to replace and modernize tax collection services.

• For short term improvements apply Business Process Engineering to analyze priority areas to improved revenue collection

• Disaster recovery planning is essential as part of the Technology Domain.

• A new data center is needed to support the operations of this LOB.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 55 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

The implementation roadmap should include:

• Tax system modernization.

• Work with the enterprise ERP team to evaluate tax collection options

• Develop a road map to guide strategic alignment with the Enterprise Architecture.

Table 55: Grants Management Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
Production Alignment:			
Revenue Collection TAX modernization Services Current O&M costs	The suite of thirty-six (36) Revenue Collection Applications will be replaced by a new TAX modernization project. The current tax system (Integrated Tax Information Management System ITIMS) was poorly implemented and requires significant hands on technical support to ensure 24x7 operations. The current system poses a high risk of failure that requires a high priority for funding a replacement.	One-time Annual DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: Low
New:			
Revenue Collection TAX modernization Project Planning	Initiate planning, perform Business Process Re-Engineering, prepare vendor specifications, evaluate and select vendor, and initiate conference room pilots	One Time DME: SW HW: Pending Review Effort: Pending Review	Priority: High EA Compliance: High
Revenue Collection TAX Modernization Project Life Cycle	Tax collection oversees collections, audit, field audit, and the oversight of the district offices relative to the tax collection. Activities include tax research, forecasts, collections and refunds. The service is responsible for overseeing all tax laws and ensures their implementation within the State and performs enforcement (civil and criminal) activities. This phase launches the project life cycle. See Sequencing below.	One Time DME: SW HW: Pending Review Effort: Pending Review For 4 years	Priority: High EA Compliance: Low

TRANSITION AND SEQUENCING

Project sequencing includes Year 1 planning followed by four years of project life cycle design, implementation, functional and system testing, user training, and production certification. (Outlined below in Table 56.)

Table 56: Tax Modernization Project Phasing

Project Phasing

YEAR 1

Analysis and Vendor Selection

- Select priority functions for first phase implementation
- Produce Future State Vision for each Business Function
- Develop detailed demonstration scripts for each element of the future state vision
- Schedule demonstrations with prospective vendors
- Identify gaps during first sessions with vendors
- Schedule follow on sessions with selected vendors to address gaps
- Prepare Specification for ERP RFQ
- Prepare Specifications for Hardware and Software
- Prepare Contracts for technical support
- Initial Business and Technical Training for Project Teams

YEAR 2

Design

- Take the time to map out the current business processes
- Attend basic training on software to be implemented
- Re-engineer business processes with the targeted software in mind
- Packaged-based re-engineering defining the ideal "to-be" state
- Initiate conference room pilots to design, configure, evaluate, and test functionality
- Understand and define the data needs for each stake holder
- Plan for ERP derived subject data bases to support data requirements for each agency
- Configuration and Implementation
- Plan for legacy data extractions, translation, and loading into the new ERP system
- Scale up conference room pilots and test the performance of each functions
- Identify interfaces that will be necessary to deliver data from existing systems that are not part of the initial phase.
- Fully configure and implement all functions
- Ensure networks are deployed, tested and certified for operation

YEAR 3

Functional Testing

- Develop functional test plans for standalone modules, module sets, interfaces, and full integration test plans
- Perform functional test for each module with live data
- Perform integrated testing for module sets ensure problems are found and fixed as the process moves forward
- Perform testing of interfaces
- Perform final integration testing of all modules
- Identify functional gaps that are "MUST HAVE" for custom implementation
- Customization must be kept to a minimum

YEAR 4

System Testing

- Develop system integration test plans to include interfaces from other systems.
- Perform system testing with live data in a test and evaluation environment
- Perform integrated performance testing with simulated loads representing the target environment
- Fully test, evaluate, and certify the system for production

YEAR 5

User Training
Production Operation

- Plan for efficient and seamless turnover from legacy applications to new system
- Ensure staff are properly trained and have access to consultants for coaching and guidance
- The new TAX system will require a standard, layered network topology, standard servers, operating systems, and centralized computing facilities that will include disaster recovery strategies, 24 x 7 operations, and a testing and migration environment.

The plan for future state transition and sequencing of initiatives is depicted below in Figure 66.
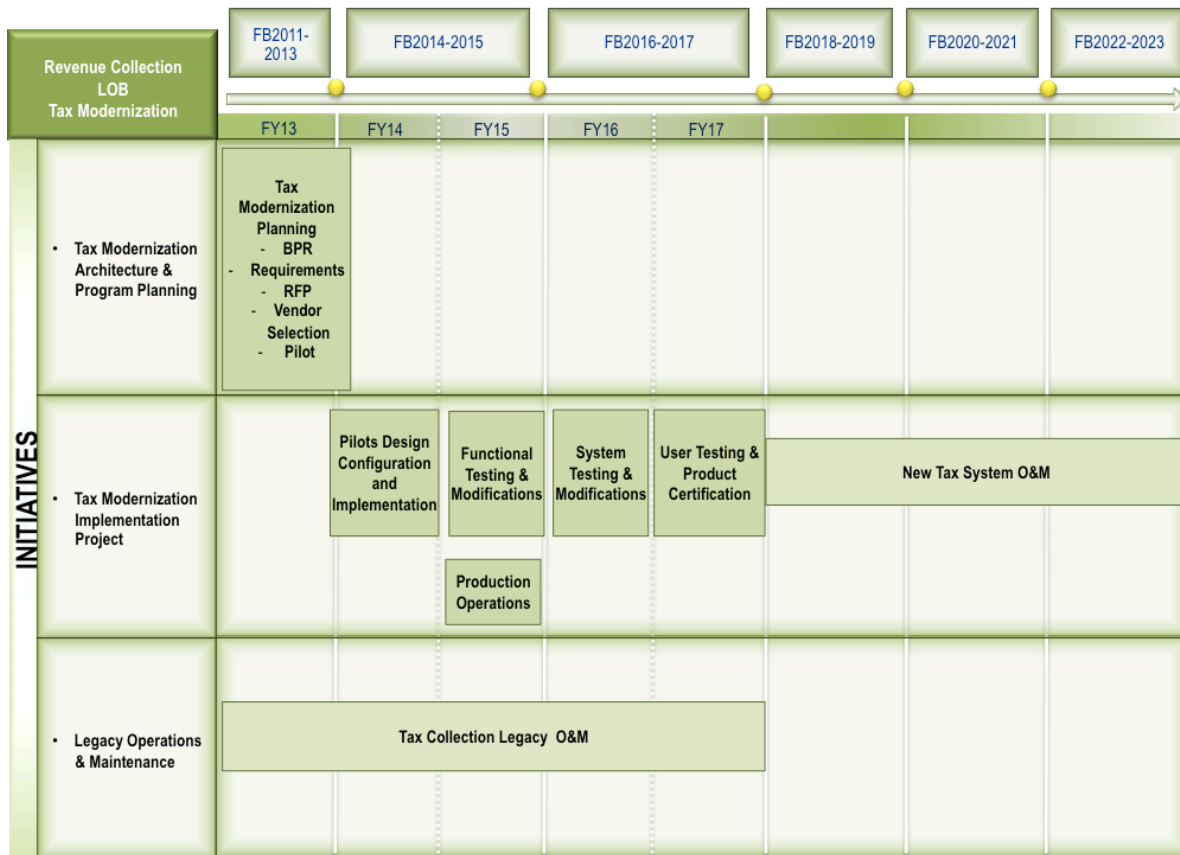
Figure 66: Revenue Collection – Tax Modernization Transition and Sequencing Plan Summary

A.2.7   BUDGET & FINANCE

Budget and Finance includes the management of the State budget process including the development of plans and programs, budgets, and performance outputs and outcomes as well as financing State programs and operations through appropriation and appointment of direct and reimbursable spending authority, fund transfers, investments and other financing mechanisms.

• An accrual-basis accounting capability is needed

• Visibility and access into quarterly budget appropriations and spend plans is needed.

• Hyperion was mentioned as a possible solution for performance management software. (Oracle Business Foundation Suite)

• Financial management system (used specifically by DOTAX, Accounting, and B&F) was mentioned as a possible way to integrate information across Departments.

Table 57: Budget and Finance LOB Business Services

LOB: Budget and Finance Service Name	Service Definition
Budget Planning and Execution	Budget planning involves all activities undertaken to determine priorities for future spending and to develop an itemized forecast of future funding and expenditures during a targeted period of time. This includes the collection and use of performance information to assess the effectiveness of programs and develop budget priorities. Budget Planning and Execution Services is responsible for planning, directing and coordinating the development of the State's plans and strategies relative to cash management, investments and bond financing. This service administers the State's financial affairs, by continually monitoring and evaluating the State's overall financial condition.

LOB: Budget and Finance Service Name	Service Definition
Treasury Management	The Cash Management Program is responsible for ensuring the availability of cash to meet the State's financial obligations when required. To carry out this responsibility, the Financial Administration Division is assigned the tasks of receiving, safeguarding, investing and disbursing all funds in the State Treasury. All State funds deposited with State appointed depositories (financial institutions) are deemed, under State law, to be deposited in the State Treasury. To protect the deposits, the funds must be fully collateralized by the depository with securities deposited with the Director of Finance as provided in Section 38-2, Hawai`i Revised Statutes (HRS). All funds that are in excess of immediate needs are invested in the types of investments permitted under Section 36-21, HRS. Permitted investments are based on the criteria of safety, liquidity and yield, with yield as a secondary consideration, to ensure payment of State obligations. In the Department's continuous effort to maximize investment income, an investment pool program was implemented in August 1999. The investment pool program centralizes all phases of the investment process under the sole direction of the Department, thereby pooling the State's vast cash resources to enhance investment returns. Income derived from investments from the State Treasury annually exceeds "Pending Review."
Unclaimed Property	The State of Hawaii's Unclaimed Property Program is administered under the provisions of Chapter 523A of the Hawaii Revised Statutes (HRS). This program collects and holds, in a custodial capacity abandoned and dormant property from "holders". As a public service, the Unclaimed Property Program returns property to rightful owners at no charge.
Debt Management	The Department of Budget and Finance oversees the general management of State debt, including reimbursable and non-reimbursable general obligation bonds, special assessment bonds, refunding bonds, mortgage credit certificates, short-term loans, certificates of participation, and municipal lease financings. In addition, the Department has oversight responsibility for revenue bonds and special facility revenue bonds issued by State agencies, in particular, the Department of Transportation - Harbors, Highways and Airports Divisions; and the Housing and Community Development Corporation of Hawai`i. The Department also oversees the issuance and management of special purpose revenue bonds, or tax-exempt debt incurred by private parties pursuing qualified projects in the interest of the general public. For example, the Department assisted with the issuance of special purpose revenue bonds to finance projects for public utilities and for projects for health care facilities provided to the general public. These are bonds authorized by the Legislature and approved by the Governor. Documents and forms for initiating action on projects approved by the Legislature include: The Loan Application and Review Procedures, Administrative Rules, Formal Application, Fee Agreement, and Statement of Benefits.
Health Benefit Plan Administration (EUTF)	The EUTF services provide health and other benefit plans to State and County employees and retirees at cost affordable to both the public employers and public employees.
Retirement Benefit Plan Administration (ERS)	The ERS service provides retirement, disability, survivor, and other benefits to more than 112,000 members. The membership is comprised of retirees, beneficiaries, inactive vested members and active public employees working for the State and Counties of Hawaii.

A.2.7.1
FUTURE STATE VISION FOR BUDGET AND FINANCE

The future state vision for Budget and Finance is to participate with the new ERP team and pursue immigration of legacy applications into the new ERP Budget and Finance functions. This will enable integration with other functional areas such as General Accounting, DOTAX, Procurement, and State-Wide delivery of budget data to each State Agency's Divisions, Departments, and Sections.

• Work with the ERP strategy team to evaluate functionality to address Budget and Finance services, replace legacy application, provide agile reporting, and mobile access on a need to know basis.

• A federated ERP will enable a modular approach to ERP function selection and integration with the State Enterprise

• Evaluate products such as Oracle's Hypension for ad hoc query and analysis, reporting, dash boards and score cards, predictive analysis, OLAP analytics, and mobile cloud deployments.

The future state solutions architecture is depicted in Figure 67 below. Key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
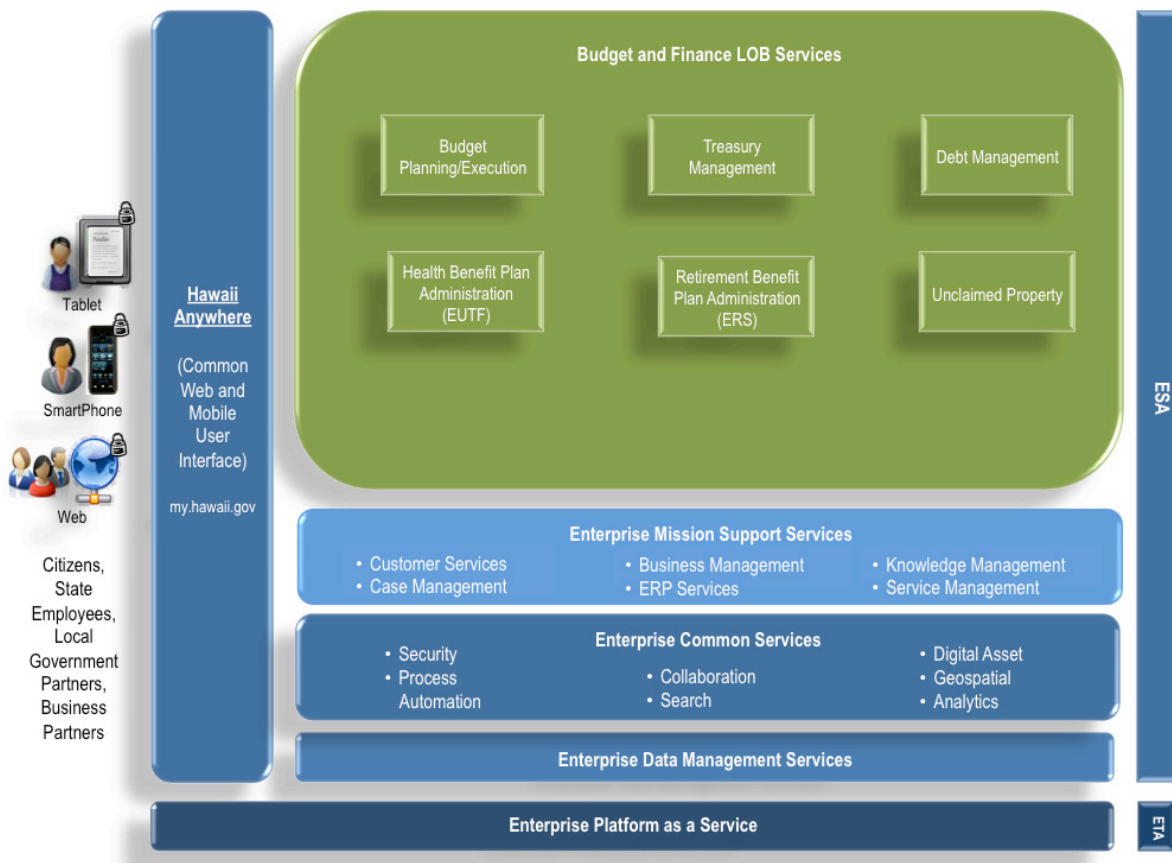
Figure 67: Budget and Finance LOB Future State Solutions Architecture

INFORMATION EXCHANGES

• Budget information is exchanged with every LOB to plan, create, rollup, review, and approve enterprise budgets.

• Health Benefits, Insurance, and Investments are shared across Lines of Businesses.

A.2.7.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR BUDGET AND FINANCE

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 58 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

The implementation roadmap should include:

• Evaluate and select a path forward to replace and integrate budget and finance services with the State's Enterprise Architecture.

• A federated ERP will enable a modular approach to function selection and integration with the State Enterprise and provide for an accrual based accounting system

• These new capabilities are considered high priority and will be included in a comprehensive roadmap for the total enterprise.

• Create a roadmap team to evaluate ERP capabilities with respect to Budget and Finance

• Near term plans can include incorporation of digital dashboards displaying the State's financial situation and providing the potential to drill down into the Department's financial spending against the budget.

  – A digital dashboard displaying the State's financial situation and providing the potential to drill down into the Department's financial spending against the budget would facilitate open communication of the State's financial situation to both the citizens of Hawai`i, the Legislature, and each Department. Opportunity to leverage enterprise initiative for a common performance measurement dashboard solution. (Project is for consideration and is not currently requested or funded.)

• Replace legacy applications, provide agile reporting, and mobile access on a need to know basis.

Table 58: Budget & Finance Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
Production Alignment:			
Budget and Finance Services Production Applications Portfolio	The suite of fifty (30) thirty Applications will be replaced in a future ERP Budget and Finance application. These systems are in Operation and Maintenance and will be sustained until all are replaced by a new ERP initiative. There are an estimated additional fifty (50) embedded Budget and Finance applications within each State Agency's Departments and Sections.	One-time Annual DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: Low
New:			
ERP Phase II Budget &Finance Architecture and Project Planning	Initiate planning, perform Business Process Re-Engineering, prepare vendor specifications, evaluate and select vendor, and initiate conference room pilots.	One Time DME: SW HW: Effort: Pending Review Portfolio Costs are captured in the ERP Section.	Priority: High EA Compliance: High
ERP Phase III Budget & Finance Project Life Cycle	Budget planning involves all activities undertaken to determine priorities for future spending and to develop an itemized forecast of future funding and expenditures during a targeted period of time. This includes the collection and use of performance information to assess the effectiveness of programs and develop budget priorities. Budget Planning and Execution Services is responsible for planning, directing and coordinating the development of the State's plans and strategies relative to cash management, investments and bond financing. This service administers the State's financial affairs, by continually monitoring and evaluating the State's overall financial condition.	One Time DME: SW: Pending Review HW: Pending Review Effort: Pending Review Portfolio Costs are captured in the ERP Section.	Priority: High EA Compliance: High

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 68.
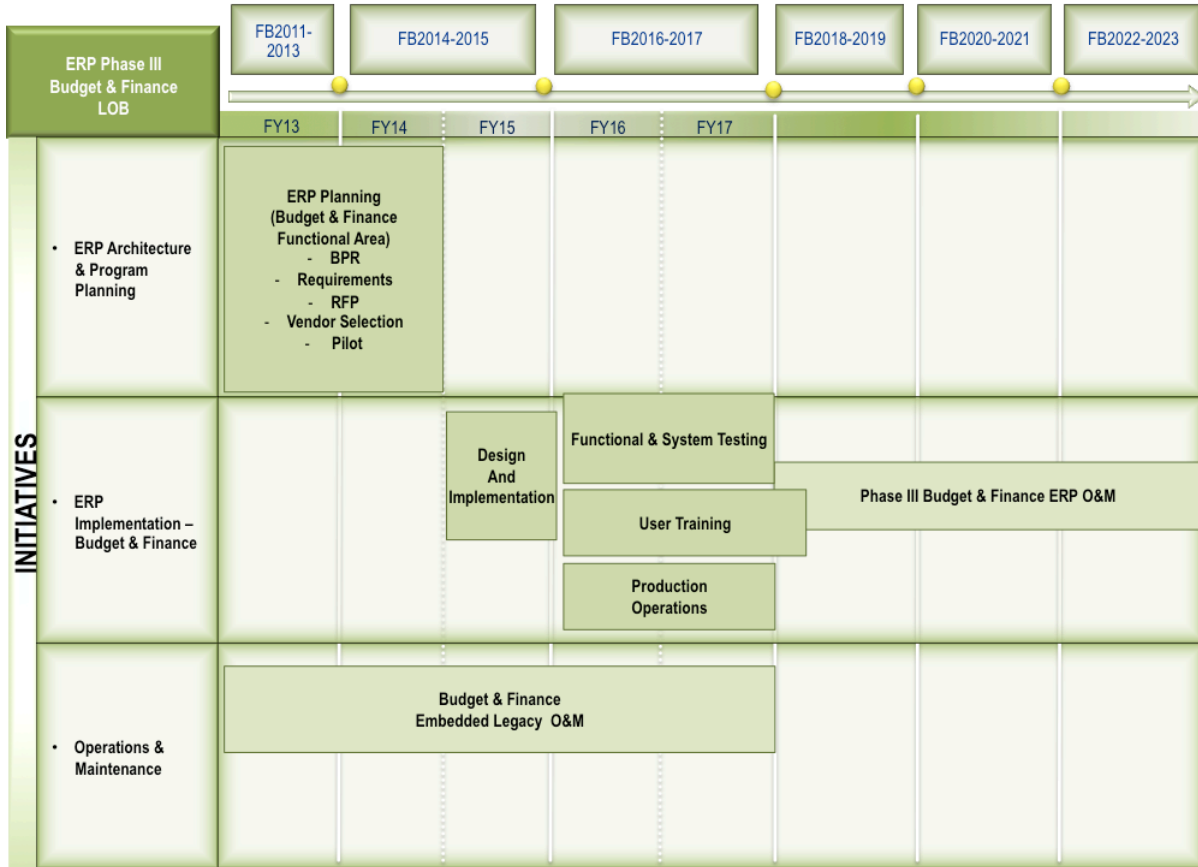
Figure 68: Budget & Finance Transition and Sequencing Plan Summary

A.2.8   FINANCIAL MANAGEMENT

Financial Management is the use of financial information to measure, operate and predict the effectiveness and efficiency of an entity's activities in relation to its objectives. The ability to obtain and use such information is usually characterized by having in place policies, practices, standards, and a system of controls that reliably capture and report activity in a consistent manner.

• DAGS accounting system is COBOL-based and runs on dated hardware. Disaster recovery is an issue. As DOTAX and B&F look at ERP solutions, Accounting's requirements should be included as part of any solution.

• Many of DAGS processes are paper-based and require the continuation of data-entry processes.

Table 59: Financial Management LOB Business Services

LOB: Financial Management Service Name	Service Definition
State-wide Accounting Services	The State-Wide Accounting Services provides the General Ledger to prepare the State's financial statements. Departments also use financial information to prepare department financial statements. Payroll execution is provided by the State-Wide Accounting Services. Accounting services entails accounting for assets, liabilities, fund balances, revenues and expenses associated with the maintenance of State funds and expenditure of State appropriations (Salaries and Expenses, Operation and Maintenance, Procurement, Working Capital, Trust Funds, etc.), in accordance with applicable State standards.

Table 59: Financial Management LOB Business Services

LOB: Financial Management Service Name	Service Definition
Accounts Payable	Accounts Payable represents the various amounts owed to vendors and suppliers of the state. When the state buys products and services on credit, these unpaid amounts are totaled as Accounts Payable. The State is then obligated to pay these amounts based on the credit policies agreed between the State and its suppliers. In government finance, a warrant is a written order to pay that instructs a federal, state, or county government treasurer to pay the warrant holder on demand or after a maturity date. Such warrants look like checks and clear through the banking system like checks, but are not drawn against cleared funds in a checking account (demand deposit account). Instead they may be drawn against "available funds" so that the issuer can collect interest on the float or delay redemption.
Accounts Receivables	An account receivable (AR) is defined as a claim against a debtor, such as a person, business, or governmental entity for money owed to the state. An invoice or other document requesting payment will be prepared. The invoice shall be sent to the debtor as soon as practical and within 30 days after the event giving rise to the AR. Invoices shall include a date for which payment is due. The AR shall be considered delinquent if payment is not received by the due date. Departments may also consider the postmark date to determine if an AR is delinquent.
Financial Reporting	Financial Reporting includes providing accounting support for the management of assets and liabilities of the State Government.

A.2.8.1
FUTURE STATE VISION FOR FINANCIAL MANAGEMENT

The future state vision for Financial Management is to participate with the new ERP team and pursue immigration of legacy applications into the new ERP Financial Management functions. This will enable integration with other functional areas such as General Accounting, Tax, Procurement, and State-Wide delivery of budget data to each State Department's Divisions, Agencies, and Programs.

The future state vision includes the following considerations:

• Work with the ERP strategy team to evaluate functionality to address Financial Management services, replace legacy applications, provide agile reporting, and mobile access on a need to know basis.

• A federated ERP will enable a modular approach to ERP function selection and integration with the State Enterprise.

• Pursue near term solutions such as digital dashboard addressing access and drill down to financial data for internal services and for the citizens of Hawaii.

• As part of the ERP team, financial management requirements will be prepared to represent financial services, information exchanges, and a financial user based Web portal.

• Evaluate products such as Oracle's Hypension for ad hoc query and analysis, reporting, dash boards and score cards, predictive analysis, OLAP analytics, and mobile cloud deployments.

The future state solutions architecture is depicted in Figure 69 below. Key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
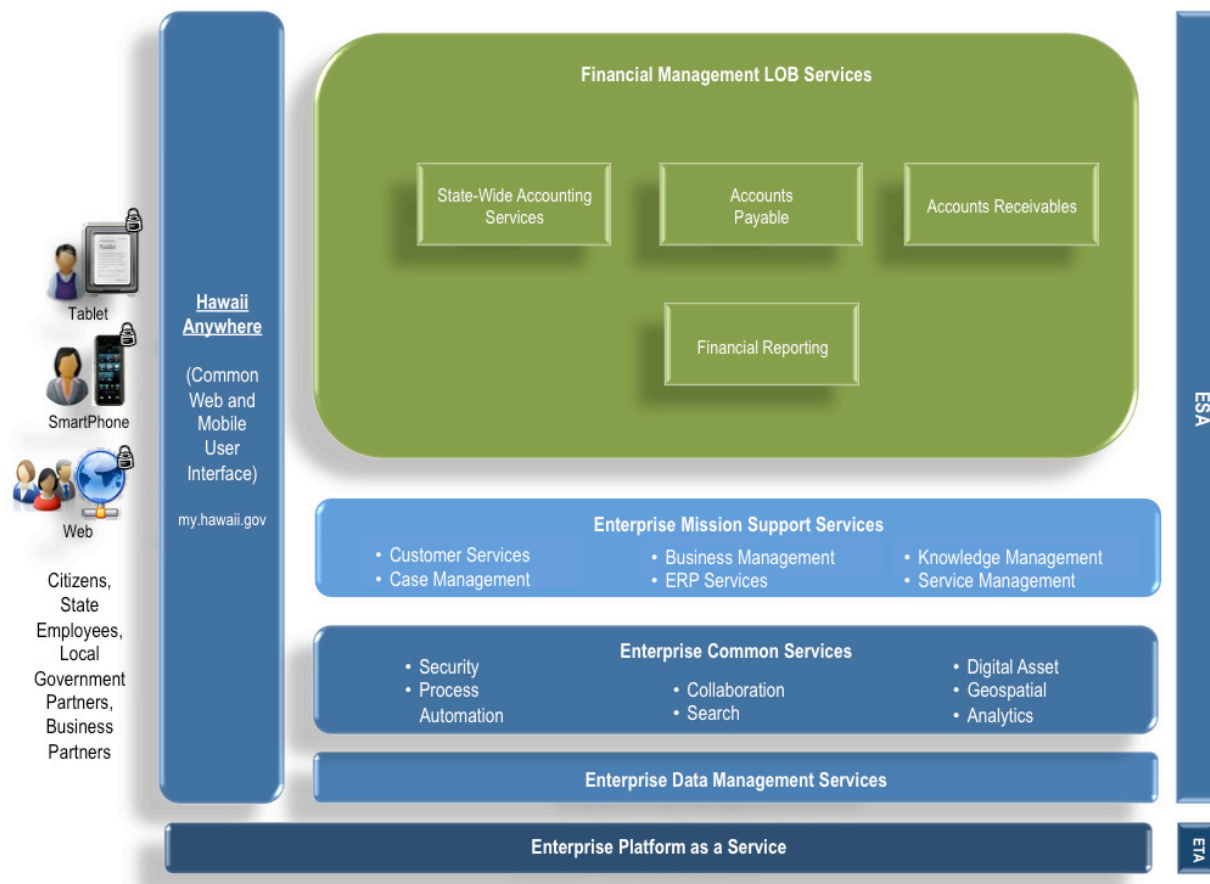
Figure 69: Financial Management LOB Future State Solutions Architecture

INFORMATION EXCHANGES

• Provide financial information on demand to effectively and efficiently serve this LOB.

• Provide financial information as segmented alignments with other LOBs.

• Provide financial information to the citizens of Hawaii on a need to know basis.

A.2.8.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR FINANCIAL MANAGEMENT

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 60 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

The implementation roadmap should include:

• Evaluate the current portfolio of applications and make a determination regarding strategic alignment with the new Enterprise Architecture

• Evaluate and select a path forward to replace and integrate financial management services. This new capability is considered a high priority and will be included in a comprehensive roadmap for the total enterprise.

Table 60: Financial Management Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
Production Alignment:			
Financial Management Services Production Applications Portfolio	The suite of fifty (50) Financial Management Applications will be replaced in a future ERP Financial Management application. These systems are in Operation and Maintenance and will be sustained until all are replaced by a new ERP initiative. There are an estimated additional fifty (50) embedded Financial applications within each Department's Divisions and Programs. These estimates do not include Financial Services in Attached Agencies.	One-time Annual DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: Low
New:			
ERP Phase II Finance Architecture and Project Planning	Initiate planning, perform Business Process Re-Engineering, prepare vendor specifications, evaluate and select vendor, and initiate conference room pilots.	One Time DME: SW$ HW: Effort: Pending Review Portfolio Costs are captured in the ERP Section.	Priority: High EA Compliance: High
ERP Phase II Finance Project Life Cycle	Financial services entails accounting for assets, liabilities, fund balances, revenues and expenses associated with the maintenance of State funds and expenditure of State appropriations (Salaries and Expenses, Operation and Maintenance, Procurement, Working Capital, Trust Funds, etc.), in accordance with applicable State standards.	One Time DME: SW: Pending Review HW: Pending Review Effort: Pending Review Portfolio Costs are captured in the ERP Section.	Priority: High EA Compliance: High
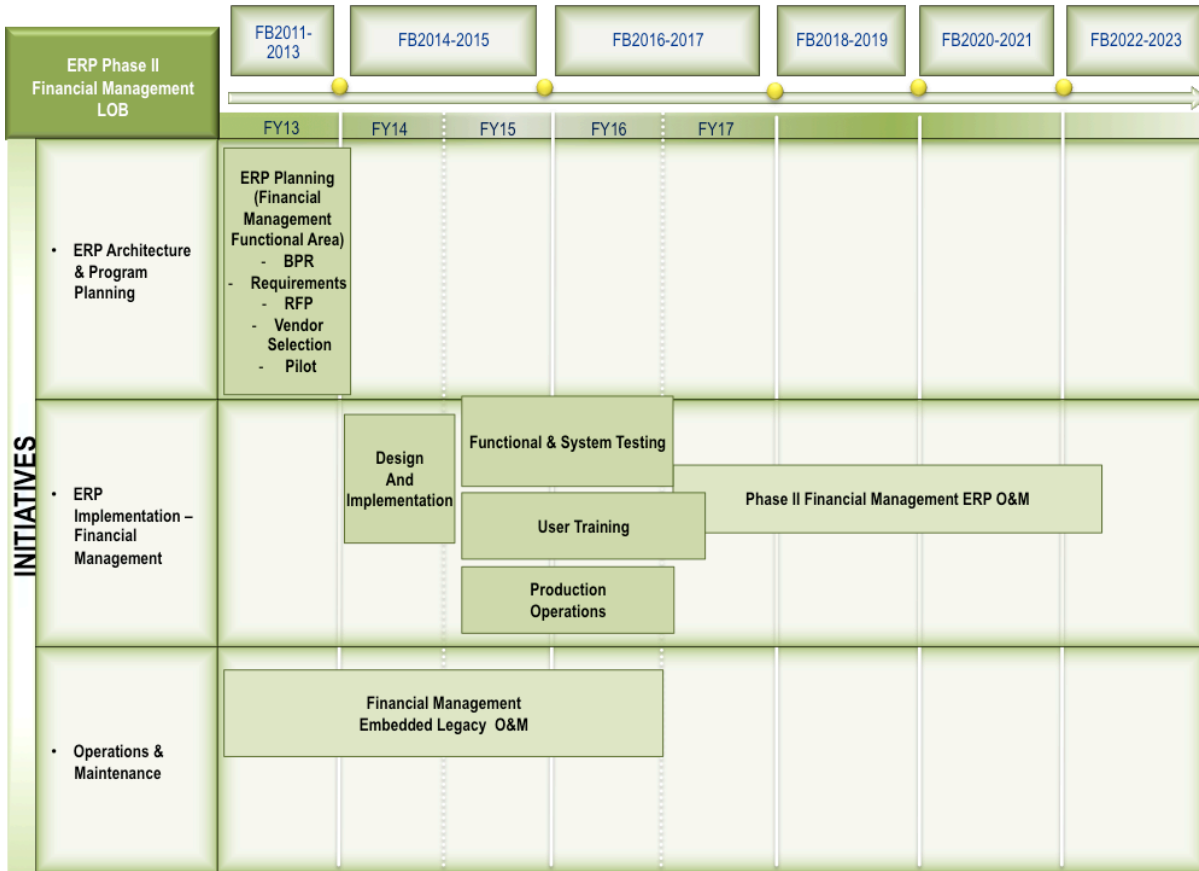
Figure 70: Financial Management Transition and Sequencing Plan Summary

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 70.

A.2.9   HUMAN RESOURCE MANAGEMENT

Human Resource Management involves all activities associated with the recruitment and management of personnel.

Table 61: Human Resource Management LOB Business Services

LOB: Human Resource Management Service Name	Service Definition
Employee Claims & Workers Compensation Administration	Employee Claims and Workers Compensation administers Workers Compensation for the Executive Branch. Fee-based service for HPHA, City and County of Honolulu, and Charter Schools.
Safety Program	Identification of hazardous working conditions and development of strategies to eliminate or mitigate the identified hazard. Provides accident injury and illness profiles, for analysis and identification of accident trends, sources, and factors that contribute to occupational injuries and illnesses.
Collective Bargaining Agreement Administration	Labor Relations provides collective bargaining, negotiations, and contract interpretations.

LOB: Human Resource Management Service Name	Service Definition
Employee Benefits	Administration of employee benefits involves the administration of entitled benefits for State personnel such as disability, and insurance. (Note: This excludes Health and Retirement which are separate services under Budget & Finance.)
Employee Development & Training	Employee development & training refers to the active building of competencies in staff members through formal, technical, or other means of education. Includes administration of training programs; including development of programs, curriculum, various modes of training, and execution of those programs.
Employee Leave Administration	Administers various programs providing family-friendly benefits to facilitate leave from work under provisions such as Family and Medical Leave, leave sharing, and flexible work hours.
Staff Performance Management	Staff performance management involves the general management of the State workforce, including but not limited to functions such as personnel action processing, employee tracking, discipline/grievance, advancement and awards, labor relations, etc.
Equal Employment Opportunity (EEO) Administration	Ensures equal employment opportunity and a harassment-free work environment. Federal and State employment laws protect persons from unlawful discrimination based on their race, color, national origin, gender, religion, ancestry, age, marital status, disability, arrest/court record, sexual orientation, or National Guard Participation. (Future service to be provided by DHRD.)
Investigations Services & Assistance	Investigates allegations of unlawful discrimination and harassment. (Future service to be provided by DHRD.)
Personnel Transactions & Processing	Personnel Transactions Office (PTO) – executes all personnel transactions for employees on leave, employee transfers, and employee terminations (owners of employee information for the Executive Branch).
Position Classifications & Compensation	This service provides position classification and management. Provides job position/position classification and auditing of positions. Manages the compensation plan associated to the position/job classification.
Recruitment & Staffing	Recruitment and staffing refers to the active marketing and hiring of personnel to capitalize on opportunities and fill vacancies within an organization as well as the activities focused on retaining staff.
Time & Attendance	The reporting and maintenance of state employee time and attendance. (Co-led by DHRD and DAGS)

A.2.9.1
FUTURE STATE VISION FOR HUMAN RESOURCE MANAGEMENT

The future state vision for service provision and automation of the Human Resources Management (HRM) LOB will be shaped largely by a future ERP implementation. It is anticipated that most all HRM functionality will be covered by modules of the ERP. During the ERP implementation, a functional gap analysis will be a key phase of the project, and decisions will be made regarding any outlying functionality that would need a separate

solution path. The go-forward assumption at this time is that all current applications will be replaced by the ERP.

The future state solutions architecture is depicted in Figure 71 below. Key features of this solution include:

- "Hawai`i Anywhere" common web and mobile user interface architecture

- "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
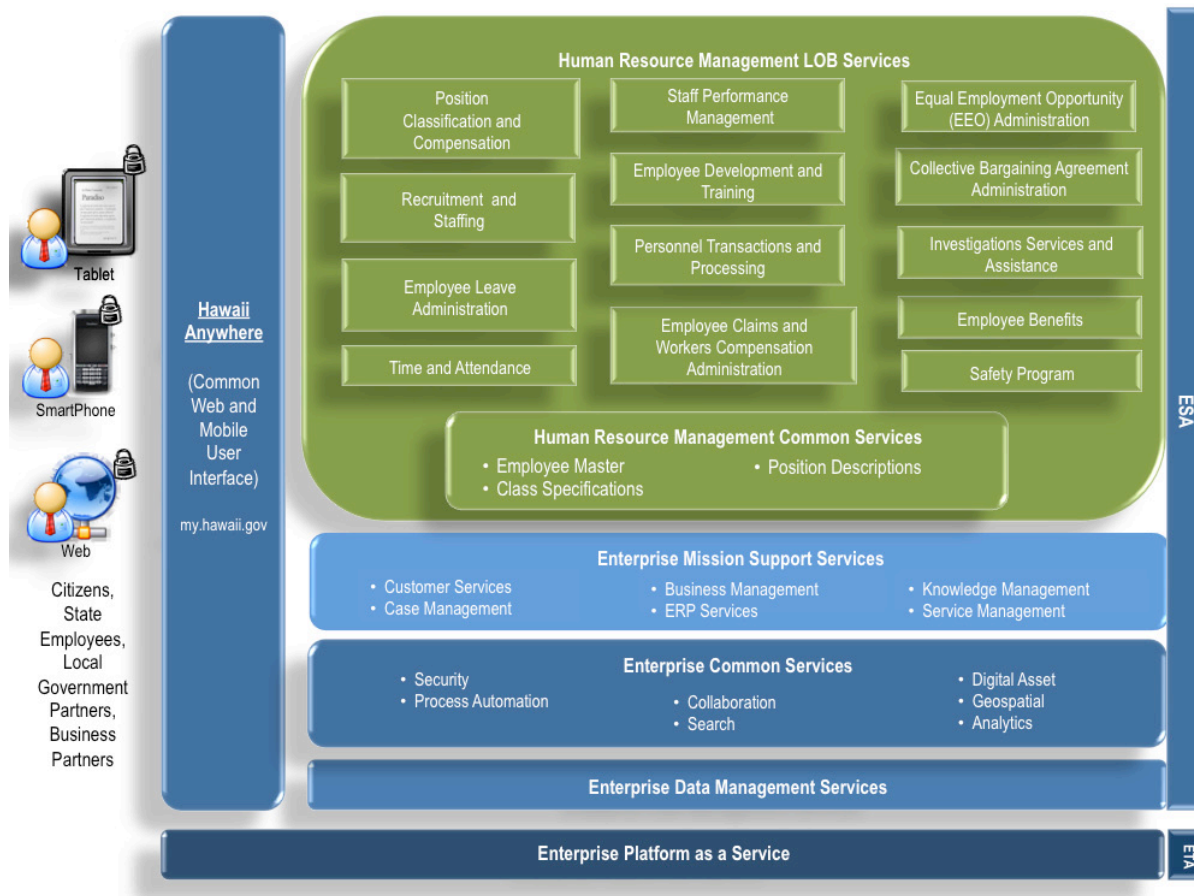
Figure 71: Human Resource Management Future State Solutions Architecture

INFORMATION EXCHANGES

- Key interfaces: DAGS, departmental personnel staff, unions, persons seeking positions with the Executive Branch Departments

- Interfaces with payroll, pensions (ERS), and benefits (EUTF)

A.2.9.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR HUMAN RESOURCE MANAGEMENT

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below. The primary objective is to participate with the ERP team to plan an approach to integrate Human Resource Management services and provide enterprise access.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 39Table 62 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 62: Human Resource Management LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
In Progress:			
None			
New:			
ERP HR Upgrade	Strategic initiative to upgrade enterprise HR management capabilities through the ERP implementation.	One-time DME: SW: Pending Review + 20,000 hours + HW Pending Review Annual O&M: SW: Pending Review + 6,000 hours	Priority: High EA Compliance: High
HRMS	Replace current HRMS implementation by ERP.	Current annual O&M: SW: Pending Review + 4,000 hours	Priority: High EA Compliance: Medium
Employee Transaction System	To be replaced by ERP.	Specified in HRMS above.	Priority: High EA Compliance: Medium
neogov	Recruiting software as a service sponsored by State Recruiting Office to support recruiting across the State. Work file integration with ERP HR.	One-time DME: 1000 hours (for file integration) Annual O&M: Other: Pending Review (SaaS)	Priority: High EA Compliance: Medium
Time & Attendance	Time & Attendance COTS package implementation with integration with overall Federated ERP architecture. This is a project that may overlap between Departments, as there are aspects of policy and rules determination along with operational procedures. DHRD will participate in the planning & design, however this specific initiative will be led by B&F.	One-time DME: SW: Pending Review + 20,000 hours + HW Pending Review Annual O&M: SW: Pending Review + 6,000 hours	Priority: High EA Compliance: High
Leaves/Absence Management	Functionality for managing leaves/absence benefits programs. This project also relates to Time & Attendance, however, implementation may follow the core HR system implementation. Assumption that Time & Attendance package will include required functionality with minimal customization.	One-time DME: 2,000 hours Annual O&M: covered above	Priority: High EA Compliance: High
Learning Management	Learning Management is a key component of the ERP under the HR scope, however, this may be secondary to the core HR system implementation. Additionally, there isn't any current system in place. Assumption that functionality is present in HR module(s).	One-time DME: 6,000 hours Annual O&M: 2,000 hours	Priority: High EA Compliance: High

Name	Description	Cost	Notes
Performance Management	Performance Management is a key component of the ERP under the HR scope, however, this may be secondary to the core HR system implementation. Additionally, there isn't any current system in place. Assumption that functionality is present in HR module(s).	One-time DME: 6,000 hours Annual O&M: 2,000 hours	Priority: High EA Compliance: High
General HR Benefits Administration	Benefits Administration is included under the general functions under "HR", however, only voluntary benefit programs are administered by DHRD. Core medical and dental benefits are administered under EUTF using a separate system - Vitech.

Future consideration needs to be given to how a common system may benefit multiple departments (i.e. DHRD and B&F - EUTF and possibly ERS). | One-time DME: 2,000 hours Annual O&M: 2,000 hours | Status: Replace by ERP Priority: High EA Compliance: Medium |
DHRD/HRM Web Content	Department's Public and internal Web Sites (hosted by ICSD). Includes DHRD, SPIN, and HRD Community Pages. Future compliance to ESA Common Portal.	One-time DME: Pending Review Annual O&M: Pending Review	Priority: Medium EA Compliance: Low
LOB Infrastructure:			
In Progress:			
None			
New:			
None			

TRANSITION AND SEQUENCING

The T&S Plan for the HRM LOB in Figure 72 below provides the roadmap for implementation of the future state vision.
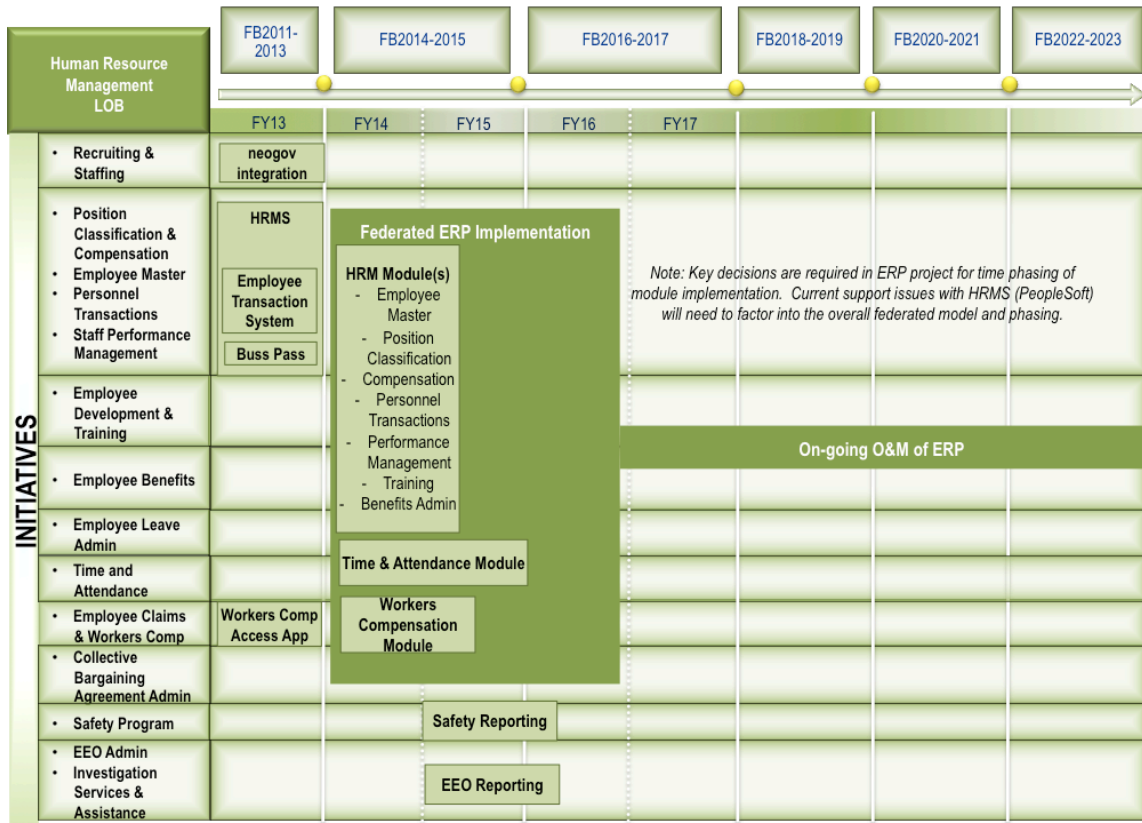
Figure 72: Human Resource Management Transition & Sequencing Plan Summary

A.2.10   PROCUREMENT

The procurement LOB provides State-Wide procurement policy, oversight, and execution for the total enterprise. Policy, oversight, and procurement execution is a centralized function. Procurement Execution is embedded in each State Department's Divisions, Agencies, and Programs.

Table 63: Procurement LOB Business Services

LOB: Procurement Service Name	Service Definition
State-wide Procurement Policy & Oversight	The procurement services provides State-wide procurement policy, oversight, and execution for the total enterprise.
Procurement Execution	Procurement execution involves the purchasing, tracking, and overall management of goods and services. This includes the procurement of physical goods, products, and capital assets to be used by the State government. Procurement Execution is decentralized and embedded within each organization.

A.2.10.1 FUTURE STATE VISION FOR PROCUREMENT

The future state vision for Procurement is to participate with the new ERP team and pursue immigration of legacy applications into the new ERP Procurement/Supply Chain functions. This will enable integration with other functional areas such as General Accounting, Tax, and State-Wide delivery of budget data to each State Department's Divisions, Agencies, and Programs.

The future state vision includes the following considerations:

- Work with the ERP strategy team to evaluate functionality to address procurement services, replace legacy applications, and provide agile reporting and status, and mobile accessibility to information regarding procurement status.

- A federated ERP will enable a modular approach to ERP function selection and integration with the State Enterprise.

- Provide a Statewide procurement system that facilitates smart buys across the state (e.g., licenses, selected solutions, pre-approved products available on demand, etc.)

The future state solutions architecture is depicted in Figure 73 below. Key features of this solution include:

- "Hawai`i Anywhere" common web and mobile user interface architecture

- "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
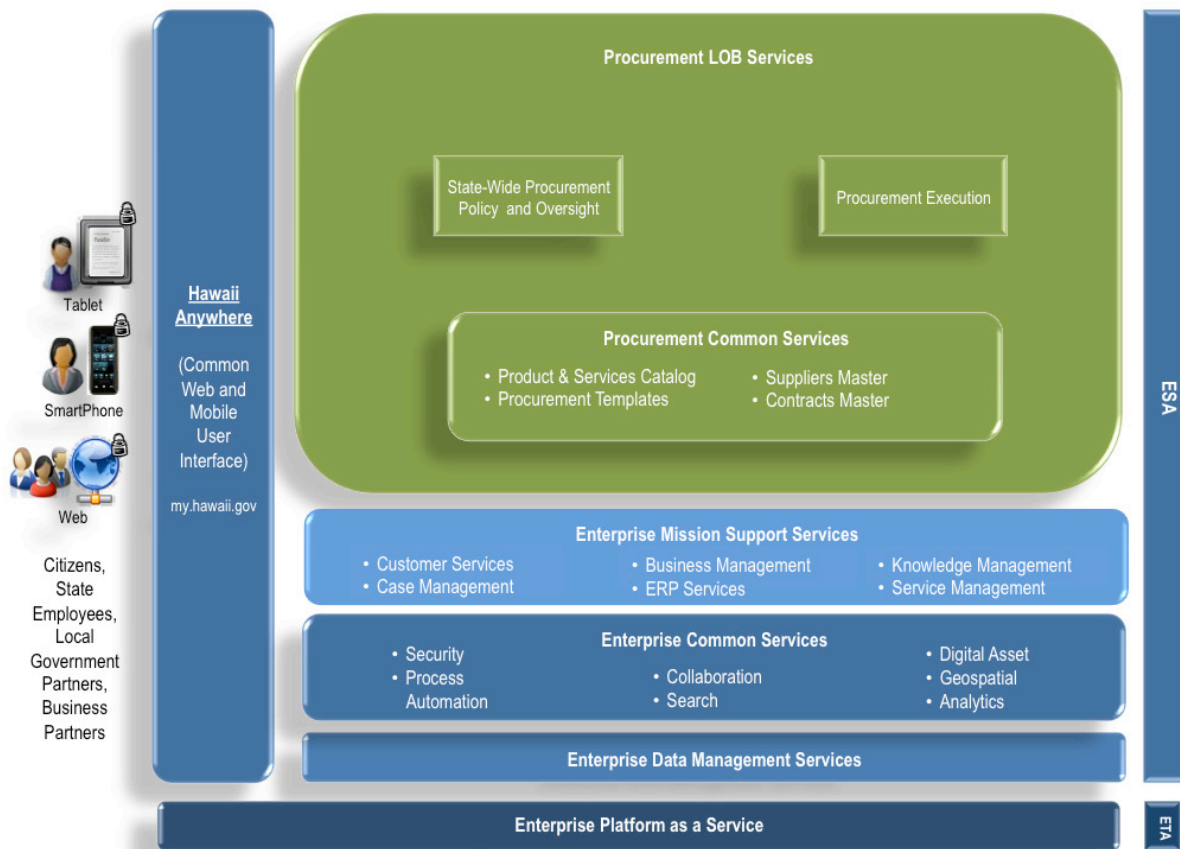
Figure 73: Procurement Future State Solutions Architecture

INFORMATION EXCHANGES

- Procurement is a cross cutting service that has information exchanges with each LOB that performs procurement transactions.

- Procurement is a central service that will be included in the new ERP initiative

- Procurement Execution is decentralized and will be integrated as part of a new ERP solution.

A.2.10.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR PROCUREMENT MANAGEMENT

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below. The primary objective is to participate with the ERP |team to plan an approach to integrate Procurement services to provide enterprise transactions.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 64 below.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

The implementation roadmap should include:

• Centralized purchasing for commodity IT is an opportunity

• Pursue ERP Procurement Modules

• Need to overhaul the procurement system to eliminate the need for a six-part carbon PO forms and use of twinax dot matrix printers in all Departments.

Table 64: Procurement LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
Production Alignment:			
Procurement Services Production Applications Portfolio	The suite of fifty (30) procurement Applications will be replaced in a future ERP Procurement application. These systems are in Operation and Maintenance and will be sustained until all are replaced by a new ERP initiative. There are an estimated additional fifty (50) embedded Procurement applications within each State Department. These estimates do not include Procurement Services in Attached Agencies.	Annual DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: Low
New:			
ERP Phase II Procurement Architecture and Project Planning	Initiate planning, perform Business Process Re-Engineering, prepare vendor specifications, evaluate and select vendor, and initiate conference room pilots	One Time DME: Effort: Pending Review Portfolio Costs are captured in the ERP Section.	Priority: High EA Compliance: High
ERP Phase II Procurement Project Life Cycle	Procurement services provide State-wide procurement policy, oversight, and execution for the total State enterprise. Procurement execution involves the purchasing, tracking, and overall management of goods and services. This includes the procurement of physical goods, products, and capital assets to be used by the State government. Procurement Execution is currently decentralized and embedded within each organization.	One Time DME: SW: Pending Review HW: Pending Review Effort: Pending Review Portfolio Costs are captured in the ERP Section.	Priority: High EA Compliance: High

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 74. The implementation roadmap should address the following considerations:

• Initiate roadmap planning to pursue a comprehensive Procurement solution to be included as part of an enterprise ERP.

• Pursue Business Process Re-Engineering to streamline processes

• Actively lead and participate in the ERP Procurement initiative to develop requirements, provide input to the ERP, and initiate pilots to configure, test and evaluate functional gaps in the new system.

• Address only must have gaps in the new product and launch technical teams to fill the gaps.
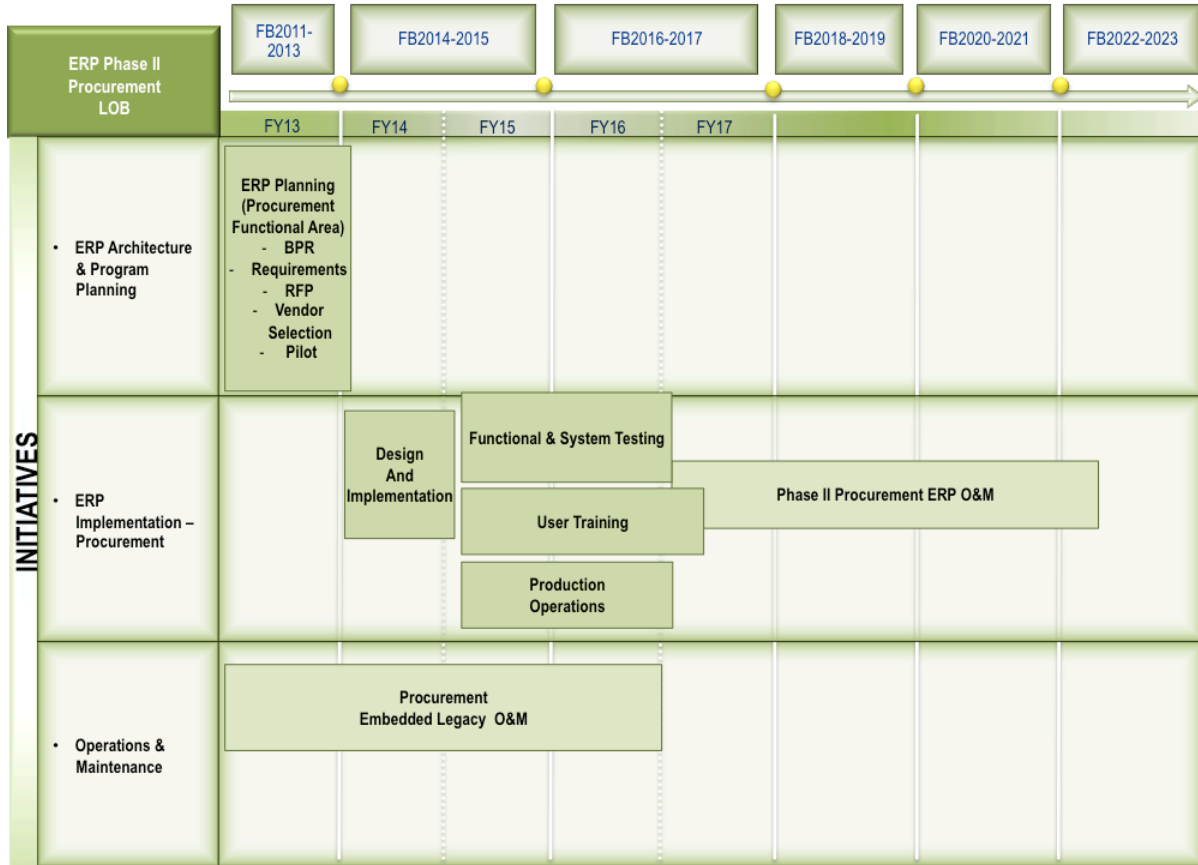
Figure 74: Procurement Transition & Sequencing Plan Summary

A.2.11   ASSET MANAGEMENT & INVENTORY CONTROL

Asset Management provides accounting support for the management of assets. Inventory Control refers to the tracking of information related to procured assets and resources with regard to quantity, quality, and location.

Table 65: Asset Management and Inventory Control LOB Business Services

LOB: Asset Management & Inventory Control Service Name	Service Definition
Asset Management	Asset Management provides accounting support for the management of assets.
Inventory Control	Inventory Control refers to the tracking of information related to procured assets and resources with regard to quantity, quality, and location.
Inventory Tracking	Inventory tracking is related to the real time status of inventory throughout the complete life cycle of an asset. This includes from the initiation of procurement, receiving, storing, delivery to the desired location, steady state status inside a using organization, and final disposition of the asset through sale or retirement. with regard to quantity, quality, and location.

A.2.11.1
FUTURE STATE VISION FOR ASSET MANAGEMENT AND INVENTORY CONTROL

The future state vision for Asset Management and Inventory Control is to provide an ERP central capability to integrate all inventory, control, and tracking of the State's assets. Subject data bases will be provided to stakeholders and constituents to enable direct read only access to required information for each Agency and underlying organizations. This new ERP system will require representation and leadership from key organization involved in asset management and inventory control.

The future state solutions architecture is depicted in Figure 73 below. Key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
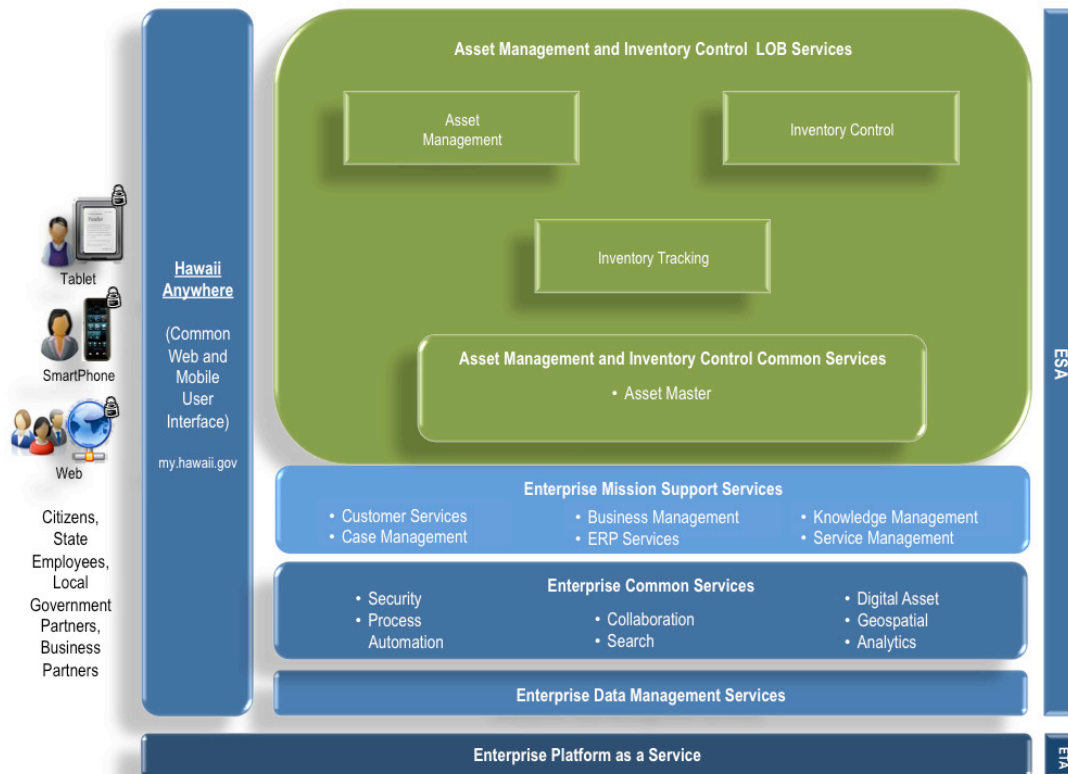
Figure 75: Asset Management and Inventory Control LOB Future State Solution Architecture

INFORMATION EXCHANGES

Asset Management and Inventory Control services cross cut most of the LOBs and will provide real time access to information and data needed to service other LOBs as well as access to for the citizens of Hawaii.

A.2.11.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR ASSET MANAGEMENT AND INVENTORY CONTROL

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below. The application portfolio for Asset Management and Inventory Control will be evaluated with regard to alignment strategies with the new Enterprise Architecture. An ERP initiative will provide most of the new functionality.

• FAIS - Fixed Asset Inventory System is an example of a system for strategic alignment.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 64 below. The new ERP working group will include representation for this service.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 66: Asset Management & Inventory Control LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
Production Alignment:			
Asset Management and Inventory Control Services Production Applications Portfolio	The suite of fifty (10) Application Management and Inventory Control Applications will be replaced in a future ERP application. These systems are in Operation and Maintenance and will be sustained until all are replaced by a new ERP initiative. There are an estimated additional fifty (50) embedded applications within each State Agency's Departments and Sections. These estimates do not include Financial Services in Attached Agencies.	One-time Annual DME: Pending Review O&M: Pending Review	Priority: High EA Compliance: Low
New:			
ERP Phase II Asset Management and Inventory Control Architecture and Project Planning	Initiate planning, perform Business Process Re-Engineering, prepare vendor specifications, evaluate and select vendor, and initiate conference room pilots.	One Time DME: SW$ HW: Effort: Pending Review Portfolio Costs are captured in the ERP Section.	Priority: High EA Compliance: High
ERP Phase II Asset Management and Inventory Control Project Life Cycle	Asset Management provides accounting support for the management of assets. Inventory Control refers to the tracking of information related to procured assets and resources with regard to quantity, quality, and location. Inventory tracking is related to the real time status of inventory throughout the complete life cycle of an asset. This includes from the initiation of procurement, receiving, storing, delivery to the desired location, steady state status inside a using Agency, and final disposition of the asset through sale or retirement.	One Time DME: SW: Pending Review HW: Pending Review Effort: Pending Review Portfolio Costs are captured in the ERP Section.	Priority: High EA Compliance: High

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 76. A comprehensive road map will provide a guide for sequencing legacy applicators and strategic alignment of services with the new EA.
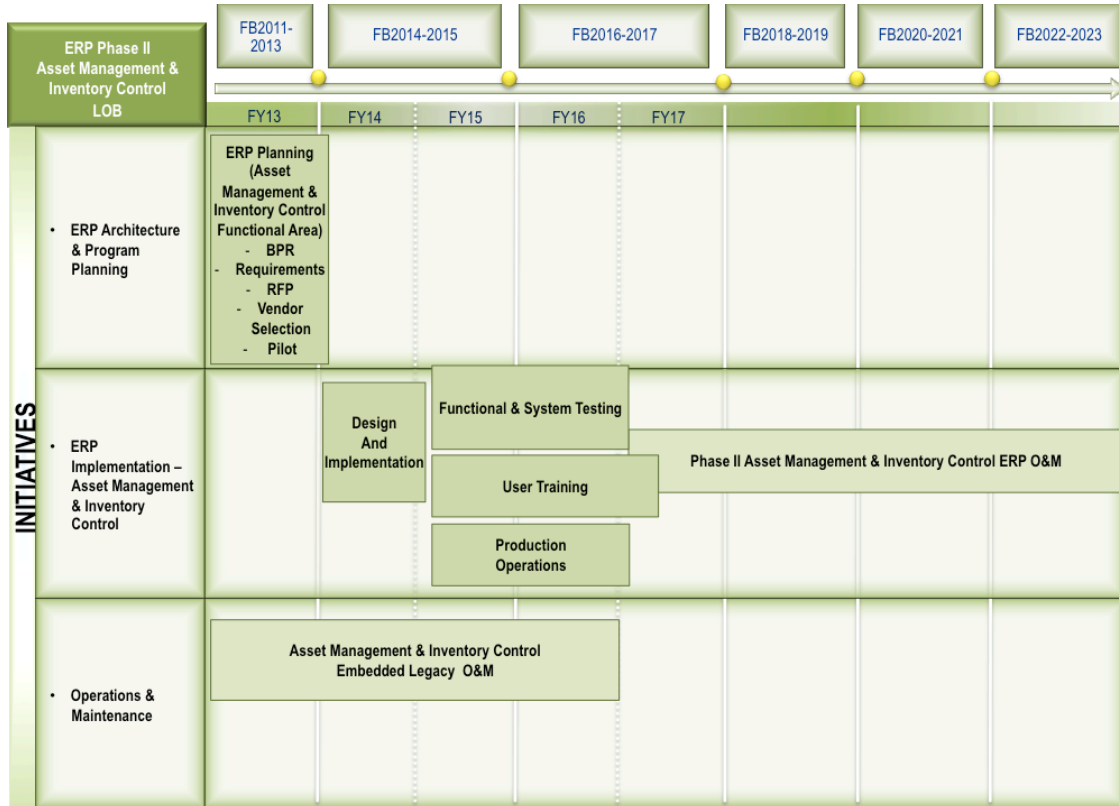
Figure 76: Asset Management & Inventory Control Transition & Sequencing Plan Summary

A.2.12   GENERAL SERVICES

The General services LOB provides provision of services that cannot reasonably be classified in any other LOB. As a normal rule, all activities reasonably or closely associated with other LOBs or sub-functions shall be included in those LOBs or Sub-Functions rather than listed as a part of general services. This LOB is reserved for central State management operations.

Table 67: General Services LOB Business Services

LOB: General Services Service Name	Service Definition
Automotive Services	Operates a financially self-supporting motor pool program by assessing fees for the acquisition, operations, maintenance, repairs and disposal of state vehicles rented by various agencies.
Custodial and Food Services	Provides custodial and food services for government facilities.
Archives Services	Ensures that past artifacts that have significant relevance and importance for the state of Hawaii are identified, cataloged, stored and made available to the public and state agencies. Provides records management policy and procedures for records retention disposition schedules of records for the state executive and legislative branch.
Parking Control	Operates a financially self-supporting parking program by assessing fees to provide and maintain parking facilities; to assign and control parking spaces for employees and the public; to direct traffic and provide security patrols in parking facilities, and to enforce parking rules and regulations.
Construction Permits and Ordinances	Oversees construction permits and ordinances within the state.
Office Services	Supports the provision of office services and personnel for the state.
Space and Facilities Leasing	Management of leases of facility and office space in non-state buildings for user agencies.
Workplace Policy	Activities required to develop and disseminate workplace policies such as dress codes, time reporting requirements, telecommuting, etc.
Facilities Management	The management of maintenance, administration, and operation of government facilities.
General Construction Management	Plans, coordinates, organizes, directs and controls a variety of engineering and architectural services for the State, including land acquisition, planning, designing, inspecting and managing construction projects, facilitating quality control, contracting, construction management, and equipping facilities and other improvements for State agencies.
Mail Services	Provides the delivery of mail to all State agencies.
Equipment & Material Moves	Plans, schedules and executes all equipment and material moves.

A.2.12.1
FUTURE STATE VISION FOR GENERAL SERVICES

Developing a future state vision for the General Services LOB will require assessing an existing set of applications to determine a disposition strategy. For example, can sets of application be strategically aligned with the new architecture by incorporating WEB based technology with a unifying user interface to select desired services? Some services may be incorporated into strategic initiatives at the enterprise level.

The future state solutions architecture is depicted in Figure 77 below. Key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
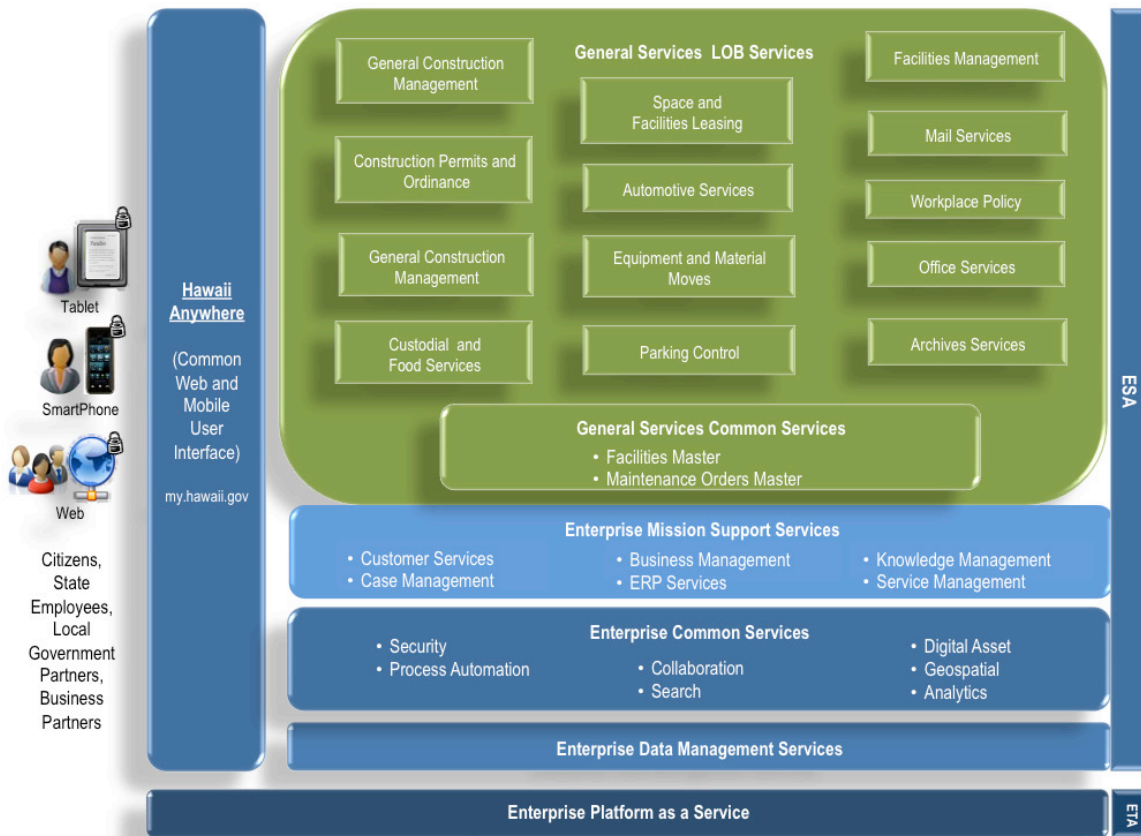
Figure 77: General Services LOB Future State Solution Architecture

INFORMATION EXCHANGES

• General Services cross cuts all LOBs and involves information exchanges to request, authorize, fund, schedule, and perform a service.

A.2.12.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR GENERAL SERVICES

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below. The application portfolio for General Services will be evaluated with regard to alignment strategies with the new Enterprise Architecture.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 68 below. The new ERP working group will include representation for this service.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 68: General Services LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
Production Applications Alignment NOTE: The applications below come from General Services' applications and represent potential cost savings and operational streamlining by moving to a common enterprise solution. Annual O&M cost for each application is estimated at "Pending Review." That represents a total of approximately "Pending Review."			
Project Tracking	Tracks project timeline and expenditures for all CIP projects managed by Public Works Division - [Access]		Replace with ERP
Building Leasing System	Tracks usage and expenditures on building leasing for State usage. - [Access]		Replace with ERP
Materials Inventory Tracking	Keeps track on all materials and supplies that are issued to work orders & projects - [RPG]		Replace with ERP
Digitized Gallery System	The Hawaii State Archives was established in 1905 and is responsible for collecting, appraising, preserving, and making available to the public Hawaiian government records of enduring value.		Records Management Upgrade
Hawaii Candidate Filing System	The Campaign Spending Commission (CSC) is the state's political ""watch dog"" on campaign spending. An internet browser based system will be developed for the CSC to ensure that candidate campaign spending reports are filed timely, thoroughly and without.		Replace with ERP
Hawaii Corporate Filling System	House Bill 2003 requires corporations to file a report for contributions made to candidate or candidate committees that total more "Pending Review" per two (2) year election period.		Replace with ERP
Hawaii Non-Candidate Filing System	The Campaign Spending Commission is the state's political ""watch dog"" on campaign spending. This project will utilize the latest technology in communication to ensure campaign spending reports are filed timely, thoroughly and without error. It will al		Replace with ERP
Records Reporting System	"Contains the names and descriptions of all ""public"" reports."		Replace with ERP
Forever Honolulu Registration Form	https://russellc.wufoo.com/forms/honolulu-forever-young-nomination-form/	Annual O&M: Pending Review	Virtualization Servers & Web Apps
Kauai Sewer Payments	http://payments.ehawaii.gov/kauaisewer (developed, supported, and hosted by HIC)	Annual O&M: Pending Review	Virtualization Servers & Web Apps
Campaign Spending Commission	hawaii.gov/campaign (hosted by ICSD)	Annual O&M: Pending Review	Web Pages

Name	Description	Cost	Notes
Hawaii State Foundation on Culture and the Arts	hawaii.gov/sfca (hosted by ICSD)	Annual O&M: Pending Review	Web Pages
Public Works FTP	www4.hawaii.gov/publicworks (hosted by ICSD)	Annual O&M: Pending Review	Web Pages
Public Works Division	hawaii.gov/pwd (hosted by ICSD)	Annual O&M: Pending Review	Web Pages
Aloha Stadium	alohastadium.hawaii.gov (hosted by ICSD)	Annual O&M: Pending Review	Web Pages
Department of Accounting and General Services	hawaii.gov/dags (hosted by ICSD)	Annual O&M: Pending Review	Web Pages
Office of Elections	hawaii.gov/elections (hosted by ICSD)	Annual O&M: Pending Review	Web Pages
Oahu Metropolitan Planning Organization	hawaii.gov/oahumpo (hosted by ICSD)	Annual O&M: Pending Review	Web Pages
Maximo	Inventory for Grant delivered equipment.City & County of Honolulu.	Annual O&M: Pending Review	Virtualization Servers & Web Apps
AIR-OM Materials and Supplies Inventory System	Provide material and supplies inventory control for AIR-OM warehouse.		Replace with ERP
AIR Controlled Item Disposal	Lotus Notes database application used to process Controlled Item Disposals.	Annual O&M: Pending Review	Virtualization Servers & Web Apps
79 S Nimitz	This database contains a roster of employees in the Harbors Division located at 79 S Nimitz Hwy and other locations. This roster is also used to create ID badges for the employees of this building	Annual O&M: Pending Review	Virtualization Servers & Web Apps
869 Punchbowl	This database contains a roster of employees in the Aliiaimoku Building located at 869 Punchbowl Street. This roster is also used to create ID badges for the employees of this building.	Annual O&M: Pending Review	Virtualization Servers & Web Apps
ADMIN-Punchbowl CSS Reservation	Domino Reservation COTS template for meeting room in the CSS Library.	Annual O&M: Pending Review	Virtualization Servers & Web Apps
ADMIN-Punchbowl DIR Reservation	Domino Reservation COTS template for the Director's Conference Room	Annual O&M: Pending Review	Virtualization Servers & Web Apps
Harbors Conference Video Reservation	The Resource Reservation database is an application designed to allow workgroups to schedule and reserve physical resources such as conference rooms or office equipment.	Annual O&M: Pending Review	Virtualization Servers & Web Apps
HAR-Kauai District Reservations	The Resource Reservation database is an application designed to allow workgroups to schedule and reserve physical resources such as conference rooms or office equipment.	Annual O&M: Pending Review	Virtualization Servers & Web Apps

Name	Description	Cost	Notes
HAR-M Reservations	The Resource Reservation database is an application designed to allow workgroups to schedule and reserve physical resources such as conference rooms or office equipment.	Annual O&M: Pending Review	Virtualization Servers & Web Apps
HWY Kapolei	This database contains a roster of employees in the DOT Kapolei Building located at Kapolei, Hawaii. This roster is also used to create ID badges for the employees of this building.	Annual O&M: Pending Review	Virtualization Servers & Web Apps
HWY-C Car Reservation	Reservation application	Annual O&M: Pending Review	Virtualization Servers & Web Apps
HWY-C Conference Room Reservations	Reservation application	Annual O&M: Pending Review	Virtualization Servers & Web Apps
HWY-Oahu District Reservations	Reservation application	Annual O&M: Pending Review	Virtualization Servers & Web Apps
Wabits	Contracts regarding office furnishings, etc. for DOT	Annual O&M: Pending Review	Virtualization Servers & Web Apps
Agriculture Motor Pool Management System (AMS)	Keeps tracks of department vehicle information. Includes maintenance and usage information. (APPX Client/Linux Server)	Annual O&M: Pending Review	Virtualization Servers & Web Apps
In Progress:			
None			
New: Interim Solutions: Upgrade the following hardware with an i-Series IBM processor. Long Term Solution will be to replace these applications with the new ERP.			
Vehicle Repair Order	Tracks vehicle repair parts, parts orders, interface to Motor Pool Sys. - Interim - Upgrade with IBM iSeries. This upgrade will also host the other IBM based applications. This is an interim solution until the new ERP is deployed.	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 3
Work Order	Generates minor repairs and emergency work orders for public buildings and libraries - [RPG] Interim Upgrade with IBM iSeries - covered by one procurement.	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 3
Project Tracking/Priority	Tracks statewide public buildings and libraries projects (includes backlog) - [RPG] Interim - Upgrade with IBM iSeries – Covered by one procurement.	One-time DME: Pending Review On-going annual O&M: Pending Review	EA Compliance: 3 Priority: 3
LOB Infrastructure:			
In Progress:			
None			
New:			
None			

TRANSITION AND SEQUENCING

The current applications in General Services cover a broad spectrum of functionality and require additional analysis for final future dispositioning on the portfolio. Several considerations should guide the dispositioning:

• A significant subset of applications center in the General Facilities Management business area. This industry has significant packages available for integrated automation. One example would be Maximo, which is already being used. This area like many within the State will have cultural challenges in removal of the highly customized applications that performs functions exactly as the user community expects as opposed to deploying an off-the-shelf package.

• The Records Management application suite in support of the Hawai`i Archives will be replaced/upgraded through a Records Management initiative.

• Conference room scheduling applications should be replaced through the Collaboration & e-mail system upgrades.

• Support of the Automotive Management and Parking Control will be evaluated for a level of inclusion in the ERP, but may likely remain as custom applications.

A.2.13   INFORMATION TECHNOLOGY MANAGEMENT

The purpose of the Information Technology Management LOB is to assist state organizations in the effective, efficient and convenient delivery of programs and services to the public through business process reengineering and information technology services.

Table 69: Information Technology Management LOB Business Services

LOB: Information Technology Management Service Name	Service Definition
IT Infrastructure Management	Involves the planning, design, and maintenance of an IT Infrastructure to effectively support automated needs (i.e. platforms, networks, servers, printers, etc.).
User Support	Provides help desk services to the users of Enterprise applications.
Applications Development	Supports all activities associated with the in-house design and development of software applications.
Applications Operations & Maintenance	Supports all activities associated with the operations and maintenance of in-house designed software applications. Includes Lifecycle/Change Management that involves the processes that facilitate a smooth evolution, composition, and workforce transition of the design and implementation of changes to agency resources such as assets, methodologies, systems, or procedures.
Systems Analysis & Design	Performs system analysis, engineering and design of business systems.
IT Governance, Policy, & Oversight	Influence and determine decisions, actions, business rules and other matters within the IT organization managing the policies, guidelines, and standards regarding systems development, acquisition, and maintenance of information management to facilitate organizational standardization and coordination of information collection, storage, and dissemination, and destruction.
Cyber Security	Involves all functions pertaining to the securing of the State's information and information systems from unauthorized access, use, disclosure, disruptions, modification, or destruction, through the creation and definition of security policies, procedures and controls covering such services as identification, authentication, and non-repudiation.

A.2.13.1
FUTURE STATE VISION FOR INFORMATION TECHNOLOGY MANAGEMENT

The Office of Information Management and Technology (OIMT) in leading the State in information resource and technology management will establish a culture of innovation throughout the State government. This strategy includes the key components of innovation and open government – transparency, engagement, and collaboration, as well other facets such as partnerships, entrepreneurship, idea generation, creative funding strategies, innovative science and technology, prizes, challenges, and grants.

The future state solutions architecture is depicted in Figure 78 below. Key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.
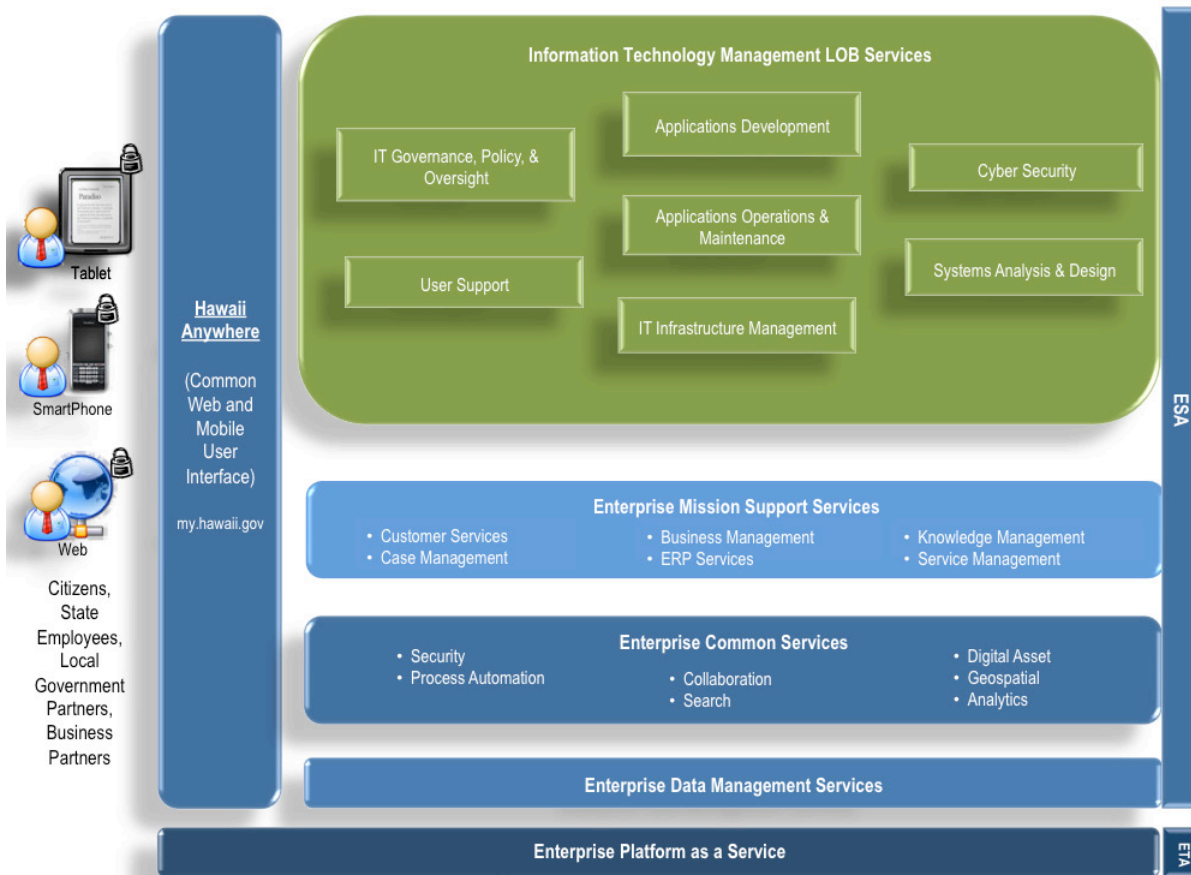
Figure 78: Information Technology Management LOB Future State Solution Architecture

INFORMATION EXCHANGES

Information Technology Management has touch points with all organizations through the following:

• Business process reengineering & optimization

• Enterprise Architecture

• Cyber Security

• IT procurements

• IT service and support requests

• IT change management

• System & application implementation life cycle phases – requirements & design

A.2.13.2
TRANSITION & SEQUENCING PLANNING SUMMARY FOR IT MANAGEMENT

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

INITIATIVES

The needed initiatives for both LOB solutions and infrastructure are outlined in Table 70 below. The new ERP working group will include representation for this service.

NOTE: Future LOB solution initiatives should adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. Future LOB infrastructure solution initiatives should adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 70: Information Technology Management LOB Investment Initiatives

Name	Description	Cost	Notes
LOB Solutions:			
In Progress:			
Business Services	Services and tool support for operations for the support of areas such as EA, portfolio management, System engineering, business process reengineering, and other business support activities for the State.	Pending Review	Includes labor and tools
Enterprise Services	Consulting and contracting services and personnel for support of State enterprise initiatives that improve government across multiple LOB's and Department in areas of IT and all associated functions of IT.	Pending Review	
Security	Labor that is for the development of IT security posture for the State and Departmental guidance in adherence to a State security posture for IT.	Pending Review	
Innovation Program	Hawaii Innovation Program will undertake a series of projects as described below. Some of these projects are intended to stand up various components of the Program, while others are innovation projects that will eventually be transferred out of the Innovation Program and become either stand-alone programs or enterprise services.	Pending Review	
New:			
ERP	The State is moving towards an ERP system as an enterprise solution for various aspects of business services such as Human Resources, Financial Management as well as other enterprise business functions.		Cost are covered in ERP section
Health IT	The Health IT Business Segment provides an overarching view of the Health Transformation initiatives across the State of Hawaii and embodies the health transformation vision over the next 10 years. This transformation includes the requirements for the Affordable Care Act (ACA), Medicare/Medicaid, insurance connector, and analytics needed by the state and the state's health care delivery system. It also includes the governor's to transform health information		Costs are covered in Health IT section

Name	Description	Cost	Notes
	technology to improve the health care delivery to Hawaiian citizens by leveraging the State's new IT initiatives as well as the initiatives hosted by private sector organizations and funded by Federal grants.		
Tax Modernization	To assist the Revenue Collections line of business as well as the Department of Tax with their migration from ITSM to a new tax system for the State.		Costs are covered in the Revenue Collection section
LOB Infrastructure:			
In Progress:			
ICSD	Support for the ongoing support of the NGN and application hosting and high speed printing for the State.	Pending Review	
New:			
Hawaii Broadband	An incident command information system to support public safety and other incident responders. Leverages public safety broadband initiatives (firstNet). This system will include field /mobile access devices that provide situational status reports to enable real-time data collection at remote sites that integrates across state agencies. Public Safety and Disaster Response information systems.		Cost are covered in the broadband initiative for Disaster Management

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 79.
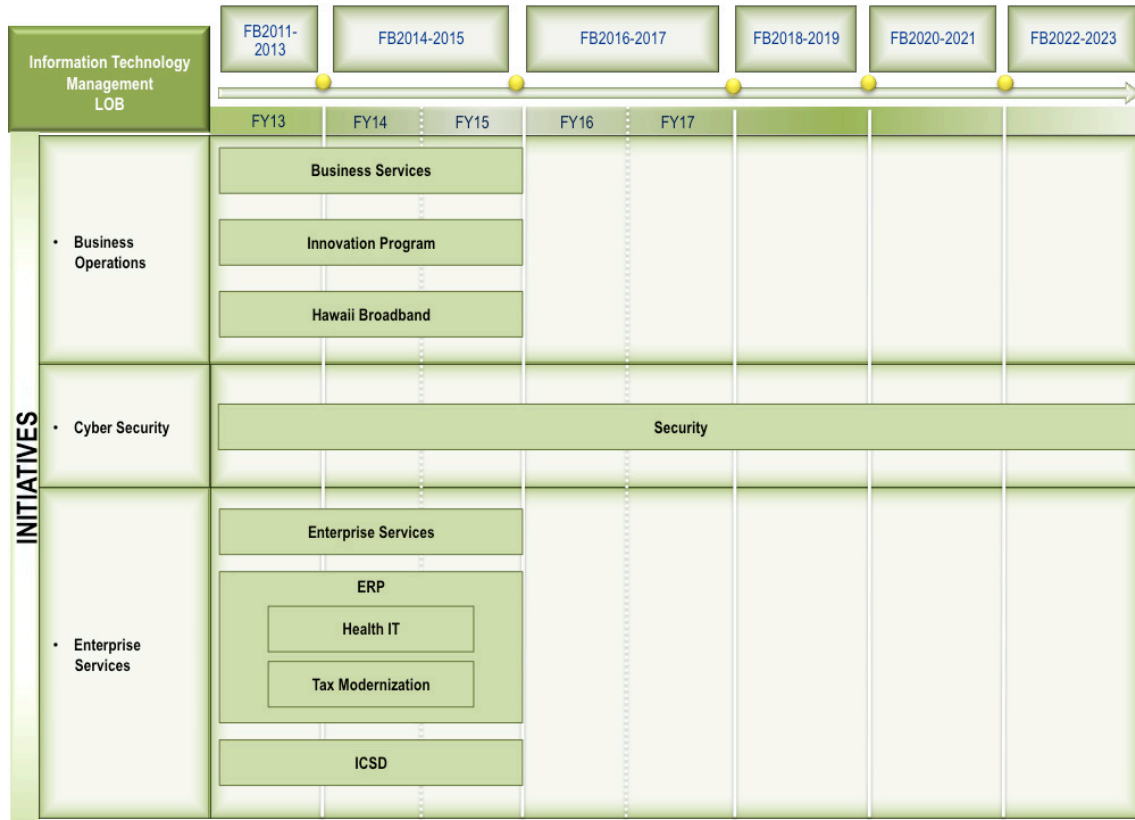

Figure 79: Information Technology Management Transition & Sequencing Plan Summary

HEALTH IT

Healthcare services delivery and public health functions of the State are undergoing a transformation to empower better patient care. The Governor's Healthcare Transformation Initiative is coordinating plans for a healthier Hawai'i. Aligning with Federal reforms under the Patient Protection and Affordable Care Act (ACA), Hawai'i seeks to lead State, Federal, and private sector resources toward the national Triple Aim goals of improving care quality for individuals, lowering costs, and creating better health for the entire State population.

Envisioning a more effective, efficient, patient-focused healthcare system, the State Transformation Plan includes a four-point strategy of innovations for health via:

• Delivery system improvements

• Payment reforms

• Health IT

• Healthcare purchasing

The Health IT vision links the State to providers, hospitals, indirect health services, and health-related organizations, utilizing quality and performance measures to create a learning health system that creates better health outcomes for all. Hawai'i seeks systemic improvements in public health through measuring health status, performing assessments, and the tracking of preventions, promotion, and outcomes. Utilizing statewide efforts encouraging the use of Electronic Health Record systems and the secure exchange of information, Health IT innovation is the foundation for Accountable Care. Clinical information sharing will improve care coordination, reduce duplication and waste, empower patient engagement in their health, and enable public health analytics to shape policy decisions that will improve the health system.

A.3   STRATEGIC BUSINESS SEGMENTS

The State currently has two initiatives that are underway which have been identified as strategic business segments – Health IT and an Enterprise Resource Planning (ERP) system. These areas include multiple LOBs that require a level of tight integration across their business processes. The segment architectures for these areas are outlined below.

A.3.1   HEALTH IT BUSINESS SEGMENT

The Health IT Business Segment provides an overarching view of implementing the Hawaii Health Transformation vision as it moves into initiatives over the next 10 years. This transformation includes requirements for the Affordable Care Act (ACA), new Medicare/Medicaid initiatives such as Meaningful Use of electronic health records, insurance reforms, and health-related data analytics needed for the delivery system and statewide public health. The Governor's Hawaii Healthcare Transformation Initiative (HHTI) aims to leverage state, Federal, and private sector initiatives to improve the wellness of all Hawaiian citizens. The use of information technology has revolutionized the American economy and advances in Health Information Technology offer an important opportunity to improve the Hawaiian healthcare system. Hawaii and the nation are facing rising healthcare costs that outpace inflation. State and Federal policies to encourage health IT implementation promise higher levels of health system efficiency and effectiveness. The national Triple Aim goals of better care, better health, and lower health costs require a foundation in data-driven system approaches to healthcare. Promoting this patient-centric vision for care across the state and furthering quality improvements are public health goals leading to enhanced wellness for all of Hawaii. Constructing resilient, interoperable Health IT systems builds a solid foundation to improve care quality, create a healthier population, and deliver better health outcomes while reducing healthcare costs.

A.3.1.1   CURRENT STATE FOR HEALTH IT

The current picture of Health Information Technology in the State of Hawaii among all stakeholders internal and external to state government is depicted in Figure 80.

The Health IT environment comprises many separate interactions sharing clinical and claims data. These many, redundant data interactions comprise manual, semi-automated, and in limited cases, fully automated systems performing data transforms and data sharing to facilitate healthcare services delivery. Current data flows operate independently, limiting opportunities for information sharing between departments and partner organizations. Health care is constrained, as doctors are inhibited by limited information available in real-time at the point of care. Patient care additionally suffers from duplicated information flows, increasing health system costs. There are significant opportunities to improve the healthcare system through Health IT. Opportunities include: increasing organizational synchronization, simplifying care coordination, activating citizens to engage in their own health decisions, eliminating duplication of information, improving information quality and response times, advancing data on care quality, and eliminating manual processes thru automated interfaces.
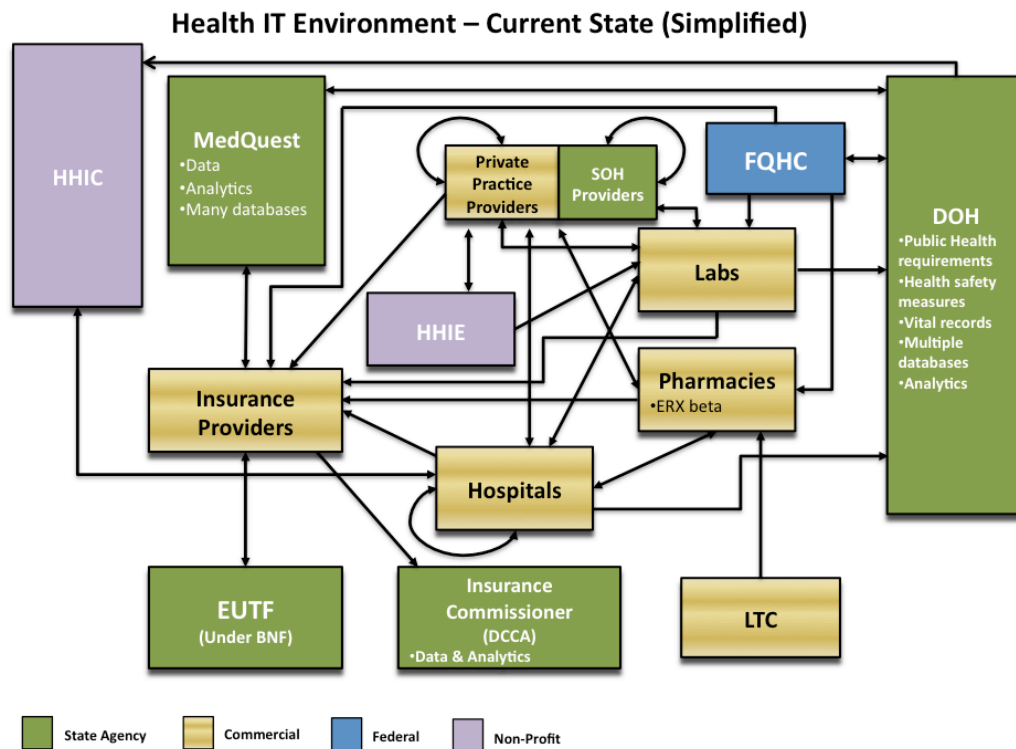
Health IT Environment – Current State (Simplified)

Figure 80:Figure 80: Current State of Health Information Technology in Hawaii among All Internal and External Stakeholders, Simplified

HHTI ROADMAP

The Governor's Hawaii Healthcare Transformation Initiative aims to develop and operationalize plans for improving local health. As a top healthcare purchaser for employees, retirees, and MedQuest enrollees, the State is leading strategic health system change. Leveraging the State purchase of healthcare for one-third of the population, the Transformation Plan will shape State, Federal, and private sector resources towards a more patient-focused, responsive learning health system. Hawaii's four-point strategy, as depicted in Figure 81 below, focuses on:

1. Changes needed in our healthcare delivery system aimed at improving and coordinating care for patients with the greatest and most expensive needs

2. Innovative payment models that reimburse for outcome improvements in our healthcare delivery system, which reduce costs while improving quality and satisfaction.

3. Making better use of health information technology including electronic health records and the exchange of health information, and using health data to improve care and reduce medical errors, waste, and abuse.

4. Leveraging our status as healthcare purchaser for one-third of the State's population to rapidly achieve the innovations we've identified above.
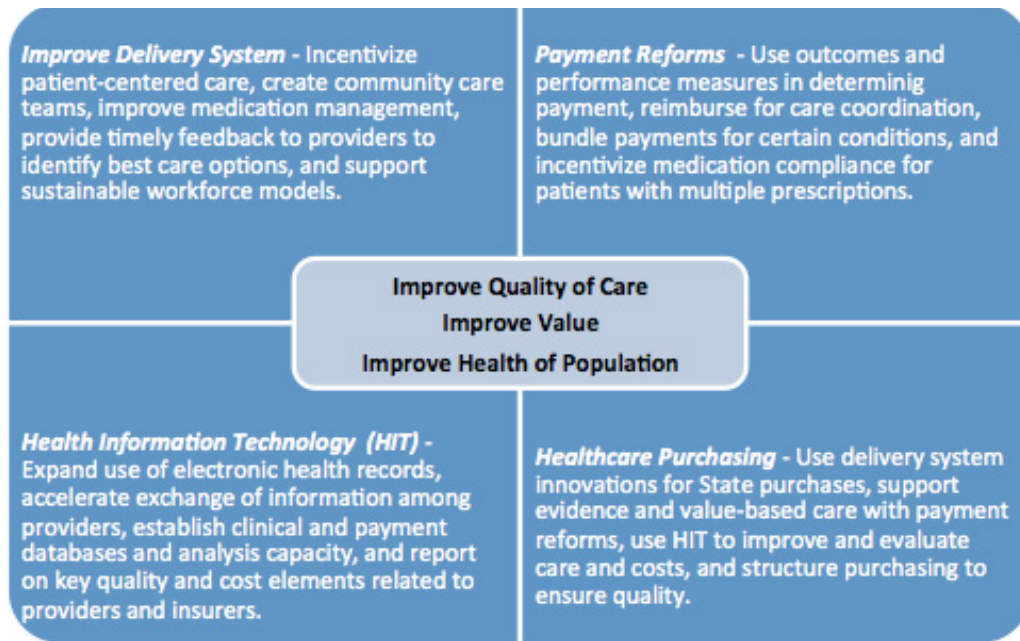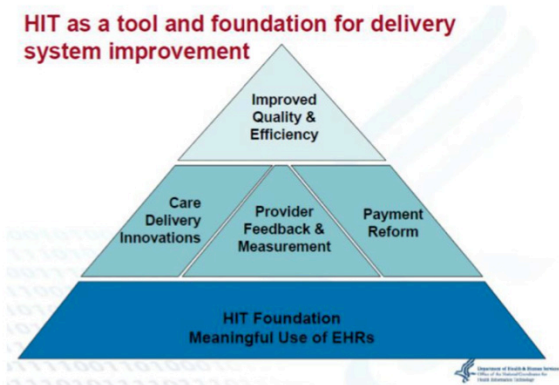
Figure 81: Governor's Hawaii Healthcare Transformation Initiative Four Point Strategy

Health IT is the foundational resource for systemic healthcare improvement, and is therefore critical to implementing state health strategy. Capitalizing on Federal reforms and the Triple Aim goals set out in national health policy, the state is creating a vision for a healthier Hawaii. Aligning with federal efforts, Hawaii seeks to empower patient access to their own health information, provide doctors with incentives for electronic medical record systems, cooperatively work with the delivery system to shape new payment models, and utilize reporting of systematized health data to improve citizen health. Using nationally-identified health and quality measures for patient interactions, providers, insurers, and the system, healthcare transformation will lead to better health outcomes. Information flow across State agencies, affiliated health organizations, providers, hospitals, insurers, and labs is critical to reaching the care, health, and cost goals for all of Hawaii. Specific long-term Health IT goals include: expanding the use of

Source: Federal Department of Health and Human Services

electronic health records, promoting information exchange among providers, facilitating the operations of a statewide health data repository, and utilizing enhanced data analysis to perform health assessments for citizens and the system. These aims have the intent of driving public health gains for all Hawaii residents through transparent quality and cost reporting on providers, hospitals, insurers, and the entire healthcare system. The enhanced use of Health IT has the potential to improve care coordination, enhance inter-agency citizen services, reduce miscommunication leading to medical errors, decrease waste, and improve patient health outcomes over time.

In order to achieve the optimum results and the highest benefit to the citizens of Hawaii, partnership and coordination between State government departments, agencies, officers, and the private sector – providers, hospitals, non-profits, pharmacies, labs, etc. – is absolutely essential. Maintaining this high level of collaboration will continue to be a challenge to all participants in Health IT, as it involves transformation that aligns diverse systems, disparate databases, and collective health goals. This system-wide transformation is akin to the past decade's transformation of the banking industry thru government regulations and private sector financial institutions. This change created world-wide access to banks through ATMs, automatic deposits, internet banking, and Smart Phone banking. Complex system transformation of this magnitude, across a diverse set of communities and stakeholders will take time. Needed change will involve new regulations, new business processes, new data sharing and transformation strategies, and new automated systems.

Health IT within the state government involves the following departments and lines of business:

- Department of Health (DOH) - Public Health

- Department of Human Services (DHS) - Human Services

- Department of Commerce and Consumer Affairs (DCCA) - HI Insurance Industry Oversight (HIDS) and Professional & Vocational Licensing (PVL) LOBs

- Department of Public Safety (PSD) - Correctional Activities/ Public Safety

- Department of Education (DOE)

- University of Hawaii (UH) - Higher Education

- Employees Union Trust Fund (EUTF) (attached to BNF).

The roles and responsibilities of each stakeholder are outlined in Table 71 below. In addition, the OIMT will provide guidance through management of the Health IT Working Group, State IT infrastructure projects, and potentially manage Health IT grants programs. Health IT entities that are external to the

state government are the following non-profits: Hawaii Health Information Exchange (HHIE) Hawaii Island Beacon Project, Hawaii Health Connector (HIX), Hawaii Health Information Corporation (HHIC), Hawaii Health Systems Corporation (HHSC), and hospitals, providers, health insurers, labs, and pharmacies across the state. Each of the leading stakeholders and their roles from the State's perspective are described in Table 71 and detailed in the following paragraphs. In addition, the systems for each state health-related department are illustrated via "as is" and "to be" diagrams in supplemental addendums. This plan includes the Health IT transition and sequencing plan of initiatives required by OIMT to coordinate and facilitate achieving a successful "to be" vision over the next 10 years. An essential element to assist with completion of the external initiatives is the establishment of a state Health IT grants program. In the near future, it will be determined which State organization is best suited to manage this grants program. Finally, the Attorney General's office will provide guidance regarding legislative and policy changes that may become necessary to achieve the State's Health IT goals.

Table 71: Health IT Stakeholders Roles & Responsibilities

Health IT Stakeholder/LOB	Business Services	Health IT Roles & Responsibilities
Internal to Hawaii State Government		
OIMT	Information Technology Infrastructure Management, IT Governance, Policy & Oversight, Systems Analysis & Design	Provide IT infrastructure support (such as, network, cyber security, cloud, and other enterprise wide services), Provide governance and policy development & oversight, and Systems Analysis & Design as needed. In addition, OIMT will facilitate the Health IT Working Group.
DOH/ Public Health	Health Services for at Risk Underinsured Populations, Monitoring Health Events and Health Forecasting, Emergency Preparedness and Response, Health Promotion and Chronic Disease Prevention	Support DOH health information systems and interfaces for Public Health systems; participate in Health IT Working Group meetings and strategic planning meetings with external stakeholders such as HHIE. Facilitate State capacity for health data aggregation and analysis to direct population health assessments.
DHS/Human Services	Human Services Case Management, Medical Assistance, Financial Assistance	Upgrade MedQuest systems, Hawaii Automated Welfare Information System (HAWI) and Hawaii Prepaid Medical Management Information System (HPMMIS) to use the State's HHIE MPI/MPD Interfaces; participate in Health IT Working Group meetings and strategic planning meetings with external stakeholders such as, HHIE.
DCCA/Commerce and Consumer Affairs	HI Insurance Industry Oversight	Upgrade the HIDS to use the HHIE MPD interface.
	Professional & Vocational Licensing	Upgrade Professional Licensing (PVL) System to use HHIE MPI interface.
PSD/Correctional Activities/ Public Safety	Inmates Health Care Program, Community-based Mental Health Programs	Upgrade existing health management systems for the inmate population to meet federal mandates of EMR meaningful use.

Health IT Stakeholder/LOB	Business Services	Health IT Roles & Responsibilities
DOE/Education	Primary, Secondary Education	Integrate student health system with Public Health for EMR.
UH/Higher Education	Higher Education	Maintain existing EMR and interface with the state as needed.
EUTF		Upgrade the EUTF System to provide automated interfaces to DOH eDeath and DLIR Disability Compensation Information System (DCIS).
HHSC		Upgrade systems to use the HHIE MPI.
External to Hawaii State Government		
HHIE		Provide to the state, strategic and tactical planning to assist the State with its implementation of MPI/MPD; Participate in Health IT Working Group meetings and strategic planning meetings with other external stakeholders as required.
HHC (HIX)		Handle insurance information exchange start up. Continue to implement and improve the Hawaii Health Insurance Exchange and assist in broadening its user base.
HHIC		Provide analytics to the healthcare delivery system and State agencies.
Beacon		Complete Federally-funded health IT initiatives and provide lessons learned to the Health IT Working Group and other State entities as needed.

A.3.1.2   FUTURE STATE VISION FOR HEALTH IT

The vision for Health IT in the State of Hawaii is illustrated in Figure x and provides a high level, simplified view of what can be accomplished. The flows indicate the kinds of data that would be provided to each of the stakeholders both internal and external to the state. The central assumption is that all data would be pushed or pulled as needed by each stakeholder. Data flows will enhance the health of all Hawaii citizens, improving the cost and quality of healthcare, through a heightened focus on preventive primary care via the following:

• Making clinical data available to all providers as needed to obtain a comprehensive health record for all patient diagnoses and treatment history independent of providers visited. This includes promoting Federal goals such as the Meaningful Use program to incentivize Electronic Health Record adoption.

• Reducing the percentage of patients lost to follow-up care, thereby increasing health system effectiveness. This will be achieved in part through the use of chronic condition

Registries to enable care extenders and providers to deliver more effective primary care.

• Empowering social services and health system use to ensure all citizens receive needed services seamlessly without gaps in care.

• Engaging citizens to become active and empowered patients, invested in learning about health conditions and improving their wellness.

• Facilitating Hawaii-based statistical analysis of all state health resource usage to aid in healthcare system evaluation, public health awareness campaigns, and direct health services interventions.

• Creating a learning health system that responds to patients needs and efficiently delivers effective health services.

• Reducing the cost of new automated systems by establishing standard interfaces between organizations and their disparate systems.

In Figure 82, the Health IT vision is described, revolving around the Hawaii Health Information Exchange's (HHIE) gateway interface to needed information through a Statewide Community Master Patient Index (CMPI) and Master Provider Directory (MPD). Utilizing these core exchange functions, each health-related State agency will tie into the CMPI through interfaces and agency-level Enterprise Master Patient Indices (EMPI). This vision links the state through the trusted HHIE network to hospitals, doctors, health centers, and indirect

service providers. Patient-centered health services drive the health transformation vision. Citizens will view the healthcare system through direct patient-provider interactions, empowered by new tools for systemic health data on quality, cost, and effectiveness. A patient will build their comprehensive health record, over time increasing the quality of services they receive. The My.Hawaii.gov portal will enhance patient knowledge and function as a transparent, easily accessible resource for all citizen-facing state information on health. In the Health IT
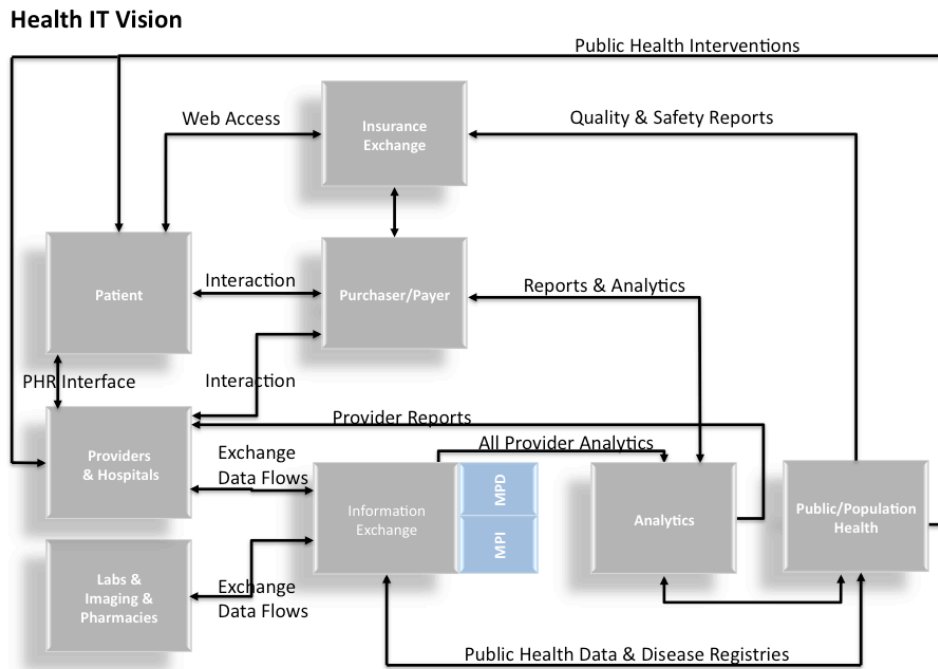

Figure 82: Health IT Vision with the Hawaii Health Information Exchange's gateway interface through a Statewide Community Master Patient Index (MPI) and Master Provider Directory (MPD)

vision, system innovation is driven by quality with a foundation in evidence-based medicine to deliver better patient outcomes. All direct and indirect care providers, hospitals, insurers, and state health agencies will orient to improve health services to the citizens of Hawaii.

There are several crucial areas of strategic emphasis critical to achieving the health transformation vision. Significant factors to be addressed include identifying relevant statewide policies and legislative changes necessary for health transformation implementation. Facilitating the health vision further requires defined public perception strategies to effectively communicate the benefits of health system changes. Other critical factors include:

• Sustaining the operational capabilities of the HHIE. Current funding is Federal-grant based, with a limited time horizon. State government must further the ongoing discussion of solutions required to ensure that the HHIE will continue to provide crucial Information Exchange functions.

• Demonstrating the benefits to the state and delivery system players of electronic health record systems. The value to statewide public health of comprehensive EHR's must become clear to providers and all health system participants, including patients. Working alongside state partner organizations, the state must achieve the critical mass necessary for reaching envisioned care coordination and the Triple Aim health goals.

• Enhancing capabilities for health analytics across the state, utilizing existing organizational partners such as HHIC and similar partners to coordinate and measure health statewide. The state must promote advanced analytics for care, population health, and research in order to reach the optimum results of a linked, learning health system.

• Coordinating the implementation of highly useful interfaces. The state is committed to working on the parallel development of critical Health IT interfaces between state agencies and the Health Connector and HHIE. These departmental system interfaces will function around a core State Hub for

Electronic Data Interchange, enhancing secure information flows between state lines of business. These efforts must be advanced to cooperatively align state health functions with Federally-funded health infrastructure partners, mindful of National time schedules.

- Establishing universally agreed standards for minimum datasets. To empower accurate and timely system-wide reporting on quality and costs, the State and affiliated health resource organizations must utilize common data standards and fields for collected data.

- Coordinating the establishment of contracts to handle organizational legal liability and privacy policies for ongoing security and access needs.

The future State vision will correct some of the following deficiencies:

- Disparate databases, manual interfaces, delayed notifications, duplication of records, and data ownership issues.

- Confidentiality and security are serious concerns for electronic health records therefore; enterprise security systems must be demonstrated as reliable, tracking access and performing system security audits. Systems that share information must be upgraded and designed to meet the progressing requirements of Meaningful Use while protecting the information by role based access and need to know via institutionalized security policies. Additionally, the systems must adhere to the Code of

Federal Regulations (CFR) - 42 CFR Part II for confidentiality of client records of alcohol, substance abuse clients and HIPAA privacy regulations regarding access to health records and duration of access.

The IT needs for Health IT envisions interfaces between State government and private sector health organizations, utilizing the most current medical information, EHR, software tools and technologies. The future state solutions architecture is depicted in Figure 83 below. Key features include:

- A secure mobile environment that fully supports providers, for example, providing mobile clinical device access to a patient's health records maintained by the State to enhance physician understanding of a patient's comprehensive health – future state implementation depends on the Hawaii Anywhere vision – the common user interface supporting any access device.

- A near paperless environment supported by reliable privacy and security services that provide regimented access to needed information– future state implementation depends on the enterprise digital asset (document) management service, and the enterprise security service providing role-based access control and the enterprise data management services providing data/information security markings.

- The use of digital signatures, digitized case files, storage and retrieval services that facilitate the paperless vision – future state implementation depends on the enterprise digital content management service.
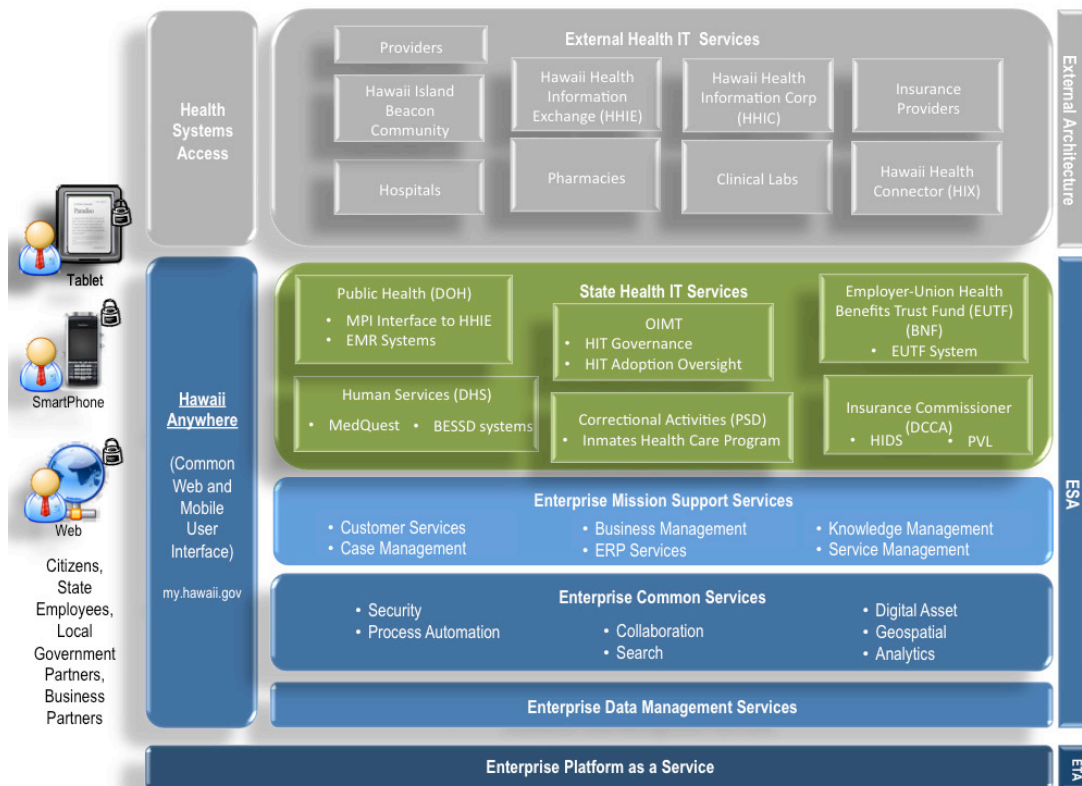

Figure 83: Health IT Future State Solutions Architecture, Notional

INFORMATION EXCHANGES

Health IT interfaces with other Departments performing health related services in the State. Currently these are largely manual processes, accomplished through transferring files and sending emails. In the future state vision, most interfaces external as well as internal to the State will occur through automated interfaces, such as those to the State Hub, HHIE MPI and MPD, and Health Connector.

Figure 84 provides a notional depiction of these interactions in the future state solutions architecture. In the future state, interfaces are provided to link departments, organizations, and citizens. For example, insurance provider quality data will support insurance shopping through the Hawaii Health Connector (HIX). Primary care providers will share Electronic Health Records to enhance patient care through the Hawaii Health Information Exchange (HHIE). The state envisions that most connections will be through these two portals. Connections internal to the state will occur through MPI interfaces provided by DOH/Public Health, DHS/MedQuest,

DCCA HIDS and PVL, PSD/Correctional Activities – Inmate Health Care Program, and EUTF Systems. Other shared entities are: Hawaii Health Information Corporation (HHIC) for analytics and the Nationwide Health Information Network (NwHIN) for federal government reporting. This future state will enable health information to follow the consumer, be available for clinical decision making, and support appropriate use of healthcare information beyond direct patient care to support improving overall health care delivery. State agency health information technology priorities include the reorganization of systems to more effectively share data among agencies, and to reduce duplication. Through business process redesign of state agency functions, opportunities will be identified for new solutions that will expedite data sharing and reduce duplicate information systems. The state assessment of data relationships from a service-oriented architecture (SOA) perspective has identified functional relationships for modeling information systems and their function within the state and connections to outside organizations. Identified future information system upgrade priorities will target these data flows to return value to the state in agency day-to-day operations.
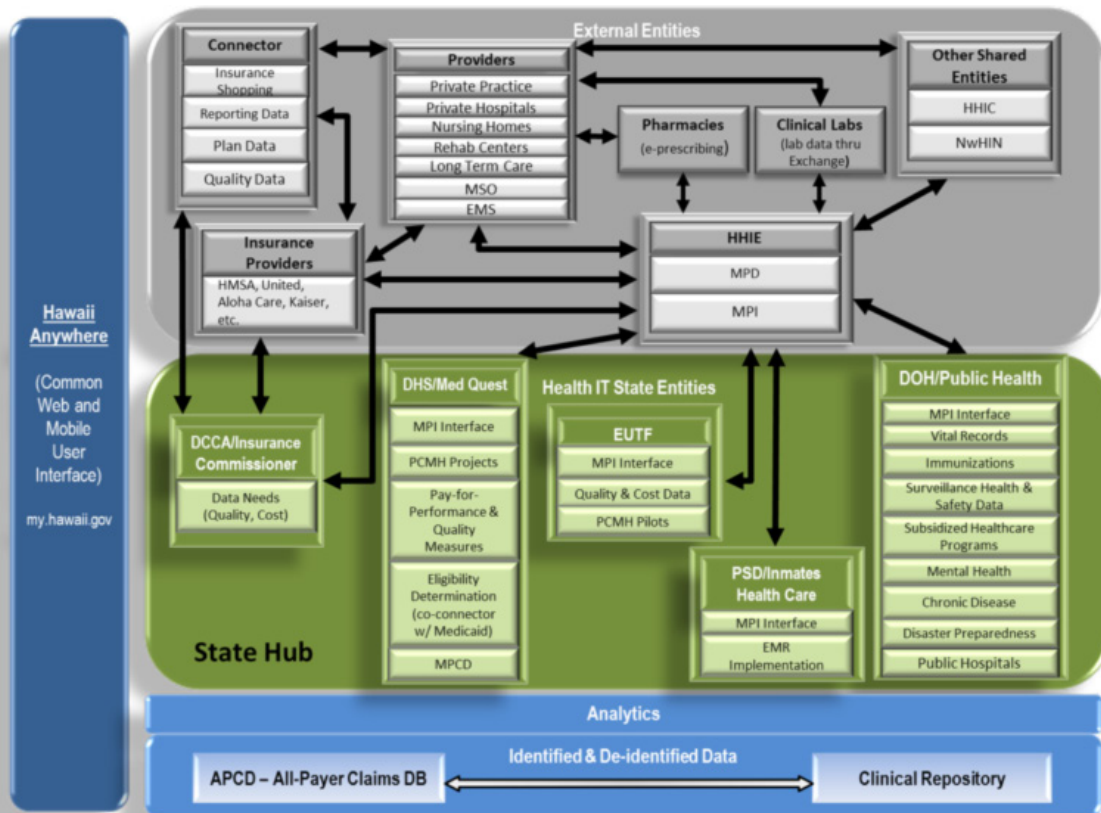

Figure 84: Health IT Future State Information Interactions, Notional

A.3.1.3
TRANSITION & SEQUENCING PLANNING SUMMARY FOR HEALTH IT

The plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below

INITIATIVES

The initiatives needed for OIMT to coordinate and ensure success as well as, solutions and infrastructures needed are outlined in Table 72 below. The details for each of the new, key health transformation initiatives from other departments are included in the owning Line of Business sections.

NOTE: All Future Health IT solution initiatives will adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. All future Health IT infrastructure solution initiatives will adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 72: Health IT Investment Initiatives

Name	Description	Basis of Estimate	Cost
Business Segment Solutions:			
HIT Governance:			
Statewide HHIE Coordination for MPI and MPD	On-going oversight and facilitation of initiatives for Master Patient Index (MPI) and Master Provider Directory (MPD); attend meetings, provide guidance, and support as needed.	½ FTE for 1 year; 1,000 hours of government labor	Pending Review
Formal MPI Agreements and Policies	Develop State government policies and develop MOUs that can be used internally and standard agreements that can be used externally for providers, hospitals, labs, etc.; requires AG input.	¼ FTE for 2 months	Pending Review
Formal MPD Agreements and Policies	Develop State government policies and develop MOUs that can be used internally and standard agreements that can be used externally for providers, hospitals, labs, etc.; requires AG input.	¼ FTE for 2 months	Pending Review
Establish Health Transformation Office	Migrate the Hawaii Health Transformation Initiative to a formal office; Seek legislative guidance and provide input for written legislation.	1 FTE for 2 years to establish office, and 4 FTE for 8 years to staff office	Pending Review
Establish Contract Access to Consultants	Establish contract with consultants for health transformation and plan development for Health; assist agencies in health related functions to seek federal grants. (OIMT)	500 hours (1 year)	Pending Review
Establish Governance for Data and Services Standardization and Sharing	Provide governance and technical guidance for sharing health related data and services across agencies to minimize duplication and enhance citizen services.	½ FTE for 2.5 years of contract labor	Pending Review
Formalize Health IT Working Group	Establish Health IT Working group with appropriate representation from state agencies and partner organizations (HHIE, HHIC, etc).	160 hours of government labor	Pending Review
Health IT Working Group	Provide funding for agencies to facilitate regular consistent participation.	4 hrs/month * 14 participants for 10 years 672 hours/ year = 6720 hours of	Pending Review

Name	Description	Basis of Estimate	Cost
		government labor	
Enable Meaningful Use:			
Establish EHR Adoption Grant Program	Develop grant program to incentivize EHR adoption for a predetermined number of providers (approximately 800-1000) not served by the Hawaii Pacific Regional Extension Center (REC) (e.g. HHIE); program to exist for two years – each provider gets one year of help; Pending Review for SaaS solution plus Pending Review/provider to implement plus Pending Review for SaaS = Pending Review = Pending	½ FTE for 2 years plus Pending Review for 500 providers over 2 year period	Pending Review
Award Grant to Administrator	Provide source selection and award;	320 hours	Pending Review
Grantee Evaluation	Evaluate progress and overall grant performance for meeting provider sign-on goals; OIMT Project Management Office.	1 FTE for 8 years	Pending Review
Health IT Projects Data Sharing:			
Establish MPI/MPD Agreements with HHIE	Establish formal agreements between HHIE and state agencies especially DOH and DHS	200 hours	Pending Review
MPI/MPD Interface Setup (State w/ HHIE)	Setup MPI/MPD interfaces between state agencies and HHIE; implementation and integration ½ FTE PM ½ FTE for Technical from OIMT over 2 years spread over this and these 2 tasks using blended rate: 1. MPI/MPD Testing - System testing to ensure integration is complete 2. MPI/MPD Deployment - MPI/MPD Deployment; setup new software train staff and go live to complete transition.	½ FTE PM, 2 FTE for DOH, 2 FTE for DHS, 1 FTE for PSD, ½ FTE for EUTF and ½ FTE for DCCA Spread over this and next 2 subtasks for 2 years. Plus 5% of 5 positions O&M for 8 years.	Pending Review
State's Clinical Data Repository	Build/integrate data sets based on inter-agency agreements through ODBC or similar connections; dependent upon cloud services and data integration tool (assume enterprise availability).	½ FTE for PM, ½ FTE for DBA over 2.5 years. Plus ½ FTE O&M for 8 years	Pending Review
State's Claims Data Repository	Build/integrate data sets based on inter-agency agreements through ODBC or similar connections; dependent upon cloud services and data integration tool (assume enterprise availability).	½ FTE for PM over 2years. Plus ½ FTE for DBA, ½ FTE O&M over 7 years	Pending Review
Establish Clinical & Claims Data agreements w/ External Entities	Establish formal agreements with external health organizations (e.g. providers, hospitals, labs, pharmacies, etc.).	½ FTE (same person as Data Sharing task earlier) over 2 years.	Pending Review
External Clinical Data Repository Interface	Build interface to access external clinical data with organizations with established agreements to support Public Health.	½ FTE System Integrator (over 4 years – shared w/next task) contract labor	Pending Review

Name	Description	Basis of Estimate	Cost
External Claims Data Repository Interface	Build interface to access external claims data with organizations with established agreements to support Public Health.	½ FTE System Integrator (over 4 years – shared w/next task) contract labor	Pending Review
Health IT Projects: Portal (my.hawaii.gov):			
My.hawaii.gov (CRM) Systems Integration & Data Visualization (i.e. DOH, DHS, HIX, DCCA)	Create portlets and other widgets as needed to aggregate data and facilitate data visualization (dashboards including quality and performance measures) for: a) Hospital Health Quality Data: Data Integration w/Hospital Compare - provides access to the federal hospital quality data under "Hospital Compare" program; create a portlet so the state has access to up to date information b) Doctor Compare – portlet to Doctor Compare when ready c) DOH, DHS, HIX, DCCA – widgets as needed to support citizen access to health care data d) Public Health Information: Geospatial (data acquisition, aggregation, visualization) e) Public Health Information: Syndromic (data acquisition, aggregation, visualization) Note: Dependent upon GIS, data integration tool (assume enterprise availability).	3 FTEs programmers over 5 years; 1 FTE to cover coordination time with state agencies plus PM time 15% FTE	Pending Review
Health IT Department Specific Projects			
DOH: EMR Upgrade - BHMIS/AVATAR/ECURA	Upgrade electronic medical records system to EMR certified version	Pending Review over 3 years + O&M for 7 years	Pending Review
DOH: EMR Upgrade – CAMHIS	Upgrade electronic medical records system to EMR certified version	Pending Review over 3 years + O&M for 7 years	Pending Review
DOH: HHIE Interface (ECURA)	Develop interface to the HHIE for the Adult Mental Health Information System (BHMIS/AVATAR/ECURA)	Pending Review over 2 years	Pending Review
DOH: HHIE Interface (CAMHIS)	Develop interface to the HHIE for the Child Adolescent Mental Health Information System (CAMHIS) eVista	Pending Review over 2 years	Pending Review
DOH: EMR Convergence	Converge disparate HHIE interfaces into one HHIE interface for DOH	Pending Review over 2 years	Pending Review
DOH: Syndromic Surveillance	Information Exchange for Meaningful Use		Pending Review
DOH: Electronic Lab Reporting	Information Exchange for Meaningful Use		Pending Review
DOH: Immunization	Information Exchange for Meaningful Use		Pending Review

Name	Description	Basis of Estimate	Cost
PSD: EMR Implementation	In Progress: eClinicalWorks EMR implementation for Inmate Health Records	DME: Pending Review O&M: Pending Review/year for 10 years	Pending Review
PSD: HHIE Interface	Develop interface to the HHIE for the Inmate Health Record system.		Pending Review
DHS: Replace HPMMIS	Replace the current MedQuest (Medicaid/eligibility) system (currently service purchased from State of Arizona) with new system owned by the State of Hawaii; cost includes projected 90% federal grant match	Pending Review over 3 years	Pending Review
DHS: HHIE Interface	Provide interface to HHIE for the Medicaid/eligibility system.	Pending Review over 2 years	Pending Review
DHS: MedQuest HIX Interface	Interface eligibility to the HIX Connector to review provider data.	Pending Review over 2 years	Pending Review
DCCA: HIDS HIX Interface	Provide interface from Hawaii Insurance Division System to HIX Connector to make available current insurance provider information such as: issuance of licenses; collection of taxes, fees, and fines; review of rate and policy filings; investigation of complaints and disciplinary actions.	Pending Review over 2 years	Pending Review
DCCA: PVL HIE Interface	HIE to ensure current information of provider licensing through the Professional & Vocational Licensing system.	Pending Review over 2 years	Pending Review
EUTF: Replace EUTF System	Replace current benefits system with one that provides automatic interfaces to the ERP system, Vital Records, Case Management, and other state systems as required.		Pending Review
EMR Convergence to Cloud	Implement converged EMR solution in Cloud service	Pending Review over 10 years + O&M Pending Review over 10 years	Pending Review
Enable Analytics:			
Analytics Product Trade Study	Assumes using the KLAS data service as basis and 3 – 5 software packages analyzed	Pending Review for KLAS service plus 1 FTE 3 months	Pending Review
Establish Analytics Agreements (SLA)	Work with agencies to coordinate and establish Service Level Agreements (SLAs)	¼ FTE for 3 years	Pending Review
Analytics Service Pilot	Pilot the software	½ FTE for 1 year + SW Lease Pending Review	Pending Review
Analytics Service	Provide statisticians (epidemiologists, etc.) and software leasing (the tool selected from trade study) for needed number of users.	2 FTEs + SW leasing cost Pending Review/ year for 9 years	Pending Review

Name	Description	Basis of Estimate	Cost
Support Services:			
Professional and Team Development and Collaboration	Hire and develop workforce and establish contracts with consultants for health transformation and plan development for Health; assist agencies in health related functions to seek federal grants. Support Services: Health Transformation Office	1 FTE for 9 years of government labor	Pending Review
Facilitate Statewide Data and Services Modeling	Dependent on Health IT working group direction; provide information models (detailed data definitions and ensure common minimum data sets) and data flow across agencies.	1 FTE 2.5 years of contract labor	Pending Review
Establish HIT Cloud Service	Set up Cloud service and SLAs	1 FTE for 2 years of government labor	Pending Review
Provide HIT Cloud Services	Provide Software and services to the HIT cloud clients.	3 Positions at half effort for 8 years of government O&M + Cloud Service Cost	Pending Review

TRANSITION AND SEQUENCING

The plan for future state transition and sequencing of initiatives is depicted below in Figure 85 through Figure 89. In addition, Health IT solutions have critical needs for the following new Enterprise-wide Solutions:

• Cloud services

• Data integration

• Web application server

• Case Management

• Network security

• Single sign-on

Figure 85: Health IT Business Segment Transition and Sequencing Plan Summary (1 of 5)

Figure 86: Health IT Business Segment Transition and Sequencing Plan Summary (2 of 5)

Figure 87: Health IT Business Segment Transition and Sequencing Plan Summary (3 of 5)
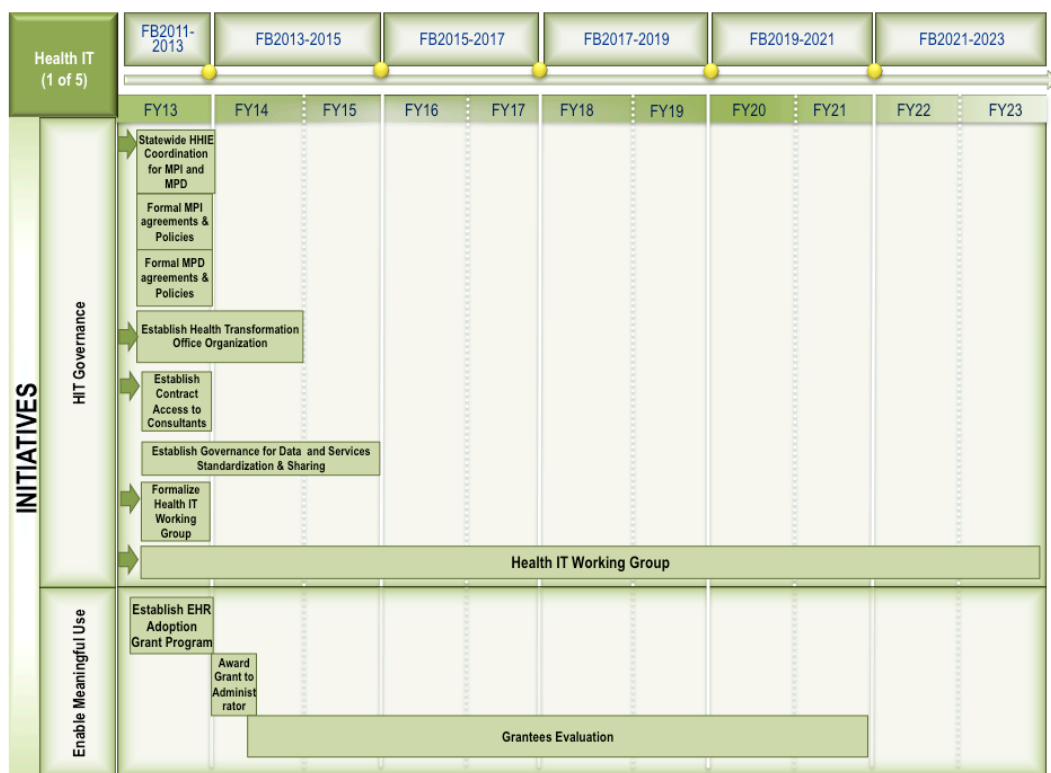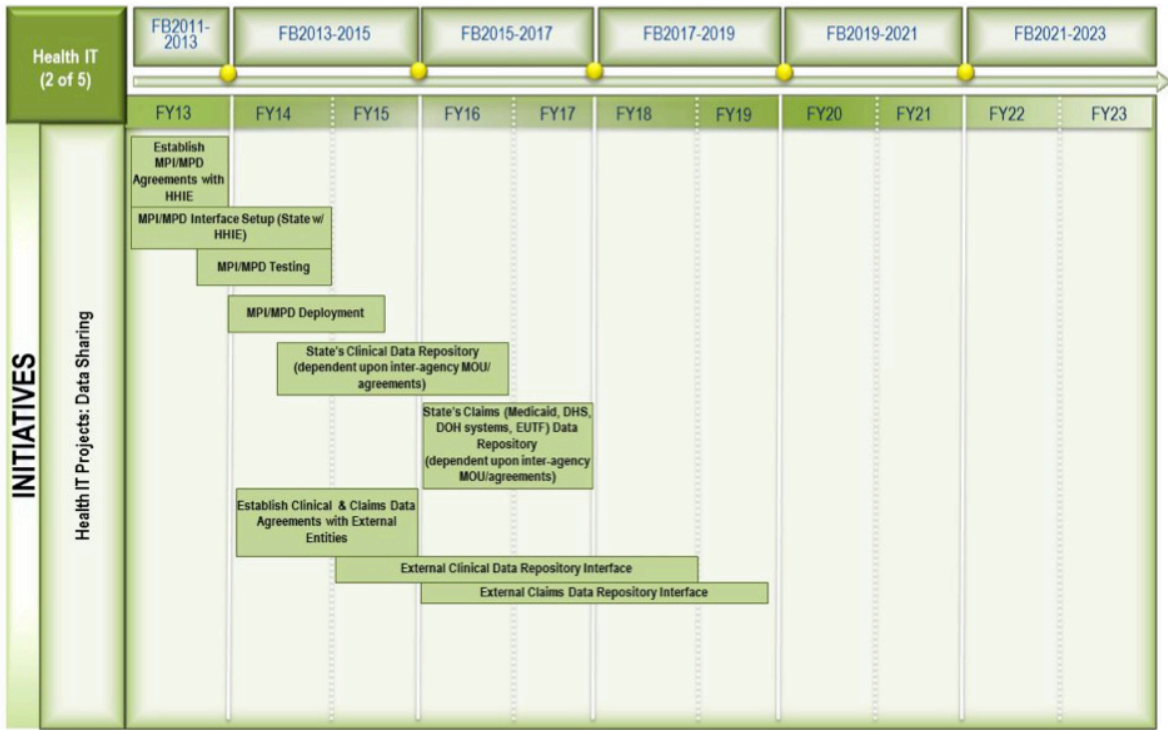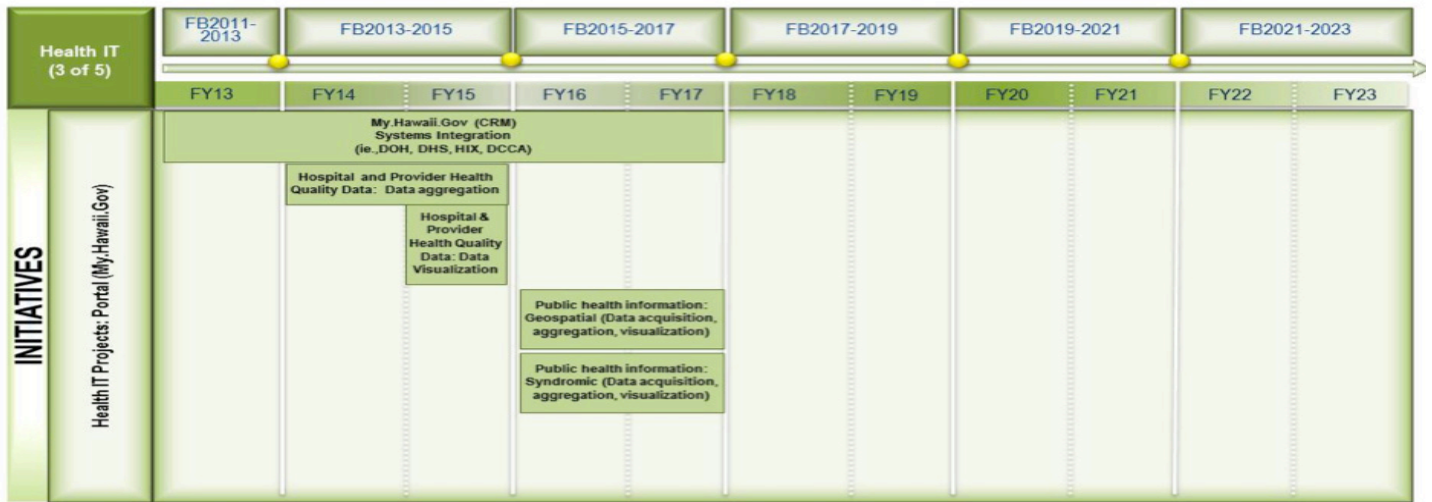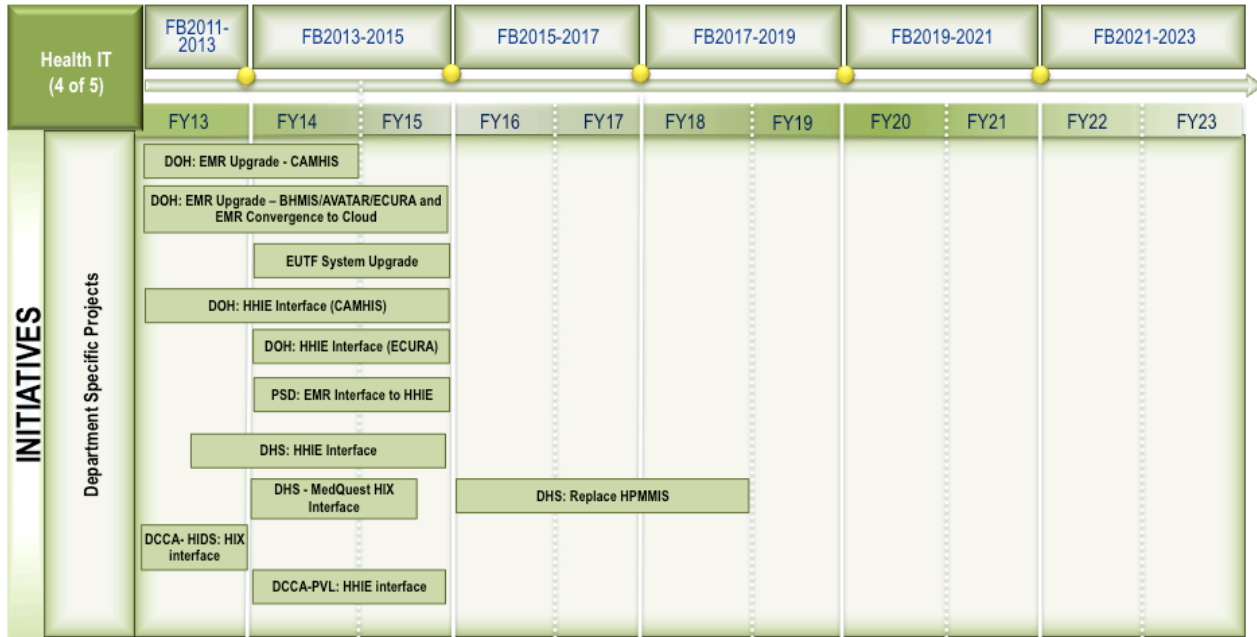
Figure 88: Health IT Business Segment Transition and Sequencing Plan Summary (4 of 5)
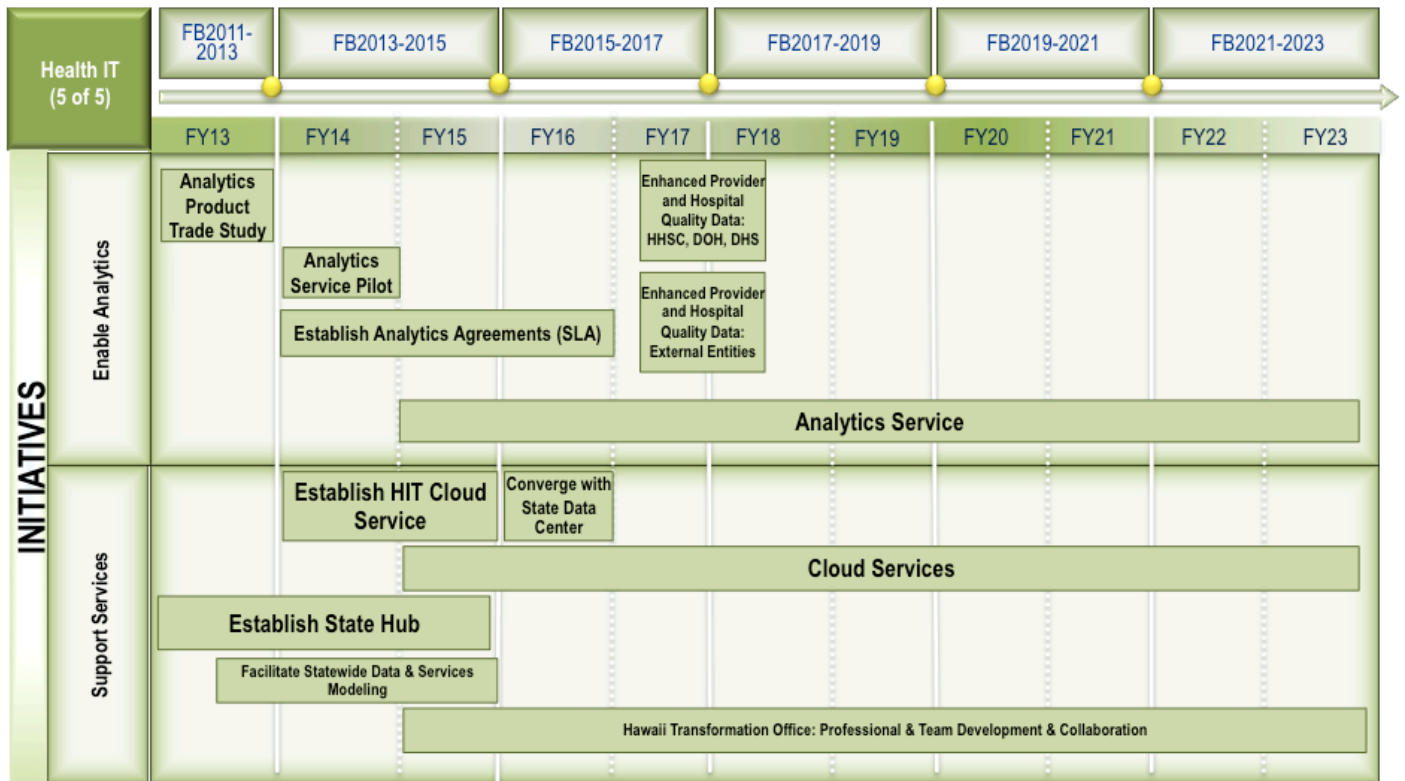

Figure 89: Health IT Business Segment Transition and Sequencing Plan Summary (5 of 5)

A.3.2 ENTERPRISE RESOURCE PLANNING

The State of Hawaii is facing an environment of continuous and rapid change due to technological surges and the need to transform old paradigms into new common business practices. The demand for real time integration across eighteen (18) State Departments and thirty-six (36) Lines of Business (LOB) is the result of a highly decentralized, localized, legacy environment. A priority for the State of Hawaii is to eliminate duplication of effort, retire applications and to reduce the current portfolio suite of an estimated seven hundred (700) systems and associated embedded services. The outcome will be a modern technological enterprise with standard business practices implemented with current technology. An important goal is to minimize customization of new solutions. Business Process Re-Engineering can assist in streamlining processes, eliminating waste and creating a new paradigm for work to proceed efficiently.

A.3.2.1 BACKGROUND AND SCOPE

The ERP scope is challenging and will be prioritized to deliver phased implementations of services. Phase I includes a planning phase consisting of Requirements, Business Process Re-Engineering, preparing Request for Quotes to Vendors, Evaluating Vendors, and launching contracts for a System Integrator, Project Oversight providing Independent Verification and Validation (IV&V), and Hardware and Software contracts to support the ERP solution. Subsequent ERP phases involve Design and Implementation, Functional and System Testing, and Production Operations. ERP Components and Functional Scope are described in Table 73.

Table 73: ERP Functional Components and Scope

Strategic Business Segment: ERP Components	Functional Scope
Budget/Finance	Budget planning involves all activities undertaken to determine priorities for future spending and to develop an itemized forecast of future funding and expenditures during a targeted period of time. This includes the collection and use of performance information to assess the effectiveness of programs and develop budget priorities Accounting services entails accounting for assets, liabilities, fund balances, revenues and expenses associated with the maintenance of State funds and expenditure of State appropriations (Salaries and Expenses, Operation and Maintenance, Procurement, Working Capital, Trust Funds, etc.), in accordance with applicable State standards. A General Ledger is used to sort and store balance sheet and income statement transactions. Examples of general ledger accounts include the asset accounts such as cash, accounts receivable, inventory, investments, land, and equipment. Examples of the general ledger liability accounts include notes payable, accounts payable, accrued expenses payable, and deposits. Examples of income statement accounts found in the general ledger include sales, service fee revenues, salaries expense, rent expense, advertising expense, interest expense, and loss on disposal of assets.
Human Resource Management (HRM)	HRM involves all activities associated with the recruitment and management of personnel to include Benefits Management, Personnel Management, Positions Classification and Compensation, and Resource Training and Development.
Grants Management	The management of federal grant services provides provision, management and reporting to federal agencies and congress. Grant management depends on a sound financial system, purchasing system, merit-based personnel practices, appropriate property management capability, sound security, health and safety practices, the ability to perform audit and resolution services, and to provide quality review and control activities. At present each organization provides grant management services. While each organization should be responsible for pursuing grants, a central Grants Management service will provide standards, guidelines, subject areas of interest, grant proposal examples, and a public offering organizing and describing State Grant opportunities for the citizens of Hawaii. Examples can be extracted from other State's experiences.

Strategic Business Segment: ERP Components	Functional Scope
Acquisition / Procurement	Procurement execution involves the purchasing, tracking, and overall management of goods and services. This includes the procurement of physical goods, products, and capital assets to be used by the State government. The procurement services provides State-wide procurement policy, oversight, and execution for the total enterprise.
Asset Management and Inventory Control	Asset Management and Inventory Control provide accounting support for the management of assets. Inventory Control refers to the tracking of information related to procured assets and resources with regard to quantity, quality, and location
Time and Attendance	Time and Attendance services are the reporting and maintenance of the State employee time and attendance activities.
Payroll	Payroll services provide for payroll management and expense reimbursement and involve the administration and determination of State employee compensation.

A.3.2.2
CURRENT STATE OF SYSTEMS FOR COMMON MISSION SUPPORT BUSINESS FUNCTIONS

The initial request to appropriate funds for Phase One of the ERP requirements and planning activities stated the following rationale regarding the current situation that is still relevant:

Specifically, based on the recent assessment of State Services and Creation of the Information Technology Baseline Report, prepared by SAIC, a number of issues and cost savings/avoidance opportunities were identified regarding the status of financial management activities (and other mission support business functions) across the State. Using this documented assessment and the input of the Departmental leadership statewide, the following provides the key reasons for the ERP initiative:

• Current processes are paper-based and are people intensive at a time where staff reductions are negatively impacting the performance of these processes within the State;

• The State is not maximizing receipt of revenues due to process inefficiencies

• Current financial reports (e.g., monthly and year-to-date expenditures) lag behind actual expenditures for the Departments due to current processes and financial management system;

• The required level of analytical analysis to support projections and other financial management activities is not is not possible given the current financial management process and system;

• Numerous Departments have "procured" and implemented financial management packages in an effort to meet management and reporting needs (especially Federal grant reporting requirements);

• Other Departments are planning on implementing a financial management package in an effort to meet management and reporting needs;

• Inaccurate and non-timely entry of time and accounting information increases the State's payroll expenditures;

• Most Departments acknowledged that they were performing financial management with a variety of point solutions, custom systems, and hybrid spreadsheets and databases to pull and push information to/from the State's financial system;

• The current financial management/tracking system (FAMIS) is a 25+-year old system design that is COBOL/mainframe-based and does not facilitate information integration or manipulation or necessary analytics;

• Support for the current financial management systems hardware (an IBM mainframe) will not be available indefinitely from the manufacturer and it will continue to be costly, and further, individuals with the requisite COBOL skills will continue to be a staffing challenge;

• The three Departments that manage the State's financial position, DOTAX, B&F, and DAGS, operate in a non-integrated environment; and,

• Accrual-based accounting required for financial reporting (i.e., the Comprehensive Annual Financial Report) is manual intensive and cannot be produced within a reasonable (3-6 months after the close of the State's fiscal year).

Table 74 below provides estimates on the number of applications residing out in the Departments today that have the potential for consolidation and absorption into the federated ERP implementation. The IT Applications (IT APPS) are the number of applications captured by the base line assessment and identified by the sponsoring Line of Business providing the support. Embedded applications are individual applications created by departments, divisions, programs, etc. to perform these functions on a local basis. Applications such as Finance and Budgeting, Human Resource Management, and Procurement are duplicated multiple times across the State. There are also multiple applications within each organization dealing with Time and Attendance and Grants Management. The ERP provides an integrated solution with subject data bases that will replace this distributed duplication of effort across the State.

Table 74: Potential Consolidation of Current Applications within the ERP Implementation

ERP Functions	IT Apps	Embedded Departmental Apps Estimated	Total Replaced By ERP
Human Resource Management	30	100	130
Time and Attendance		200	200
Payroll	1		1
Finance Budgeting	60	150	210
Inventory	30	200	230
Grants Management		200	200
Procurement/Acquisition	30	200	230
Totals	151	1050	1201

The O&M for the IT APPS including fifty (50) Time and Attendance and fifty (50) Grants Management Applications is estimated to be Pending Review per year. For an ERP implementation of Pending Review over five (5) years with a 15% O&M continuing cost, the new ERP O&M is estimated to be Pending Review per year for a net savings of Pending Review per year.

A.3.2.3 FUTURE STATE VISION FOR ERP

The vision for a future ERP is a dynamic integration suite of functions that enables delivering quality information and services to all stakeholders thus replacing multiple implementations, duplications of effort and embedded practices within each State Agency. The ERP will become the trusted source for transactions and data validation. In addition the ERP can provide subject area data views that are derived and made available to stakeholders and constituents to serve the unique information needs of each organization. Technology gaps can be addressed but only after sufficient evaluation that the new requested function(s) are indeed necessary.

The guiding principle to the selection of an ERP for the state of Hawaii is based on a service-oriented, federated approach.

The aim is the reduction in the total number of existing applications, improvement of data sharing, collaboration, mobile accessibility and functional execution between the different Lines of Businesses (LOBs) supported by an ERP consistent with the new State enterprise architecture. In pursuing a path forward it is essential that the boundaries of the ERP can plug and play seamlessly with other enterprise agents. There will be no boundaries to sharing data and enabling decision support within the ERP and externally to the broader set of LOBs. The appropriate architecture to enable a service-oriented approach is one which makes its components available over a network using cross cutting services. These component ensembles will still appear as a single ERP system to the end user, however it can consists of different independent elements which exist on different computers. Based on this construction it is possible for an enterprise to achieve real time data requests and provide functionality that achieves a state of plug and play services for their enterprise members over a layered network topology. Essentially the main objective of an ERP is to integrate business components across it domain, with other vendors, and with other LOBs. Important requirements going forward with an ERP implementation is to minimize customization and provide read only subject databases supporting data needs of each State Department and Lines of Business.

The future state solutions architecture is depicted in Figure 90 below. Key features of this solution include:

• "Hawai`i Anywhere" common web and mobile user interface architecture

• "Everything as a Service" common solutions framework that facilitates application assembly through reusing application "services" to include various "levels of sharing" such as LOB services, common LOB services, enterprise mission support (functional) services, and enterprise common (utility) services.

• These two above components enable the potential "federation" and "plug and play" of multiple commercial off-the-shelf (COTS) packages as well as appropriate customized components within the mission support business segment. The over-arching architecture will identify integration touch points and shared business objects/data and specify needed services

to achieve the required integration.

The future vision for interoperability within the State across significant areas such as these Federated ERP functions with the strong potential for multiple packages being used plus the supporting enterprise common services such as Identity Management/Single Sign-On and Document Management (as examples) also with separate COTS solutions will require these features of the EA.

Additional detail regarding a Federated ERP concept can be found at the following sources:

• A proposed Federated ERP architecture from Oracle to the University of California: www.ucop.edu/irc/docs/hrarchconcept.pdf

• A NASCIO position paper on the benefits of a service-oriented environment (and implied enablement of a federated environment): http://www.nascio.org/publications/documents/
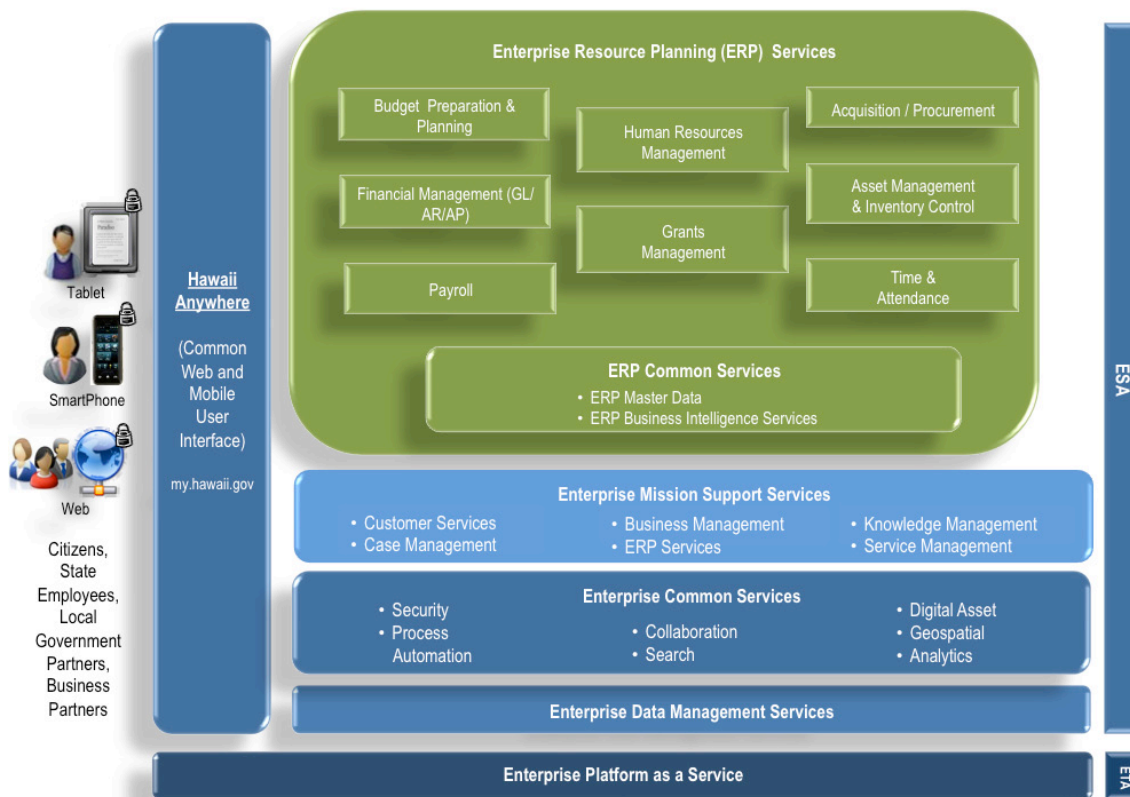

Figure 90: Federated ERP Future State Solutions Architecture

A major planned feature of the ERP implementation will include the derivation of subject databases or subject data marts for use in business intelligence and analytics solutions, as depicted in Figure 91.
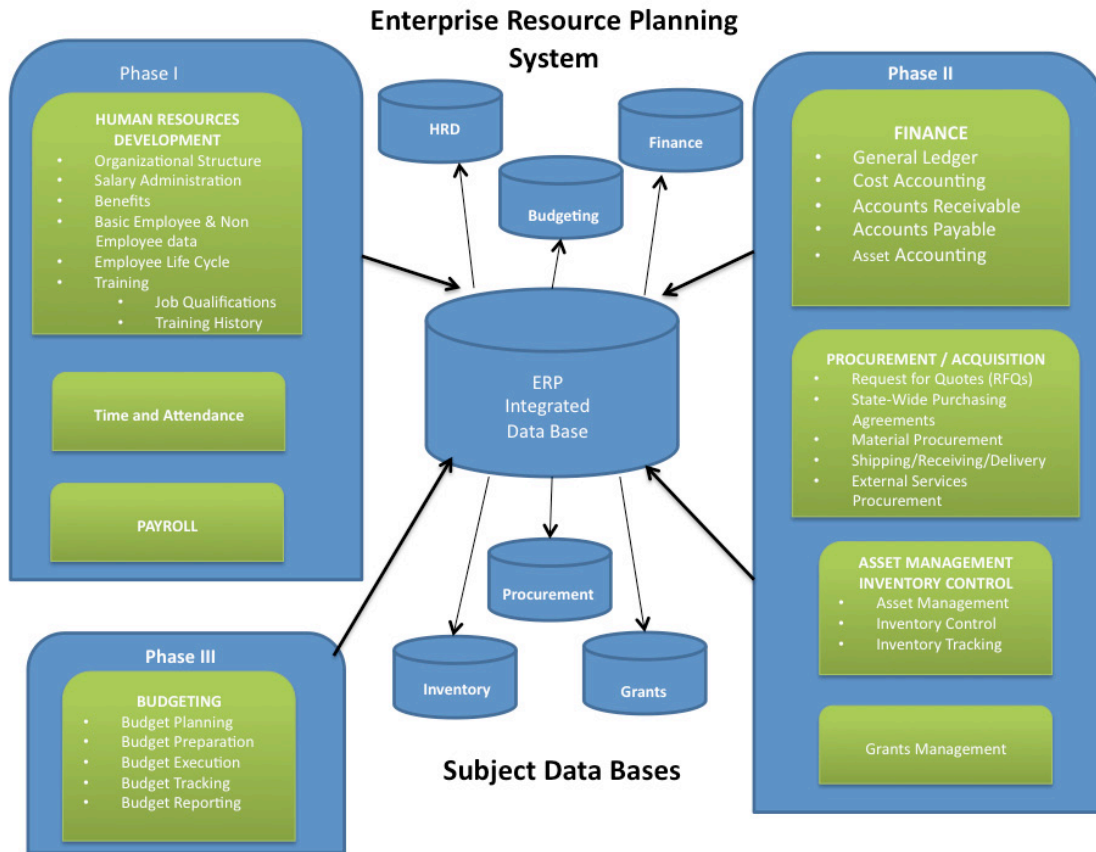

Figure 91: Federated ERP Future State Solutions Architecture

INFORMATION EXCHANGES

The elements of the ERP were chosen as flag ship initiatives serving a super set of LOBs. These services are cross cutting and provide seamless information integration across Revenue Collection, Budget and Finance, Financial Mnagement, Human Resources, Procurement, Asset Management and Inventory Control, Grant Management, and Planning and Resource Allocation. The architecture also enables a reach out to other LOBs to provide information and data services to satisfy business needs and to enable information exchange with the citizen's and residents of Hawai`i on a need to know basis.

A.3.2.4
TRANSITION & SEQUENCING PLANNING SUMMARY FOR ERP

ERP implementation considerations and the plan for needed transition initiatives to achieve the future state vision and the sequencing of those initiatives is described below.

ERP IMPLEMENTATION CONSIDERATIONS

The industry literature contains numerous examples of project challenges and failures in ERP implementations. There is no greater situation in IT project implementations for taking great care in consideration of implementation challenges and risks, and lessons learned from others.

ERP Implementation Challenges

An SAIC strategist provided the following insight regarding a recently published article referenced below on this critical area:

Snippet: Advice on avoiding five common ERP implementation errors

This CFO Magazine article begins by describing yet another major ERP implementation disaster story. Even though more and more companies are adopting flexible, cloud-based ERP options, many organizations will still struggle trying to implement legacy-type ERP products. If you are ever involved in one of these projects, this article highlights vsome common errors you can help your team guard against. Here are excerpts:

http://www3.cfo.com/article/2012/6/it-value_five-erp-errors-cfos-can-avoid

This story, unhappily, is far from unique. It happens all the time. Most likely, it has happened to you. What could the CFO have done to prevent this disaster? Here's my list of five common ERP mistakes to avoid:

• *Selecting the wrong product. Unbelievably, companies often select ERP packages that are not commonly used in their industries. In addition to looking for the right balance of reliability and flexibility, the ERP vendor you choose should have a long list of happy customers in the same industry as your own.*

• *Locating program leadership too low in the organization. ERP is a game-changing project that requires leadership in the upper echelons. At the mid-management level, these directors do not have either the visibility or influence to lead. Consequently, the program suffers.*

• *Assuming that ERP is an IT project. I've said it before and I'll say it again: ERP is not an IT project; it is a business project, and it requires more than business sponsorship. It requires business leadership, not to mention resources, commitment, and engagement.*

• *Ignoring the talent question. Sometimes I tell clients, "Finding SAP talent is easy. Just add a zero to their monthly pay." (I've noticed that clients almost never*

laugh at this joke, so I'm thinking about retiring it.) I have seen companies push back their ERP launch date because recruiting those rare birds with the right blend of industry, technology, and leadership experience is much harder than they anticipated.

• *Underestimating how long an ERP will take. It is rare for a company to complete an ERP implementation (or upgrade) in the time they budget at the start. Whatever formula you use, you have to build in a cushion because, if history is a guide, you are bound to need more time.*

A critical consideration from above, worth repeating, is the recommendation that the State find an ERP package that has a considerable track record for successful implementations within state government. The State could go so far as to research another state government's organization/legislative funding/financial structure and determine their level of similarity and then work with the state customer and the vendor to purchase a copy of their configuration/customizations.

ERP Implementation Considerations in State Government as Industry Segment

Within state government as an industry, a study performed by Gartner in association with NASCIO on statewide ERP implementations documented the data in the following tables – Table 75: Survey on ERP Implementation Cost within State Government and Table 76: Survey on ERP Packages Implemented within State Government.

Table 75: Survey on ERP Implementation Cost within State Government

Estimated ERP Implementation Cost	States
Pending Review	Idaho, Alabama, Maine, Nebraska, New Hampshire, Utah, Vermont
Pending Review	Georgia, Kansas, Kentucky, Minnesota, New Mexico, North Dakota, Oklahoma, South Carolina, West Virginia
Pending Review	Delaware, Illinois, Missouri
Pending Review	California, Michigan, New York, North Carolina, Tennessee, Texas, Pennsylvania, Ohio

Table 76: Survey on ERP Packages Implemented within State Government

ERP Packages Implemented within State Government	States
AMS Advantage	Massachusetts, Missouri, Nevada, Utah
JD Edwards	Nebraska
Lawson	New Hampshire
Oracle e-Business	Rhode Island

ERP Packages Implemented within State Government	States
PeopleSoft	Connecticut, Georgia, Indiana, Kansas, Minnesota, Montana, New Mexico, New York, North Dakota, Ohio, Oklahoma, Tennessee, Texas, Vermont
SAP	Arkansas, Louisiana, Pennsylvania
Combination	Florida –PeopleSoft (financials) and SAP (outsourced using SAP HR/Payroll)
	Kentucky –AMS Advantage (financials) and SAP (HR/payroll)
Underway and Undecided on Package	Alaska, Mississippi, West Virginia

Source: Gartner and NASCIO Study: Trends in Statewide ERP Implementations, 2009

For consideration, a notional peer group for use in comparing the State of Hawai`i based on population and revenue consists of: Alaska, Idaho, Kansas, Maine, Nebraska, Nevada, New Hampshire, New Mexico, Rhode Island, Utah, West Virginia.

There are some observations that can be made from the data:

• Hawai`i's implementation should not require the upper end of the spectrum in implementation costs as the largest states – a notional implementation cost in the band of Pending Review to Pending Review.

• PeopleSoft has a significant base of current state government implementations.

ERP Implementation Guiding Principles

In planning and moving forward with ERP project execution, the following guiding principles are best practices within the industry:

• Ensure proper governance structure is in place

• Develop business case and funding plan

• Providing Senior Management leadership and commitment from each Division is critical to the success of the project. Eliminating obstacles, team building, and being a change agent for the culture to adopt new business practices are important

• Include contingency in the ERP estimate. It is rare for a company or State Government to complete an ERP implementation in the time they budget at the start.

• Create a project organization structure to provide planning and quick response for decision making and issues management.

• Create a positive environment for the ERP team to function. This is a very difficult project and the team will need inspiration to stay the course.

• Lead and encourage functional ownership of the project .

• Take the time to map out, streamline, and standardize business processes for each functional area.

• Establish and implement common data standards.

• Ensure Business and Technical contributors are sufficiently trained on the selected ERP.

• Re-Engineer business processes with the targeted software in mind ("package-based re-engineering").

• MUST minimize customization of the ERP system. Customization will drive the cost up and increase the complexity for operations, maintenance, and new version releases.

• Ensure project teams do not slip into functional silos. An ERP is an integrated system where most decisions have impacts across the enterprise.

• Set up project team facilities to facilitate COMMUNICATIONS and responsive decisions.

• Create a partnership with your software vendor, contractors, implementation partners, and institutional stakeholders.

ERP Program Management Considerations

One of the greatest needs for a successful implementation will be establishing the appropriate executive leadership and functional expertise from the state. The notional ERP implementation program organization chart in Figure 92 below outlines initial considerations for the roles and involvement required.
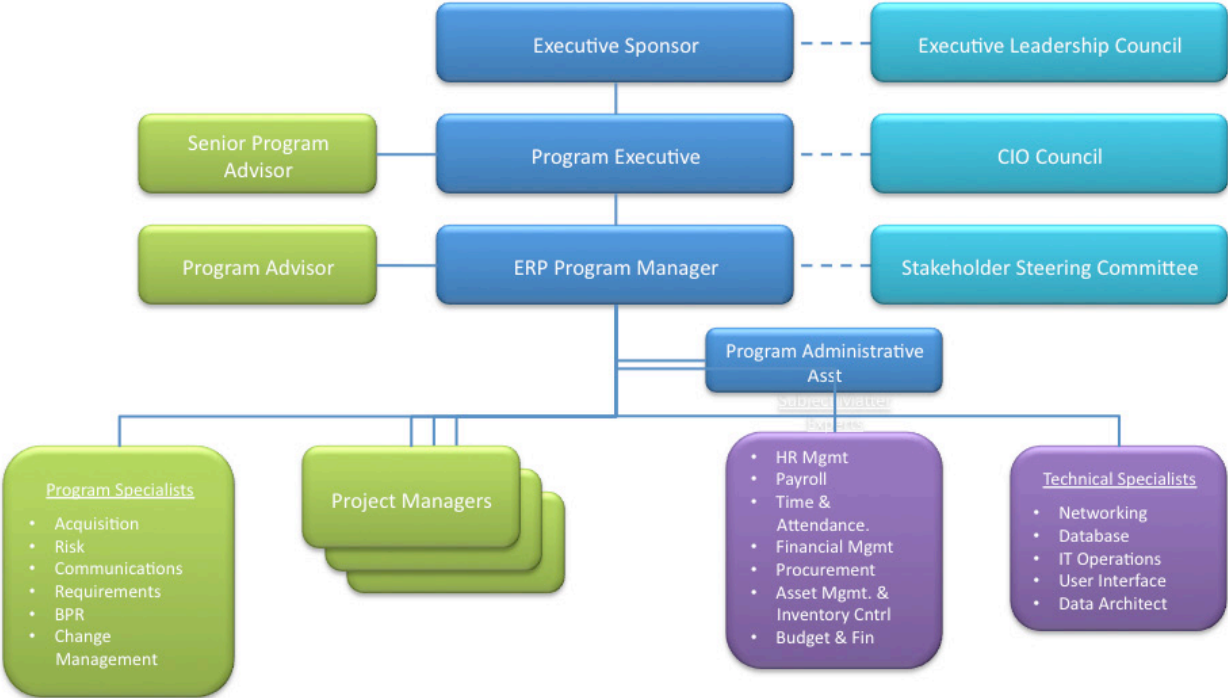
ERP Program Organization Chart

Figure 92: ERP Program Organization Chart

Considerations on ERP Implementation Approach

Notional considerations on an ERP implementation approach are provided below in Table 77. The table outlines life cycle stages for an implementation and the activities within the life cycle stage.

Table 77: ERP Implementation Life Cycle Model

ERP Implementation Life Cycle Stage	States
Analysis and Vendor Selection	• Select priority functions for first phase implementation
	• Produce Future State Vision for each Business Function
	• Develop detailed demonstration scripts for each element of the future state vision
	• Schedule demonstrations with prospective vendors
	• Identify gaps during first sessions with vendors
	• Schedule follow on sessions with selected vendors to address gaps
	• Prepare Specification for ERP RFQ
	• Prepare Specifications for Hardware and Software
	• Prepare Specifications for Hardware and Software
	• Initial Business and Technical Training for Project Teams

ERP Implementation Life Cycle Stage	States
Design	• Take the time to map out the current business processes • Attend basic training on software to be implemented • Re-engineer business processes with the targeted software in mind • Packaged-based re-engineering defining the ideal "to-be" state • Initiate conference room pilots to design, configure, evaluate, and test functionality • Understand and define the data needs for each stake holder • Plan for ERP derived subject data bases to support data requirements for each agency
Implementation	• Plan for legacy data extractions, translation, and loading into the new ERP system • Scale up conference room pilots and test the performance of each functions • Identify interfaces that will be necessary to deliver data from existing systems that are not part of the initial phase. • Fully configure and implement all functions for the project phase • Ensure networks are deployed, tested and certified for operation
Functional Testing	• Develop functional test plans for standalone modules, module sets, interfaces, and full integration test plans • Perform functional test for each module with live data • Perform integrated testing for module sets ensure problems are found and fixed as the process moves forward • Perform testing of interfaces • Perform final integration testing of all modules
System Testing	• Develop system integration test plans to include interfaces from other systems • Perform system testing with live data in a test and evaluation environment • Perform integrated performance testing with simulated loads representing the target environment • Fully test, evaluate, and certify the system for production
User Training	• Ensure staff are properly trained and have access to consultants for coaching and guidance
Production Operations	• Plan for efficient and seamless turnover from legacy applications to new system • The ERP production environment requires a standard, layered network topology, standard servers, operating systems, and centralized computing facilities that will include disaster recovery strategies, 24 x 7 operations, and a test and migration environment.

INITIATIVES

The ERP implementation is recommended to be organized within 3 major implementation phases. A summary of the elements of the activities in within the phased approach are outlined below.

• An ERP working group team has been formed

• Phase 0 will include:

  – Planning

  – Business Process Re-Engineering

  – Request for Proposal (RFP)

  – Vendor Evaluation

  – Vendor Selection

  – Launch Pilots

• Funding has been approved for a FY13 start

• Phase I will include

  – Human Resources

  – Payroll

  – Time and Attendance

• Phase II will include

  – Finance

  – Acquisition (Procurement)

  – Asset management and Inventory Control

  – Grants Management

• Phase III will complete the deployments and include

  – Budget and Finance Function

  – Budget Planning and Execution

  – End User Subject Databases, tools, and Analytics

The initiatives needed for OIMT to coordinate and ensure success as well as, solutions and infrastructures needed are outlined in Table 78 below.

NOTE: All future solution initiatives will adhere to the ESA Common Solutions Framework for interoperability with the Hawaii Anywhere common user interface and the use of Enterprise Services such as common security, digital content management, and collaboration & email services. All future infrastructure solution initiatives will adhere to the ETA Adaptive Computing Environment for enterprise and end-user computing.

Table 78: ERP Investment Initiatives

Name	Description	Cost	Notes
ERP LOB Solutions:			
New:			
ERP Phase 0 Planning	Phase 0 involves ERP planning, Business Process Re-Engineering, Proposal preparation, Vendor evaluation and selection, and launching initial pilots.	One Time DME: SWPending Review HW Pending Review Effort: Pending Review	Priority: High EA Compliance: High
ERP Phase I HRM	HRM involves all activities associated with the recruitment and management of personnel to include Benefits Management, Personnel Management, and Resource Training and Development	One Time DME: SW HW Effort: Pending Review	Priority: High EA Compliance: High
ERP Phase I PAYROLL	Payroll services provide for payroll management and expense reimbursement and involve the administration and determination of State employee compensation.	One Time DME: SW HW Effort: Pending Review	Priority: High EA Compliance: High
ERP Phase I Time and Attendance	Time and Attendance services are the reporting and maintenance of the State employee time and attendance activities.	One Time DME: SW HW Effort: Pending Review	Priority: High EA Compliance: High
ERP Phase II Finance	Financial services entails accounting for assets, liabilities, fund balances, revenues and expenses associated with the maintenance of State funds and expenditure of State appropriations (Salaries and Expenses, Operation and Maintenance, Procurement, Working Capital, Trust Funds, etc.), in accordance with applicable State standards.	One Time DME: SWPending Review HW: Pending Review Effort: Pending Review	Priority: High EA Compliance: High

Name	Description	Cost	Notes
ERP Phase II Asset Management and Inventory Tracking	Asset Management and Inventory Control provide accounting support for the management of assets. Inventory Control refers to the tracking of information related to procured assets and resources with regard to quantity, quality, and location.	One Time DME: SW Pending Review Effort: Pending Review	Priority: High EA Compliance: High
ERP Phase II Acquisitions /Procurement	Procurement provides State-Wide procurement policy, oversight, and execution for the total State of Hawaii. This include RFQs, material procurement, shipping, receiving, delivery, and external services procurement.	One Time DME: SW Pending Review Effort: Pending Review	Priority: High EA Compliance: High
ERP Phase II Grants Management	The management of federal grant services provides provision, management and reporting to federal agencies and congress. Grant management depends on a sound financial system, purchasing system, merit-based personnel practices, appropriate property management capability, sound security, health and safety practices, the ability to perform audit and resolution services, and to provide quality review and control activities.	One Time DME: SW Pending Review Effort: Pending Review	Priority: High EA Compliance: High
ERP Phase III Budget Perpetration	Budget planning involves all activities undertaken to determine priorities for future spending and to develop an itemized forecast of future funding and expenditures during a targeted period of time. Activities includes budgeting, planning, execution, structure, and treasury management.	One Time DME: SW Pending Review HW Pending Review Effort: Pending Review	Priority: High EA Compliance: High

TRANSITION AND SEQUENCING

Considerations for sequencing of the implementation initiatives are outlined below:

• Year 1 Transitioning and Sequencing

  – Phase I ERP planning, Business Process Re-Engineering, Requirements and RFP

  – Phase I Requirements preparation to include process and data modeling of business services

  – Phase I Procurement options based on requirements

  – Phase I Project planning

  – Phase I Vendor evaluations

  – Phase I Vendor selection and award

  – Phase I Pilot selections

  – Phase I Detail project plans to support implementation.

  – Phase I Pilot reviews for lessons learned

  – Phase I Scale up and project launch

  – Initiate Phase II planning, Business Process Re-Engineering, Requirements and RFP for Phase II.

• Year 2 Transitioning and Sequencing

  – Phase I Design and Implementation of HRM, Payroll and Time and Attendance

  – Phase II Vendor evaluations

  – Phase II Vendor selection and award

  – Phase II Pilot selections

  – Phase II Project plans to support implementation.

  – Phase II Pilots reviews for lessons learned

  – Phase II Scale up and project launch

• Year 3 Transitioning and Sequencing

  – Phase I Functional and System Testing

  – Phase I User Training

  – Phase I Production Operations

  – Phase II Design and Implementation of Finance and Budgeting, Acquisition, Asset Management and Inventory Control, and Grants Management

• Year 4 Transitioning and Sequencing – Financial Management

  – Phase II Functional and System Testing

– Phase II User Training

– Phase II Production Operations

• Year 5 Transitioning and Sequencing – Budget Preparation

– Phase III Functional and System Testing

– Phase III User Training

– Phase III Production Operations

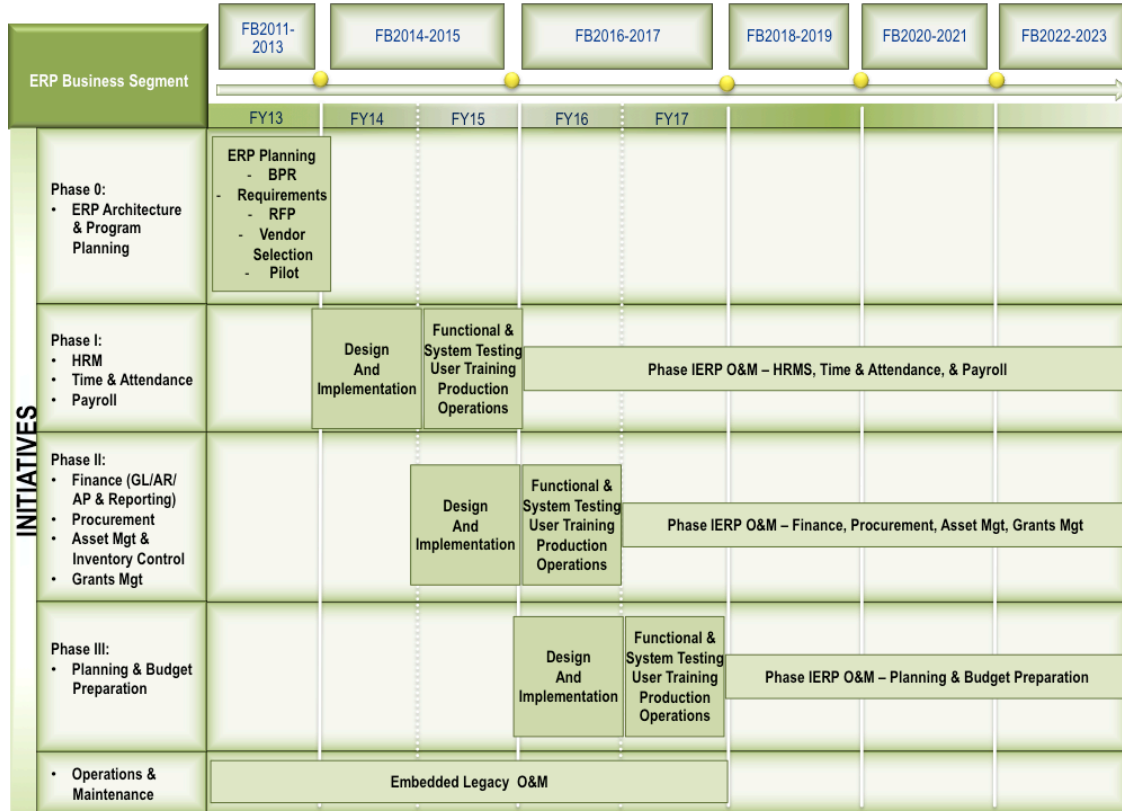The plan for future state transition and sequencing of initiatives is depicted below in Figure 93.

Figure 93: ERP Business Segment Transition and Sequencing Plan Summary