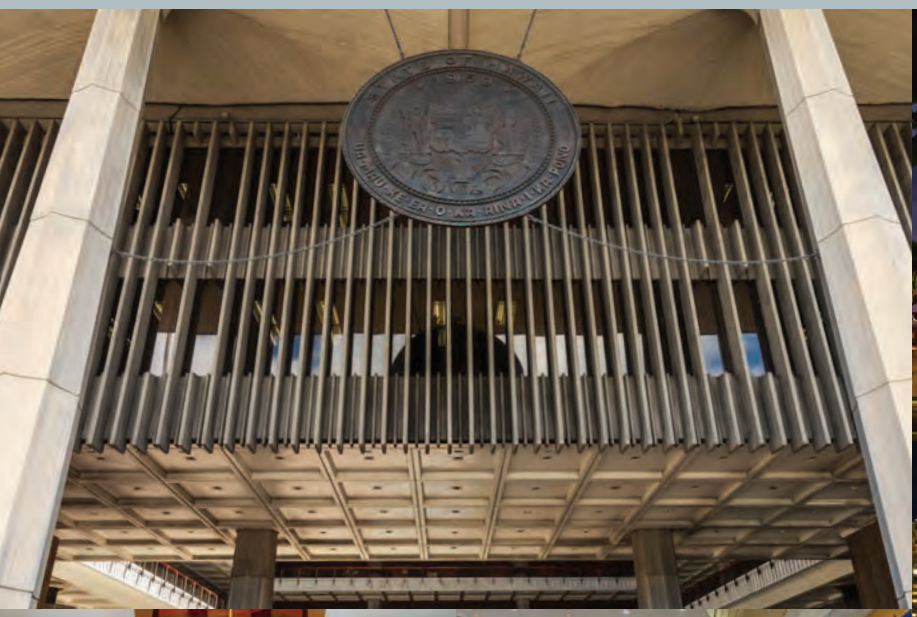
REPORT FOR THE **STATE OF HAWAI'I**
BY THE **STATE CHIEF INFORMATION OFFICER**



STATE OF HAWAI'I CIO ANNUAL REPORT
FOR FISCAL YEARS **2012–2014**

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1.0 INTRODUCTION

ALOHA
E KOMO MAI

1.1 LETTER FROM THE GOVERNOR

February 10, 2014

Aloha. On behalf of the people of Hawai'i, I would like to recognize and applaud State Chief Information Officer (CIO) Sanjeev "Sonny" Bhagowalia, his entire Office of Information Management & Technology (OIMT) team, and the CIO Council for their efforts to transform government through improved business processes and modernized information technology. Their work has contributed greatly toward our goal of bringing our three-decades-old information technology infrastructure into the digital age.

The State CIO's Fiscal Year 2012–2014 Annual Report is designed to inform the citizens of Hawai'i and all State departments and employees of our technology challenges, accomplishments, and the road ahead to technology innovation in the State. Achieving these changes requires modernizing the State's antiquated technology infrastructure and systems. It also requires streamlining business operations so that State employees can optimize their work, and residents and businesses can readily access the services and information they seek.

I formally established the first CIO for the State of Hawai'i through Act 200 (2010 session laws), culminating with the hiring of Sonny and the formation of OIMT in July of 2011. Last year, I signed into law Act 263, a measure to enhance government transparency and accountability in Hawai'i through public awareness and access to open data. Additionally, last year, I was pleased to enact significant legislation emphasizing our commitment to moving Hawai'i forward while maintaining cyber-security. Act 264 requires the State and counties to take action in advancing the Hawai'i Broadband Initiative. The initiative's goal is to provide ultra-high-speed Internet access by 2018, and the clear and decisive timeline established by the Act will reduce uncertainty for broadband companies and serve as an incentive to invest in increased bandwidth. Furthermore, Act 265, also introduced last year as part of my legislative package, authorizes the CIO to conduct security audits and direct remedial actions, as necessary, in the management of the State's cyber-security.

Mahalo to Sonny and OIMT for their exemplary leadership in transforming government. This shared goal remains a top priority of this Administration. These significant achievements over the past 2.7 years were made possible through a national award-winning plan and progressive successful implementation of Top 10 programs as outlined in this report. There is a long road ahead in our transformation journey. We look forward to even greater achievements in the coming months and years.

With warmest regards,

Neil Abercrombie

NEIL ABERCROMBIE
Governor, State of Hawai'i

1.2 LETTER FROM THE STATE CIO

February 10, 2014

Aloha! This State of Hawai'i CIO Annual Report for Fiscal Years 2012–2014 provides insight into the State's rapidly changing business environment, and highlights the value that Information Technology (IT) delivers to the State. It has been a monumental 2.7 years, since the Governor and Legislature established a State Chief Information Officer to address the State's chronic underinvestment and utilization of technology by aggressively implementing the Business and Information Technology/Information Resource Management (IT/IRM) Transformation Plan.

To aid my role as the State CIO and facilitate projects that directly benefit other State departments and Hawaiian residents, the Office of Information Management and Technology (OIMT) was developed in July of 2011. Our mission is to **"To connect Hawai'i to the world, with people and technology."** As part of its mission, OIMT's long-term goals to better serve its stakeholders are to:

- Make it simpler and easier for Hawai'i's citizens to get valuable services from the government;
- Empower the State's IT workforce to become a highly trained workforce with marketable skills;
- Enable departments to effectively deliver services that are more in line with their mission and positively impact citizens.

During 2012–2014, I undertook three strategeies, Top 10 Program, and 50 initiatives and partnerships to transform the State's IT environment, better serve citizens, and move Hawai'i into the future. These initiatives all fit within the following three strategies:

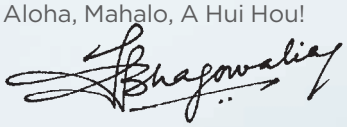
- **Transforming the Business Environment:** Providing more-efficient and effective applications to the citizens and departments of the State by reengineering business processes.
- **Modernizing the Technology Infrastructure:** Implementing new and emerging technologies to better serve Hawai'i with a modern, secure and reliable infrastructure.
- **Establishing Transparency and Accountability:** Creating enterprise-level strategic investments and providing open, transparent oversight on those investments through open government, improved governance and a unified organizational culture.

As OIMT looks ahead, its key priority will remain modernizing IT within the State to enable Hawai'i to become a leading digital state. As the State works to transform its technology and business environment, it will be especially important to continue strong collaboration efforts with departments, industry, academia, and the public — listening to their needs, soliciting input, and working together to find solutions. With a focus on updated business applications, improved technology and infrastructure, and strong organizational culture — transformation is not only achievable, but also underway.

We are proud of our accomplishments in FY 2012 through 2014, and thankful for the support of the Governor, the Lieutenant Governor, the Legislature, and the staff of all the State departments we have the privilege of working with every day.

I would also like to give special acknowledgment to the dedicated OIMT, ICSD, and CIO Council staff throughout the state. Without your hard work, passion and commitment to the State of Hawai'i, none of this would be possible. As of today, I have been requested by the Governor to help shape the future of Hawai'i as a technology and cyber-security hub on a larger, world stage. I look forward to the next step in our transformation journey together.

Aloha, Mahalo, A Hui Hou!



Sanjeev "Sonny" Bhagowalia
State of Hawai'i Chief Information Officer

2.0 EXECUTIVE SUMMARY

The State of Hawai'i's Chief Information Officer is responsible for providing information Technology (IT) services to the State's $11 billion business enterprise, which consists of 18 departments, 108 attached agencies, and 168 boards and commissions — representing 220 business functions and services across 35 distinct lines of business and 41,000 employees. The State of Hawai'i currently employees 746 IT employees dispersed across multiple State agencies to support the State's IT needs. Of the $11 billion spent in the Executive Branch, IT accounts for a mere 1.4% ($157 million), well below the 3%–5% recommended industry best practice, and far below the average 10% IT resource levels in federal government.

Several assessments completed in 2011 and 2012 found that, when compared to the business processes and IT capabilities of other states, the State of Hawai'i lags by 20 to 30 years. These independent assessments confirmed that current systems lack interoperability, reliability, security, privacy, and maintainability, preventing the State from solving current challenges and leveraging future opportunities. This means slower delivery of services to citizens, cumbersome procedures for State staff, and taxpayer dollars that are being spent on systems that could be better spent elsewhere. To address these challenges, the State CIO established the new Office of Information Management & Technology (OIMT), whose mission is to **"To connect Hawai'i to the world, with people and technology."**

In consultation with State agencies, the State CIO and OIMT conducted a thorough review of national best practices and lessons learned, and developed the Business and Information Technology/Information Resource Management Transformation Plan (Transformation Plan) to guide the work of the State toward achieving Governor Abercrombie's New Day vision. This 12-year plan, which includes two years of planning and 10 years of implementation in multiple phases, will revolutionize the way information is managed to improve how programs and services are delivered to the public.

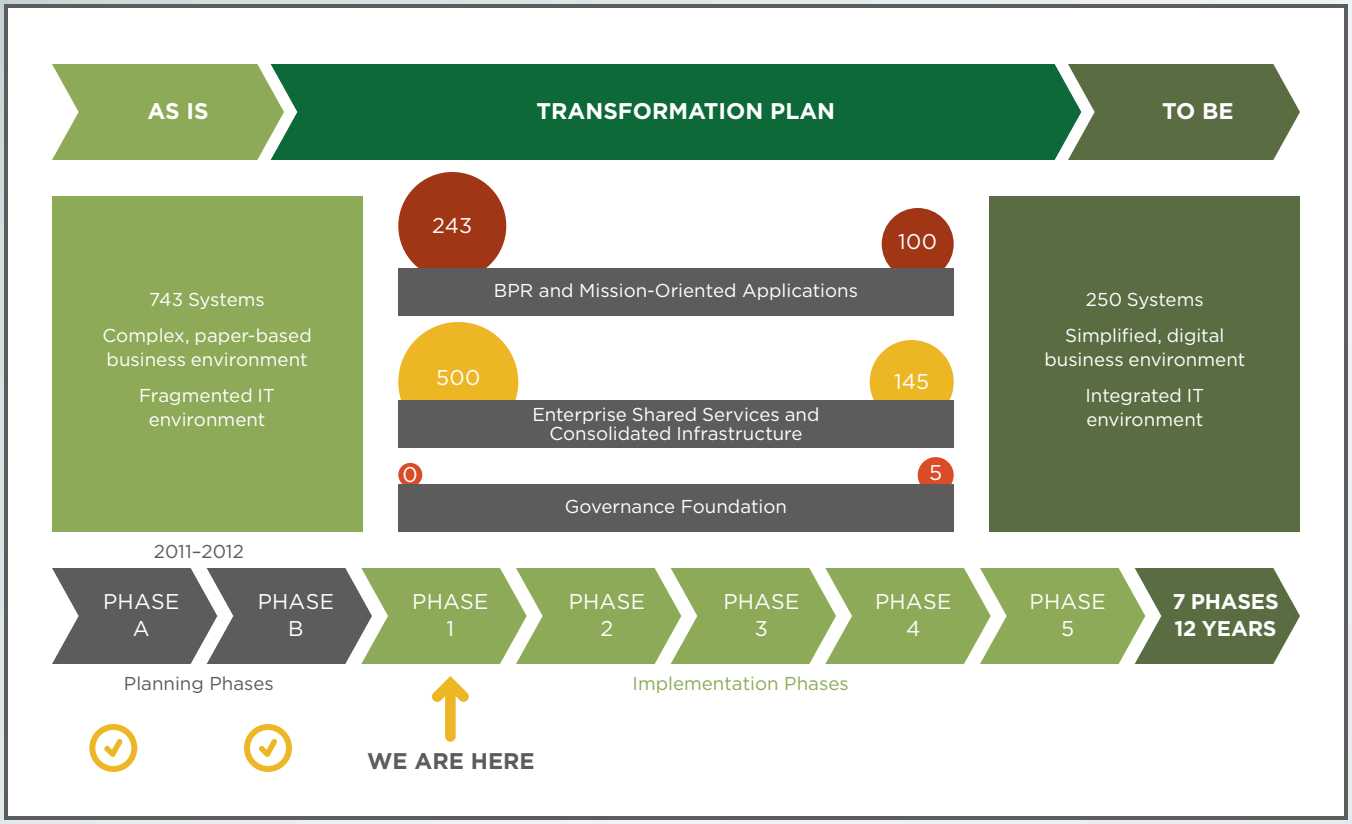
As part of the implementation plan, the State CIO has created three guiding strategies to transform IT for the State and deliver increased IT value to all branches of the government, the citizens of Hawai'i, and third-party partners such as local businesses.

THREE KEY STRATEGIES

#1 Re-engineer Business Processes	#2 Modernize IT Infrastructure	#3 Establish Governance
PROGRAMS		
• Enterprise Resource Planning • Tax System Modernization • Health Information Technology • Business Process Re-engineering	• Infrastructure • Enterprise Shared Services • Security and Privacy • Hawai'i Broadband Initiative	• Governance • Open Government

These three CIO strategies guide 10 program initiatives that the Office of the CIO undertook during 2012–2014 — each program associated with one of the key guiding strategies. Within each of the programs are several projects that have either been completed or are currently in progress to achieve the program's objective.

As depicted in the graphic below, the State is currently in Year 3 of the 12-year plan and is moving aggressively into the implementation phases of the plan.



During the past two years, the State CIO and OIMT have made significant accomplishments in each of the three key strategic areas:

#1: Re-engineer Business Processes

Working closely with department staff, OIMT delivered several important business process re-engineering projects, including:

- **Enterprise Resource Planning** — In order to update key business applications and enable business efficiency, information analysis, and technology modernization for seven (7) core functions; completed a comprehensive ERP Assessment and Road Map leading up to the development and release of the ERP Request for Proposal; and created an ERP Program Management Office and ERP Acquisition Support to enable the successful procurement and implementation of this critical project.
- **Tax System Modernization** — In order to streamline and modernize tax systems and processing across the enterprise: completed the development of the Tax System Request for Proposal; implemented an Analytics Program; and implemented the SERVICE Plan, an oversight program for modernization to align technology and processes for DoTAX to its core mission.
- **Health Information Technology** — To provide a more effective, efficient, and patient-focused healthcare system: completed the implementation of the Hawai'i Health Information Exchange (HHIE); implemented the Hawai'i Health Connector (Health Insurance Exchange); undertook modernization efforts for the Medicaid Eligibility and SNAP (Supplemental Nutrition

2012–2014 TOP ACHIEVEMENTS BY PROGRAM

#1: Re-engineer Business Processes

Enterprise Resource Planning (ERP)

STATE OF HAWAI'I
ENTERPRISE RESOURCE PLANNING PROGRAM

Released an RFP to acquire an Enterprise Resource Planning (ERP) solution and developed interim, updated solutions for Budget and Grants to modernize key business applications until a new system is acquired.

Tax System Modernization

80%
REDUCTION IN PROCESSING TIME

Re-engineered business processes to reduce the average time to receive a refund from 5–8 weeks to 1–2 weeks. Identified uncollected revenue using tax analytics and helped prepare tax system modernization SERVICE Plan and RFP.

Health IT

Successfully coordinated various stakeholders through the OIMT-facilitated Hawai'i Health IT Committee (HHITC) to facilitate health information exchanges and modernize health information architecture across agencies and programs.

Re-engineered Business Processes

40 UNDERGRADUATE AND GRADUATE INTERNS EACH SEMESTER

Instituted the Transformation Intern Program (TIP) to provide first-hand business and IT experience to 40 interns each semester. Most of the students are local, with strong participation from the University of Hawai'i. Initiated 12 BPRs, completing 2.

#2: Modernize IT Infrastructure

Consolidated Infrastructure

99.8%
INCREASED NETWORK UPTIME FROM BELOW 80% TO OVER 98%

Invested in the upgrade of the State's network and communications backbone, increasing uptime from below 80% in 2011 to 95% in 2012 and 99.8% in 2013. Increased capacity from 100Mbps to 10Gbps (1000%)

Enterprise Shared Services

40–60%
REDUCTION IN SOFTWARE COSTS

Increased purchase volumes and reduced licensing expenses by as much as 40%–60% statewide, with a cost avoidance of over $4,000,000.

Enterprise Security and Privacy

Established a fully integrated Security Operations Center (SOC) and Computer Security Incident Response Center (CSIRC). Completed enterprise security assessment across 17 categories and 5 projects.

Hawai'i Broadband Initiative

MOVING FROM
3G > 4G LTE
ACCESS

Improvements to infrastructure for broadband mean connections are now faster, more reliable, and more affordable for residents and businesses and interisland connections have improved.

#3: Establish Governance

Governance

THE FEDERAL 100
AWARD WINNER

Published the national award-winning comprehensive State Business and Technology Transformation Plan. Participated in and/or ran nine Governance Boards covering the business and technology transformation portfolio.

20 DASHBOARDS

Developed 17 performance dashboards to openly report on departmental activity, funding, and spending; a Capital Improvement Project (CIP) dashboard to show the amount of CIP funds encumbered; a health IT dashboard; and an IT dashboard.

Open Government

DATA.
HAWAII.
GOV

1,144 TOTAL
DATA SETS PUBLISHED

Hawai'i's open data portal (Data.Hawaii.gov) published 239 data sets in 2012 and 905 data sets in 2013 to provide residents, analysts, and civic developers with unparalled access to State data.

Fully upgraded award-winning hawaii.gov portal, modernized all 18 department websites, launched my.hawaii.gov, a single, "user-friendly-intelligent" Web portal with a service catalog of 101 online services and 63 mobile apps. Launched transparency.hawaii.gov site and app.

Assistance Program) systems; implemented a Data Services Hub and a Health Data Repository; instituted Health Data Governance and Standardization; and implemented Electronic Health Records modernization.

- **Business Process Re-engineering** — To update and re-engineer the business processes of legacy mission-critical applications and have them delivered through one portal: created the Business Transformation Representative Group; established the Executive Project Management Office (ePMO); created the Transformation Internship Program (TIP); and modernized department websites.

#2: Modernize IT Infrastructure

IT infrastructure enhancements were a top priority of the State CIO in 2012 and 2013, and the CIO placed a significant amount of emphasis and resources in this area. OIMT invested in the upgrade of the State's network and communications backbone, increasing uptime from below 80% in 2011 to 95% in 2012 and 98% in 2013. OIMT also completed the implementation of several security and network management and monitoring tools, upgraded IT infrastructure and computing, and enhanced IT security support. OIMT also focused on increasing broadband access to effectively meet citizens' needs for advanced telecommunications access.

- **Infrastructure** — Consolidated networking and computing infrastructure; enabled a reliable statewide network with guaranteed service levels; refreshed and updated technology such as desktop and mobile equipment; provided additional computing storage via private partnerships; and developed the infrastructure for departments' mission-critical applications.
- **Communications Infrastructure** — Worked to plan, design, and construct CIP projects for radio infrastructure and equipment, including the following:
  - Modernization of the Hawaiian Microwave Radio System — this project will replace the existing backbone and spur microwave radio link infrastructure and equipment of the Hawaiian Digital Microwave Radio System, especially on the southern portion of the system.
  - Add high-capacity microwave radio links connecting O'ahu and Maui — to provide additional capacity between O'ahu and Maui, as well as provide relief to congested paths between Maui and Hawai'i.
  - Addition of microwave radio link to connect Aloha Stadium to the State network — project will fund infrastructure and equipment necessary to link Aloha Stadium to the State infrastructure.
  - Expansion of State Shared Blended (SSB) system and Land Mobile Radio (LMR) system — this funding of infrastructure and equipment will help expand the SSB radio coverage on O'ahu to include the addition of radio equipment at one site on Moloka'i.
  - Upgrade of DC battery power systems and inverters at radio systems statewide — this effort will modernize and upgrade systems that provide primary power for the 'Ānuenue and Hawaiian microwave systems and SSB LMR system at radio facilities statewide.
  - Modifications, upgrades, and repair of diesel fuel systems for standby generators at radio facilities.
- **Enterprise Shared Services** — Provided central shared services including: Email and Directory services, Content and Document Management; Geographic Information Systems (GIS); and Collaboration tools.
- **Security and Privacy** — Improved security and privacy controls including Identity, Credential, and Access Management, enabled Single Sign-On for access across various State systems; and enabled privacy protections.
- **Hawai'i Broadband Initiative** — Made significant progress toward the goal of providing all Hawai'i residents with ultra-high-speed, affordable, and reliable broadband services by 2018.

#3: Establish Governance

In 2012–2014, OIMT made significant progress in establishing IT Governance processes, procedures and policies, including:

- **Governance** — Established enterprisewide IT policies, lifecycle management processes, capital planning and investment control (CPIC), portfolio management, enterprise architecture (EA), and performance dashboards.
- **Open Government** — Made open government data widely available through an open-source environment, including mobile apps and open government data (e.g., Data.Hawaii.gov).

STATE OF HAWAIʻI BUSINESS AND IT/IRM TRANSFORMATION PROJECTS
PROGRESS IN ACTION FY 12–15

Category	FY 2012	FY 2013	FY 2014	FY 2015
#1: RE-ENGINEER BUSINESS PROCESSES				
	Enterprise Resource Planning (ERP)			
	• Interim Projects	• ERP Assessment • ePayroll Change Schedule • Interim Projects	• Fit Gap Execution • ERP System Design — Initial Modules ($18.5M) • Program/Project Management/Legal ($5.5M) • Interim Projects	• ERP — Finance, Grants, Assets and Acquisitions Modules
	Tax System Modernization (TSM)			
	• Tax Document Processing (refunds)	• Tax Analytics ($$) • eTreasury Deposit Receipts • TSM RFP Preparation	• Design and Consolidation of core System ($16M)	
	Health IT (HIT)			
	• HIT Grant Proposal / $14.4M *Federal or Grant Funds	• HIT Planning • HIE Oversight and Contracts • HIT Phase I*	• HIT Integration • HIE Planning and Oversight	• HIT Phase II*: All-Payer Claims DB, and Health Analytics • HIE Advancement, Coordination, and Oversight
	Business Process Re-engineering (BPR) Initiatives			
	• Tax Document Processing (Refunds)	• SCR 40 State Contract to Payment Business Process Analysis and Dashboard Working Group • Electronic Treasury Deposit Receipts (eTDR) — automate and streamline the recording and reporting of electronic deposits more efficiently and immediately	• DAGS Plans and Documents Web Access • DOA Quality Assurance Information Management System • DOA Contract Management System • AG Advice Memo Automation • DOD File Conversion to Electronic Format • DOH Contract GENie • DOH Vital Records Ordering and Tracking System • DHRD Online Unskilled Labor Registration Class System for Applicant Processing and Hiring • DHS BESSED INVO Database Consolidation • PSD Dashboard for Decision Making	• Complete 10 BPRs — to be defined with BTR participation
#2: MODERNIZE IT INFRASTRUCTURE				
	Security & Privacy			
	• Asia-Pacific Economic Cooperation (APEC) Summit Security	• Data Loss Prevention (Pilot) • Securing Internet Communications (DNSSEC) • Multi-Factor Authentication Phase 1 • Enhanced Data Loss Prevention • ICSD Security Triage	• Cyber Software License ($.45M) • Secure Internal Network & Vulnerability ($.9M) • Data Loss Prevention ($1.4M) • Data-at-Rest Protection ($1.23M) • Active Directory/DNS/Identity/ Access/Credential ($2.1M)	• Cyber Software License ($0.45M) • Secure Internal Network & Vulnerability ($0.9M) • Data Loss Prevention ($1.4M) • Data-at-Rest Protection ($1.23M) • Active Directory/DNS/Identity/ Access/Credential ($2.1M)
	Enterprise Shared Services			
		• Data Loss Prevention (Pilot) • Securing Internet Communications (DNSSEC) • Multi-Factor Authentication Phase 1 • Enhanced Data Loss Prevention • ICSD Security Triage	• Cyber Software License ($0.45M) • Secure Internal Network & Vulnerability ($0.9M) • Data Loss Prevention ($1.4M) • Data-at-Rest Protection ($1.23M) • Active Directory/DNS/Identity/ Access/Credential ($2.1M)	• Cyber Software License ($0.45M) • Secure Internal Network & Vulnerability ($0.9M) • Data Loss Prevention ($1.4M) • Data-at-Rest Protection ($1.23M) • Active Directory/DNS/Identity/ Access/Credential ($2.1M)
	Hawaiʻi Broadband Initiative (HBI)			
		• HBI Strategic Plan	• Planning, Land Acquisition, Design, and Construction HBI ($6M)	
	Infrastructure			
	• Server Virtualization • System Access Modernization	• ICSD Infrastructure Triage • Data Center Planning • OneNet Foundation	• Emergency repair and replenishment of Halon ($0.167M) • VMware custom software and support ($2.7M) • B-20 Renovation, Data Center Revitalization, Monitoring Systems ($0.5M) • Hardware and Storage Systems ($2.6M)	• Cyber Software License ($0.45M) • Secure Internal Network & Vulnerability ($0.9M) • Data Loss Prevention ($1.4M) • Data-at-Rest Protection ($1.23M) • Active Directory/DNS/Identity/ Access/Credential ($2.1M)
#3: ESTABLISH GOVERNANCE				
	Governance			
	• State Baseline Assessment • Benchmarking Study • Data Center Assessment • CIP Dashboard	• Business IT/IRM Transformation Plan (7/2012) • IT Governance Modernization • Performance Dashboards	• Enterprise Architecture & Portfolio ($2M) • Troux Implementation • Agency and Programs Dashboards	• Enterprise Architecture & Portfolio ($1M)
	Open Government			
	• Open Data (alpha)	• Open Data (beta) • 905 data sets • 18 Department websites • 6 mobile apps • New web portal (web 2.0) • Boards & Commissions website • Legislative and Constituent Tracking System	• my.hawaii.gov Portal • 44 Attached Agency websites • Data apps • Citizen Engagement	• my.hawaii.gov (beta) with two-factor authentication
Spend	**$4.5 Million**	**$25,000,000**	**$50,000,000**	**$45,000,000**

($M = Millions) * ICSD Operating Budget FY12 - FY14 $15.8M-FY12; $27.2M-FY13; $17.3M-FY14 ** OIMT "U" Fund $25.0 million

By undertaking its key strategies and top programs, OIMT has begun to transform the State's IT environment in following the road map laid out in the State's IT Transformation Plan. By realizing the Transformation Plan, the State will become a world-class IT environment, offering cutting-edge technology and services to residents, State employees, and government and business partners.

FUTURE STATE OF HAWAIʻI: A LEADING DIGITAL STATE

Residents, State Employees, Government and Business Partners

have access to the right information through one portal, **my.hawaii.gov**, on any device, securely and reliably

for any mission, at any time.

From a technology standpoint, the State will have a simplified, streamlined, and technologically advanced environment. This new environment will allow the State to rapidly develop and deploy applications and technology-enabled solutions that provide direct benefits to residents, State employees, and government and business partners. It will also enable the State to train its IT workforce in the latest technologies, thus improving their skills sets and marketability.

The transformation of IT currently under way within the State will have far reaching benefits for everyone, including:

The Community

- Improved delivery of services and programs (e.g., "going online" vs. "waiting in line")
- A more transparent and responsive government
- Increased, secure, and timely access to information and data

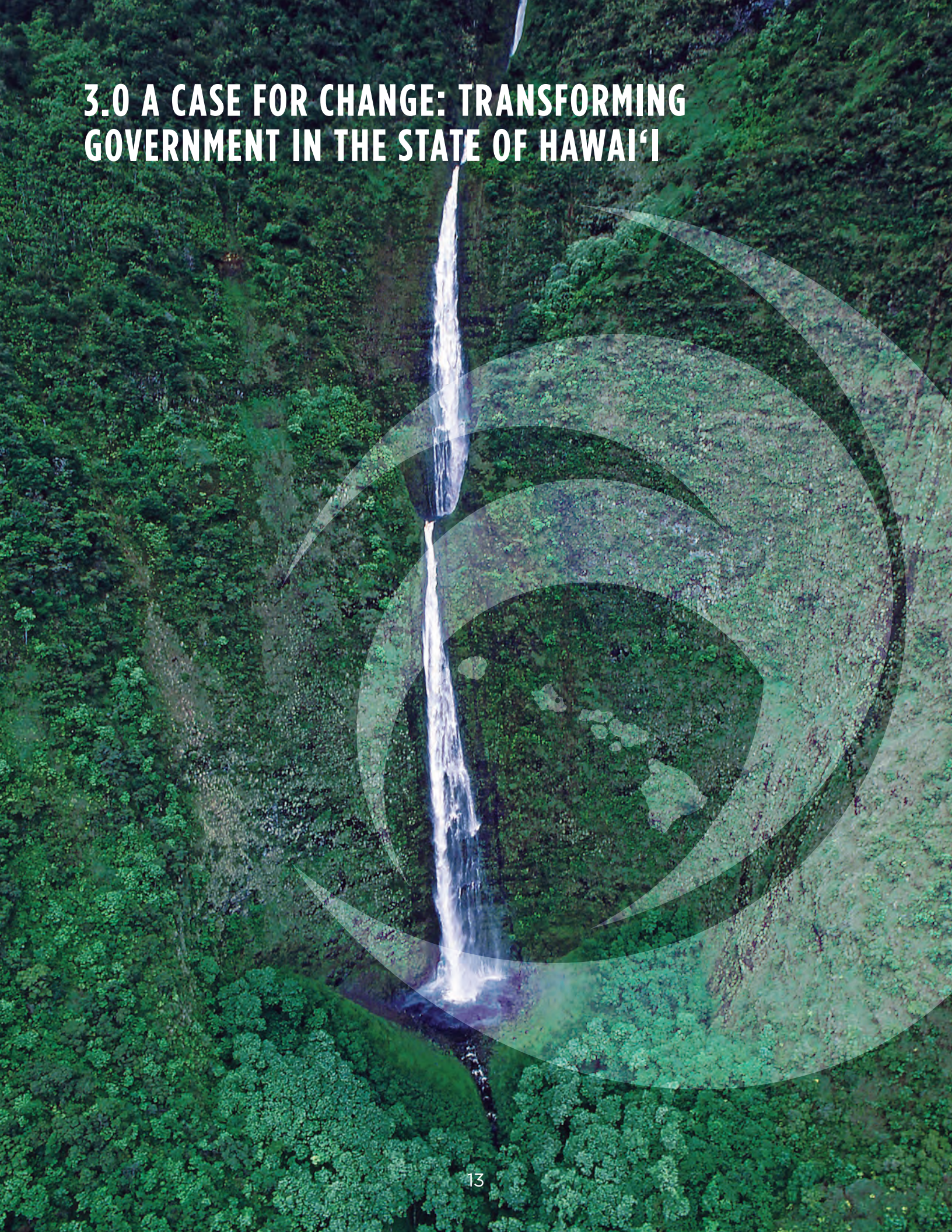
State Employees

- Streamlined workflow processes that allow more focus on serving customers
- Access to a wider range of new technologies to better support departmental missions, programs, and services
- Improved career growth opportunities

Departments

- Efficiently aligned services
- Reduced costs and unnecessary redundancies
- Increased reliability and security
- Improved outcomes and accountability

3.0 A CASE FOR CHANGE: TRANSFORMING GOVERNMENT IN THE STATE OF HAWAI‘I



3.1 OUR PROUD HISTORY AND TRADITIONS

From the Polynesian settlers who first voyaged to the Hawaiian Islands thousands of years ago, to the agricultural and commercial advances of the 1800s, to the pioneering conservation efforts of the past two decades — Hawai'i has a proud history of embracing innovation and change.

Throughout the 20th century, Hawai'i has been a recognized international leader in research, science, and technology; specializing in such areas as astronomy, ocean sciences, and geology. The State supports a number of technology and research initiatives including the Maui Research and Technology Center (home of the Maui High-Performance Computing Center), the National Energy Laboratory of Hawai'i Authority (an ocean science and technology park utilizing deep ocean water technology), and the Subaru Telescope Facility which features advanced telescopes and a dedicated supercomputer.

As Hawai'i looks to the future, it will focus on expanding beyond expectations in the natural sciences to become a leader in digital technology and the global knowledge-based economy.

3.2 EXISTING CHALLENGES — OUR LEGACY BUSINESS, TECHNOLOGY AND GOVERNANCE ENVIRONMENT CHALLENGES

A Mandate for Change

With the release of the "New Day in Hawai'i Plan," Governor Neil Abercrombie laid out a road map for investing in Hawai'i's economy, restoring public confidence, and sustaining Hawai'i for future generations. The Plan is comprised of three mandates, stating:

1. Our first task is immediate job growth as we shift Hawai'i's economy to a sustainable foundation.
2. Our second charge is to invest in the education, skills, and well-being of Hawai'i's people.
3. Our third focus is to transform State government into an efficient and effective enterprise.

The third mandate in the New Day in Hawai'i Plan is centered on improving the State's efficiency and effectiveness, which can be interpreted as a commentary on the current information technology (IT) environment of the State. Compared to leading states, Hawai'i is currently "behind the times" in terms of IT capabilities: several key State applications including the State's financial and payroll systems run on outdated technology that is more than 30 years old; departmental applications are unable to efficiently meet core service needs; there are serious concerns around security and privacy protections for sensitive data (e.g., Social Security Numbers); and citizens have very limited access to online services — unable to complete even basic service requests online; historically tax refunds have taken several weeks to process, causing citizens to have to wait to receive money owed to them; broadband networks are slow and unreliable, limiting the peoples' ability to access an ever-expanding World Wide Web; and time-and-attendance entries for State employees are manual and time-consuming, resulting in errors and improper payments. These are just a few of the technology problems that have routinely hampered the State in its vision to invest in Hawai'i's economy and future sustainability.

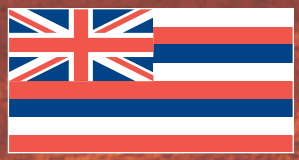
[1] SAIC Baselines, Gartner Baseline, Auditor General Report

A PROUD AND UNIQUE STATE

With breathtaking natural beauty, a diverse population, a rich cultural history, and Aloha spirit — There's no place on earth like Hawai'i:

HISTORY

"The Aloha State" became the 50th state in 1959, but the history of Hawai'i goes back centuries earlier. Roughly 1,500 years ago, Polynesians first set foot on Hawai'i Island, sailing over 2,000 miles in canoes to migrate to the Islands.



POPULATION

1.4 MILLION RESIDENTS

Diverse population of Native Hawaiians and immigrant ethnicities including Japanese, Chinese, Filipino and Portuguese immigrants.

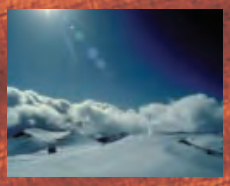
HAWAI'I'S EIGHT MAJOR ISLANDS

Described by Mark Twain as "the loveliest fleet of islands that lies anchored in any ocean," Hawai'i is a string of 137 islands with the major islands being Ni'ihau, Kaua'i, O'ahu, Moloka'i, Lana'i, Kaho'olawe, Maui, and Hawai'i.

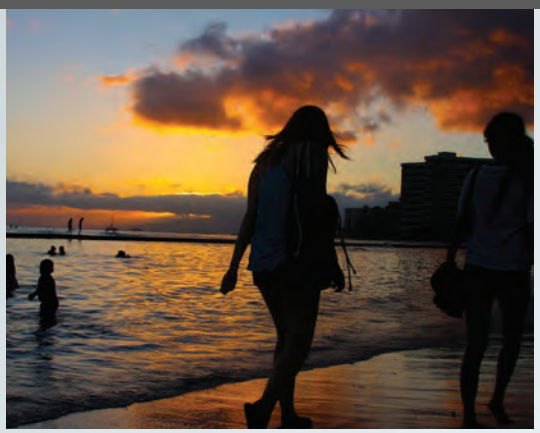
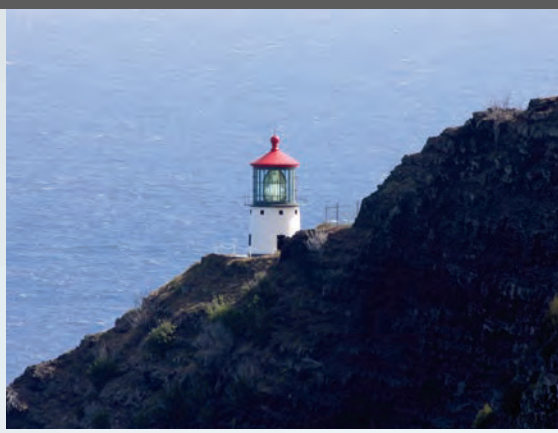
State Flower: Yellow hibiscus (pua ma'o hau hele; Hibiscus brackenridgei)

State Song: Hawai'i Pono'ī

State Seal and Motto: Ua mau ke 'eā o ka 'āina i ka pono (The life of the land is perpetuated in righteousness)



- **Energy:** As the most oil-dependent state in the U.S., imported petroleum 85% (2010), Hawai'i's Clean Energy Initiative's goal is to achieve 70 percent Clean Energy by the year 2030—utilizing renewable energy
- **Education:** The UH system enrolls over 60,090 students and awards over 3,593 bachelor's degrees
- **Military:** USPACOM, the U.S. Pacific Command, one of six U.S. Unified Combat Commands of the United States armed forces covering 50% of earth's surface
- **Economy:** Gross Domestic Product: $70B, visitor expenditures $14.5B (2013), Federal expenditures $26B (2010)
- **Government:** Two levels: State and four Counties; 51 House members and 25 Senate members in Legislature
- **Tourism:** 8.24 million visitors annually from the U.S. and abroad (2013) - daily average of 180,000 visitors
- **Income & Cost of Living:** Hawai'i listed 6th families (2009); $2.3K homeowners monthly housing cost (2009) — 3rd highest in the nation
- **Research & Technology:** Federal government spending: $344 million (2007); Mauna Kea Summit — home to the world's largest optical telescope, a $1.2 billion Thirty Meter Telescope (TMT)
- **Business:** 33,240 Domestic corporations, 11,497 Non-Hawai'i corporations and 5,125 Partnerships (2010)
- **Communications:** Five Newspapers, 102 Radio stations, 25 Television stations, Six Cable TV companies and 1.07M Cellular telephone subscribers

HAWAIʻI HAS FOUR MAJOR COUNTIES WITH EACH HAVING ITS OWN MAYOR AND COUNCIL:

- City & County of Honolulu (the Island of Oʻahu and the Northwest Hawaiian Islands excluding Midway)
- Hawaiʻi County (Hawaiʻi Island)
- Maui County (Islands of Maui, Molokaʻi, Lanaʻi and Kahoʻolawe)
- Kauaʻi County (Islands of Kauaʻi and Niihau)

COUNTY GOVERNMENTS

HONOLULU COUNTY

- The City and County of Honolulu includes the Island of Oʻahu. Known as the "Gathering Place," Oʻahu is the center of business and government for the State of Hawaiʻi.
- Downtown Honolulu is Hawaiʻi's financial center while Waikiki, the world famous tourist destination, is only a few miles away.
- Smallest of the four counties in geographical size, Honolulu has 70% of the state's population.

MAUI COUNTY

The second largest county in the state, it includes the islands of Molokaʻi and Lanaʻi islands. Maui Island is known as the "Valley Isle," and is the economic center and seat of county government. Maui is the second-most-popular tourist destination.

KAUAʻI

Kauaʻi is known as the "Garden Island" and is geographically the oldest of the Hawaiian Islands. The county includes the islands of Kauaʻi, Niihau and uninhabited Lehua and Kaula. Scenic wonders in the county include Waimea Canyon, Hanalei Valley, Kōkeʻe State Park, Fern Grotto, many stunning beaches and, for the intrepid, Kalalau Valley.

HAWAIʻI COUNTY

Encompassing the island of Hawaiʻi and the youngest island in the chain, the "Big Island" was formed by five volcanoes, two of which are still active (Mauna Loa and Kīlauea). It is known as the "Big Island" and as the "Orchid Isle." With a land area of 4,028.4 square miles, it is almost twice the combined size of the other islands. Hawaiʻi County is an important science and technology center — with Mauna Kea hosting 12 major astronomical facilities that represent the cooperation of 10 countries.

The efficiency and effectiveness that the Governor envisions in the New Day in Hawai‘i Plan can be enabled by streamlining processes through the use of modern technologies. Implementation of these technologies will improve business and IT services to three primary stakeholders groups:

1) Citizens of Hawai‘i — Improved technology will simplify government access to the residents of Hawai‘i, which will improve the overall delivery of service and facilitate increased transparency of government;

2) State Staff — Improved technology will provide State staff with the necessary resources to improve their efficiency and effectiveness by eliminating the need for redundant processes and improving their access to information;

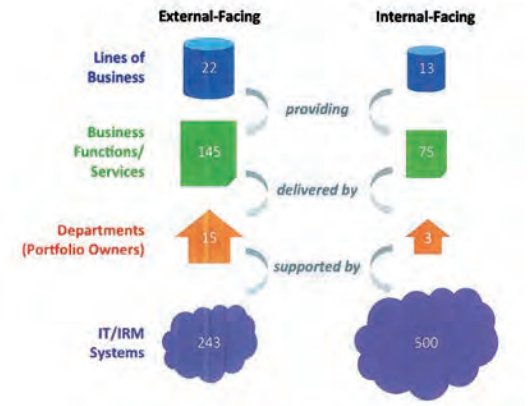
3) State Departments and Agencies — Improved technology enables the efficient and secure delivery of government services and will establish a foundation that can grow and change with the evolving needs of each agency, department, or program.

LEGACY IT AND BUSINESS ENVIRONMENT: A FRAGMENTED AND INEFFICIENT ENVIRONMENT

BUDGET
STATE GDP = $ 70 BILLION

$11B State Budget

$157M IT Budget (1.4%)



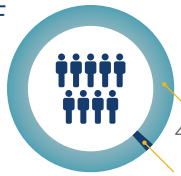
ORGANIZATION

18 Departments

108 Attached Agencies

162 Boards & Commissions

STAFF



41,000 State Employees

746 IT Employees (1.8%)

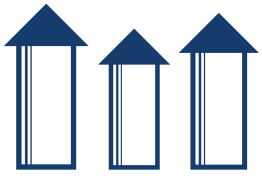
BUSINESS

- 35 Lines of Business;
- 220 Business Functions and Services;
- 100s of Complex, Manual, Siloed, Paper Processes

TECHNOLOGY

- Up to 30 years old;
- 743 fragmented IT systems;
- No Disaster Recovery or Continuity of Operations

GOVERNANCE

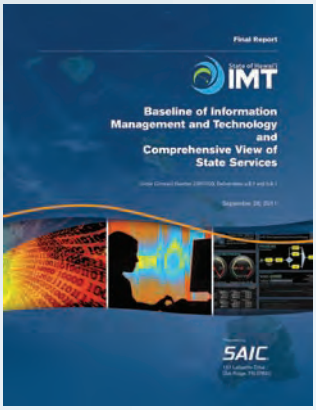


- Decentralized legacy IT environment without strong IT leadership
- No organizational oversight in the past
- Lack of portfolio management in legacy environment

Understanding the Current Environment

Because the perception of the adequacy of IT is often subjective, the State conducted independent benchmark assessments to adequately evaluate the State's technology environment and assess the challenges that lie ahead. These assessments all confirmed that the State was underinvested in IT in terms of funding, facilities, technology, and a skilled IT workforce — especially when compared to other states. The assessments undertaken included:

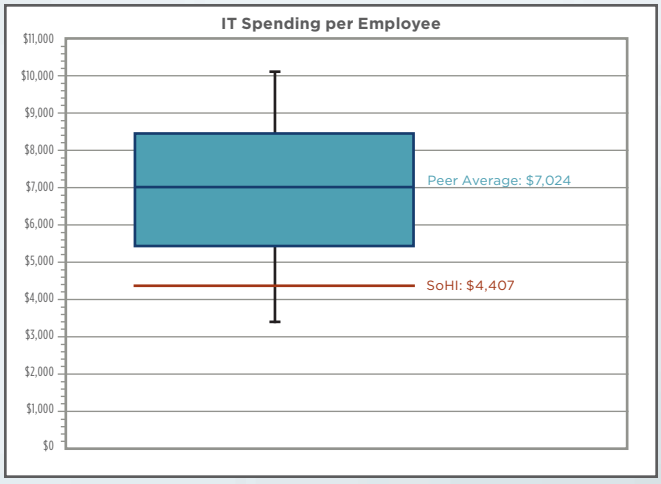
1) Baseline of Information Management and Technology and Comprehensive View of State Services Report
2) Benchmarking Final Report
3) Data Center Assessment Report and Strategy
4) Enterprise Alignment Database Tool
5) Report to the Legislature —2011 Update on the Information Technology Strategic Plan
6) Security Assessment
7) IT Business Effectiveness Survey
8) Feasibility Study Report (FSR) for investing in an ERP solution
9) Functional and Technical Requirements for a State ERP solution
10) IT Cost Benchmark — Applications
11) IT Cost Benchmark — Infrastructure
12) IT Job Skills Assessment
13) Network Strategic Roadmap



Additionally, benchmark assessments showed that IT spending per employee for the State of Hawai'i was well below the peer average of other state governments, with Hawai'i spending an average of $4,407 per employee on IT services vs. the national average for state governments of $7,024. Of the State's $11M budget only 1.4% was spent on IT, compared with the national average for state governments of 3%–5% and the average federal IT spend of 10%.

The assessment also showed that investment was disproportionate, with certain areas such as legacy mainframe applications being overinvested in, while other areas such as new application support were underinvested.

IT Spending per Employee



Source: Gartner, Inc.

This comparative underinvestment in IT staff and resources made it difficult for the State to invest in new applications, underlying infrastructure, and training and development for IT staff. As a result of the lack of investment, the State scored poorly in several IT areas that needed to be significantly improved upon in order to transform IT within the State.

	IT AREA	RATING	RATIONALE
#1: BUSINESS	Application Hosting	R	• Lack of necessary hosting infrastructure and processes
	Application Development & Support	Y	• Lack of application support staff • Lack of consistent development methodology
#2: TECHNOLOGY	Data Center	R	• Lack of a suitable data center for enterprise systems • Lack of disaster recovery
	Network	O	• Lack of reliability • High security risks
	Service Desk	R	• Lack of a service desk
	Security Management	R	• Low security maturity with significant security vulnerabilities • Unproven security capabilities
	End-User Computing	O	• Lack of end-user device security • Lack of standard images and obsolete hardware and operating systems
#3: GOVERNANCE	Enterprise Architecture	G	• Lack of dedicated staff to maintain enterprise architecture
	IT Services Management	R	• Lack of IT Services Management (ITSM) capabilities
	Portfolio, Program & Project Management	O	• Inconsistently applied portfolio management methodologies • Lack of project management capabilities
	Application Portfolio Management	G	• Lack of formal application support

KEY:

R	Completely lacking in best-practice criteria
O	Severely lacking in best-practice criteria
Y	Meets some areas of best-practice criteria
G	Meets or exceeds most areas of best-practice criteria

Source: Gartner ERP Capstone Report
31 January 2013

The ratings above can be summarized into three key challenges that needed to be overcome in order to transform the State.

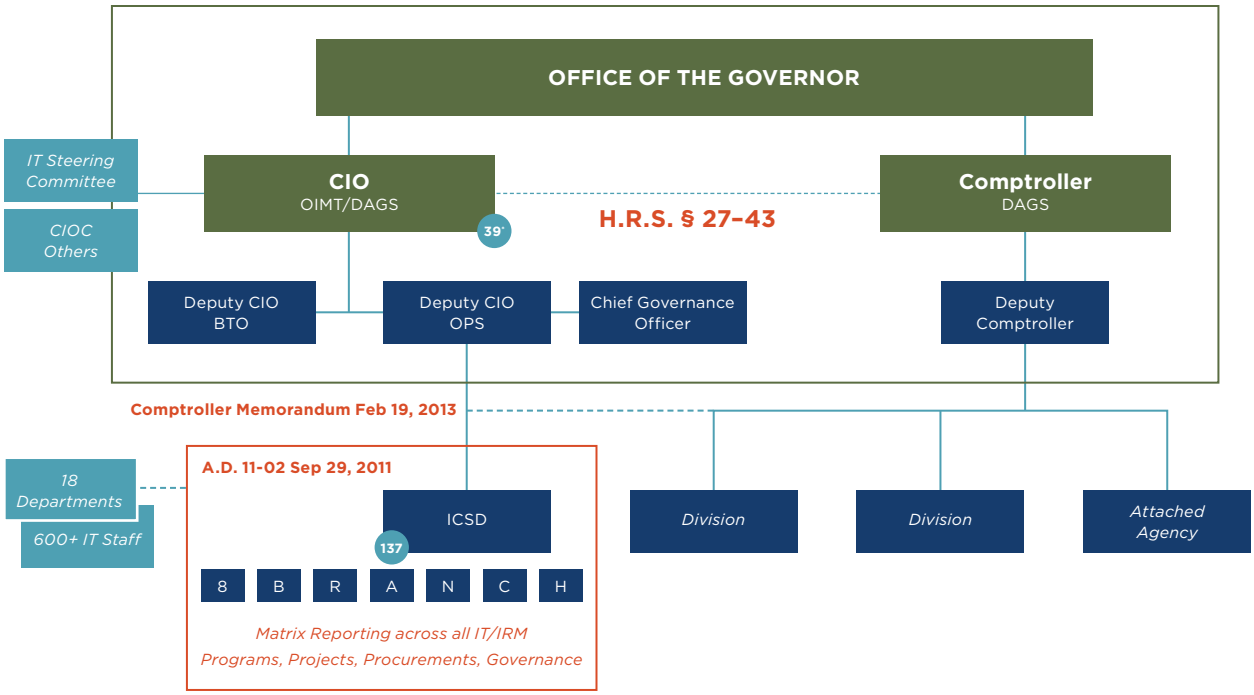
- The current business environment was decentralized and lacked significant interdepartmental sharing of IT investments and resources; key business applications were antiquated, forcing staff to rely on manual, paper-intensive business processes.
- The existing State technology infrastructure was outdated, which limited the State's ability to support evolving business demands and exposed the State to security and business continuity risks.
- The State had no strong, centralized IT organization to coordinate statewide IT strategic planning or to establish enterprise IT standards or IT governance.

The Legislature Establishes a State Chief Information Officer to Transform the Current Environment

In order to address the third key challenge — the lack of a strong, centralized IT organization to coordinate statewide IT strategic planning and establish enterprise IT standards governance, the Legislature established the Chief Information Officer (CIO) as a full-time position in 2011 in an effort to modernize IT within Hawai'i and make progress against the Governor's Plan.

To aid the State CIO and facilitate projects that directly benefit other State departments and Hawaiian residents, the Office of Information Management and Technology (OIMT) was developed in 2011.

CURRENT-STATE CIO ORGANIZATIONAL STRUCTURE



*Approved for 2014

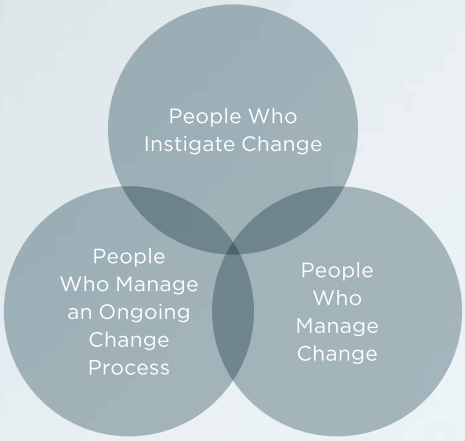
CIO Mission and Core Values

Upon its establishment, OIMT worked extensively with Fresh Leadership, a leading executive coaching and change management organization, to define its strategic plan, mission, and core values.

CURRENT COLLABORATION BETWEEN OIMT, DEPARTMENT CIOs, AND ICSD

Change Management Training & Coaching

The State CIO Sanjeev 'Sonny' Bhagowalia & his Deputies Randy Baldemor & Keone Kali have completed an significant effort to train and develop their staff on a change management process that specifically addressed the cultural and contextual factors unique to Hawai'i. The primary task was to unify the offices of Office of Information Management & Technology (OIMT), Information & Communication Services Division (ICSD) & State CIO Council into one team and "'Ohana", as well as to operationalize the 1400 page ITRM Strategic plan developed by SAIC into a workable Strategic – Operating plan. The ultimate goal of this process is to get the entire team involved in implementing the transformation.



In any change management process there are three major roles:

1) People who catalyze change – in this case this would be the Governor, Legislature, and Sanjeev 'Sonny' Bhagowalia the State CIO, and his executive team.
2) People who manage change – in this case the line staff of ICSD, OIMT Staff & CIO Council
3) People who manage an ongoing change process – Change Management Team.

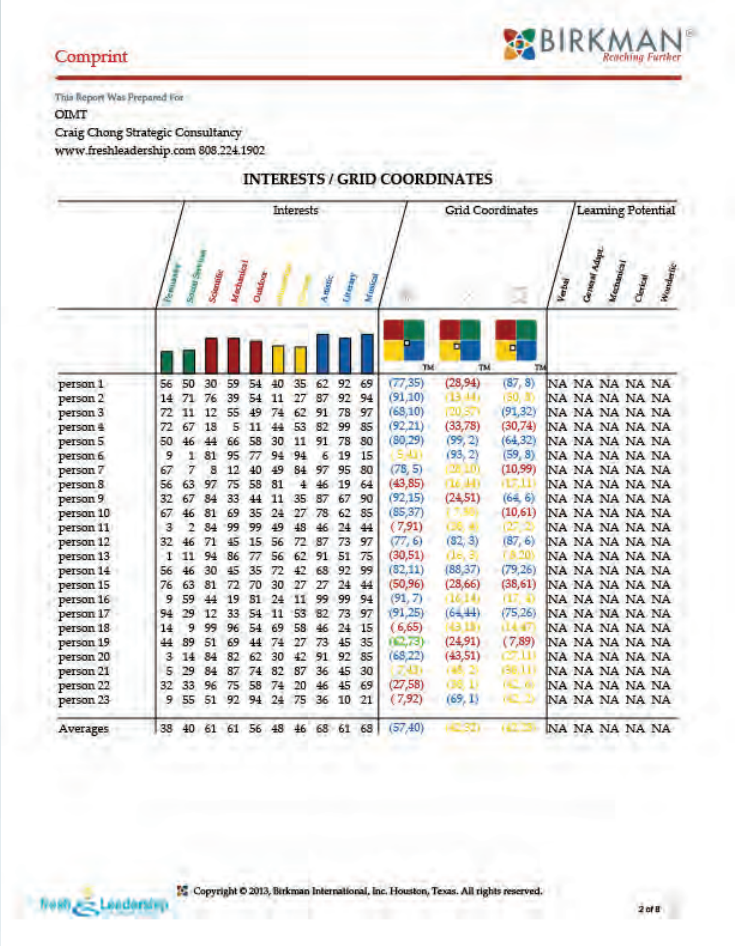
Previously, the biggest functional role that was missing in the transformation effort were people who would not only oversee the change process, but who would also be sensitive to executing the change in a culturally sensitive manner. The strategic operations and change management processes that was adopted, coupled with an understanding of the local culture, has provided the essential ingredients necessary to propel the transformation process forward.

We believe that the people & State workers of Hawai'i are valuable, intelligent, and capable of transforming the IT infrastructure of our state into a world-class city. Hence, our approach has been to provide capacity-building training and tools to the people who manage change (circle #2) and to provide structures and processes that work for those who instigate and manage change (circles #1 & #2). Our ultimate goal is to build capacity within state workers so that they can manage their own ongoing change process.

Our training and coaching processes are benchmarked by world-class standards yet delivered with the heart and aloha of residents who are vested & rooted with local Hawai'i values. Hence, all the training and coaching are tailored to the needs of the people of Hawai'i.

In the past six months, we have implemented a multi-pronged approach of skills training and support/capacity-building services. These included Executive and Cultural Coaching, The Birkman Method Interpersonal Skills and Professional Strengths training, Appreciative Inquiry Training, Communications Training, Branding training, Service Delivery training, Hudson Cycle of Renewal Training and Strategic Operating Planning Process Training (StratOp). Eighteen OIMT Staff, 35 ICSD Staff, and 14 CIO Council members participated in these trainings and services.

At the heart of a transformation movement are people who need to experience personal transformation. Our approach to large-scale organizational change starts with each individual. Hence, personal transformation is the foundation that precedes organizational transformation. Coupled with individual coaching and group team building sessions, we've administered The Birkman Method for a holistic change assessment.



Comprint

BIRKMAN Reaching Further

This Report Was Prepared For
OIMT
Craig Chong Strategic Consultancy
www.freshleadership.com 808.224.1902

INTERESTS / GRID COORDINATES

	Interests									Grid Coordinates			Learning Potential				
	Practicality	Status/Power	Scientific	Mechanical	Outdoor	Aesthetic	Artistic	Literary	Musical				Verbal	General Adapt.	Mechanical	Clerical	Wonderlic
person 1	56	50	30	59	54	40	35	62	92	69	(77,35)	(28,94)	(87, 8)	NA	NA	NA	NA	NA
person 2	14	71	76	39	54	11	27	87	92	94	(91,10)	(13,44)	(50, 8)	NA	NA	NA	NA	NA
person 3	72	11	12	55	49	74	62	91	78	97	(68,10)	(20,57)	(91,32)	NA	NA	NA	NA	NA
person 4	72	67	18	5	11	44	53	82	99	85	(92,21)	(33,78)	(30,74)	NA	NA	NA	NA	NA
person 5	50	46	44	66	58	30	11	91	78	80	(80,29)	(99, 2)	(64,32)	NA	NA	NA	NA	NA
person 6	9	1	81	95	77	94	94	6	19	15	(5,41)	(93, 2)	(59, 8)	NA	NA	NA	NA	NA
person 7	67	7	8	12	40	49	84	97	95	80	(78, 5)	(28,10)	(10,99)	NA	NA	NA	NA	NA
person 8	56	63	97	75	58	81	4	46	19	64	(43,85)	(16,44)	(17,11)	NA	NA	NA	NA	NA
person 9	32	67	84	33	44	11	35	87	67	90	(92,15)	(24,51)	(64, 6)	NA	NA	NA	NA	NA
person 10	67	46	81	69	35	24	27	78	62	85	(85,37)	(7,58)	(10,61)	NA	NA	NA	NA	NA
person 11	3	2	84	99	99	49	48	46	24	44	(7,91)	(30, 4)	(27,25)	NA	NA	NA	NA	NA
person 12	32	46	71	45	15	56	72	87	73	97	(77, 6)	(82, 3)	(87, 6)	NA	NA	NA	NA	NA
person 13	1	11	94	86	77	56	62	91	51	75	(30,51)	(16, 3)	(8,20)	NA	NA	NA	NA	NA
person 14	56	46	30	45	35	72	42	68	92	99	(82,11)	(88,37)	(79,26)	NA	NA	NA	NA	NA
person 15	76	63	81	72	70	30	27	27	24	44	(50,96)	(28,66)	(38,61)	NA	NA	NA	NA	NA
person 16	9	59	44	19	81	24	11	99	99	94	(91, 7)	(16,14)	(17, 4)	NA	NA	NA	NA	NA
person 17	94	29	12	33	54	11	53	82	73	97	(91,25)	(64,44)	(75,26)	NA	NA	NA	NA	NA
person 18	14	9	99	96	54	69	58	46	24	15	(6,65)	(43,18)	(14,47)	NA	NA	NA	NA	NA
person 19	44	89	51	69	44	74	27	73	45	35	(62,73)	(24,91)	(7,89)	NA	NA	NA	NA	NA
person 20	3	14	84	82	62	30	42	91	92	85	(68,22)	(43,51)	(27,11)	NA	NA	NA	NA	NA
person 21	5	29	84	87	74	82	87	36	45	30	(7,43)	(48, 2)	(80,11)	NA	NA	NA	NA	NA
person 22	32	33	96	75	58	74	20	46	45	69	(27,58)	(38, 1)	(62, 6)	NA	NA	NA	NA	NA
person 23	9	55	51	92	94	24	75	36	10	21	(7,92)	(69, 1)	(62, 2)	NA	NA	NA	NA	NA
Averages	38	40	61	61	56	48	46	68	61	68	(57,40)	(42,52)	(42,28)	NA	NA	NA	NA	NA

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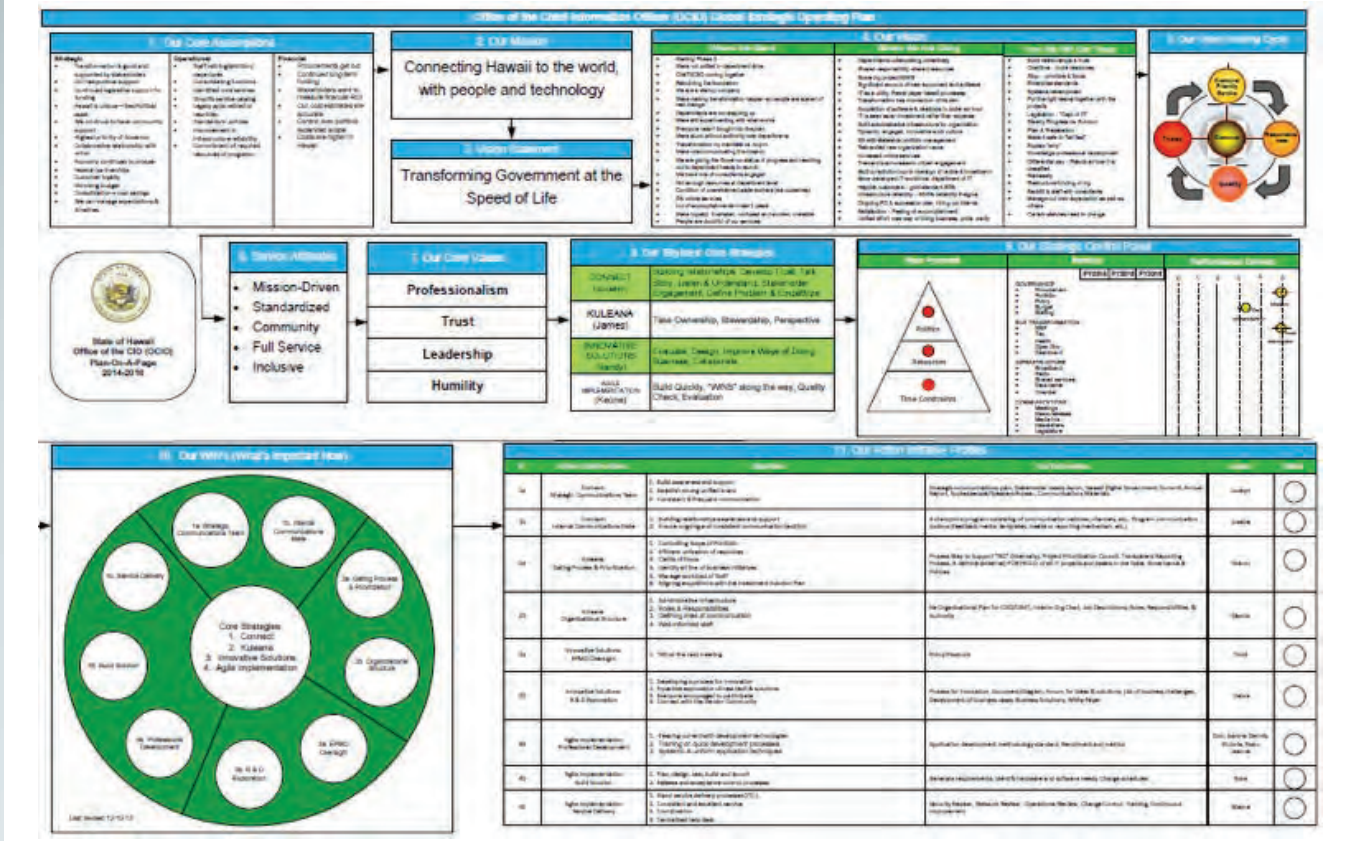
The Tom Paterson Strategic Operating Planning Process (StratOp)

At the core of our change management training we have facilitated a Strategic-Operating (StratOp) plan which takes the ITRM 1400 page plan and condenses it into a functional Play-Book of less than 50 pages, as well as a one-page 'Strategic Plan-on-a-Page' visual map. This StratOp plan is an organic process that aligns the leaders with roles and responsibilities and is a guiding work document for the CIO and his entire staff. This plan is guided by 4 core strategies 1) Connecting 2) Kuleana 3) Innovative Solutions and 4) Agile Implementation which are broken into cross-functional action initiative teams that put the plan into operations. These plans are reviewed on an ongoing basis and are organic in nature, thereby empowering people to execute with strategic focus. As a result change isn't being done to people but people are the authors and collaborators of the IT transformation process.



The unification of OIMT & ICSD has helped guide the over 60 individuals from two organizations to embrace one vision, starting with a newly branded office name, vision, mission, and core values.

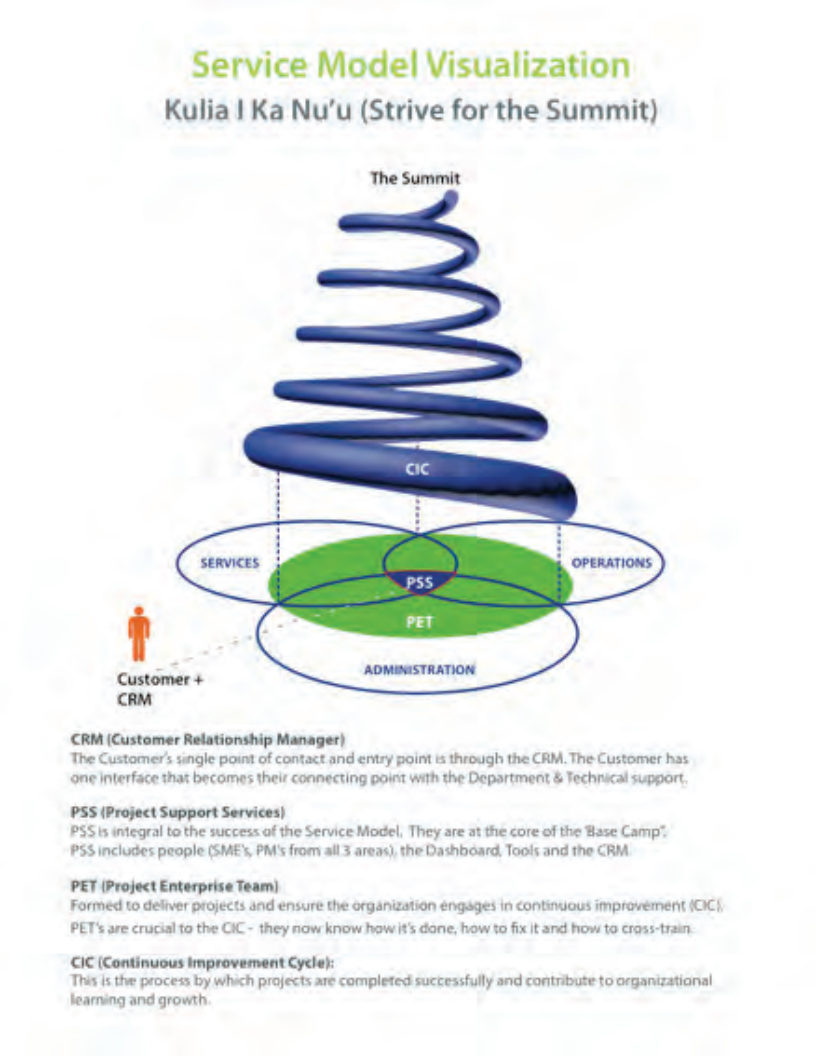
- New Office Name: **Office of the Chief Information Officer OCIO**
- The Vision of OCIO is: **'Transforming Government at the Speed of Life.'**
- The Mission of OCIO is: **'Connecting Hawai'i to the world, with people and technology.'**
- Core Values that will guide OCIO are:
  - **Trust**
  - **Professionalism**
  - **Leadership**
  - **Humility**

A New Service Delivery model

The Service Model provides a framework and set of guiding principles for service delivery. It includes the definition of the role played by the organization, the key characteristics it should exhibit, how it should organize itself for optimal service delivery, and guidelines on how to operationalize the model in practice.

The Service Model is all about people — People serving people. It bridges the gap between the internal processes/resource allocations and the external customer experience/quality of experience. Its first focus is on understanding the customer — both internally and externally.

This is what drives the service model — the processes and procedures are derived from this understanding, not the other way around.



MISSION

Connecting Hawai‘i to the world, with people and technology

VISION

Transforming Government at the Speed of Life

CORE VALUES

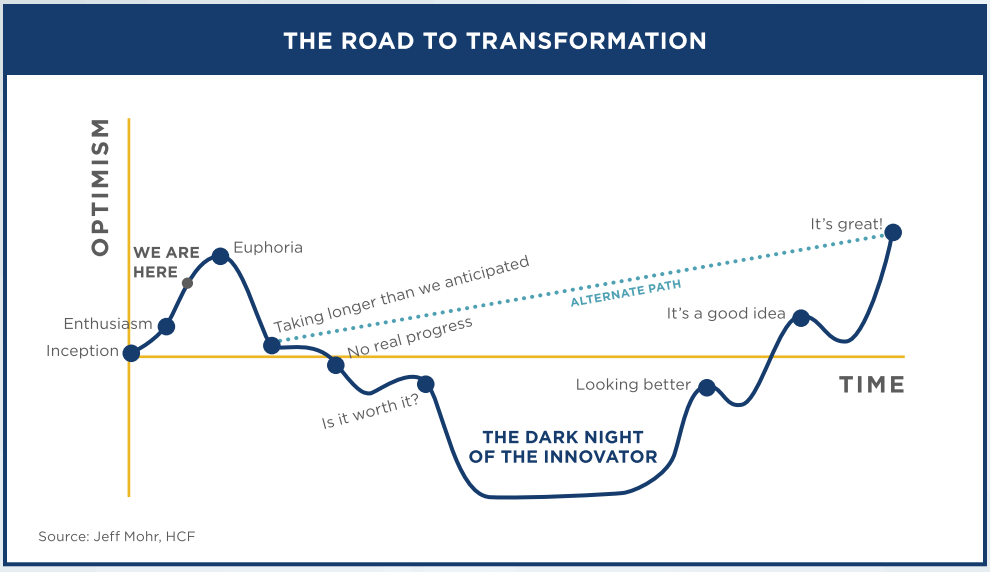
- TRUST
- LEADERSHIP
- PROFESSIONALISM
- HUMILITY

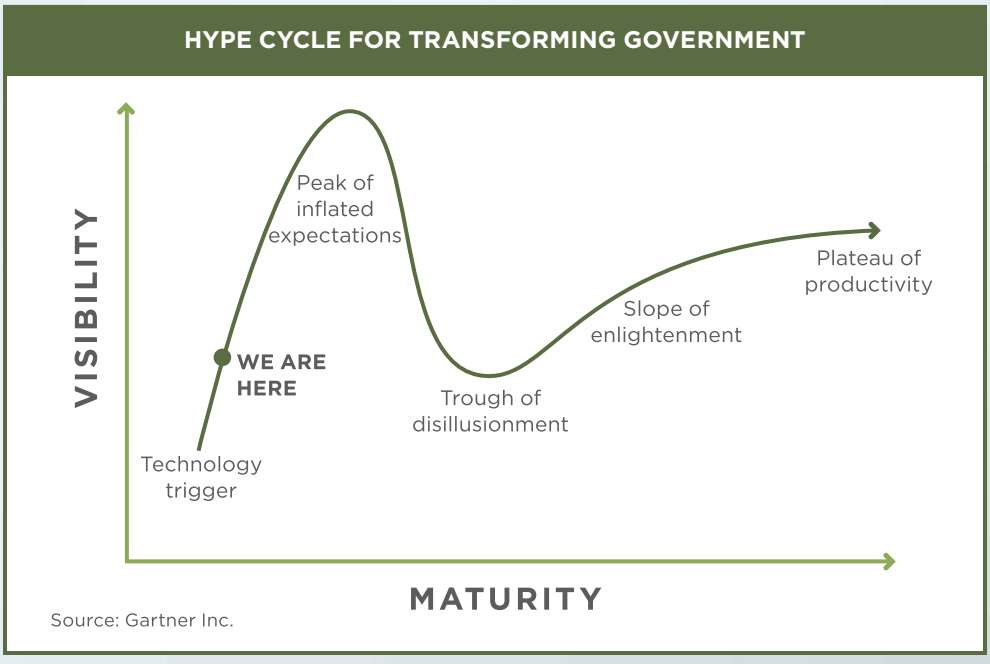
Transformation Will Not Be an Easy Road

In any organization, transformation is not an easy task, but given the State's long-term underinvestment and fragmented current environment, transformation to better serve stakeholders would be an especially difficult undertaking. Additionally, in any organization with any large-scale transformation effort, change management and existing culture are often substantial inhibitors. Dedicated and sustained change management requires buy-in across the organization, and that can take time to acquire.

Transformation takes years, and often occurs only after a period of frustration and disillusionment. The implementation of most transformative technologies and processes goes through a period of unreasonable expectations far beyond the ability to deliver, followed by a period of disillusionment as these unachievable expectations are not met. It is only after a period of time that the technology, people, and process can catch up to deliver enhanced productivity and allow the organization to reach a state of "enlightenment" to transform operations.

Transformation Takes Time





Although Transformation Would Be Difficult — It Would Be Necessary

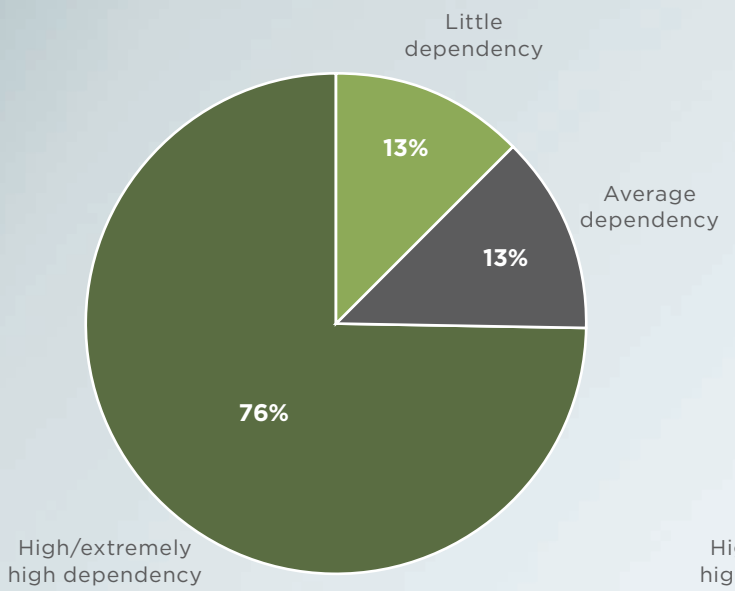
While transformation can oftentimes be a difficult road, both the State and key stakeholders, including State departments and agencies, realized it was necessary.

A 2012 IT Business Effectiveness (ITBE) survey that was conducted with directors and managers within Hawai'i's executive departments showed that the majority of departments felt not only would their future dependency on IT continue to increase as IT became a critical enabler of service delivery, but also that there should be an increased investment in technology by the State.

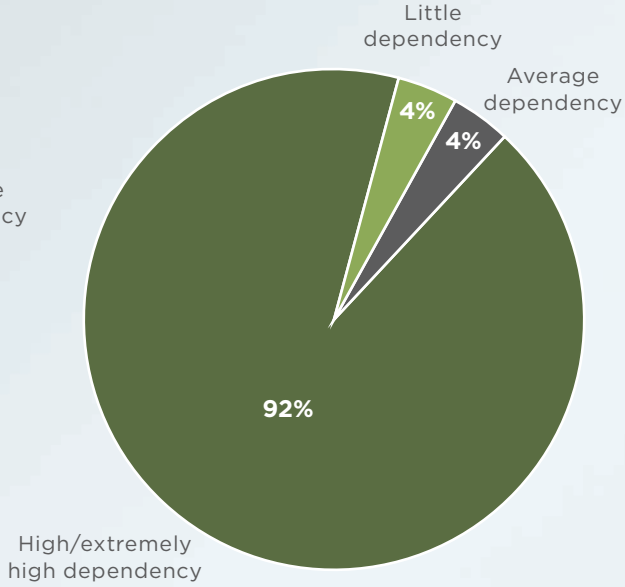
Furthermore, departments are expecting IT to be an enabler of transformation — going beyond simply providing basic foundational competencies, to instead facilitating business outcomes and adding business value.

DEPARTMENTS TO BE MORE DEPENDENT ON IT MOVING FORWARD

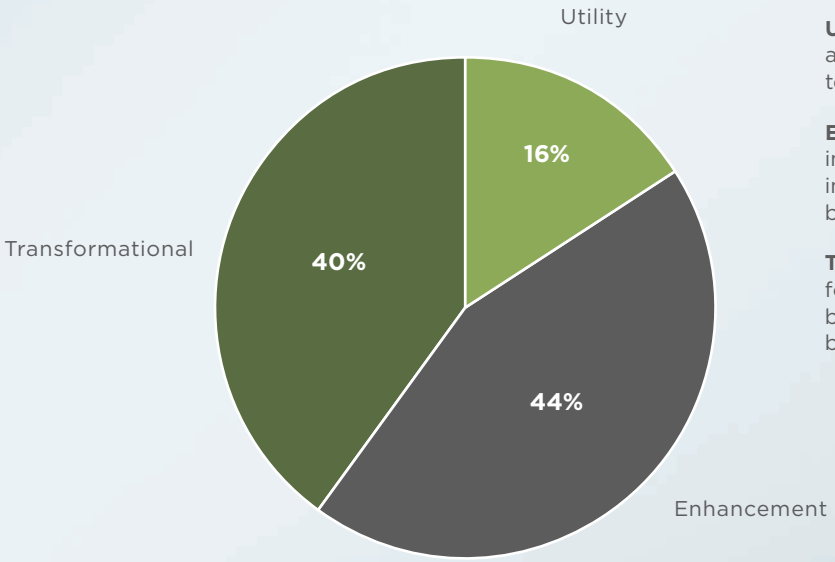
CURRENT DEPENDENCY



FUTURE DEPENDENCY



Which category of IT organization best fits your business expectations?



Utility: Cost-effective focus aimed at solely enabling technical competencies.

Enhancement: Increased investment focused on improved processes and business competencies.

Transformational: Customer focused around managing business change and adding business value.

Source: IT Business Effectiveness Survey, October 2012

Directors and Deputy Directors of 18 departments of the State of Hawai'i with 25 total respondents

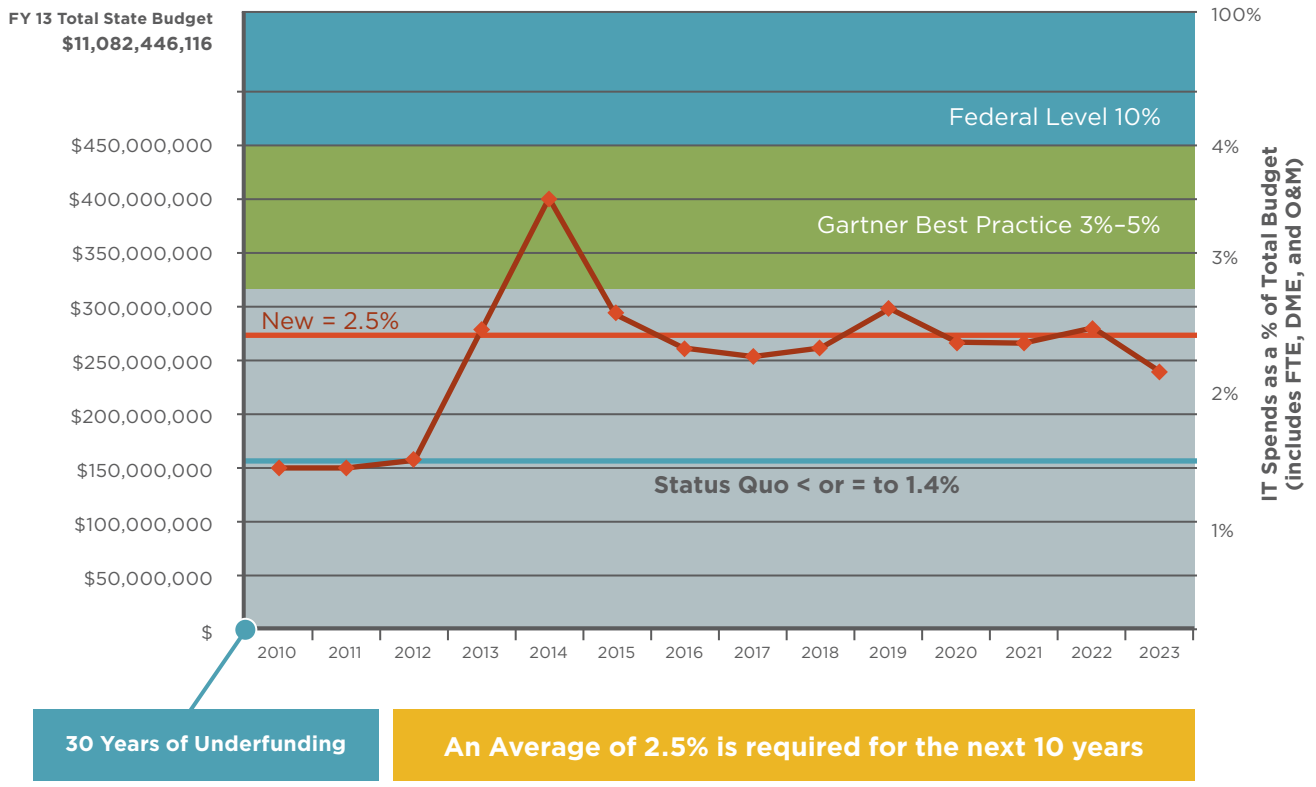
"From the start, Sonny and OIMT have been systematic, comprehensive and collaborative working with the Department of Health to bring the State's information technology into this century. We are seeing great progress and are confident that the OIMT team will succeed."

—Gary Gill
Acting Director, Department of Health

How Much Will the Transformation Cost?

To overcome 30 years of underinvestment in IT and transform IT operations within the State would require an increased commitment. The State CIO has estimated that, with an additional investment of as little as 2.5% of the State's budget during the next 10 years (compared with the recommended best practice of 3%–5% of a state budget reserved for IT), Hawai'i could dramatically transform its underperforming IT environment and better serve its constituents.

HOW MUCH WILL THE TRANSFORMATION COST?



FTE = Full-Time Equivalent
DME = Development Modernization and Enhancement
O&M = Operations and Maintenance

"The Department of Public Safety faced a serious crisis. Within a period of four months, two dangerous felons escaped from the Honolulu Circuit Court. We found that that there were multiple cause for the security breakdowns. Poor communication among the courts, the deputy sheriffs, and correctional officers; antiquated information systems; entities working in silos; overcrowded facilities; and human error. OIMT helped us bring the parties (Judiciary, Sheriffs and Corrections) together and document the existing system; implement immediate improvements; and identify new equipment that will greatly improve information sharing and communication. These improvements will mitigate the effects of the limited physical facilities, and minimize the chance of human error. Most importantly, these improvements will enhance public safety."

—Ted Sakai
Director, Public Safety Department

3.3 OPPORTUNITIES FOR EXCELLENCE

Despite of its challenges, the State CIO has proactively moved to overcome institutional limitations and have Hawai'i become one of the best digital states in the U.S. within the next 10 years.

With a focus on updated business applications, improved technology and infrastructure, and strong organizational culture — transformation is not only achievable, but is also under way.

During 2012–2013, the State CIO undertook several initiatives and partnerships to transform the State's IT environment, better serve citizens, and move Hawai'i into the future.

The key opportunity areas that the CIO identified to address the State's primary challenges were:

- **Business Process and Business Environment:** Providing more-efficient and effective applications to the citizens and departments of the State.
- **Technology and Infrastructure:** Embracing new and emerging technologies to better serve Hawai'i.
- **Organizational Culture and Governance:** Creating enterprise-level strategic investments and providing open, transparent oversight on those investments.

For each of the State's three primary stakeholder groups, key opportunity areas were identified to overcome the State's challenges.

PRIORITIZED OPPORTUNITIES

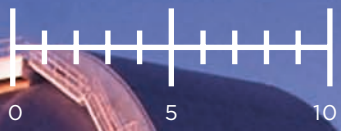
Stakeholder	Improved Business Services	Updated Technology	Governance and Oversight
State Departments and Agencies	Provide new and improved IT services that allow departments to focus on mission-critical business needs.	Invest in updated and efficient technologies that will save departments time and money.	Enable more-efficient (less-paper-based) processes; use resources more effectively and efficiently.
State IT Staff	Offer the necessary resources, training, equipment, and facilities to redevelop Hawai'i's IT workforce for the 21st century.	Provide marketable job skills and training on emerging technologies; provide IT staff with consistent and repeatable processes and tools.	Provide opportunities for growth and learning.
Residents of Hawai'i	Provide residents with timely, applicable, and secure government services.	Allow access to government information across multiple devices; offer engaging and relevant applications to interact with State government. Invest in locally owned businesses whenever possible.	Ensure that residents receive the most from their tax dollars.

By focusing on these key opportunity areas, the State CIO would be also be making progress toward the New Day in Hawai'i Plan:

ACHIEVEMENTS BY THE STATE'S IT PROFESSIONALS HELP DRIVE THE GOVERNOR'S NEW PLAN

The CIO's Council and State's IT professional's transformative efforts during 2012–2014 directly drive the three main focus areas of the Governor's Transformation Agenda (New Day Plan):

IMMEDIATE JOB GROWTH AS WE SHIFT HAWAI'I'S ECONOMY TO A SUSTAINABLE FOUNDATION



Provide a 10-year economic impact of $55M–$95M+ with the creation of a new Data Center.

Enable job growth through the implementation of new State systems (e.g., ERP and Health systems).

Attract leading businesses through advanced digital infrastructure (i.e., reliable broadband and GIS).

INVEST IN THE EDUCATION, SKILLS, AND WELL-BEING OF HAWAI'I'S PEOPLE

- Train OIMT, ICSD, and department IT staff on the latest emerging technologies and provide relevant IT and business skills.
- Offer real-world IT experience to undergraduate and graduate students through opportunities to work directly with State staff.
- Provide Hawaiian residents with more-timely and accurate information (e.g., Open Data, mobile app services, my.hawaii.gov).

TRANSFORM STATE GOVERNMENT INTO AN EFFICIENT AND EFFECTIVE ENTERPRISE

- Streamline business services and reduce duplicative efforts.
- Update and modernize technology; reduce software costs.
- Provide more-efficient and informative citizen services (e.g., faster tax refund checks, more-robust emergency public radio services, increased access to online service).

THE FEDERAL 100

AWARD WINNER

"OIMT has laid out a good overall transformation plan, created strategic frameworks, and provided me with guidance on how to advance information technology to effectively support the future direction of the Department."

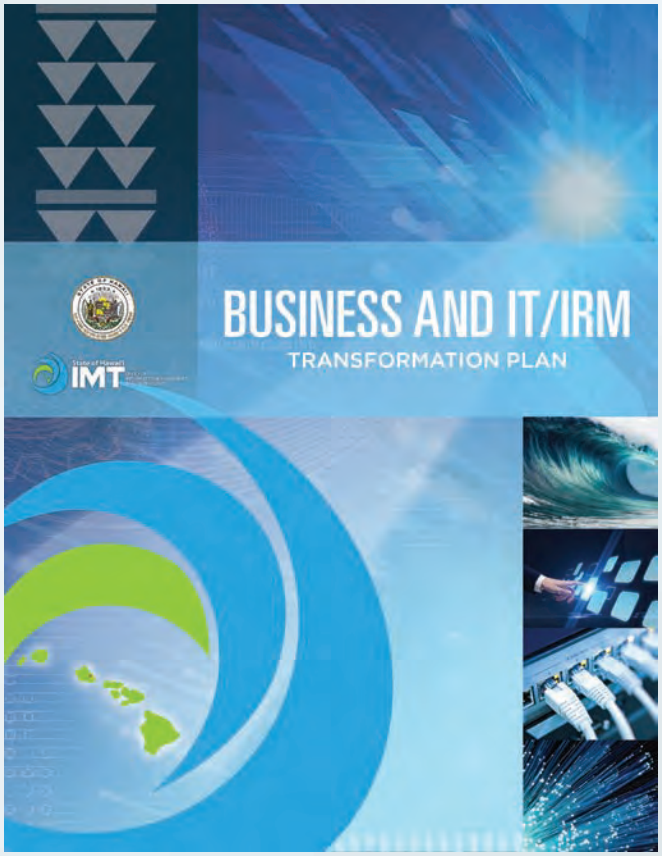
—Dwight Bartolome
Health Information Systems Manager, Department of Health (DOH)

In October 2012, the State CIO unveiled its plan to create an environment in Hawai'i for innovative industries to thrive and simultaneously apply technology to all sectors. The 12-year road map for this major initiative is described in the IT Transformation Plan. The Plan aims to transform the State's current underinvested IT environment and bring Hawai'i into the 21st century.

It includes:

- A Comprehensive Transformation Plan
  - **20 plans** with 1,432 pages
  - **7 phases** over 12 years
  - **3 Key Strategies and 10 Programs**
  - **Affecting all departments and attached agencies in the State**
- The Transformation Plan highlights three categories of activities:
  - Streamlining and improving current business pocesses and applications to directly benefit the public
  - Leveraging the state's investment in shared support services and consolidated technology infrastructure
  - Establishing open government; and a strong organization-wide management and oversight framework
- The Plan will:
  - **Reduce** the overall number of IT systems
  - **Reallocate** a percentage of the IT workforce to better serve departments' missions
  - **Streamline** business and IT operations
  - **Increase** IT service capabilities, reliability and security
  - **Reduce** ongoing IT costs
  - **Improve** government transparency

The IT Transformation Plan lays the groundwork for a future state that includes faster, better, and easier access to government information and services.



4.0 A CIO FRAMEWORK FOR PHASED ENTERPRISE TRANSFORMATION

4.1 THREE KEY STRATEGIES AND TOP 10 PROGRAMS

In an effort to overcome the State's primary challenges, the State CIO has created three guiding strategies to transform IT for the State and deliver increased IT value to all branches of the government, the citizens of Hawai'i, and third-party partners such as local businesses.

THREE KEY STRATEGIES

#1 Re-engineer Business Processes	#2 Modernize IT Infrastructure	#3 Establish Governance
PROGRAMS		
• Enterprise Resource Planning • Tax System Modernization • Health Information Technology • Business Process Re-engineering	• Infrastructure • Enterprise Shared Services • Security and Privacy • Hawai'i Broadband Initiative	• Governance • Open Government

These three CIO strategies guide 10 program initiatives that OIMT undertook during 2012–2014 — each program associated with one of the key guiding strategies. Within each of the programs are several projects that have either been completed or are currently in progress to achieve the program's objective.

Programs vs. Projects

- *Program: An ongoing set of interrelated projects*
- *Project: A specific initiative that has a clear end date*

Each of these programs serves the citizens, staff, and departments and agencies of Hawai'i.

Below is an overview of how each of the three guiding strategies aligns to programs and major projects:

CIO STRATEGIES, PROGRAMS, AND PROJECTS FOR IT/BUSINESS TRANSFORMATION

Strategy	Program	Projects	Benefit to Hawai'i
Re-engineer Business Processes	**Enterprise Resource Planning (ERP)**	• ERP Planning Study • RFP for ERP Solution • Uniform Chart of Accounts • ERP Architecture • ERP Program Management • ERP Acquisition Support	Update key business applications to enable business efficiency, information analysis, and technology modernization for seven (7) core functions.
	Tax Systems Modernization (TSM)	• Tax Systems RFP • Analytics Program • SERVICE Plan	Streamline and modernize tax systems and processing across the enterprise.
	Health IT (HIT)	• Hawai'i HIT Committee and Governance • Hawai'i Health Information Exchange (HHIE) • Hawai'i Health Connector (Health Insurance Exchange) • DHS Integrated Eligibility System Modernization: for Medicaid, SNAP, TANF • DHS/OIMT State Data Services Hub • Health Data Repository • Agency EHR Modernizations and Medicaid Meaningful Use	Accelerate effective coordination and communications among Health and Human Services, empowering a more patient-focused healthcare system. Coordinate with DHS on State Data Services Hub for secure interconnectivity of agencies as the foundation for systems modernization and my.hawaii.gov. Consolidate and streamline resident access to health and social service benefits. Enhance and promote use of Electronic Health Records and HIE. Enhance access to data for State-paid health programs and public health.
	Business Process Re-engineering (BPR)	• Business Process Re-engineering Projects (10) • Business Transformation Representative Group • Transformation Internship Program (TIP) • Executive Project Management Office (ePMO)	Update and re-engineer the business processes of legacy mission-critical applications; have them delivered through one portal.
Modernize Technology and Infrastructure	**Infrastructure**	• Network Upgrades • Data Center • Backup and Recovery • Public Safety Radio	Consolidate networking and computing infrastructure; enable a reliable statewide network with guaranteed service levels; refresh and update technology desktop and mobile equipment; provide additional computing storage via private partnerships; develop the infrastructure for departments' mission-critical applications.
	Enterprise Shared Services	• Enterprise Licensing Agreements • Cloud Services • Cloud-Based Email • Geographic Information Systems (GIS) • Maritime Wireless Network	Provide central shared services including: Email and Directory services, Content and Document Management, Geographic Information Systems (GIS), and Collaboration tools.
	Security and Privacy	• Proactive Security Monitoring and Notification for Departments • Security Infrastructure	Improve security and privacy controls including Identity, Credential, and Access Management; enable Single Sign-On for access across various State systems; and enable privacy protections.
	Hawai'i Broadband Initiative (HBI)	• Broadband Mapping Study • University of Hawai'i Funding Grant • Public Library Laptop Program	Provide all Hawai'i residents with ultra-high-speed, affordable, and reliable broadband services by 2018.
Establish Enterprise Management, Oversight, and Transparency	**Governance**	• Portfolio Management • Enterprise Architecture (EA) • Performance Dashboards	Establish enterprisewide IT policies, lifecycle management processes, capital planning and investment Control (CPIC), portfolio management, enterprise architecture (EA), and Performance Dashboards.
	Open Government	• Open Data Portal - Data.Hawaii.Gov; Transparency.Hawaii.Gov • Mobile Apps • Website Modernization • my.hawaii.gov	To make open government data widely available through an open-source environment, including mobile apps and open government data (e.g., Data.Hawaii.gov).
3 Strategies	**10 Programs**	**50 Projects**	

Measuring Success:

A critical component of the State's IT transformation is quantifying project and program success as a means to track progress. The State CIO is focused on measuring return on investment for projects and programs and providing metrics. Through a series of project dashboards, the Office is actively working to track project performance, measure incremental success, and show the overall impact of programs and projects.

OVERALL ASSESSMENT

Category	Assessment	Comments
Overall Transformation Effort	G	**Top 10 programs**
1. Business Transformation	G	• ERP on schedule, within scope and cost • TSM in process - within scope, cost but 6 months behind schedule • HealthIT within cost and slightly behind on scope/ schedule • BPR on schedule, within scope and cost
2. Technology Transformation	G	• Infrastructure ahead of schedule, with scope and cost • ESS on schedule, within scope and cost • Security and Privacy on schedule, within scope and cost • HBI on schedule, needs more funding
3. Management and Oversight (Governance)	G	• Open Gov Ahead of schedule, scope and within cost • Governance on schedule, within scope and cost

RISK REGISTER

#	Risk	Rating (Severity/ Probability)	Mitigation Plan
1	Policy	Med/Med	• Common enterprise policy governance framework being established - policies identified and will be processed in batches by Chief Governance Officer • HBI will require improved public/private partnerships including federal/state/ local/industry and international
2	Process	Low/High	• BTRs established across Departments and Top 10 BPRs identified, scoped, funded and being implemented under PM guidelines
3	People	High/Low	• OIMT/ICSD Consolidation with OCM practices • Collaborative framework with CIO Council for Top 10 Programs with OCM practices
4	Technology	Low/Med	• Infrastructure projects offer enterprise services with better performance criteria - unification is process • Organizational culture and communications being improved through regular governance, joint efforts and tools
5	Funding	Med/High	• FY12-15 OK (but under additional 1% ask of overall state budget) • O&M out-year funding remains an issue due to lack of CPIC/ITIM process • Exempt Staffing remains top challenges due to institutionalized culture

LEGEND

R	x>=10% behind in Scope, Cost, Schedule and Risk
Y	5>x>10% behind in Scope, Cost, Schedule and Risk
G	0>x>5% behind in Scope, Cost, Schedule and Risk
B	Ahead of Scope, Cost, Schedule and Risk

		Probability of Occurrence		
		Low	Med	High
Severity	High	Yellow	Red	Red
	Med	Green	Yellow	Red
	Low	Green	Green	Yellow

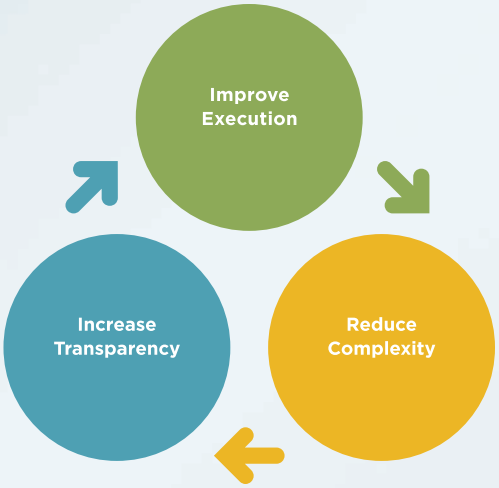
5.0 STRATEGY #1: A NEW WAY OF DOING BUSINESS THROUGH DIGITAL GOVERNMENT

"Our goal is to be a helpful resource — to work across departments and external organizations, and create an IT ecosystem that benefits the entire State."

—Randy Baldemor
Deputy CIO, Business Transformation Officer, State of Hawai'i

There are four programs under the *Re-engineered Business Processes* strategy:

- Program #1: Enterprise Resource Planning (ERP)
- Program #2: Tax System Modernization (TSM)
- Program #3: Health IT (HIT)
- Program #4: Business Process Re-engineering (BPR)



The mission of these programs and initiatives is to work collaboratively with State departments and other public/private organizations to build an IT ecosystem that emphasizes local connections and benefits Hawai'i as a whole. During the past two years, OIMT has worked closely with various stakeholders to re-engineer their business processes and aid departments with their mission-critical applications.

These programs will increase business and application efficiency within the State, resulting in improved IT services as departments are able to transform themselves while transforming the State.

5.1 PROGRAM: ENTERPRISE RESOURCE PLANNING (ERP)

Objective: Update business applications to enable business efficiency, information analysis, and technology modernization for seven core functions.

Description: In the State of Hawai'i, several core administrative functions such as financial management, acquisition management, human resource management, and payroll are operated using a combination of manual processes and antiquated systems — some that are almost 40 years old. Additionally, the State has had a relatively low level of investment in its key systems, departments have historically operated with a high degree of de-centralization, and many employees with critical knowledge and skills are retiring.

Outdated technologies, manual processes, and de-centralized operations have led to five primary problems:

- Current technologies are antiquated, redundant, and pose significant security concerns.
- The lack of centralized and detailed data impedes the State's ability to make timely decisions.
- Departments do not have the necessary tools to efficiently perform administrative functions, which has resulted in significant levels of manual effort and the implementation of shadow systems.
- Existing solutions are not integrated, which results in duplicate data entry and manual reconciliation of data.
- The changing business needs of the State cannot be easily accommodated.

"It amazed me that the State had an $11 billion budget and I could not get a simple budget-to-actuals report. Implementation of the State's ERP system is a top priority of the State's Business and Information Technology Transformation Plan that will involve modernizing IT systems throughout every organization in the State."

—Kalbert Young
Director of Budget and Finance

Solution: To address these major concerns, the State has begun the process of acquiring an Enterprise Resource Planning (ERP) solution. **An ERP solution is an enterprisewide system that integrates financial management, human resources management, grants management, asset management and inventory control, time and attendance tracking, payroll, and acquisition/procurement information.** The current effort to institute an inter-departmental solution represents tremendous collaboration among several departments and stakeholders.

The planned ERP solution will provide:

- An integrated software suite
- A foundational application architecture
- A consistent view of key enterprise financial and resource data
- Embedded "best practice" business processes
- An upgrade path for future releases

A steering committee consisting of representation across six departments provides governance and oversight to the program.

Impact to Key Stakeholders: The implementation of an ERP solution will allow the State to recognize numerous benefits including: millions of dollars in savings due to cost avoidance and significant labor redistribution; an up-to-date, detailed view of financial information across departments; higher yields on investments; and better compliance with security and privacy standards. Specifically, the ERP solution will:

- Improve employees' experience, automating manual processes such as the submission of sick and vacation leave slips, so time can be better allocated.
- Improve system stability and security and mitigate the risk of failing to perform critical business functions (e.g., process payroll).
- Improve financial reporting, data analysis, and policy making.
- Connect State operations so data can be seamlessly transmitted across departments.
- Improve efficiencies, resulting in an estimated annual savings of $14.55M.
- Eliminate 120+ systems, which is an estimated annual savings of $5.7M.

Related Projects and Initiatives:

ERP Planning Study

To determine the expected benefits, risks, and outcome of the implementation of an ERP solution, OIMT engaged Gartner to develop the following reports and assessments:

- Feasibility Study Report (FSR)
- Detailed Business and Technical Requirements
- Benchmark Assessments, including:
  - Applications and Infrastructure Cost Benchmark Assessment of the current condition of Information Technology within the State
  - Information Technology Business Effectiveness Survey
  - Skills Assessment of Information Technology Employees
- Security Assessment

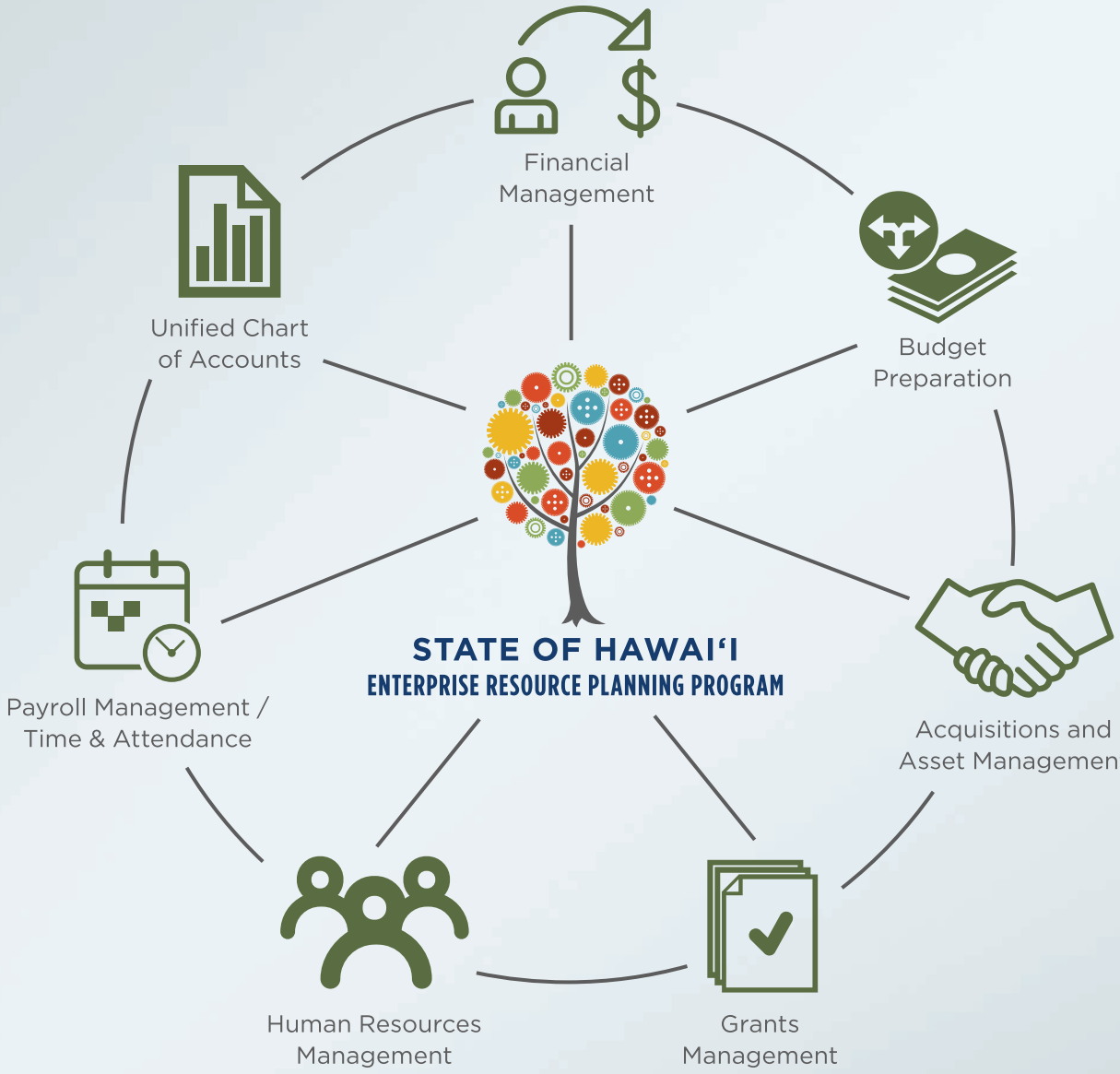
It was concluded that the implementation of an ERP solution was critical to modernizing key business functions.

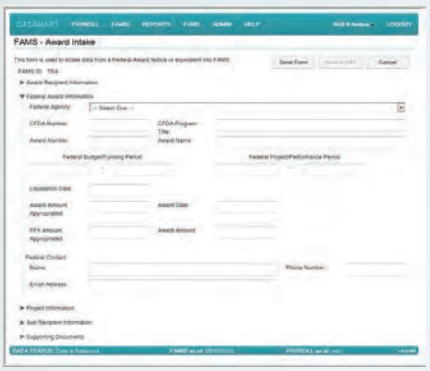
RFP for ERP Solution

At the conclusion of the Planning Study, an RFP was created and released on September 16, 2013. The purpose of the RFP is to allow the State to identify and engage an ERP solution contractor to provide an ERP solution.

"I've been very impressed with OIMT's coordination of the ERP process. I think their approach has been very well thought out and the planning stages have been laid out well. They're also making a point to include staff in the field, not just steering committee members, in the process."

—Maria Zielinski
Deputy Comptroller, Department of Accounting and General Services (DAGS)





Uniform Chart of Accounts

The Department of Accounting and General Services (DAGS), Budget and Finance (B&F), and OIMT are partnering on an effort to standardize and update a statewide uniform chart of accounts (i.e., accounting codes and structure). Currently, each department maintains a separate system.

Interim Grants Solution (iFAMS)

The interim Federal Award Management System (iFAMS) will provide an immediate solution to improve the State's ability to manage and consistently report on federal awards. This project will put in place the policies, tools, and techniques to enable stakeholders and their staff to track, maintain, and inquire on all aspects of the grants process within the constraints of the current accounting structure. By involving grants managers, iFAMS will be an early demonstration of inter-department collaboration, a key feature of the ERP solution.

Interim Budget Solution (IBS)

B&F, Department of Human Services (DHS), and OIMT have partnered to develop an Interim Budget Solution (IBS). The solution will involve a Web-based interface for the preparation, review, and approval of operating budget requests, and will generally mimic and improve the current process. The current budget preparation process includes, but is not limited to: Form A — Operating Budget Request; and Form B — Department Summary of Operating Budget Adjustment Request.

Department of Labor and Industrial Relations (DLIR) System Stabilization

The ERP Team is supporting DLIR Disability Compensation Division in an effort to stabilize legacy systems. The Special Compensation Fund process relies on applications that run on hardware and software that are no longer supported by vendors. Migrating these systems to stable platforms will enable department staff to work on ERP activities.

Interim Asset Solution

Under SB 722, SD 2, HD 1, CD 1 (2013), the Department of Accounting and General Services (DAGS) is required to coordinate an inventory of public buildings, facilities, and sites on public trust lands. It also requires State agencies to provide inventory information by December 1, 2013. DAGS and OIMT will develop an interim asset management system in order to comply with the Senate bill, but the objective is to develop a comprehensive and dynamic Asset Management solution that could be incorporated as part of the Enterprise Resource Planning system.

ERP Architecture

OIMT is leading an effort to establish the technology architecture necessary to support the ERP initiative.

ERP Program Management

A cross-departmental program management office has been established with several subject matter experts (SMEs) detailed to OIMT to guide the effort.

ERP Acquisition Support

OIMT, the State Procurement Office (SPO), and several other departments are collaborating to provide oversight to the procurement of an ERP solution.

"The Department of Taxation plays a key role in public finance, collecting the revenue needed by the State of Hawai'i for funding the programs and services provided to residents and businesses in Hawai'i. Since 2011, our strategic plan has focused on a business transformation of operations by introducing 21st century technology into all processes. We are grateful to the Office of Information Management and Technology (OIMT) colleagues' for their assistance in this effort. Our staff in the document processing and in the collections sections identified areas for improvement by working with an outside consultant firm engaged by OIMT. While the inventory of delinquent tax accounts had significantly increased over the past years, the size of the collection staff available to work the cases had suffered reductions. To more effectively address the increasing inventory, we worked with OIMT in arranging for the use of computer analytics as a means for prioritizing the workload. We are also turning to technology to service the most frequent inquiries of an ever increasing population in Hawai'i. OIMT has recently developed two mobile applications for searching for general excise tax licenses and for determining the status of tax refunds. We also continue to work very closely with OIMT in the design and implementation of Tax Systems Modernization (TSM) which will be our new computer system to more efficiently and effectively collect the revenue for the State of Hawai'i and its people."

—Frederick D. Pablo
Director, Department of Taxation

5.2 PROGRAM: TAX SYSTEM MODERNIZATION (TSM)

Objective: Streamline and modernize tax systems and processing across the enterprise.

Description: The Department of Taxation (DoTAX) partnered with OIMT in an effort to modernize its tax system and streamline its business processes. Previously, DoTAX had several challenges with its technology and processes, leading to inefficiencies and delayed tax returns. These included:

- Organizational silos led to a fragmented work environment and disparate processes.
- The outdated and incomplete system was inefficient and prone to system disruptions.
- Time-consuming processes were largely paper-based, leading to a tremendous amount of manual work for DoTAX personnel.
- Delays in tax processing led to the large accounts receivables balance.

In early March 2011, DoTAX established a Modernization Task Force comprised of members throughout the Department to evaluate existing challenges and explore potential improvements to operations. The group concluded that the current information technology system — the Integrated Tax Information Management System (ITIMS) — was outdated and incomplete, presenting tremendous operational challenges.

In August 2011, DoTAX participated in an independent statewide baseline assessment of technology, spearheaded by the State CIO. The assessment confirmed DoTAX's critical condition, leading Robert Su (DoTAX's CIO) and the State CIO to identify TSM (Tax System Modernization) as a key modernization initiative for the State of Hawai'i.

During 2012–2014, DoTAX and OIMT partnered to procure a new technology system, re-engineer business processes, and introduce tax analytics to analyze the efficiency of operations. The goal was to increase efficiency and reduce delays for individuals receiving tax refunds.

Impact: In 2012, working with OIMT and DAGS, DoTAX was able to achieve a dramatic reduction in the time needed for tax return processing and check deposits — reducing the average time for taxpayers to receive a refund from six to eight weeks to one to two weeks — resulting in more money being paid to taxpayers. This led to faster refund deposits for Hawaiian citizens and faster revenue recognition from tax income for Accounts Receivables. Additionally, case management processing was streamlined and the overall use of electronic tax filing and electronic payments was expanded.

Related Projects and Initiatives:

RFP for Tax System Modernization (TSM) Program
OIMT, DoTAX, Attorney General's Office (AG), and SPO are working together collaboratively to create a Request for Proposal (RFP) for software vendors to propose and bid on a new technology system. The RFP is scheduled for release in January 2014.

Analytics Program for Tax

Under the TSM Program, the newly instituted tax program, Integrated Tax System (ITS), will provide for improved analytics and better customer service. When coupled with an integrated Case Management system, Workflow Engine, Data Warehouse, and Decision Analytics, the new ITS will allow DoTAX management to better allocate scarce resources to increase processing speed and maximize revenue. Compliance management will be able to assign auditors and collectors to the right case at the right time, maximizing revenue with the most efficient use of personnel and equipment.

SERVICE Plan

SERVICE is an acronym for:
System Reliability
Expedited Processing
Robust Collections and Analysis
Verified Reporting
Improved Customer Service
Education and Training.

In July of 2012, DoTAX, in partnership with OIMT, presented DoTAX's "Service Plan," detailing the need for a complete replacement and upgrade of the current tax processing system and IT infrastructure to align with DoTAX's core mission. The benefits include:

- Increased revenue
- Reduced accounts receivables
- More-robust audit capabilities
- Better customer service
- Improved reporting capabilities
- Reduced processing time
- More-flexible system
- Reduced programming and testing time
- Improved system reliability
- More-effective utilization of resources
- Improved collaboration

The TOC methodology was first formulated in the mid-1980's and made popular through the bestselling book The Goal, by Dr. Eli Goldratt. The TOC has been used successfully used to reengineer thousands of processes of various sizes and complexity with the Department of Defense; U.S. Navy; commercial clients such as Intel, Pfizer, Kroger, P&G, and Hewlett Packard, and most recently with resounding success within the State of Utah and State of Hawai'i DOTAX.

TOC views any process as an interconnected system or "chain" and provides a common sense focusing approach for optimizing it. TOC is applied using a step-by-step methodology, Strategy, Design, Analyze, Improve, Sustain (SDAIS).

Tax System Modernization Program (TSM)

The request for procurement (RFP) is undergoing final reviews for its future release. In the meantime, the TSM team has been busy preparing for its issuance and the subsequent vendor selection process. The TSM team has completed a tax matrix worksheet documenting relevant statistical data about the Department of Taxation (DoTAX). These data include revenue collected by tax type, transaction volume by tax type, a complete listing of reports and forms, and other information that will be needed by prospective vendors.

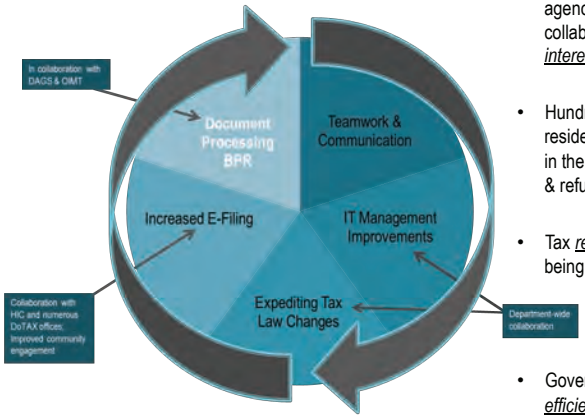
The TSM team has also begun mapping business processes within DoTAX. TSM business analysts have started mapping business processes to enable the TSM team to understand the scope of business activities, perform a gap analysis after vendor selection, and illuminate possible process improvements. The team held an initial meeting with DoTAX division chiefs and other supervisors to define the "As Is" system. TSM technology specialists have engaged in a similar effort to document "As Is" system flows. These two types of documents will provide records of current business rules and workflow rules to inform the development of a new solution.

BPR SHOWCASE: TAX MODERNIZATION

All members of the TSM team have worked collaboratively to produce a kickoff presentation for DoTAX staff and other stakeholders. The presentation will be used to introduce audiences to the TSM Program and describe the program's current status, the proposed solution, and the rationale for its selection. The presentation lays out the plan for moving forward with the TSM Program and how the stakeholders will be involved.

Key Elements of Transformation

Key Document Processing Improvements

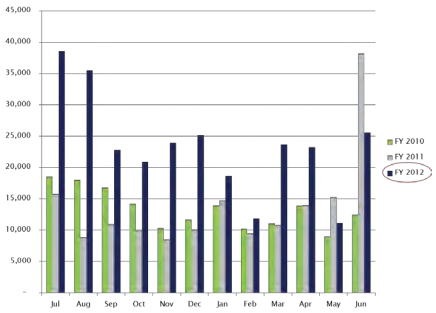


Summary of Impacts

- The Tax Department and other state agencies (DAGS, B&F and OIMT) are collaborating in a way that *puts the interests of the state first*
- Hundreds of thousands of Hawai'i residents are receiving *improved service* in the form of quicker processing, deposits & refunds
- Tax *revenue* for important state services is being *deposited much sooner*
- Government resources are being *more efficiently utilized*

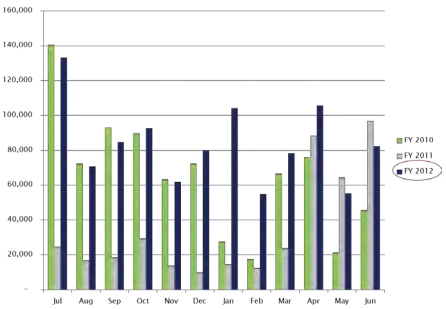
(note: staffing decreased in FY 2012 due to retirements & other factors)

Hundred thousand+ *more* checks deposited within 4 days

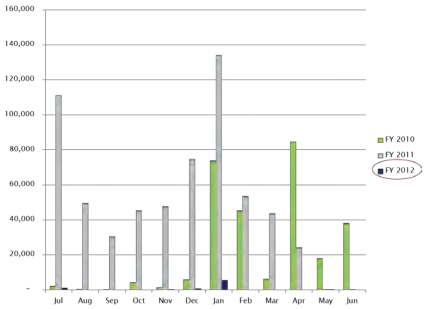


CHECK CASHING

Hundreds of thousands *more* checks deposited within 2 weeks

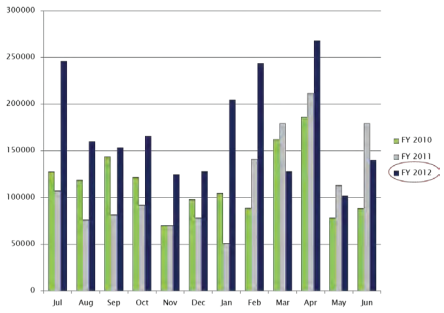


Hundreds of thousands *less* checks took more than 3 weeks to deposit

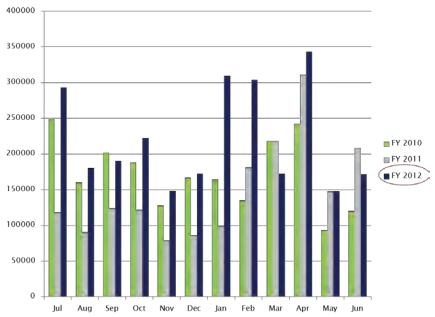


RETURN PROCESSING

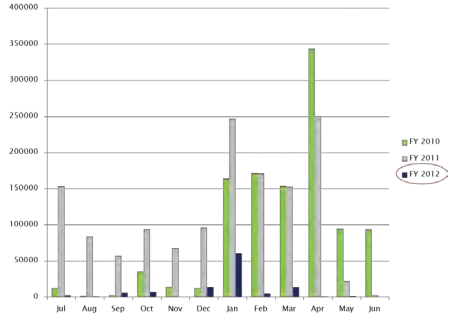
Hundreds of thousands *more* returns processed under 7 days



Hundreds of thousands *more* returns processed under 14 days

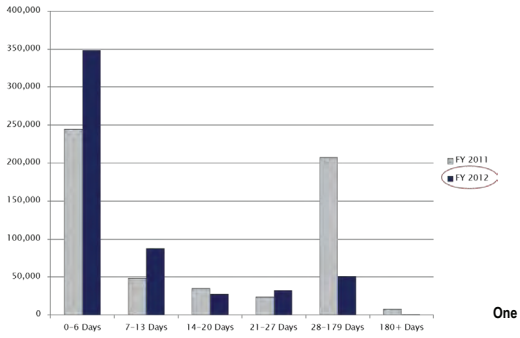


One million *less* returns took more than 3 weeks to process

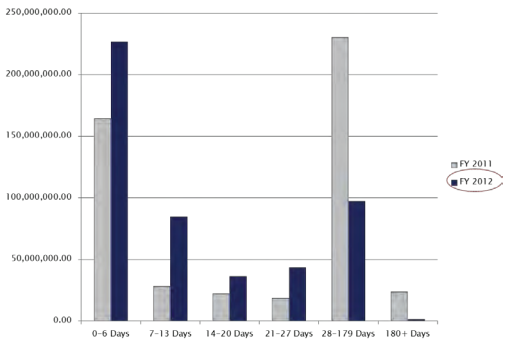


REFUNDS

One hundred thousand+ *more* refunds were issued under 14 days



One hundred million+ *more* in refund dollars were issued under 14 days



Tax BPR Improvements

Fiscal Year / Category	FY 2010	FY 2011	FY 2012	Key Impact
Check Cashing	160,206	166,770	**280,971**	Hundred thousand+ *more* checks deposited within 4 days
	786,709	414,789	**1,004,166**	Hundreds of thousands *more* checks deposited within 2 weeks
	281,194	615,624	**8,860**	Hundreds of thousands *less* checks took more than 3 weeks to deposit
Returns Processing	1,391,643	1,383,057	**1,925,554**	Hundreds of thousands *more* returns processed under 7 days*
	2,068,774	1,785,902	**2,655,970**	Hundreds of thousands *more* returns processed under 14 days*
	1,102,839	1,399,761	**113,113**	One million *less* returns took more than 3 weeks to process*
Refunds		294,152	**436,346**	One hundred thousand+ *more* refunds were issued under 14 days
		$192,619,959. 91	**$311,445,865.00**	One hundred million+ *more* in refund dollars were issued under 14 days

**(Dip in March 2012 due to expedited processing in January & February)*

5.3 PROGRAM: HEALTH IT (HIT)

Objective: Provide a more effective, efficient, and patient-focused healthcare system.

Description: This innovative program works across various departments to consolidate healthcare, public health, and human services-related information for Hawai‘i’s citizens and allow data integration with other State and federal applications. The Health IT program links the State to providers, hospitals, indirect health services, and health-related organizations to create a public health system that creates better health outcomes for Hawai‘i’s residents. Utilizing statewide efforts encouraging the use of electronic health record systems and the secure exchange of information, the Health IT program links the Governor’s Healthcare Transformation Initiative to State agencies and the private sector for coordinating plans for a healthier Hawai‘i with federal reforms under the Patient Protection and Affordable Care Act. These projects each combine the interests and efforts of multiple State agencies and are largely funded at the agency level for system modernizations, through a variety of State and federal sources. OIMT’s current role is coordinating technology planning in this area, setting the joint road map for HIT synchronization of activities, facilitating discussions, empowering collaboration across agencies, and providing IT project guidance for these activities.

The Health IT governance is executed jointly through OIMT-facilitated monthly meetings of the Hawai‘i Health IT Committee (HHITC), chaired by the Governor’s Health IT Coordinator and the State CIO. Other stakeholders are composed of representation from DHS, DOH, DCCA, EUTF, and other agencies. This essential role enables collaboration and coordination of health technology projects across State agencies, divisions, and systems. In addition, a collaboration council is in development for open meetings that include key representative from the private sector on public-private partnerships, with participants such as the Hawai‘i Health Information Exchange (HHIE), Hawai‘i Health Connector (HHC), and others. These functions primarily include significant participation in the planning and State coordination of health information exchange activities with the HHIE. This is coordinated on a daily basis with the Health IT strategies of the Governor’s Office of Healthcare Transformation.

As a significant effort, OIMT is partnering with several departments, including the Department of Human Services (DHS), the Department of Commerce and Consumer Affairs (DCCA), the Department of Health (DOH), and the Department of Industrial and Labor Relations (DLIR) to enable the functioning of the Hawai‘i Health Connector (HHC). This entity requires multiple interfaces and complex system integration interactions to operate as the Hawai‘i State-Based Marketplace for insurance under the Affordable Care Act. This involves coordinating business, technical, security, and operational needs for considerations of incorporating State agency data flows with those of HHC’s HIX system. These multiyear efforts bridge integration points between State agencies and Health Connectors to support the Affordable Care Act.

Impact: The Health IT program provides foundations for modernizations of the health information architecture across agencies and programs. This comprises aspects such as governance, technology environments, system modernizations, integrated eligibility and enrollment, clinical data integration, and multiple agency data source integration, information management, and security. These projects are planned and funded in coordination with OIMT and State agencies’ leadership, to align system developments and IT resources investments in accordance with the Business and Information Technology/Information Resource Management Transformation Plan.

The benefits to the State include:

- Increased clinical information sharing
- Enhanced information on health and human services program outcomes
- Reduced duplication and waste
- Greater access to health analytics to guide policy decisions
- Improving the health of Hawai‘i’s population

The benefits to Hawaiian residents include:

- Improved care quality, coordination, and patient outcomes

"The Health IT architecture links Affordable Care Act and HITECH Act transformation to technical foundations, advancing Hawai'i towards the "Triple Aim" goals, of improving patient care, population health, and cost management."

—Derek Vale
Health IT Manager

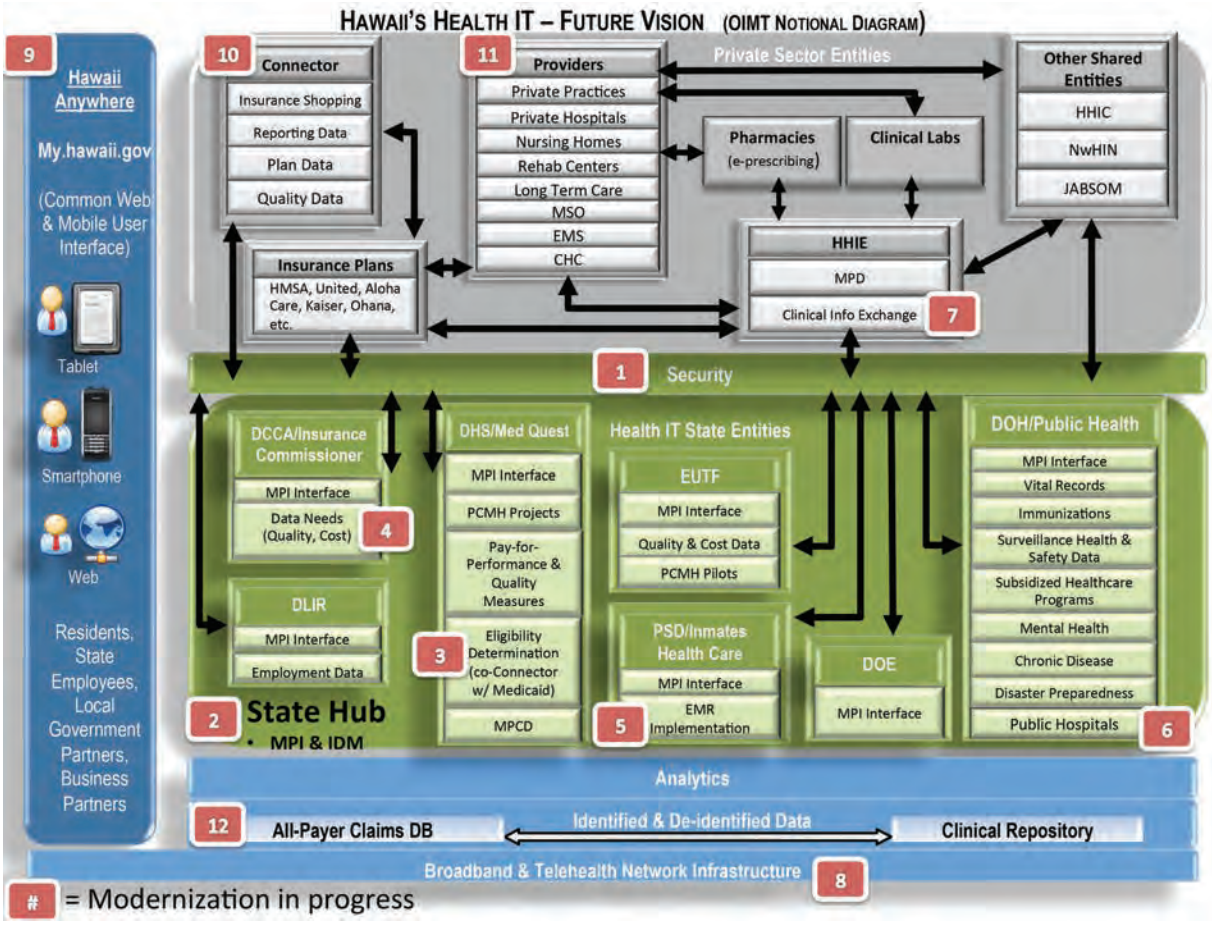
- Improved healthcare value
- Improved public health
- Empowered patient health education and engagement

OIMT has also been able to successfully coordinate among the various stakeholders to facilitate health information exchanges. As Dwight Bartolome, Health Information Systems Manager for the Department of Health (DOH) states, "There are so many players on the private and public side of healthcare data — where OIMT has been especially helpful is in coordinating the effort among the key players and providing a governance structure."

OIMT Health IT Vision and Portfolio

Activities of existing Health IT initiatives are tracked and coordinated to optimize funding resources for advancing the overall State technology enterprise architecture. Figure 1 shows major HIT activities currently funded and in execution as components of the global conceptual architecture.

Health IT Vision and Modernization Portfolio for Future State Info



The federal Centers for Medicare & Medicaid Services (CMS) has funded the modernization of an Integrated Eligibility System (IES) for Medicaid and other social services eligibility determinations for the State Department of Human Services (Item 3 in Figure 1). This system, named KOLEA, was made operational on schedule for utilization by DHS-MedQuest and the Hawai'i State-Based-Marketplace, starting on October 1, 2013. To support KOLEA, information security enhancements (Item 1 in Figure 1) and the DHS-OIMT State Data Services Hub are under way (Item 2 in Figure 1). The KOLEA project is currently engaging in secondary phases extending to eventually serve as the eligibility system for all DHS social services. The extension of State Data Services Hub functions to connect additional State agencies is in progress, first with DHS and the Department of Labor and Industrial Relations (DLIR). This State Hub provides the technical path for systems modernizations and greater information utility, by enabling systems to communicate securely across agencies and divisions. These added connections will require continuing governance and development of data sharing agreements, as legacy systems are modernized.

The implementation of the Affordable Care Act (ACA) funded through CMS is also contributing to the development of the insurance marketplace through the Hawai'i Health Connector. The Department of Human Services' KOLEA comprehensive "no wrong door" approach to accessing eligibility for Medicaid, other social services, and marketplace health coverage aligns with the State's vision of my.hawaii.gov as a resident-focused portal (Item 9). The National Association of Insurance Commissioners (NAIC) has built the System for Electronic Rate and Form Filing — Plan Management component (SERFF-PM, Item 4) that DCCA is using to qualify health plans for the insurance marketplace. The Governor's Office of Healthcare Transformation is leading development of an All-Payer-Claims Database (APCD), in collaboration with the insurance expertise of the Department of Commerce and Consumer Affairs (DCCA), and technology management expertise of OIMT. The APCD is a multiyear system and analytics resource development, via a CCIIO-funded grant (Item 12), for greater understanding and transparency on healthcare costs and utilization. This interagency effort will advance the capability for analyzing, visualizing, and reporting trends on all commercial and State-paid healthcare across Hawai'i.

In coordination, the Office of the National Coordinator and State of Hawai'i are investing in the Hawai'i Health Information Exchange and promoting electronic health records (EHR) adoption. The HHIE is the federally and State-funded, State-designated entity for information exchange in Hawai'i, and work is ongoing to connect the major hospitals, labs, physicians, FQHC, State payers, and public health. Synchronized with this, CMS and the State DHS's MEDQUEST Division have operationalized the Medicaid Meaningful Use EHR incentive program. Looking to the future, the Health IT Coordinator, OIMT, DOH, DHS, and other State partners are working through the Hawai'i HIT Committee to align plans, funding, and policies to: advance the interoperability of agency health-related systems within government; and accelerate build-out of health information exchange for enhanced community value of secure clinical health records sharing. Aligning to the Medicare and Medicaid Meaningful Use programs, the Department of Public Safety, the Department of Health, and the public hospitals under the Hawai'i Health Systems Corporation are implementing and modernizing their EHR systems.

With greater reliance on information exchanges via electronic communications, the State agencies are working with multiple federal partners to improve the communications infrastructure for greater broadband connectivity and capacity under the aegis of the Hawai'i Broadband Initiative and other related programs including telehealth. Planning for telehealth includes State agency partners across the DOH, DHS, and University of Hawai'i's TASI and JABSOM.

Details of selected associated projects and initiatives:

Health IT Governance; Data Governance and Standardization

Governance for HIT is developed through regular meetings of the inter-agency Hawai'i Health IT Committee (HITC). This group meets at minimum monthly, to coordinate direction of resources and projects, as they relate to planning across agencies. This includes alignment on State governance matters around the HHIE.

The Hawai'i Health IT Committee (HHITC) is responsible for Health IT collaboration across the State. Coordination activities take place via participation of select representatives from key health and human services-related agencies. The committee is jointly chaired by the Office of Information Management & Technology and Health IT Coordinator in the Governor's Office of Healthcare Transformation, with representation from the Department of Human Services, Department of Health, Department of Commerce and Consumer Affairs, EUTF, and other State agencies. In association, the HHITC schedules coordination council meetings with private sector stakeholders on the topic of healthcare and IT transformation, including the Hawai'i Health Information Exchange, Hawai'i Health Connector, and the Hawai'i Health Information Corporation. The inter-agency HHITC meets monthly or as needed, can be expanded for additional collaborative HIT needs, and meets with arranged coordination council sessions as required. The HHITC supports the development of data governance standards and policies, via inter-agency agreements, and working progressively toward unified State data architecture.

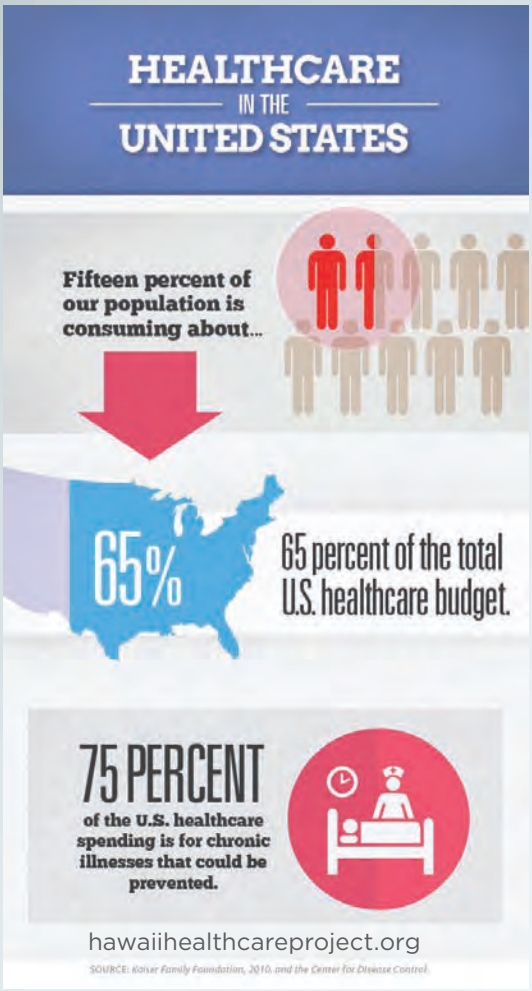
More broadly, data governance is an effort to standardize health-related data formats, and to provide the mechanisms for secure, easier integration and exchange. The foundations for integration are advancement of data sharing agreements among partner agencies. Through collaboration among agencies in alignment with the OIMT Transformation Plan, common approaches are in development toward: master data management, State master person index, data repositories, data formats, and technical standards in the data governance process.

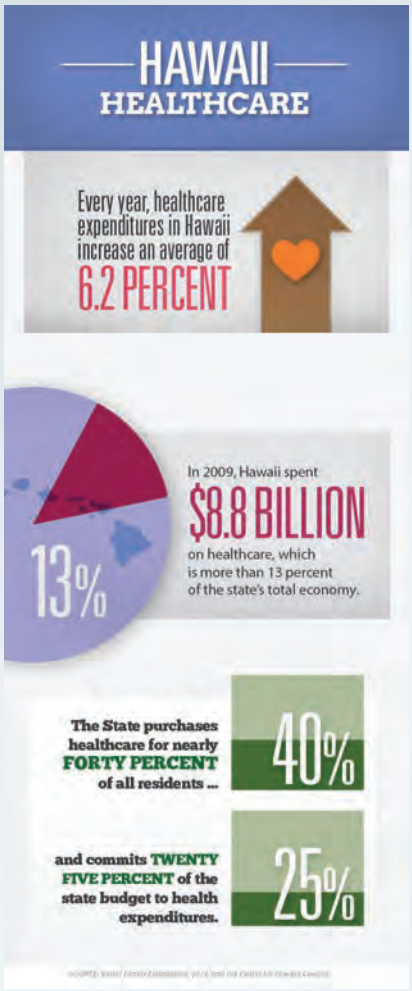
Healthcare Transformation

In collaboration with the Governor's Office of Healthcare Transformation, OIMT Health IT program responsibilities include aspects of forward-looking IT strategy, technology planning, information management, governance and technology project management components designed for healthcare reform priorities. These goals include information and systems interoperability, at both the interagency and public-private clinical healthcare ecosystem levels. The Governor's Healthcare Transformation Coordinator and State Health IT Coordinator are the executive sponsors for the OIMT Health IT program. Aligned with this strategic direction, collaborative project planning, implementation, and management of many distinct HIT projects benefit healthcare and IT transformation priorities; moreover these efforts are joined with the programmatic goals of such primary agencies as the Department of Human Services, Department of Health, and Department of Commerce and Consumer Affairs.

Hawai'i Health Information Exchange (HHIE)

The HHIE is Hawai'i's State-designated entity for health information exchange of electronic health records (EHR), and related exchanges of digitized health information. This organization was designated as the State's receiving entity for federal ARRA HITECH funding in 2010. A major effort is expanding the services, permitting exchange of direct secure messages (Phase I), and accelerating interoperable (Phase II) health information sharing among healthcare providers. Ongoing efforts by the HHIE are to operationalize the expanded services for patient record query and public health data exchange, involving providers, hospitals, and the Department of Health. Public health reporting for immunizations and syndromic surveillance, medication management and radiological image viewing are additional services under current development, for delivery by HHIE in the next year. As the federal Office of the National Coordinator (ONC) grant-funded HIE program ends in 2014, gaining increasing HIE participation, and demonstrating the value of these information services to the community, become paramount. The OIMT and the Governor's Office of Healthcare Transformation are engaged in a coordinated effort with the Department of Health and Department of Human Services to facilitate the acceleration of health data exchange in Hawai'i. OIMT Health IT works to plan and advance these priorities with the Health IT Coordinator. The State working body for governance and collaboration on this effort is enabled through meetings of the Hawai'i Health IT Committee (HHITC) with the Health and Human Services-related agencies. Advancing sustainable adoption and expansion of HHIE's health information network is the goal of this public-private collaboration among State departments, federal agencies, hospitals, private health practitioners, and insurers.





Health Data Repository

Planning around statewide data repositories management for health data is under way with multiple agencies. Through collaboration with the Governor's Office of Healthcare Transformation, and the Department of Commerce and Consumer Affairs, Hawai'i is receiving a CCIIO grant to build an All-Payer Claims Database to function as the central repository for building understanding and reporting on healthcare utilization and costs. OIMT is working with Healthcare Transformation and DCCA on components of the APCD development, with oversight responsibilities relating to technical project management and systems integration vendor oversight. Additional facets of this initiative are to align this repository with the programmatic goals of health-related State agencies, to provide information assets of value to identify healthcare cost and utilization trends across programs.

EHR Modernization

Multiple State agencies are currently engaged in modernizations or implementations of electronic health records. The MedQUEST Meaningful Use program launched in 2013, for Medicaid providers to receive federal payments to recoup part of the investment in implementing their EHR systems. OIMT is coordinating across State programs to enhance EHR utilization and alignment, as these programs benefit public health and the health outcomes of all residents. The federal (Medicare and Medicaid) programs for Meaningful Use of EHR reach Stage 2 of funding incentives and penalties in 2014, imposing additional requirements on providers and public health. The goals of these initiatives are increasing adoption of electronic healthcare records (EHR) systems, updates and upgrades to existing EHR systems, and movement toward patient-centered healthcare. Current EHR implementations are progressing across the Department of Health, and at the Department

of Public Safety. OIMT aspects related to coordination on Meaningful Use of electronic health records include working with DOH on planning and coordination for public health interfaces utilizing the HHIE, particularly for immunizations and syndromic surveillance. EHR use is a first step for providers to connect to the Health Information Exchange, in alignment with the national "triple aim" goal of enhanced patient care, cost control, and improved public health.

Security and Compliance

OIMT works in coordination with health agencies in the State to align security and compliance initiatives and programs. Components of these efforts are woven into all the Health IT projects, as security and privacy around health data are crucial to the State. In particular, governance initiatives, EHR modernization, and the Health Information Exchange involve significant compliance efforts, in aligning State polices with those of HIPAA and other requirements.

Telehealth

OIMT is engaged in planning regarding telehealth in conjunction with the Governor's Office of Healthcare Transformation, the Department of Health, University of Hawai'i's TASI and JABSOM, for coordination across agencies and federally funded programs. These models for telehealth care include aspects relating to meaningful use of electronic health records and adoption of a health information exchange. In particular, planning efforts incorporate the programmatic aims of the Hawai'i Broadband Initiative, toward the goal of increasing broadband access to residents for health services.

DHS Medicaid Integrated Eligibility System Modernization (KOLEA)

The Hawai'i Department of Human Services was tasked by the federal government under Affordable Care Act reforms to provide an Integrated Eligibility System to be used by all of Hawai'i's federally funded human services programs. This significant project effort provides the underpinnings for human services program modernization. As designed, this eligibility and enrollment system serves to check Medicaid eligibility in the first phase, and was operational from October 1. In future phases, this project, named KOLEA, is to be expanded for use by other DHS benefits programs. Under ACA requirements, KOLEA interacts with the Health Connector's HIX system, for the proper functioning of the State-based marketplace for health insurance. The OIMT role is cross-agency assistance, and progression toward enterprise standards and security through systems modernizations.

DHS and OIMT State Data Services Hub

The DHS is developing the State Data Services Hub in coordination with OIMT. In operations for the DHS KOLEA system and Health Connector's HIX system, particular information sets are securely verified from other State agencies via the State Hub, within designated agreements. Hub Phase One operation for the Affordable Care Act (DHS andf HHC) additionally interfaces with a federal data services hub, for similar ACA program information verifications with federal agencies. This architecture is compliant with stringent federal and State regulations and security. The road map for future State Hub utilization is to connect securely with additional State agencies, providing a streamlined path to modernization for agencies' legacy systems. In the immediate next phase, this centralized State data services hub is to deliver datasets from DLIR as information verifications to DHS for human services benefits determinations. OIMT's strategy on planning shared technology and governance elements is to incorporate common standards developed on projects such as the State Hub across the enterprise, in system modernizations statewide. Future projects may tie in longitudinal data systems, such as the DLIR Worlds project. In the long term, the State Hub is envisioned as the mechanism for secure data sharing, permitting enriched interagency coordination and communications of information across programs with improved resident services effectiveness.

Hawai'i Health Connector, HHC, the Health Insurance Exchange — (HIX System)

The HHC is Hawai'i's State-designated, State-based marketplace for health insurance, in alignment with the Affordable Care Act. This non-profit organization is delivering the market for ACA-compliant and Hawai'i-Prepaid Health Care Act-compliant insurance for individuals, and small business (SHOP) health plans. Operations of the HHC's HIX system is subject to requirements of: DLIR for the Prepaid Act, DCCA systems for insurance regulation, and most crucially significant integration with the DHS Integrated Eligibility

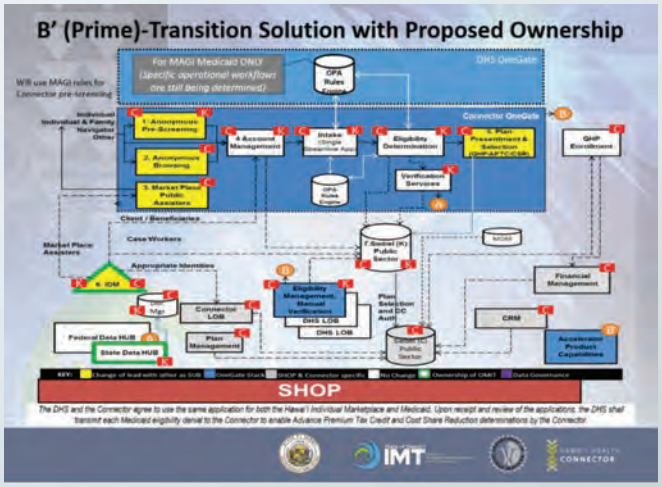
System (KOLEA), and connections through the State Hub to federal hub data services. The role of OIMT in this is consultative for the HIX system, in the form of facilitating planning for cross-organizational project integration. From the technology integration perspective, State regulations and federal ACA compliance require agency and HHC needs be met such that systems can communicate with the HIX system all the information requested for programmatic function relating to DLIR, DCCA, and DHS. Crucial to this project, State interagency collaboration forinformation interfaces to and from the health insurance exchange portal was developed with these agencies and through the services of the IPMO. Moving forward, as the HHC matures as a closely State-aligned non-profit, additional automated information interfaces are to be developed with State agency systems.

Integrated Program Management Office (IPMO)

In Spring 2013, OIMT brokered an agreement between the Hawai'i Health Connector (HHC) and the Department of Human Services (DHS) to cooperate toward a common architecture for their Health Insurance Exchange system (HIX), and Kauwale On-Line Eligibility Assistance (KOLEA) Medicaid integrated eligibility system, respectively, that would minimize redundancy between the two systems and provide an interoperating solution at better value to the taxpayers. Achieving the common goal would require a significant coordination effort that neither project on its own was able to provide. The coordination among the various State and private organizations involved in the project was to be orchestrated by the Integrated Program Management Office (IPMO), which reports to OIMT. The IPMO was created in April 2013, in order to facilitate communication and cooperation primarily between HHC and DHS, but also with DCCA and DLIR as stakeholders; and the Governor's ACA Implementation Manager, OIMT, and the Centers for Medicare & Medicaid Services (CMS) as executive sponsors. The IPMO's role consists of identifying information requirements, issue and status reporting to OIMT and CMS, conducting and documenting meetings, integrating and managing cross-entity project plans, managing risk, and facilitating negotiations and disputes between State and non-State parties.

The IPMO helped to establish the governance for the joint program, including support for the Executive Steering Committee (ESC) and the Coordinating Committee (CC). The ESC is the team of executives who provide strategic guidance and oversight for the program, and consists of the Director of DHS, the Executive Director of HHC, the HHC Board Representative, and the Governor's ACA Implementation Manager — and is chaired by the State CIO. The Coordinating Committee is the governance working body established by the program to provide a venue for daily decision making across the participating organizations. The Coordinating Committee comprises one representative each from HHC and DHS, and is chaired by the Deputy State CIO from OIMT. The Coordinating Committee reports to the Executive Steering Committee, meeting either in person or via conference call on a daily basis to address items of interest that require coordination between the projects.

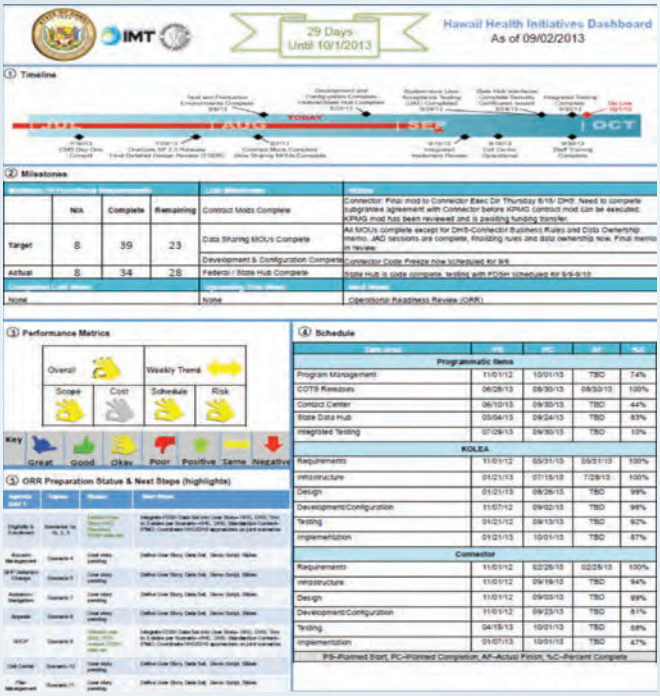
One of the IPMO's first tasks was to facilitate a technical summit between HHC and DHS to clarify exactly what that common architecture would look like. This meeting, along with a series of subsequent Joint Application Design (JAD) sessions, established the process and information flows that the coordinated systems would use. Over the course of the summer, the IPMO continued to support the evolving design, balancing requirements and resources, until the final architecture, called B' (Prime) Transition, was formally agreed upon on July 8. The shared approach reflected a user-centric, streamlined application that provides eligibility determination for both Medicaid and HHC Affordable Care Act programs. The B' (Prime) Transition architecture was conceived as an interim step on the way to a more completely integrated model but, for the near term, it represents a significant improvement from two independent and uncoordinated systems.



B' (Prime) Transition Architecture

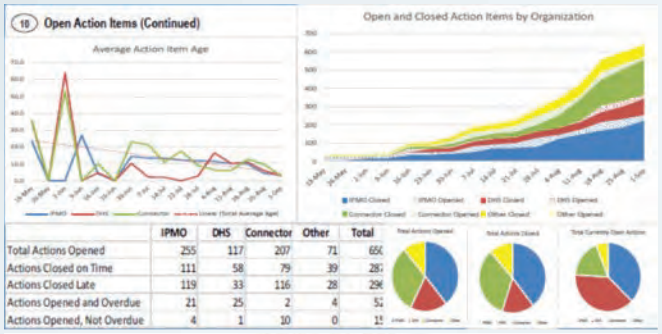
One of the most critical tasks of the IPMO was to integrate the project plans from the two primary stakeholders — HHC and DHS. The IPMO stepped in to provide the expertise and support for bringing the two independently created project plans into a single, integrated plan that would enable leadership to establish common program milestones, identify areas of shared interest, allocate resources, anticipate risks and dependencies, and report to CMS with a unified voice. The integrated plan went through several iterations, which ultimately included both programmatic and system development tasks from both projects, and tied the progress to fulfillment of the minimum required functionality for the HIX. The Integrated Program Plan provides much of the information used to populate the weekly dashboard sent to DHS, HHC, OIMT, and CMS.

To better standardize and automate the project status reporting, the IPMO developed a dashboard that is prepared and submitted each week to Hawai'i stakeholders and CMS. The dashboard shows progress toward the scheduled October 1 launch date for the systems, milestones, performance metrics, percent complete for major task areas on the Integrated Program Plan, identified risks and mitigation strategies, progress narratives and upcoming activities, and status of action items that had been assigned.



Weekly Program Dashboard

These weekly dashboards give leaders at the project, State, and federal levels a shared understanding of the progress and risks facing the program. By providing a consistent format and content, the weekly dashboard makes identifying patterns, trends, and outliers easier and permits leadership adoption of a "management by exception" approach. The dashboard is the guiding document in the weekly coordination calls between OIMT, DHS, HHC, the IPMO, and CMS, and provides a structure that had been previously lacking.



	IPMO	DHS	Connector	Other	Total
Total Actions Opened	255	117	207	71	65
Actions Closed on Time	111	58	79	39	28
Actions Closed Late	119	33	116	28	29
Actions Opened and Overdue	21	25	2	4	5
Actions Opened, Not Overdue	4	1	10	0	1

Action Item Statistics

One section of the dashboard report of particular value is the tracking and analysis of Action Items. Action Items are most often assigned at the daily Coordinating Committee meetings, which are facilitated by the IPMO. Action Items are critical tasks that must be executed in order for the project to be successful. The IPMO tracked all assigned Action Items, including whom they were assigned to and when they were due. Statistics on completion of Action Items, on time or late, were maintained and presented as part of the dashboard. This visibility helped to ensure accountability among the project owners and managers, and played a large role in the overall success of the project.

The IPMO has continued to support the HIX post-launch, and is applying its program management discipline and rigor to the transition from development to operations. The IPMO's subject matter expertise and professional knowledge have been instrumental in advancing the maturity of the HIX project, and they will continue to play a vital role in the future phases of State-Connector relations for the HIX system.

5.4 PROGRAM: BUSINESS PROCESS RE-ENGINEERING (BPR)

Objective: Update and re-engineer the business processes of legacy mission-critical applications, and have them delivered through one portal.

Description: The BPR program partners with State departments to identify, prioritize, and update business processes in need of re-engineering, including content management, enterprise architecture (EA), and ERP efforts. A major focus for many departments 2012–2014 was moving from inefficient, paper-based processes to streamlined, digital processes.

Impact: The BPR initiatives aid departments in streamlining, updating, and increasing the efficiency of business processes within the State. Additionally, website modernization efforts connect Hawaiian citizens to government and make it easier for them to get valuable information and access services. Through the Transformation Internship Program (TIP), the State works to train, attract, and retain a talented business and IT workforce as an investment in the local community.

Related Projects and Initiatives:

Business Process Re-engineering Support

In an effort to help departments operate more efficiently and provide citizens with better services, OIMT has been working with departments to lend staff resources and technical support to develop applications and re-engineer their business processes.

Throughout 2012–2014, OIMT, along with the Information and Communication Services Division (ICSD), has provided departments with several useful applications. An example is the Legislative Tracking System, an application developed in-house by ICSD that allows departments to easily and electronically track proposed legislation and testimony during legislative sessions.

Most recently, OIMT partnered with the Department of Health (DOH) to identify issues in its vendor payment process that caused payments to be delayed. OIMT and DOH identified contract execution as a contributing factor to the delays. As a result, DOH worked with the Attorney General's (AG's) office to create a "contract genie" with pre-defined and pre-approved contract fields, which has resulted in expedited vendor payments.

State CIO Bhagowalia share Aloha with TIP team at their graduation ceremony

BUSINESS PROCESS RE-ENGINEERING INITIATIVES

	Department	Project	Benefit
1	Department of Accounting and General Services	Public Works Division	Create a web based system to allow construction design consultants to access plans and other documents of our current State facilities.
2	Department of Agriculture	Quality Assurance Information Management System (QAIMS):	The QAIMS will enable staff to better protect consumers, businesses, and manufacturers from unfair practices, based on a measurement process or subject to a standard of quality. The goal is to minimize losses and inaccuracies due to incorrect or fraudulent commercial measuring equipment, processes, or substandard products. Also to provide services and enforce laws that help to improve the market quality of agriculture commodities, promote fair trade and honest business practices.
3	Department of Agriculture	Contract Management System (CMS)	The goal is to provide an integrated information system to administer contracts statewide.
4	Attorney General	Advice memo Automation	The goal of this project is to create an electronic database that will store advice memos currently stored in paper files in the Department of the Attorney General, Land/Transportation Division. The project will encompass scanning all hard copy files into soft copy format, and to index the documents for easier search/retrieval. This will allow for better search and indexing capabilities making the files more accessible and useful to the staff.
5	Department of Budget and Finance/ Department of Accounting and General Services	Electronic Treasury Deposit Receipts (eTDR)	The purpose of the (eTDR) project is to automate and streamline the recording and reporting of deposits in the state's financial systems. The new system will improve the efficiency and timeliness of recording the deposits and eliminate the manual processing of paper forms and multiple data entry. The system is currently being tested.
6	Department of Defense	File Conversion into Electronic Format	The goal of this project is to convert paper files into an electronic format. This will eliminate over 20 file cabinets and create to create space for a study hall for the Youth Challenge Academy Cadets.
7	Department of Health	Contract GENie	The goal of this project is to reduce the overall time needed to process a contract from the date of award to the date of execution. Project Goal: 90% of all new contracts will be executed within 60 days of contract award.
8	Department of Health	Vital Records Ordering and Tracking System (VROTS)	Reduce the amount of walk-in vital records and mail order requests by increasing online orders. This would increase customer satisfaction by providing order information and status tracking. Providing this service will streamline issuance processes enabling more services to be available online.
9	Department of Human Resources and Development	Online Unskilled Labor Registration Class System for Applicant Processing and Hiring	Expand efforts to track all state employment interests independent of appointment type. This tool will provide Departments and agencies with a standard online tool to manage registration class applicants and provide the ability generate applicant lists to meet hiring objectives.
10	Department of Human Services	DHS BESSED INVO Database Consolidation	Integrate multiple data systems across various BESSED offices to result in a standard process and system to track SNAP fraud cases and investigations.
11	Public Safety Division	Dashboard for Decision Making	Improve performance of the organization by making better decisions using key targets and indicators to measure performance.
12	Multiple	SCR 40	A working group was created to: (A) Examine state contracting and issues relating to payment when invoices are submitted; (B) Identify areas that can be simplified and standardized between government agencies, the State Procurement Office, the Department of Accounting and General Services, the Department of the Attorney General, and the parties contracted to deliver services; and (C) Develop the scope of a "dashboard" demonstration project that utilizes designated contract areas in the Department of Health, Department of Human Services, and Department of Public Safety to test business process improvements or other approaches to streamline the contracting process, with the goal of clarifying problem areas and solutions for government agencies and the parties contracted to provide services.

"In the short time that we worked with the interns, they were able to come up with tangible analysis and well-documented reports for us to consider."

—Tracy Ban
Administrative Services Officer, Budget and Finance (B&F)

BPR representatives after a workshop

Business Transformation Representative Group

Established in 2013, the Business Transformation Representative Group includes representatives from several State departments. The members are individuals with a keen interest in BPR who are dedicated to transforming operations within their departments. The members of the BPR group work with the Office of the CIO to exchange ideas and lead BPR efforts within their respective departments.

For many of the BTR participants, the biggest value is the collaboration with staff from other departments. Says Tracy Ban, Administrative Services Officer for Budget and Finance (B&F), "One of the real benefits of being part of the group is seeing what other departments are struggling with and trying to change. When there are new solutions or business processes that come out of a department, it's often useful for others."

BPR representatives working collaboratively during a conference

BPR SHOWCASE: EXAMPLE OF EXCELLENCE

"We are trustees of the public's trust and public funds. It is incumbent upon us to continuously seek ways to improve our processes through technology to maximize the limited human and capital resources we have at our disposal. We owe it to the taxpayers and the vulnerable and needy families, individuals and children we strive to serve on a daily basis."

—Pankaj Bhanot
Division Administrator, Department of Human Services
Governor's State Manager of the Year

The Department of Human Services' Business Process Re-engineering Project

The State of Hawai'i Department of Human Services (DHS), Benefit, Employment and Support Services Division (BESSD) in December 2011 embarked on a bold initiative to transform its business processes involving eligibility determination for public welfare benefits. DHS/BESSD undertook this effort in the face of a great economic depression, reduction in the public workforce, hiring freezes, low morale among the BESSD employees, budget cuts, crushing increases in caseloads and demand for public benefits and services, large backlogs of applications, operational inconsistencies, unhappy customers, and a federal injunction against DHS to improve the statewide timeliness rate of disposition of federal Supplemental Nutrition Assistance Program (SNAP) applications to 95% (from 66%) by December 2012. Governor Abercrombie's New Day Plan emphasized the urgency to make structural or transformational changes to improve government efficiency, which was also echoed by Sanjeev "Sonny" Bhagowalia, the first Chief Information Officer of Hawai'i, in his Business Transformation Strategy, i.e., *"...to identify and prioritize business process re-engineering projects with the overall goal of streamlining business processes, increasing efficiencies, reducing duplication of effort, and improving delivery of services."*

This unprecedented effort to transform the existing business processes involved moving away from the case management model wherein a caseworker shepherds customers through all the steps necessary, to a new task-based process management model of determining eligibility for public welfare benefits. In a case management model, a caseworker handles a customer's case from the day they applied to the day they exited the system. The success of a customer depends heavily on the customer's ability to meet the eligibility requirements in a timely manner, and on the caseload size and the competency of the caseworker. In process management, the success of a customer depends on a team of caseworkers executing key processes to move cases along as quickly as possible.

The key goals and objectives of the DHS/BESSD's Business Process Re-engineering (BPR) Plan were to:

1. Create Capacity
2. Improve Timeliness
3. Improve Accuracy
4. Increase Program Participation
5. Increase Client Satisfaction

The key guiding principles behind the BPR were:

1. Customers have different needs and one size does not fit all.
2. Eliminate repeat visits and attain same-day processing of applications.
3. Reduce rework of cases through consistent tools and standard practices.
4. Real-time data and resource management.

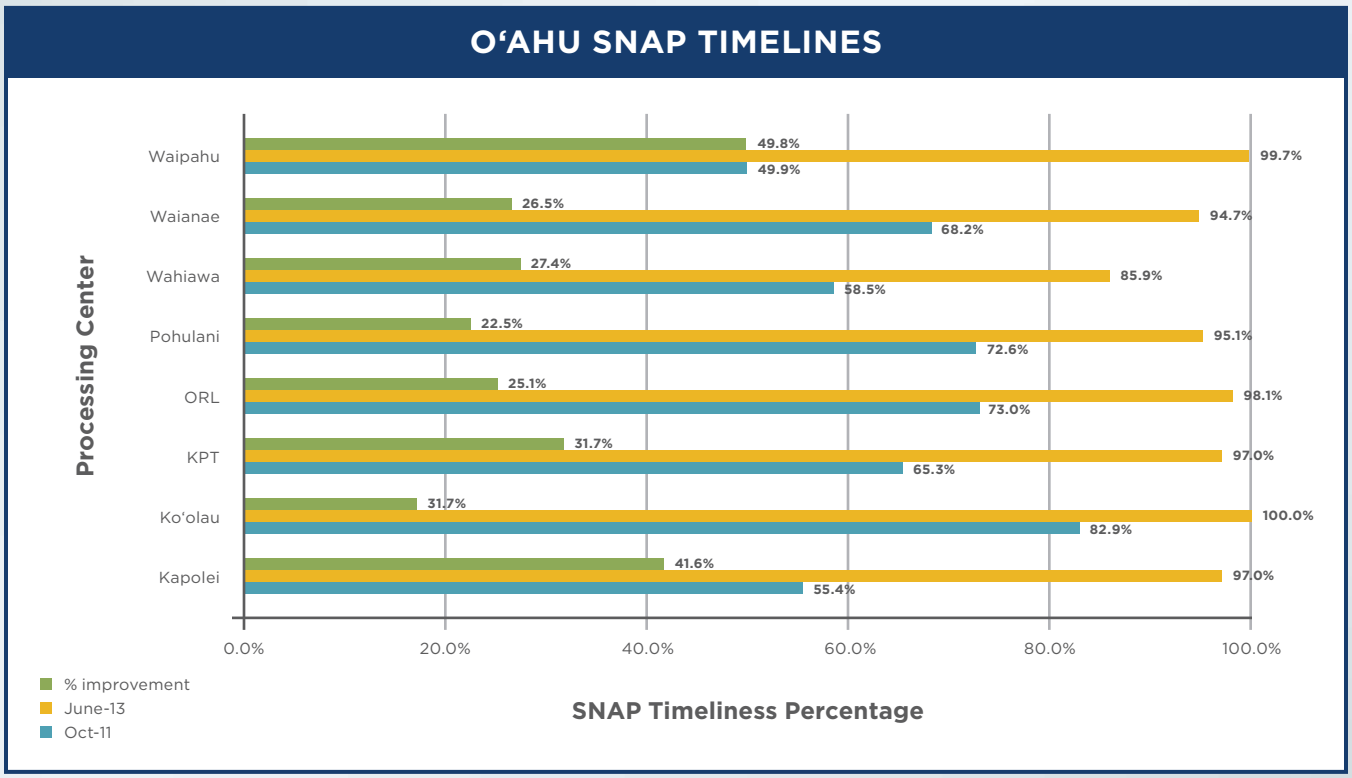
BESSD's Management team, led by Pankaj Bhanot, Division Administrator, established the BPR Steering Committee to oversee the planning and implementation

of the BPR. The membership on the Steering Committee included staff from all levels — clerical, professional, and managerial staff. Julie Morita, O'ahu Branch Administrator, was appointed to lead the BPR effort; Scott Nakasone, Assistance Division Administrator, was the technical advisor; and Lorie Young, Financial Assistance Program Administrator, was the Change Agent. BESSD also received support from the Food and Nutrition Services of the U.S. Department of Agriculture, New Mexico Department of Human Services, Washington Department of Social and Health Services, Idaho Department of Health and Welfare, Arizona Department of Economic Security, and other states. BESSD also hired Change and Innovation Agency, a premier consulting group, to assist in the development and implementation of the BPR Plan.

BESSD implemented the BPR in phases. The first processing centers were rolled out in Maui (the lowest-performing center at 29%), North and South Hilo (the best-performing centers at 80%) in December 2011, and the remaining centers were rolled out by November, 2012. BESSD's mantra was to *"...just do it, select the most favorable conditions for innovation, involve staff early, and implement in phases."*

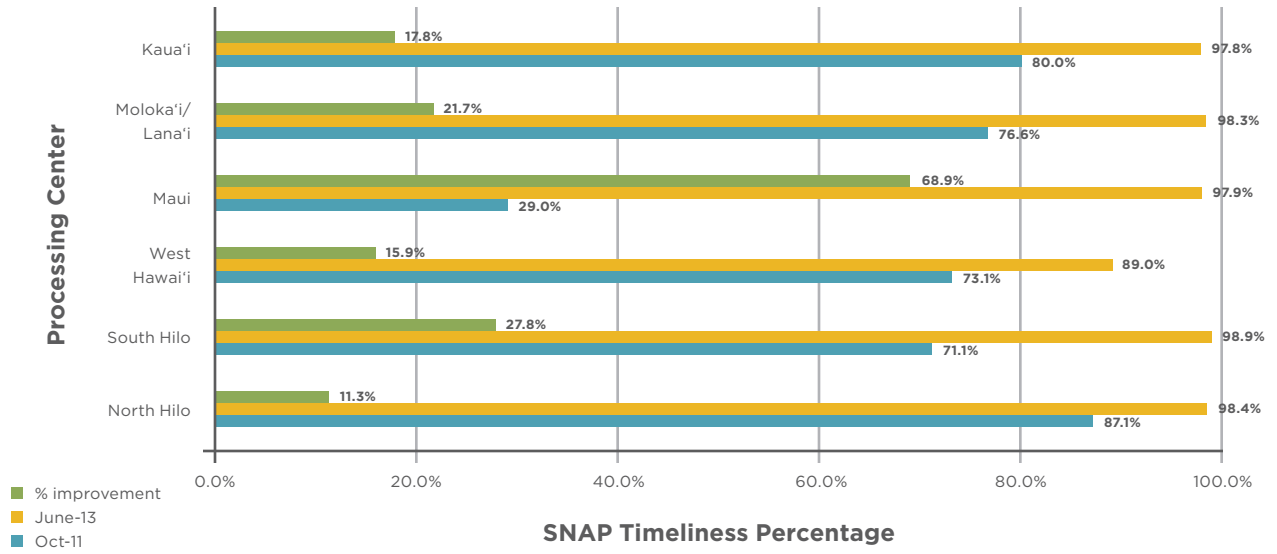
BESSD's BPR effort resulted in the following measurable outcomes:

1. Improved timeliness. Within 12 months of implementation, BESSD's statewide timeliness rate went up to 95% from 67% in October 2011. BESSD's current (June 2013) timeliness rate is at 96.6%.

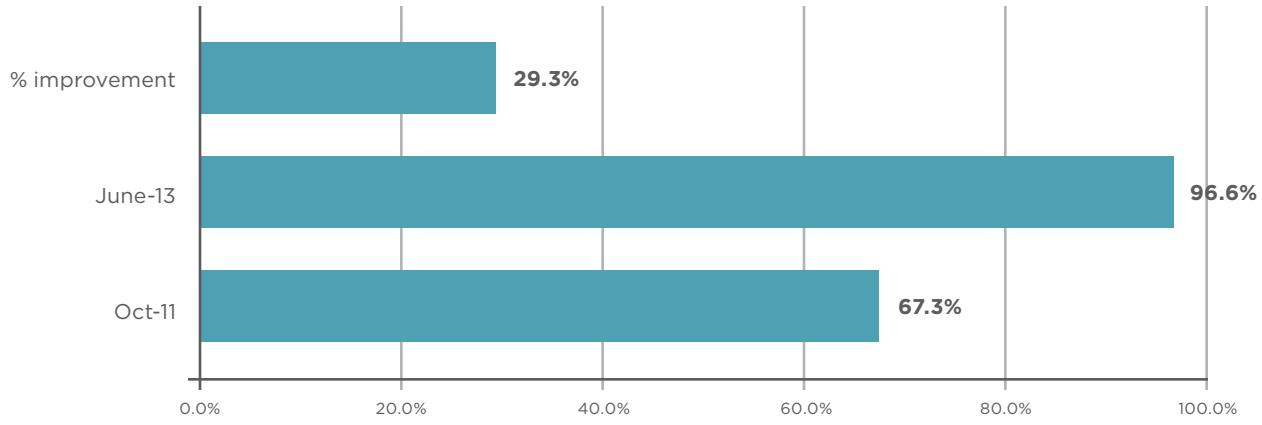


BPR SHOWCASE: EXAMPLE OF EXCELLENCE

NEIGHBOR ISLAND SNAP TIMELINES



NEIGHBOR ISLAND SNAP TIMELINES



	Oct-11	June-13	% improvement
Hawai'i (Statewide)	67.3%	96.6%	29.3%

2. Increased access to and participation in SNAP. SNAP participation in FY 2012 increased by 9.08% compared to FY 2011, the single largest increase in the nation. The State of Hawai'i was awarded a bonus of $724,139 by the U.S. Department of Agriculture for the most improved SNAP participation rate in the nation.
3. Maintained the high accuracy rate in calculation and issuance of SNAP benefits. Hawai'i's error rate for FY 2012 is lower than the federal acceptable threshold. BESSD is working closely with the Quality Control Staff to lower the error rate further in the ensuing federal fiscal year.
4. Reduction in per-case cost to determine SNAP eligibility. The post-BPR cost per case to determine SNAP eligibility has come down to $13.89 per case, i.e., 3.22% of the total administrative cost. The national average in 4.76%.
5. Same-day processing of transactions. Almost 75% of clients are now able to get their eligibility-related matters handled on the same day. During the pre-BPR days this percentage was "zero," as all cases were given an interview date in the future.

The process management has proven to be faster, more flexible, responsive, accurate, accountable, efficient, and rewarding.

BESSD, with support from Patricia McManaman, DHS Director, and Chief Information Officer of Hawai'i, rolled out two information technology (IT)-oriented solutions to support and sustain the BPR gains. The first is the ePathos solution. ePathos is a cloud-based process and operations management solution that allows BESSD processing centers to monitor, measure, and manage wait time and work flow in real time; compare and enhance performance; reallocate your resources, locally and system-wide; and ensure excellent customer service. The second IT solution currently rolled out on the Island of Hawai'i is the document imaging and content management (DICM). DICM allows BESSD processing centers to create electronic case records; more flexibility in utilizing human resources and addressing backlog of applications; easy transfer of cases; and possibility of online application and forms.

BESSD future *kaizen* (means continuous improvement in Japanese) efforts to fortify and sustain the gain of BPR include integration of the Hawai'i Automated Welfare Information (HAWI) system (current TANF, GA, AABD, LIHEAP, and SNAP eligibility system) into the KOLEA system (Medicaid eligibility system recently implemented pursuant to the Affordable Care Act); and Customer Relationship Management solution phone system and device integration and interactive voice response, intelligent call routing, call support and tracking, application and case integration, and online and email contact center. BESSD is poised to embark on these efforts in early 2014 and is expecting to complete the implementation by December 2015.

"The TIP program gave me invaluable experience working directly with the State CIO staff to develop a BPR kickoff event and participate in process mappings with members of the Business Transformation group. As a direct result of my involvement in the TIP program and the skills learned within the program, I was able to land a great career opportunity within the State CIO's Office managing the TIP program."

—Josette Knapp
Program Manager, TIP Program

Transformation Internship Program (TIP)

Tip.Hawai'i.Gov

TIP is a unique opportunity for undergraduate and graduate students to gain training and experience in state government and assist in organization change management, business process re-engineering and/or information technology systems and solutions. Established by OIMT in 2012, the program enrolls 35–40 students each semester and during summer breaks to prepare students for challenging IT-related jobs — enhancing Hawai'i's business and IT workforce. Participating schools include: University of Hawai'i, Hawai'i Pacific University, Brigham Young University, University of Southern California, University of Washington, and University of Phoenix.

Through TIP, students gain experience in areas such as strategic planning, human capital management, organizational change management, and fiscal planning. Students are assigned to program teams, enabling them to work with State employees and transfer their classroom activities to actual work experiences.

A major focus for the interns was working with the Business Transformation group on BPR initiatives. The students worked on open data projects (including creating data.hpu.edu) as a means to visualize data, and worked directly with State departments to complete business process mappings.

EXAMPLES OF THE INTERNS' CONTRIBUTIONS TO STATE DEPARTMENTS INCLUDE:

State Department	Project(s) Worked On	Contribution
Budget and Finance (B&F)	• Death Benefits Validation for Employee Retirement System (ERS) and Hawaiian Employer Union Health Benefits Trust Fund (HEUHBTF)	• Interviewed the two agencies to discern their needs and concerns for validating when benefit recipients were deceased and benefits should stop. • Coordinated a meeting between the two agencies and Department of Health (DOH) to facilitate better information exchanges. • Produced a comprehensive report of their findings and recommendations.
Hawai'i Criminal Justice Data Center (HCJDC)	• Document Management and e-Discovery	• Gathered document management and process automation requirements.
Department of Health (DOH)	• Customer satisfaction surveys and process assessments	• Conducted customer satisfaction surveys for birth, marriage, and death licensing processes to issue certified copies. • Assessed major challenges with the processes, including backlog and time delays.

Students have learned valuable skills from participating in the program. Steve Smith, CIO for the University of Hawai'i, notes that students have told him "they've had a very positive experience with the program and that it's been a real help to them, and something they're happy to have on their resume."

Governor Abercrombie and CIO Bhagowalia at the TIP Spring 2013 Session

Lieutenant Governor Tsutsui with interns at the TIP Summer Session Kickoff

The Governor and State CIO with TIP Summer 2012 interns

Data.hpu.edu

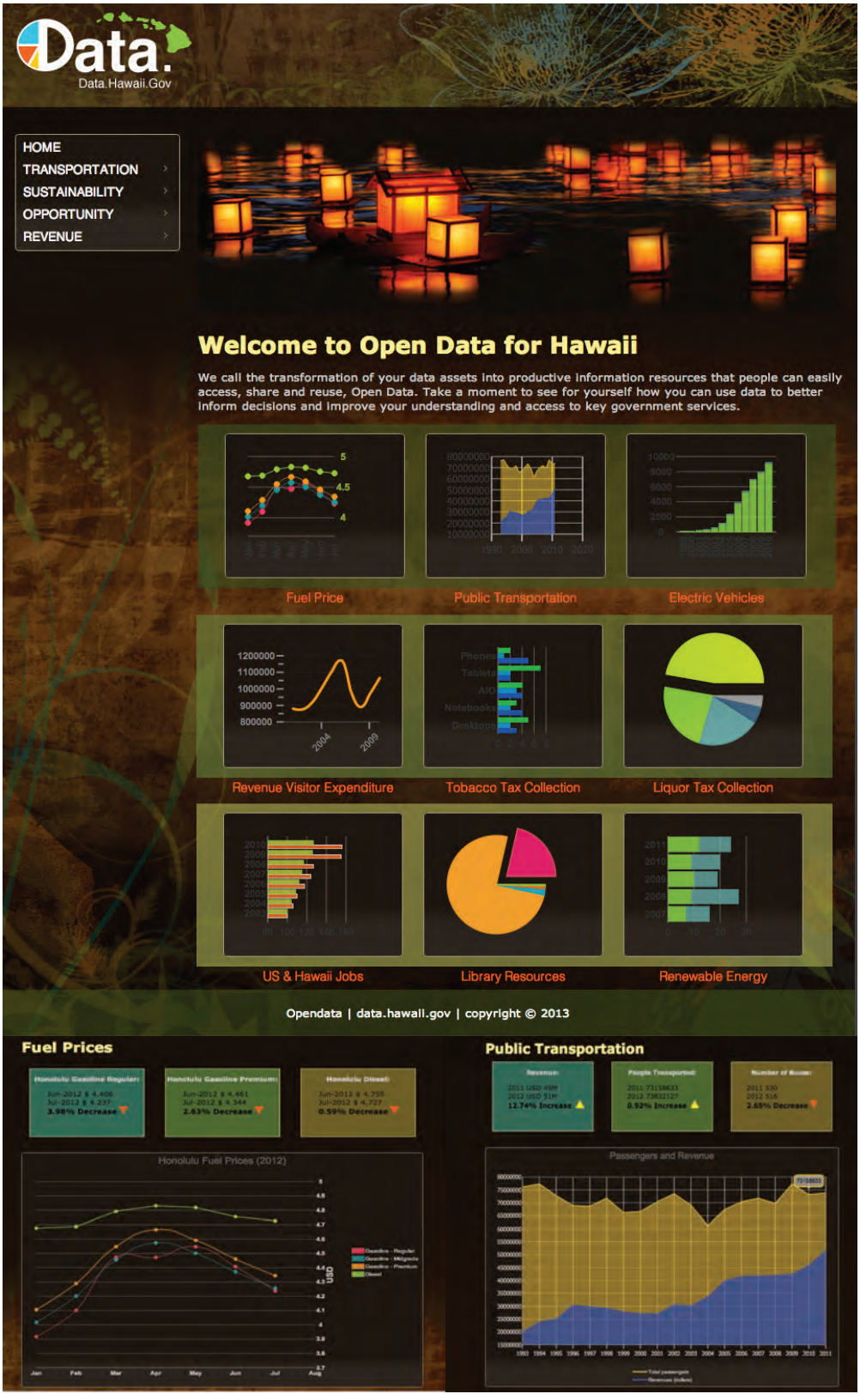

Data.
Data.Hawaii.Gov
HOME
TRANSPORTATION
SUSTAINABILITY
OPPORTUNITY
REVENUE
Welcome to Open Data for Hawaii
We call the transformation of your data assets into productive information resources that people can easily access, share and reuse, Open Data. Take a moment to see for yourself how you can use data to better inform decisions and improve your understanding and access to key government services.
Fuel Price
Public Transportation
Electric Vehicles
Revenue Visitor Expenditure
Tobacco Tax Collection
Liquor Tax Collection
US & Hawaii Jobs
Library Resources
Renewable Energy
Opendata | data.hawaii.gov | copyright © 2013
Fuel Prices
Honolulu Fuel Prices (2012)
Public Transportation
Passengers and Revenue

Figure 1. Enterprise Program Management Office (ePMO)

OIMT has been working to create the foundation for an Enterprise Program Management Office (ePMO) to provide governance and oversight for major program initiatives including Enterprise Resource Planning, Tax System Modernization, and Health IT. The office will work to deliver IT projects on time, on budget, and in scope using proven industry standard tools and practices.

The ePMO will bring training options to IT programs and projects, including program and project management, business process re-engineering (BPR), contract administration, leadership, negotiation and teamwork. As the ePMO grows, additional services will be offered such as facilitation, subject matter expertise on communications, risks, technology architecture and acquisition.

The Office also will work collaboratively with departments to provide centralized services such as document management and SharePoint repository services. Coming soon will be a project management information system called Alanui (The Way). With Alanui, project collaboration and communications across departments and agencies will be more efficient and effective.

Aligning people, process, and technology, the ePMO enables the State to transform through increased skill sets, visibility, and best practices for government IT and BPR projects.

Office of Information Management and Technology

Newsletter

State of Hawai'i IMT

Volume 1, Issue 1 — December 2013

Opening Message

From Sanjeev "Sonny" Bhagowalia, CIO

Aloha,

As we begin a new year, I am both optimistic and grateful for the dedication of so many state employees working on the IT transformation and its promise for the future.

The preparation and planning during the past two years have introduced a number of changes, and we are now ready to move ahead on a number of fronts. We will be selecting a vendor to launch ERP – enterprise resource planning – that will streamline the way we work and deliver government services. And we are upgrading a number of systems in tax, human resources, and finance, as we eventually migrate to one technology platform.

During this multi-year transformation, we will do our best to coordinate among teams of state workers and agencies, and provide updates and responses to your questions.

As part of our communications effort, we will continually update our website and provide you with the latest status of various projects and information about how they will affect processes and functions in state government. To pull everything together, we developed this newsletter covering all the major business transformation initiatives. Future editions will feature all areas of our work, such as IT network, security, and other infrastructure improvements. We hope you will find it useful as we continue our enterprise transformation.

We will stay in touch. But if you have any questions, please let us know. Our strength comes from unity of purpose and effort.

Mahalo and aloha.

In This Issue

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6.0 STRATEGY #2: MODERNIZING THE TECHNOLOGY INFRASTRUCTURE

"Our strategy to modernize technology infrastructure for the State of Hawaii will require unprecedented performance by staff in the implementation of high-availability infrastructure supporting network, data and communications services with a systems availability target of 99.8% in 2013. We are seeking to fortify our technology architecture across all islands and will be working towards a 99.9% availability target by the end of 2014."

—Keone Kali
Deputy CIO, Operations and IT Infrastructure

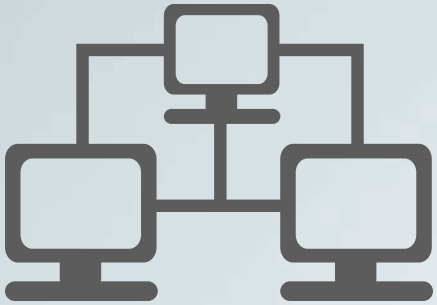
There are four programs under the *Modernize and Consolidate Technology Infrastructure* strategy:

- Program #5: Consolidated Infrastructure
- Program #6: Enterprise Shared Services
- Program #7: Enterprise Security and Privacy
- Program #8: Hawai'i Broadband Initiative (HBI)

These programs focus on increasing the effectiveness and security of the State's foundational technology components. They include the procurement, installation, and upgrading of technology, as well as the training of State IT staff on emerging technologies and processes.

In the area of Consolidated Infrastructure, OIMT is working with departments and all branches of government to fortify and extend core backbone networks; upgrade cabling; provide integrated VoIP and unified communications services; enhance interoperability of microwave, wireless, and critical communication systems; increase centralized capacity for systems, storage, databases and disaster recovery; virtualize servers into OIMT's Government Private Cloud; improve facilities that host our operational environments; and mesh our data centers across all islands into a cohesive and centrally manageable resource. In the area of Enterprise Shared Services, OIMT is looking to achieve efficiencies in negotiating enterprise software licensing agreements and implementing Centers of Excellence in core areas of importance related to OIMT's managed services portfolio including Email, Directory Services, Geographic Information Systems (GIS), Office Productivity, and Middleware. In the Security and Privacy arena, we are making extraordinary efforts to secure the enterprise, harden the State's network and data assets against cyber-threats, and continuously monitor and improve the State's security and privacy policies and posture. Under the Hawai'i Broadband Initiative (HBI), we are making visionary improvements to Hawai'i's broadband critical infrastructure, including plans and designs for landing new transpacific fiber optic cables and deploying gigabit services throughout the state.

6.1 PROGRAM: CONSOLIDATED INFRASTRUCTURE



Objective: Consolidate networking and computing infrastructure; enable a reliable statewide network; refresh and update desktop and mobile equipment; provide additional computing capacity via private partnerships; and develop the core infrastructure for departments' mission-critical applications.

Description: The consolidated infrastructure program encompasses several projects that will transform the State's IT infrastructure during the next 10 years into an integrated, state-of-the-art backbone for managing and using the information collected and/or generated by the State. From enhanced networks, to increased data capacity, to newer desktop computers and software for State employees — the consolidated infrastructure program is the cornerstone of the State's IT transformation.

Impact: The updated infrastructure environment will ensure that departments can efficiently run mission-critical applications and deliver services to Hawai'i residents, while Hawai'i's citizens will have increased access to government services such as Internet-accessible applications and business processes, and will benefit as well from improved communications infrastructure such as enhanced public safety radio systems.

Related Projects and Initiatives:

Network Upgrades

The existing State network is a shared network which:

- Provides secure and reliable connectivity between O'ahu and the Neighbor Islands
- Connects State departments together (email, document management, video conferencing, applications)
- Provides each department with access to enterprise applications, data center resources, cloud-based services, and Internet access

In 2012, the State was heavily reliant on legacy networks that were under-utilized by departments due to reliability issues, and which had low reliability rates, resulting in lags in system performance and application downtimes for departments. OIMT undertook a network assessment study to evaluate the current state of the network and identify weaknesses and critical improvement areas. The assessment identified all critical infrastructure related to the network, and a series of actions to be taken during the next two years that would result in improved reliability. Among the specific actions recommended were:

- Increase Internet bandwidth and establish connections to the Internet via multiple service providers.
- Add redundant interisland and O'ahu connections to increase reliability to 99.9%.
- Establish a separate fiber optic ring on O'ahu for State Government offices
- Upgrade connection speeds for a tenfold increase in bandwidth.

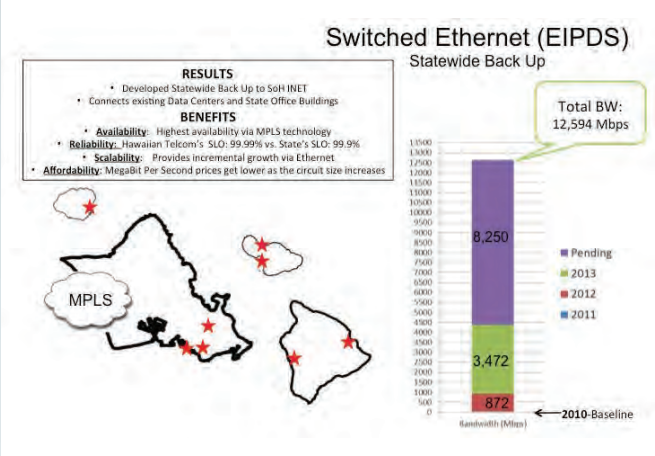
Because high-speed, reliable connectivity is fundamental to the State's IT transformation and operations, the State CIO made it a key priority in 2013 to improve the network — increasing reliability, enhancing speed and performance, and guaranteeing service levels. Additionally, OIMT began consolidating network circuits, resulting in huge savings statewide and more manageability of network services and performance metrics. The addition of redundant Internet and backbone network connections has been completed. The State achieved its goal of reaching 99.8% backbone network availability by the end of 2013.

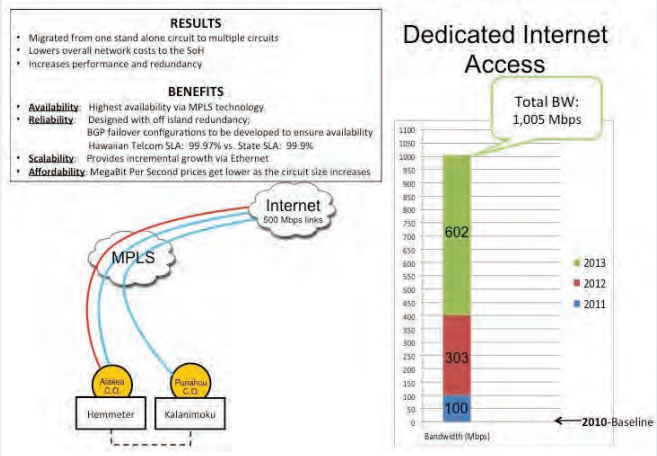
In addition to the Executive Branch, the Judiciary and Legislative branches of the government have now joined the network, and several Executive departments have successfully consolidated onto the State network, saving significant funds which had previously been earmarked for maintaining their legacy networks. Finally,

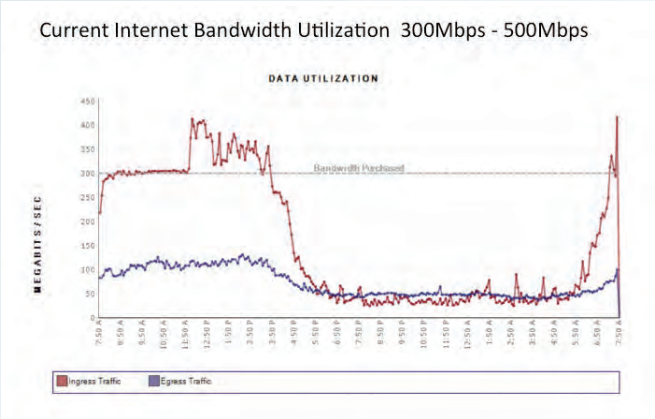
plans for upgrading bandwidth to the data centers and to major State office buildings are currently under way.

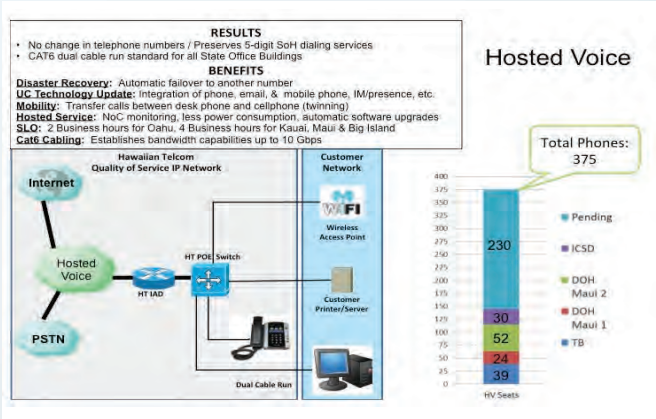
As a result of the improved network, State employees can now take advantage of better-performing applications without downtime, increasing efficiency and productivity — resulting in employees finishing their work in less time. The improved network will also support the rollout of new enterprise applications including the State's new ERP and Tax systems, a plethora of Health IT systems and other strategic departmental and enterprise-level applications.

Departments have already begun to realize benefits from OIMT's consolidated infrastructure efforts. For example, the Department of Transportation notes, "On the networking side, OIMT has been helping us reduce our number of host circuits — reducing our costs and saving the Department money." Invested in the upgrade of the State's network backbone, increasing uptime from below 80% in 2011 to 95% in 2012 and 99.8% in 2013. Increased capacity from 100 Mbps to 10 Gbps (10X or 1000% increase) to all 15 major state government locations. Also upgraded the statewide backup network with disaster recovery capabilities.

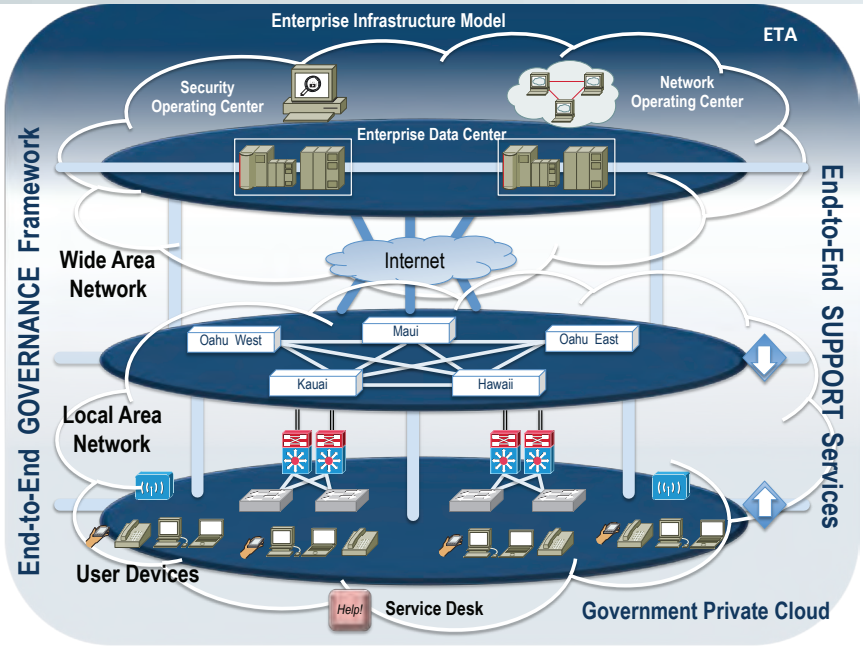








These figures illustrate significant infrastructure accomplishments across the State of Hawaii network.



Data Center

Recognizing that modern, efficient data center operations are critical to State operations, the State CIO commissioned a Data Center Strategy in 2012. This effort found that the State's existing 25+ data centers expose the State to excessive risk and are inadequate to meet the State's expanding transformation needs.

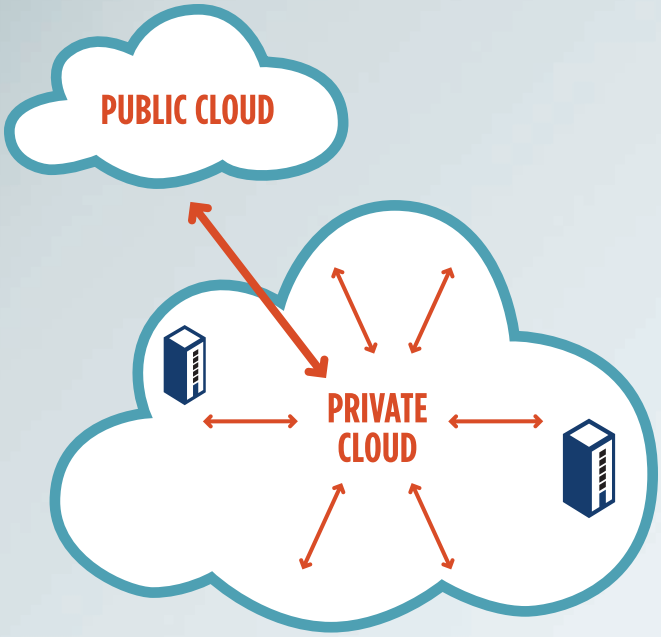
Specifically, the Data Center Assessment found:

- Most data centers lack basic features such as generators to protect them from power outages. A significant power outage in Honolulu would significantly impact many critical State IT systems.
- Many data centers are located in or near flood/tsunami zones. Typically they are located in basements or on the first floor of State office buildings.
- The State's most critical data center is located in a basement near the water. Much of the power and cooling equipment in this facility, which was designed to last 15 years, has been in place for more than 30 years. In addition, the data center has almost reached full capacity.
- Data centers are not secured or monitored on 7x24x365 basis — leaving them vulnerable to prolonged outages and cyber-attacks.
- The State currently does not have a geographically separate disaster recovery center. A major Honolulu-centered disaster could expose the State to a potential shutdown of critical IT services for weeks, or even months. There is a chance that some systems and data might be unrecoverable.

While most states have established enterprise-level data centers and no longer house key systems in decentralized, departmental data centers, Hawai'i has more than 25 individual departmental and division data centers in operation that are hosting critical applications.

The current data center infrastructure cannot support new statewide applications, such as ERP and the new Tax system. In fact, the current data centers put these investments — and the State's existing IT assets, and the services that Hawai'i's residents rely on — at risk. The combination of new systems, more-integrated systems, and publicly accessible systems will create new demands on the underlying data center infrastructure that the current system cannot support. The inevitable results will be project delays, significant cost overruns, outages, and unacceptable exposure to disaster and other risks.

In 2012, OIMT developed and began executing against a three-part strategy for addressing the data center deficiencies.



1. First, OIMT is developing a government private cloud solution which will enable departments to migrate much of the equipment located in their existing sub-standard data centers to a secure "cloud" solution which is secure, reliable, and maintained by State personnel at State facilities.
2. Second, OIMT has begun the process of acquiring a new enterprise-class data center on O'ahu which will be designed for high availability and disaster survivability. OIMT plans to partner with the private sector to accelerate the acquisition of a Tier 3 data center and hopes to have it ready for occupancy within 36 to 40 months. Eventually this data center will be part of a five data center network (two on O'ahu and one on each of the other three major islands).
3. Third, because the new data center strategy will take three years to put fully in place, OIMT has taken immediate steps to improve data center redundancy and resiliency. These steps include the following:
   - Establishing an operational mirror site on Maui where the State's critical data and applications will be replicated and can be run in the event of a major disaster on O'ahu.
   - Establishing temporary data center facilities with commercial, on-island data center co-location providers, where new applications can be housed and existing departmental equipment can be consolidated.
   - Establishing limited backup capabilities in the University of Hawai'i's new state-of-the art data center in Mānoa.

Through server consolidation and virtualization, storage capacity increased tenfold, and select departments such as DHRD were able to begin moving their database information into cloud-based servers maintained by the Office of the CIO.

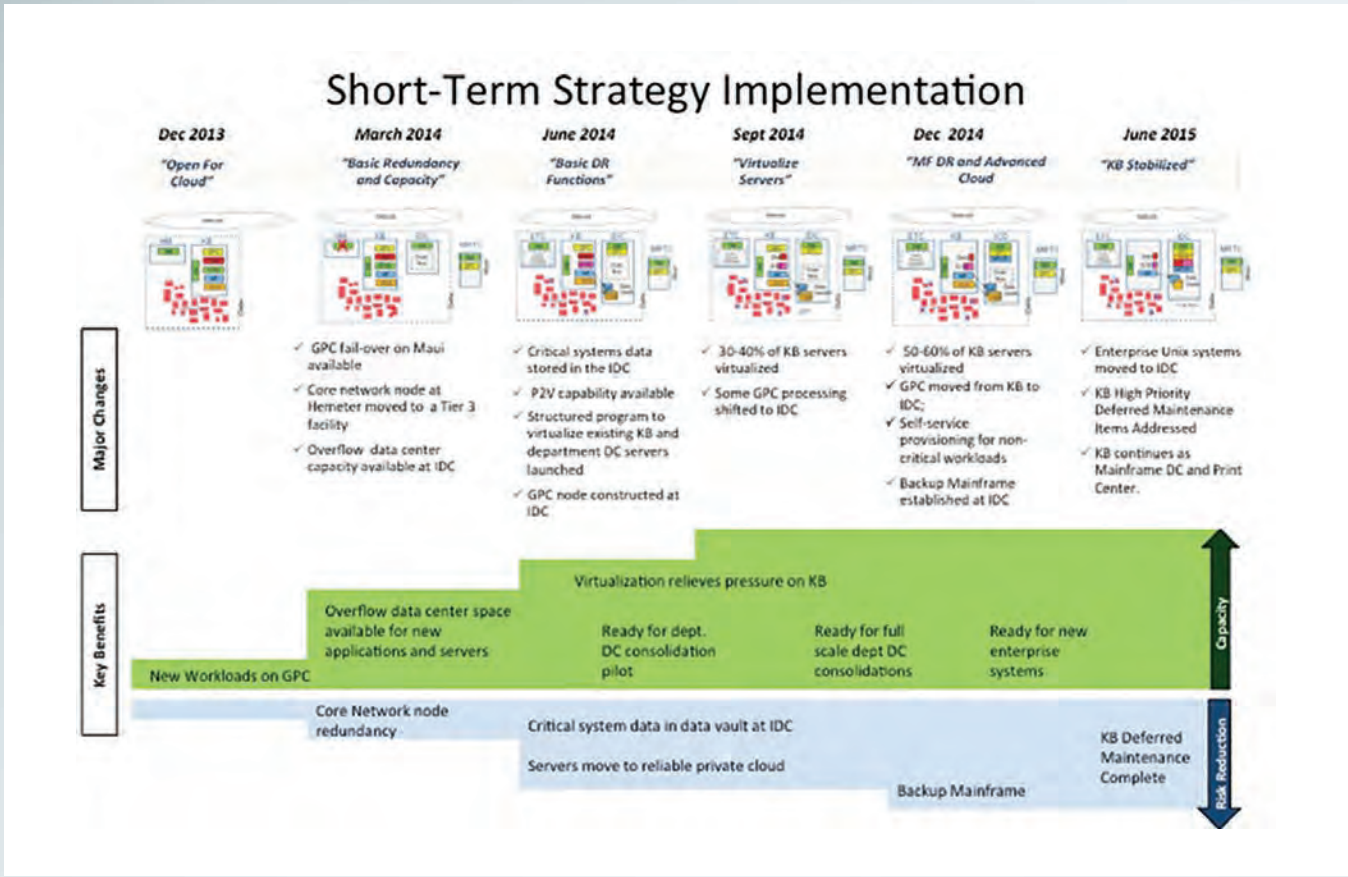
In addition to improving existing data center operations and deploying the government private cloud infrastructure solution, OIMT has begun the process of acquiring a new enterprise data center. This new facility will be highly energy-efficient and will provide the State with the capacity and level of reliability required to meet the needs of a leading digital state.

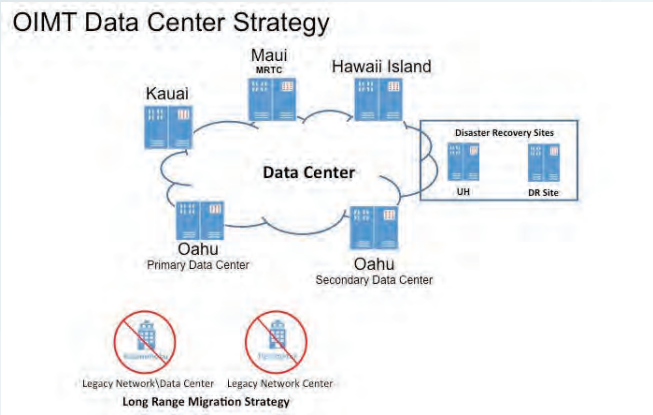
While consolidating from the more than 25 departmental data centers to an enterprise data center will allow the State to reduce costs through improved infrastructure sharing, leveraging staff, and increasing energy efficiency, the real benefit will be the added reliability and the mitigation of the State's current vulnerability to a concerted cyber-attack or a major Honolulu-based disaster. The State's investment in a Hawai'i-based data center will also prevent shifting jobs from Hawai'i to the Mainland, with an estimated 10-year positive economic impact of millions of dollars to the State.

In an effort to construct a state-of-the art data center for the lowest level of funding possible, OIMT recently conducted a Data Center Public-Private Partnership Study to assess the public-private option for building the State's shared data center. OIMT has submitted a Request for Information (RFI) to gather input from private sector organizations.

In addition to the outdated data center technology and operations, the State's 2012 assessment also found that the State was severely lacking in adequate backup and recovery systems and processes.

The Data Center Public Private Partnership Study assessed various models of public/private partnerships to determine the relative affordability and feasibility of each for the State.





There was no central disaster recovery site for most critical State applications, and the State relied entirely on manual backup systems for disaster recovery protection. While some departments had limited continuity plans in place, most lacked comprehensive IT disaster recovery plans — and where such plans did exist, the required infrastructure (e.g., facilities and equipment) had not yet been funded.

Realizing that a major Honolulu disaster could shut down State IT for months — and knowing that providing consistent and reliable access to State services when disaster strikes is essential to citizen confidence in government — the State CIO sought to improve backup and recovery operations within Hawai'i.

In 2013, OIMT began work on:

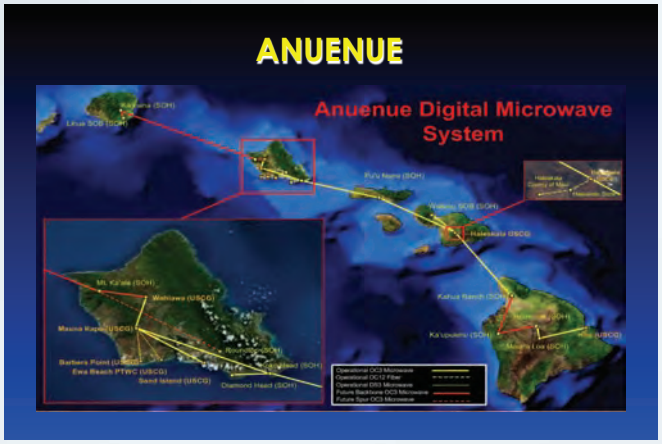
1) Providing Disaster Recovery Management (backups) for all servers/data on the core network (WAN).
2) Establishing network connections to other data centers for data replication, de-duplication, and disaster recovery management.

Public Safety Radio Communications

To ensure that first responders and government employees responsible for essential public safety operations have the communication tools necessary to carry out their missions, and ensure interoperability among and between agencies and partners, OIMT began improvements to the public safety radio network in 2013.

In an effort to embrace FirstNet (the national public safety broadcast network), the State made improvements including site and tower upgrades, air conditioning installation, electrical upgrades, and instituting interoperable standards and protocols. As a result of the improvements, the Office of the CIO was able to secure a FirstNet grant to help fund additional improvements and upgrades.

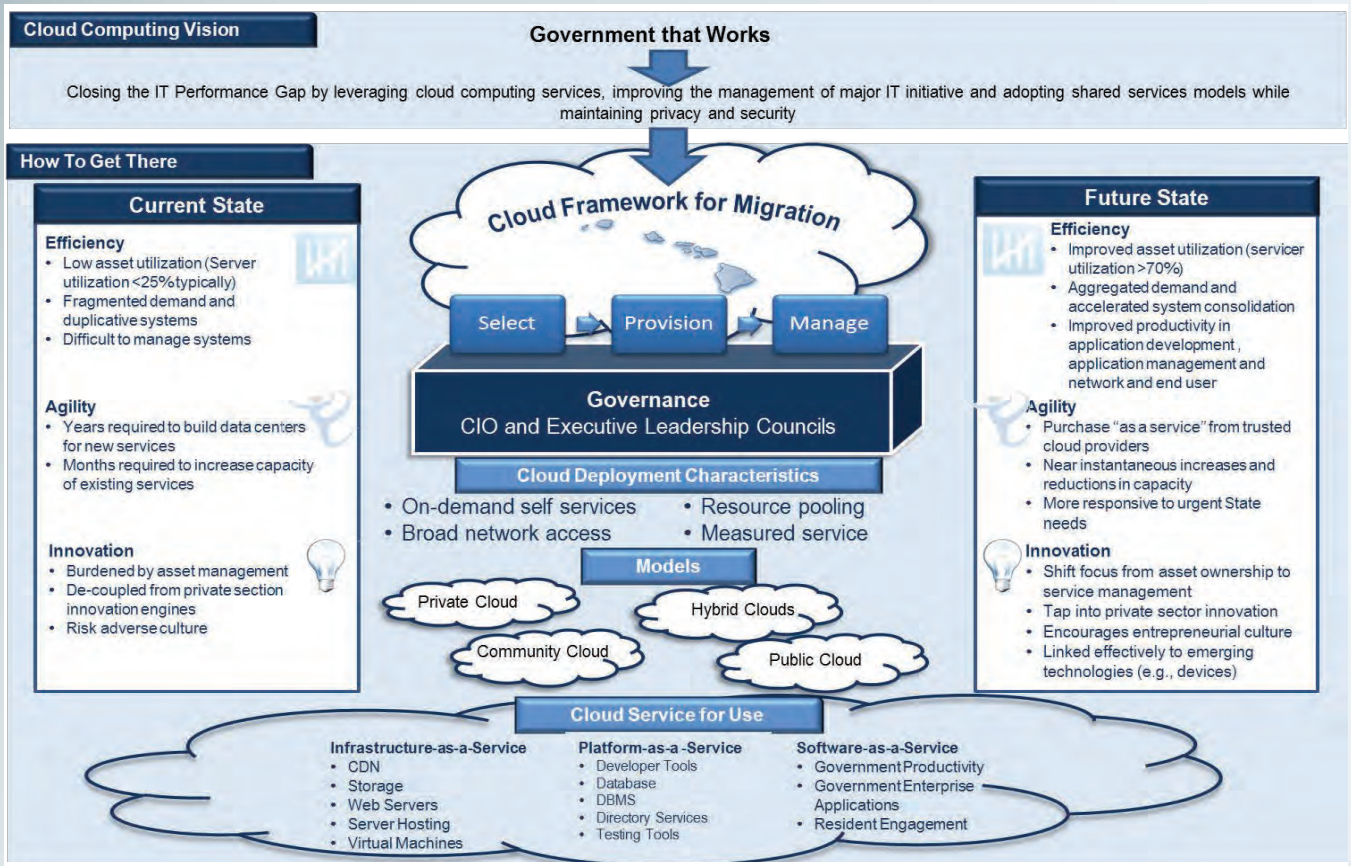
As an example of better managing all the State's communications and IT assets, OIMT is planning to leverage the interisland microwave network established to support public safety radio communications and to provide a backup network for the State's interisland data communications network. Currently this communications network is 100% dependent on interisland/undersea fiber optic connections. In the event of a widespread disaster, microwave may be the only form of high-speed data connectivity that the State can be assured is available. The graphic below is an example of how the Hawaiian Islands are connected via microwave connections.



Ka'ūpūlehu Radio Tower

Kahuā Ranch Radio Tower

Puu Nana Radio Tower


Cloud Computing Vision
Government that Works
Closing the IT Performance Gap by leveraging cloud computing services, improving the management of major IT initiative and adopting shared services models while maintaining privacy and security
How To Get There
Current State
Efficiency
• Low asset utilization (Server utilization <25% typically)
• Fragmented demand and duplicative systems
• Difficult to manage systems
Agility
• Years required to build data centers for new services
• Months required to increase capacity of existing services
Innovation
• Burdened by asset management
• De-coupled from private section innovation engines
• Risk adverse culture
Cloud Framework for Migration
Select
Provision
Manage
Governance
CIO and Executive Leadership Councils
Cloud Deployment Characteristics
• On-demand self services
• Broad network access
• Resource pooling
• Measured service
Models
Private Cloud
Hybrid Clouds
Community Cloud
Public Cloud
Future State
Efficiency
• Improved asset utilization (servicer utilization >70%)
• Aggregated demand and accelerated system consolidation
• Improved productivity in application development, application management and network and end user
Agility
• Purchase "as a service" from trusted cloud providers
• Near instantaneous increases and reductions in capacity
• More responsive to urgent State needs
Innovation
• Shift focus from asset ownership to service management
• Tap into private sector innovation
• Encourages entrepreneurial culture
• Linked effectively to emerging technologies (e.g., devices)
Cloud Service for Use
Infrastructure-as-a-Service
• CDN
• Storage
• Web Servers
• Server Hosting
• Virtual Machines
Platform-as-a-Service
• Developer Tools
• Database
• DBMS
• Directory Services
• Testing Tools
Software-as-a-Service
• Government Productivity
• Government Enterprise Applications
• Resident Engagement


Operational Readiness Capability Overview
Target
Existing
IT Organization - Financial Mgmt
IT Organization - Service Mgmt
IT Organization - Operations Mgmt
IT Organization - Infrastructure Mgmt
Consumer Mgmt. & Reporting
Business Requirements Mgmt.
IT Financial Mgmt.
Accounting & Billing
Risk Mgmt.
IT Vendor Mgmt.
Service Catalog Mgmt.
Service Level Mgmt.
Service Portfolio Mgmt.
Service Development and Implementation Mgmt.
Demand Mgmt.
Chargeback and Metering
Service Desk
Event Mgmt.
Incident and Problem Mgmt.
Change and Configuration Mgmt.
Capacity and Availability Mgmt.
Continuity Mgmt.
Release Mgmt.
Integration & Automation Mgmt.
Provisioning Mgmt.
Performance Mgmt.
Architecture Services
Deployment Services
Infrastructure Provisioning Services
Integration and Automation Services
Infrastructure Capacity Mgmt.
Security and Compliance Mgmt.
Monitoring
3.3
2.8
2.3
1.8
1.3
0.8
0.3

"The Enterprise price lists for software and services have been a big benefit to us. It has allowed us to quickly contract for professional services for software that would have taken a lot longer to bid for — likely leading to a lapse in services."

—David Wu
Assistant Superintendent/CIO Department of Education (DOE)

6.2 PROGRAM: ENTERPRISE SHARED SERVICES

Objective: Provide central shared services including: Email and Directory services, Content and Collaboration applications, and Document Management tools.

Description: Enterprise shared services are those business functional services that are common across all line-of-business activities, and include the management of key shared data. Examples include business functions such as financial tracking, asset inventory tracking, and procurement execution; and common IT services such as email, collaboration, and digital content management. Enterprise shared services are being developed, deployed, and provided by OIMT, and an effort is being made to reduce or eliminate redundant investments and maximize the State's purchasing power.

Impact: By consolidating and centralizing common services and widely utilized technologies, the State is able to dramatically reduce costs and improve efficiencies, while departments are able to outsource basic technology needs to focus on mission-critical services and initiatives. The result is better use of taxpayer dollars and improved services from departments.

Related Projects and Initiatives:

Enterprise Licensing Agreements

Since 2013, OIMT has aggressively been negotiating with multiple software vendors on behalf of State departments and is looking to combine common departmental technology needs (such as email or collaboration programs) into enterprise-level purchases. By combining shared departmental service and application needs, the State is in a much stronger negotiating position when purchasing from vendors and is able to reduce costs. Through OIMT-led enterprise licensing agreements, the State has been able to increase purchase volumes and reduce licensing expenses by as much as 40%–60% statewide, resulting in potential taxpayer savings of millions of dollars.

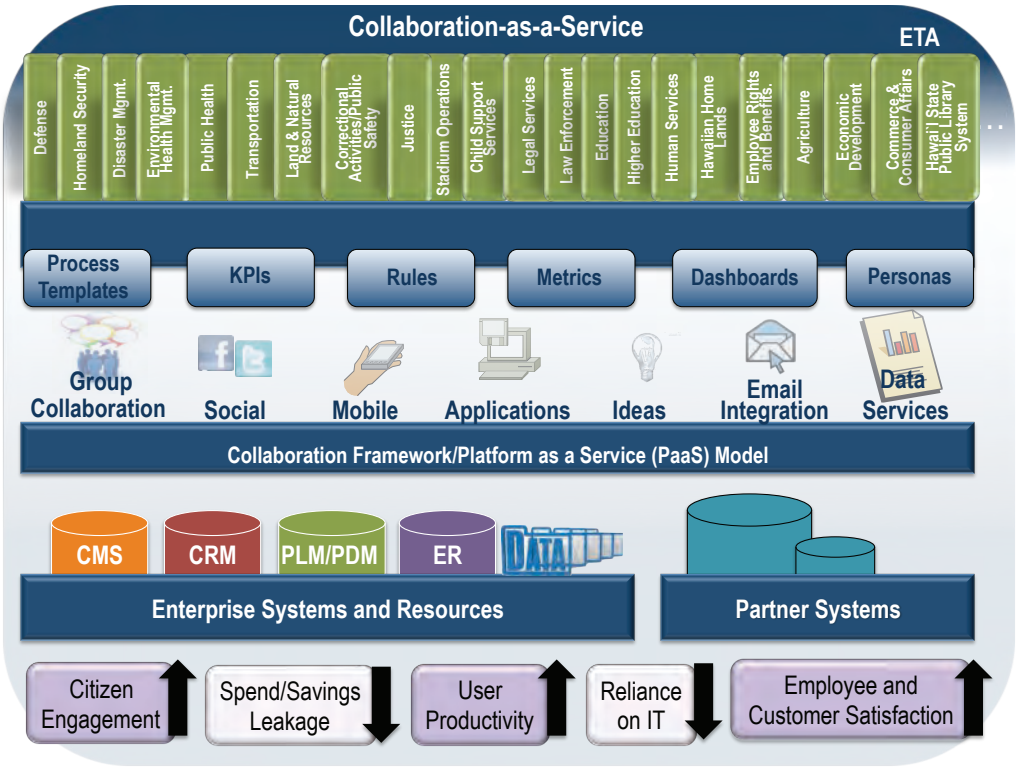
Cloud Services

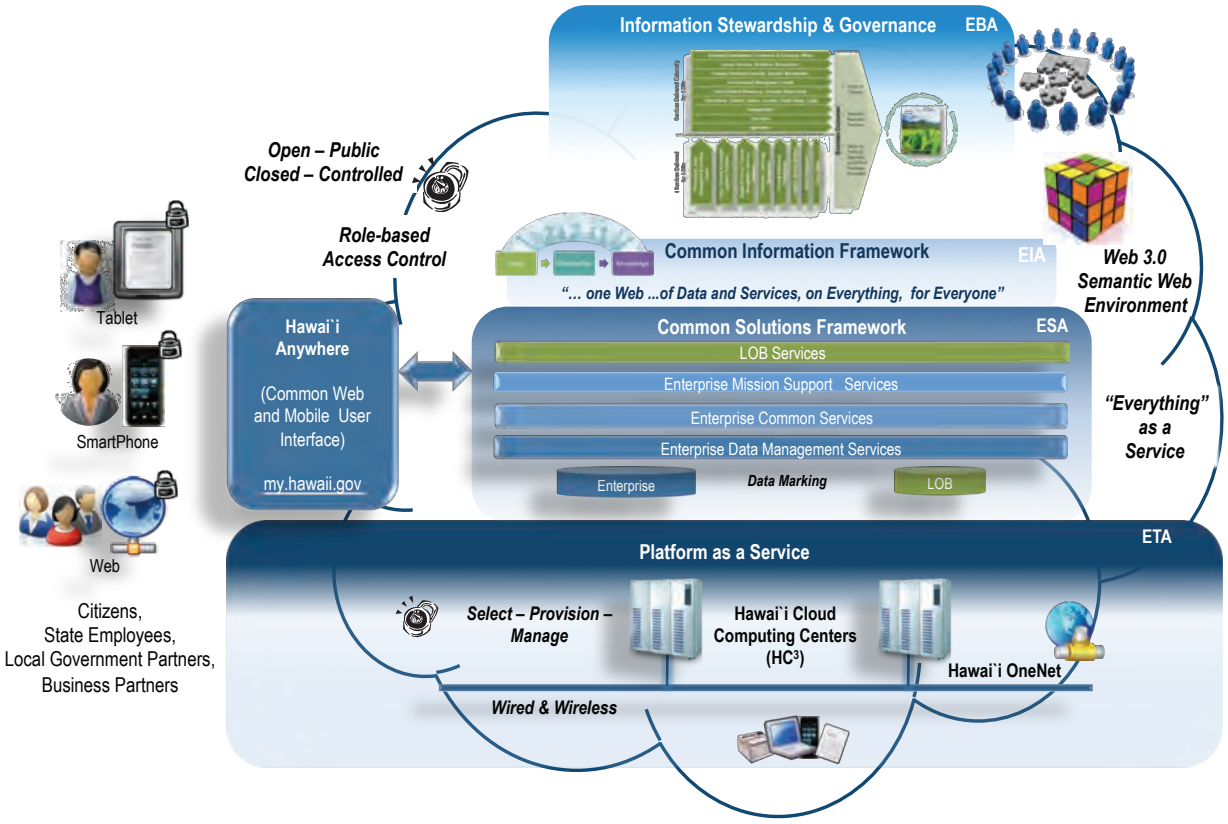
In early 2013, OIMT undertook a cloud readiness assessment to evaluate and confirm that the ICSD and OIMT teams could launch and operate an internal private cloud, as well as provide guidance on improvements needed to institute a private cloud, including improvements to people, processes, and tools. The assessment reviewed 30 areas, including: organizational strategy, financial control, service control, operations control, and infrastructure control.

The assessment recommended that OIMT/ICSD implement a new internal private cloud (IPC) for best-practice Infrastructure-as-a-Service (IaaS) and implement a cloud operations leadership team (COLT) structure with responsibility for:

- Architecture strategy
- Service strategy and design
- Service governance
- Infrastructure provisioning processes and provisioning strategy

In 2013, OIMT began implementing virtualized private cloud services, offering departments shared IT services to allow their IT staffs to refocus on mission-critical applications. Services to be offered include Infrastructure-as-a-Service (IaaS) and Virtual Desktop Infrastructure (VDI), Software-as-a-Service (SaaS), Security-as-a-Service (ScaaS), and IT-as-a-Service (ITaaS). Some departments have already begun to shift their hosting needs to OIMT, such as the Hawaiian Criminal Justice Data Center, which


Collaboration-as-a-Service
ETA
Defense
Homeland Security
Disaster Mgmt.
Environmental Health Mgmt.
Public Health
Transportation
Land & Natural Resources
Correctional Activities/Public Safety
Justice
Stadium Operations
Child Support Services
Legal Services
Law Enforcement
Education
Higher Education
Human Services
Hawaiian Home Lands
Employee Rights and Benefits.
Agriculture
Economic Development
Commerce & Consumer Affairs
Hawai`i State Public Library System
Process Templates
KPIs
Rules
Metrics
Dashboards
Personas
Group Collaboration
Social
Mobile
Applications
Ideas
Email Integration
Data Services
Collaboration Framework/Platform as a Service (PaaS) Model
CMS
CRM
PLM/PDM
ER
DATA
Enterprise Systems and Resources
Partner Systems
Citizen Engagement
Spend/Savings Leakage
User Productivity
Reliance on IT
Employee and Customer Satisfaction


Information Stewardship & Governance
EBA
Open – Public
Closed – Controlled
Role-based Access Control
Common Information Framework
EIA
"… one Web …of Data and Services, on Everything, for Everyone"
Web 3.0 Semantic Web Environment
Tablet
SmartPhone
Web
Hawai`i Anywhere
(Common Web and Mobile User Interface)
my.hawaii.gov
Common Solutions Framework
ESA
LOB Services
Enterprise Mission Support Services
Enterprise Common Services
Enterprise Data Management Services
Enterprise
Data Marking
LOB
"Everything" as a Service
Platform as a Service
ETA
Select – Provision – Manage
Hawai`i Cloud Computing Centers (HC³)
Hawai`i OneNet
Wired & Wireless
Citizens,
State Employees,
Local Government Partners,
Business Partners

"Sonny Bhagowalia's leadership has been truly instrumental in forging the future of our state and department's IT systems. From a Homeland Security perspective he has implemented policies and programs that have dramatically increased our State's IT network performance, security and reliability. On a day-to-day basis, his decision to migrate to a 'Wordpress' platform for sharing information via the World Wide Web has enabled the State Department of Defense to reach out more efficiently to our veterans, comprising 10% of Hawaii's total population, as well as the public at large".

—Major General Darryll D.M. Wong
Adjutant General, State of Hawai'i Department of Defense

will migrate a significant portion of its digital information into OIMT's hosted environment. Likewise, several departments have begun to consolidate infrastructure in anticipation of moving to OIMT's shared environment, such as the Department of Health, which has increased its server virtualization by 30%. As with enterprise licensing agreements, shared cloud services reduce operating costs across departments. Virtualization of servers reduces power consumption, use of space and cooling elements, and provides exponential increases in computing power that can be assigned to a department as needed. One vertical rack of equipment including servers, memory, and disk storage can accommodate up to 300 high-capacity virtual servers.

Cloud-Based Email

To centralize email operations, ensure consistent security and privacy controls, and take advantage of new cloud technology features, OIMT has begun the process of establishing a statewide email platform that will host all State government email accounts in the cloud. Currently, several departments are operating on outdated email servers, with the State maintaining several email systems and versions. By consolidating the various State email clients to a single cloud-based system, the State will standardize email operations and eliminate the need to maintain redundant systems, and can offer enhanced features such as up to 50 times more storage and strict compliance with privacy protocols (e.g., HIPAA, CJIS compliance). OIMT is currently in the exploration phases of coordinating with departments to migrate to a new standardized email platform. OIMT is also exploring the incorporation of unified communications tools and office productivity tools that may be integrated into the standardized email platform. As Donn Yabusaki, Information Systems Manager for the Department of Commerce and Consumer Affairs (DCCA) notes, "We're currently looking to modernize our Lotus Notes applications and migrate custom software applications. As part of that effort, we've been actively working with OIMT to map out how to best migrate and transition applications."

Maritime Wireless Network

The Maritime Wireless Network System (MWNS) is a system that is designed to connect all the commercial harbors in the State of Hawai'i, to provide for increased security and enhanced communications at these facilities. When completed, it will allow video surveillance systems that are currently being installed at these locations to be connected with each other and monitored from a central location 24 hours per day, seven days per week.

The MWNS involves the construction and installation of steel monopoles (most of which are 80 feet tall and designed to withstand Category 4 hurricane winds) for mounting antennas, microwave dishes and communications equipment at the harbors. Additional antennas and equipment are also being procured and installed at other locations throughout the state to facilitate transmission of the data stream and to provide redundant connections through the State's institutional fiber optic network (INET).

Program milestones completed in 2011–2013 include:

- Contracted with an engineering consultant for design of the monopole projects and other required professional services.
- Design and installation of monopoles.
- Replacement of existing poles with new monopoles.
- Procurement and engineering of antennas and communications equipment. Installation is ongoing at the existing remote communication facilities, and at harbors where construction activity has been completed.

- Ancillary construction upgrades to electrical infrastructure and replacement or re-installation of area lighting systems at selected harbors.
- Three (3) Memoranda of Agreement between State departments of Accounting and General Services (DAGS), Defense (DOD), and Transportation (DOT) addressing financial, construction, operation, and maintenance issues.
- Successful closeout of 2008 grant.

The MWNS is funded under four Port Security Grant Programs totaling $7,445,804 that the State received from the United States Department of Homeland Security, with a State matching amount of $1,964,966. The State departments involved in the MWNS project include: Accounting and General Services, Defense, Transportation, and OIMT.

Geographic Information Systems (GIS)

A geographic information system (GIS) includes the hardware, software, and data for capturing, analyzing, and displaying geographic information, in the form of maps, reports, and charts.

This dynamic mapping information allows the State to view and analyze geographic data to show patterns and relationships.

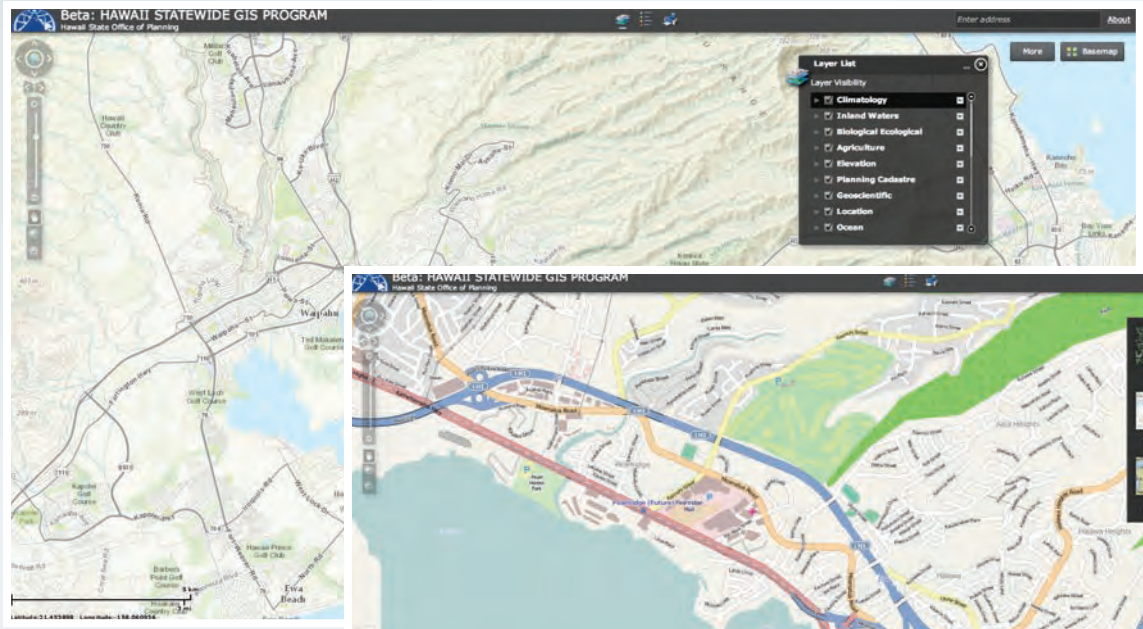
In 2013, OIMT introduced GIS-as-a-Service, replacing the former static-based shapefiles, with a dynamic online mapping service. The beta service allows users viewing capabilities and the ability to include layers such as climatology, inland waters, agriculture, and elevation. The map services are available to organizations outside the State government, including local counties and Neighbor Islands, and popular consumer map providers such as Apple and Google. The beta service is available at http://gis.Hawaii.gov/.

By utilizing GIS mapping information, the State and county governments can: make better decisions regarding the location of projects (including site selections); improve coordination with Neighbor Islands; increase efficiency and reduce costs through an enhanced understanding of the state's geography; provide citizens with more transparency by showing the location of service requests and works in progress; and provide more-reliable data to programs such as Apple Maps and Google Maps — resulting in more-detailed maps.

"Significant progress has been made this year in modernizing the Statewide GIS. Using the 2011 GIS Blueprint for Change developed in coordination with GIS users and stakeholders throughout Hawai'i, and with support from OIMT, we were able to migrate many of the 200+ data layers maintained by the Office of Planning to a relational database management system housed on new equipment dedicated to the Statewide GIS. This makes spatial information more accessible and useable by decision-makers."

—Jesse K. Souki, Director
Office of Planning, State of Hawai'i

Online GeoPlatform: http://gis.hawaii.gov




Your 2014 Hawaii State Senate
The State of Hawaii 2014 Legislative Session is underway - Legislative Timetable
(click a number on the map or a photo along the bottom for information on how to contact that Senator)
Hawaii State Legislature
Hawaii State Senate
Link to Senate web page for more information


Geospatial Portal
State of Hawaii
Knowledge Workers
Managers
Policy Makers
Citizens
GIS Professionals

"OIMT has enhanced the State's security — they've been able to notify our department of potential security breaches and potentially suspicious activity."

—Ryan Shimamura
Acting Chief Information Officer, Department of Human Services

6.3 PROGRAM: ENTERPRISE SECURITY AND PRIVACY

Objective: Improve security and privacy controls including Identity, Credential, and Access Management; enable Single Sign-On for access across various State systems; and enable privacy protections.

Description: In 2012 OIMT conducted a preliminary security and privacy assessment that found the State had significant security and privacy vulnerabilities, exposing the State to a number of potentially devastating security breaches. Especially worrying was the fact that, in 2012, numerous state governments had already been victims of costly security breaches that had cost an average of more than $20 million to remediate. In addition to the monetary expense, each of these states had also jeopardized citizens' privacy, as evidenced in one case where 14,000 Social Security Numbers were posted to a website.

In response to the security and privacy assessment, OIMT made strengthening the State's security and privacy controls a key priority. Throughout 2012–2014, OIMT worked to establish a fully integrated Security Operations Center (SOC) and Computer Security Incident Response Center (CSIRC) that would allow the State to:

- Provide uninterrupted security services while improving security incident response times;
- Reduce security threats to the State;
- Enable quicker, well-coordinated notification to all State departments regarding security threats or issues; and
- Provide proactive monitoring of email and data services.

In 2013 OIMT completed a more detailed assessment across 17 categories, performed an audit to further assess security capabilities, and identified vulnerabilities that require more than 60 security-related projects.

Impact: OIMT's five security and privacy initiatives have reduced the State's exposure to security breaches, while notifications to departments have alerted IT personnel within those departments of potential threats.

Related Projects and Initiatives:

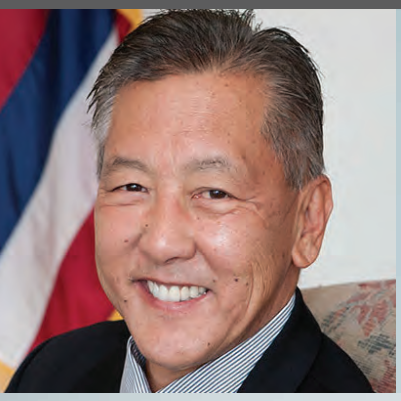
New Chief Information Security Officer (CISO)
In 2013, OIMT was focused on the following:

- Hiring a Chief Information Security Officer (CISO) — Matthew Wong
- Establishing Security Governance policies for the overall Information Security Program
- Creating Enterprise Information Security Policy, BYOD Policy, and overall Security and Privacy Policy
- Creating a Security and Privacy Road Map based on the completed security assessment

Proactive Security Monitoring and Notification for Departments
In 2013 OIMT began proactively monitoring the State's network (through Hawaii's first-ever SOC) for potential security breaches and notifying departments of potential threats found. OIMT also publishes regular security announcements to inform departments of recent occurrences and provide security policy updates.

Security Infrastructure
OIMT has begun to implement upgrades to the State's security infrastructure to prevent breaches of personal data.


Assessment
Ingestion
Security Operations Center
Detection
Analysis
Response
Detect Global Threats
Defense in Depth



"Supporting knowledge work doesn't degrade our environment, brings in well-paying jobs, and strengthens our economy. Having world-class broadband capabilities that allow us to transmit everywhere in the world is crucial to attracting and retaining that knowledge work."

—Richard Lim
Director, Department of Business, Economic Development, and Tourism (DBEDT)

6.4 PROGRAM: HAWAI'I BROADBAND INITIATIVE (HBI)

Objective: Provide all Hawai'i residents with ultra-high-speed, affordable, and reliable broadband services by 2018.

Description: Broadband modernization is extremely important to the State — especially as the State increases its broadband consumption and looks to attract global businesses to strengthen Hawai'i's economy. During 2012–2014 OIMT partnered with various departments, including the Department of Business, Economic Development, and Tourism (DBEDT), to improve the State's underlying infrastructure for broadband to increase broadband performance for both Hawaiian residents and businesses.

As part of the State's broadband modernization efforts, OIMT has been:

- Working with network and cable providers to establish more infrastructure and faster speeds at affordable prices
- Partnering with the Department of Commerce and Consumer Affairs (DCCA) to negotiate more available infrastructure on Neighbor Islands through cable franchise agreements
- Negotiating for new fiber optic cables to be established in Hawai'i
- Upgrading the State's network to accommodate faster broadband speeds
- Securing new funding for broadband upgrades — the Legislature recently approved $20M to fund the Transpacific Fiber Optic Cable Landing Site project
- Planning for future increased broadband needs and studying the availability of wireline and wireless broadband services statewide

Impact: As a result of improvements to infrastructure for broadband — connections are now faster, more reliable, and more affordable for residents and businesses, and interisland connections have improved. Provider upgrades to broadband have also improved capacity — with the State moving from 3G access to 4G LTE access.

OIMT continues to analyze the current state of broadband infrastructure for ubiquitous, affordable access for Hawai'i residents by 2018.

Related Projects and Initiatives:

Broadband Mapping Study

OIMT worked with DCCA who conducted a mapping study for broadband connectivity to show where there were connectivity capabilities and where there were not, and to identify areas that have been underserved with unreliable connectivity. The study also analyzed interisland connections. It was the first time that such extensive broadband information had been gathered together, documented, and compiled into one place.

University of Hawai'i Funding Grant

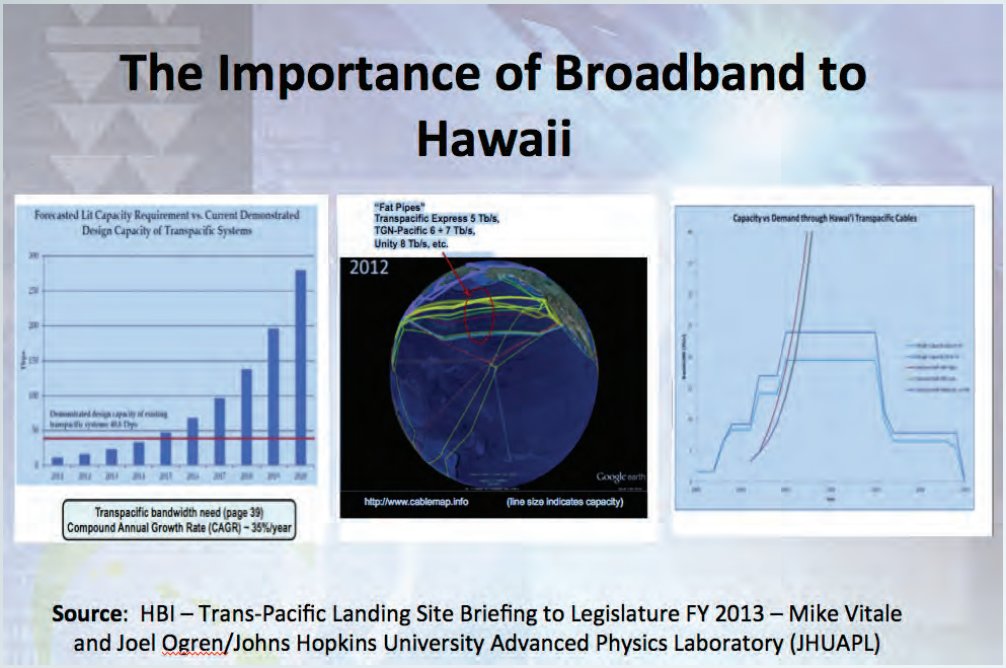
The University of Hawai'i (UH) received a grant to provide faster, more reliable broadband coverage to all public schools and libraries in the state, partnering with OIMT and the Department of Education (DOE) on the initiative. As a result of the funding, 300+ additional community access points (e.g., schools and libraries) were provided with high-speed internet connectivity.

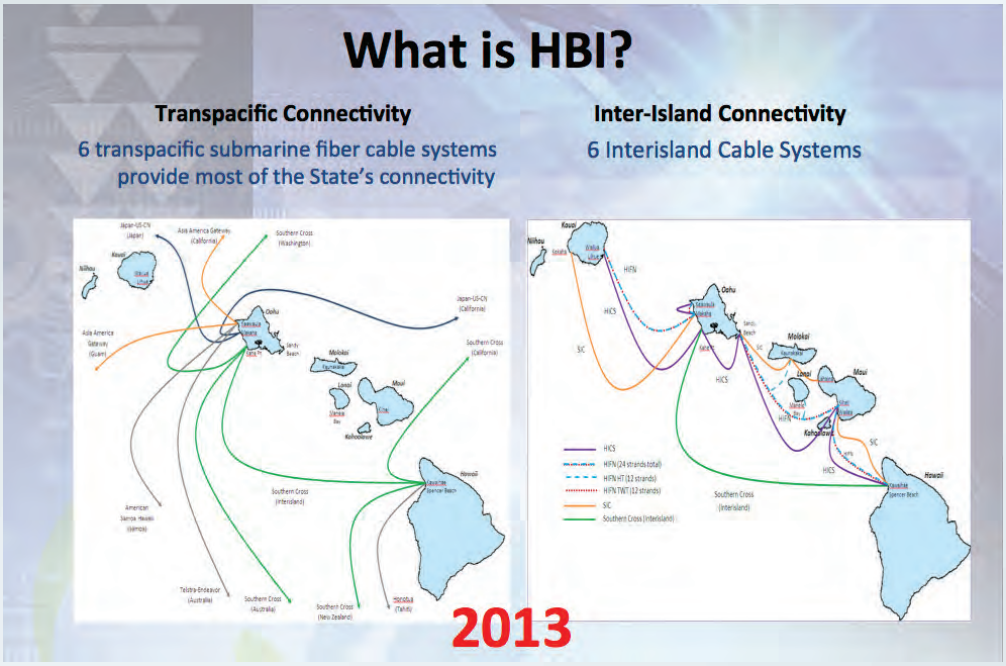
Public Library Laptop Program

The Hawai'i State Public Library System (HSPLS) is launching a laptop checkout program to provide all Hawaiian residents access to a computer and the Internet.

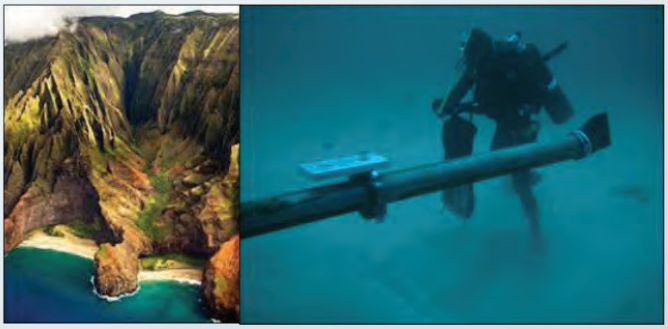
Hawaii Broadband Strategic Plan

OIMT's Chief Strategy Officer for Broadband and Telecommunications co-authored this plan with DCCA, the Pacific Disaster Center and the HBI Program Executive.





Difficult on–shore and off-shore fiber facilities and conditions.



7.0 STRATEGY #3: IMPROVING TRANSPARENCY AND EFFICIENCY THROUGH OPEN GOVERNMENT AND GOVERNANCE

"What would I like to see 10 years from now through this Transform Hawai'i effort? That our State has vastly improved government services to our residents we serve. Through strong Governance, innovative Business Process Modernization and advanced Technology Modernization, we clearly become a leader in delivering efficient and cost-effective government services with the much-needed transparency and accountability for all constituents. We become known as a government that excels in caring for our Keiki, Kupuna, and protecting our Aina, that other government entities would want to emulate our digital government model we have created here in Hawai'i."

—James Lum
Chief Governance Officer and Chief Enterprise Architect

There are two programs under the *Establish Oversight Management and Transparency of Enterprise* strategy:

Program #9: Open Government
Program #10: Governance

The purpose of these programs is to help ensure that the State is investing its limited technology resources in alignment with the strategic direction desired by the Governor and other leadership, and that those resources are being used effectively to produce the desired results. The focus of the strategy is to increase transparency for IT operations and increase governance accountability.

7.1 PROGRAM: OPEN GOVERNMENT

Objective: To make open government data widely available through an open-source environment, including mobile apps and open government data (e.g., Data.Hawaii.gov).

Description: Open government-related projects support the three principles of open government: transparency, participation, and collaboration. It provides forums to share information, and best practices on innovative ideas to promote participation and collaboration, including how to experiment with new technologies. It takes advantage of the expertise and insight of people both inside and outside government. And it forms high-impact collaborations with researchers, the private sector, and the public.

Impact: Open government and open data increase government transparency by easily providing residents, analysts, and journalists with information on government activities and initiatives. Likewise, developers can access available data through application programming interfaces (APIs) to create applications for civic initiatives. Open data initiatives also increase civic participation, as integration with social media networks such as Twitter or Facebook encourages residents to participate in a more collaborative form of government by commenting on, discussing, and sharing available data sets.

"Sonny's leadership and vision has set the foundation to start the much needed business and technology transformation for Hawai'i State Government. It is truly exciting and greatly rewarding to be part of the technology modernization initiatives that will directly benefit the citizens we serve."

—Karen Higa
Open Government Program Manager

Related Projects and Initiatives:

Open Data Portal

DATA SETS

Visualize Socialize Mobilize Analyze

With the Governor signing the Open Data Bill (HB632), OIMT launched the State of Hawai'i's open data portal (Data.Hawaii.gov), where the State now provides residents, analysts, and civic developers with unparalleled access to State data for use in increasing transparency, driving civic innovation, and engaging participants in a more collaborative form of government. Visitors to the site will find more than 700 datasets organized by six major topics, with more datasets continuing to be added to the site:

Data sets are organized by:

- Culture and Recreation
- Economic Development
- Employment
- Environmental Protection
- Formal Education
- Government-wide Support

A number of data sets have been made publicly available through the State portal, with 239 data sets published in 2012 and 542 data sets planned for publication in 2013 (a 127% increase).

Overall Progress	Website Infrastructure	Website Usability
	Time to deploy website servers: FY 12 avg time: 80 days FY 13 avg time: 1 day	Usability Compliance Rating FY 12: 40% FY 13: 62%
100%	8000% (80X) Increase in efficiency	22% Increase
▲ On Track	▲ On Track	▲ On Track

Website Modernization

Along with open data initiatives, the CIO has also worked to modernize Hawai'i's government Web portal and departmental websites.

In April 2013, the Office launched the redesigned departmental sites and the Hawai'i government Web portal. The outdated website infrastructure for sites was moved from old standalone servers hosted at ICSD to the Amazon Cloud. The redesigned effort was recently named a finalist for Best Government Website in the Center for Digital Government's Best of the Web Competition. The redesigned website also includes updated access to a variety of mobile apps and online services.

Several departments are already benefiting from OIMT's website modernization efforts. According to the Department of Health (DOH), the website modernization led to a more user-friendly dynamic website that was easier to maintain, and caused a significant reduction in the number of staff needed to maintain and update their department's website.

As a result of the modernization efforts, website availability and usability has greatly increased:

Improvement in Website Infrastructure — Time to Deploy Servers:

- FY 12: Average time to deploy — 4 months
- FY 13: Average time to deploy — 1 day
- 99% increase in efficiency

Improved Usability of Our Sites (as a result of the new design, based on Foresee survey results):

- FY 12: 40%
- FY 13: 62%
- 22% increase in usability


Department Websites 18
Office of the Governor
Lieutenant Governor
State Departments
Accounting & General Services
Health
Agriculture (HDOA)
Human Resources Development
Attorney General (ATG)
Human Services
Budget & Finance
Labor & Industrial Relations
Business, Economic Development & Tourism
DBEDT
Land & Natural Resources
Commerce & Consumer Affairs
Public Safety
Defense
Taxation
Education (K-12)
Transportation
Hawaiian Home Lands
MY.HAWAII.GOV
ALOHA
Come in, WE'RE OPEN
Achievements in
OPEN GOVERMENT
State of Hawaii
Mobile Apps 63
All Hawai'i Government
Online Services 101
33,914 ePile Tax Returns
12,182 DOTAX ePile
11,864 ePile Tax eCheck Payments
6,519 Conveyance Documents Recorded
3,986 Driver Records
2,355 Annual Business Report Filings
1,869 ePile Tax Credit Card Payments
1,830 HCJDC eCrim Searches
827 Unemployment Insurance Payments
544 Marriage License Payments
536 eTraffic Payments
423 Maui Motor Vehicle Renewals
376 Criminal History Record Purchases
362 Hawaii Business Expert Filings
354 State Parks Camping Reservations
323 PVL License Renewals
304 Business Document Purchases
272 Hawaii Real Property Tax Payments
266 Conveyance Document Searches
258 Warrants Served
230 Hawaii Motor Vehicle Renewals
177 Hawaii Business Wizard Filings
165 Hawaii Compliance Express Renewals
113 Teacher License Renewals
96 Kauai Real Property Tax Payments
92 Hawaii County Camping Permits
92 Hawaii Water Bill Payments
78 Wedding Permits
72 Online Hunting Licenses
71 MED Admin
66 Controlled Substance Registration Renewals
64 Hawaii Compliance Express Applications
55 Vessel Registrations
50 Kauai Motor Vehicle Renewals
47 Marriage Performer License Registrations
39 Conveyance Recordings
31 Insurance License Renewals
25 Trail Reservations
23 Charity Annual Registration Fees
20 AG Notary
18 Waste Water Filings
18 Commercial Fishing License Services
16 Judiciary Document Purchases
16 Hawaii County Permit Payments
14 Boating Payments
13 Freshwater
8 Electronic Death Certificates
8 Film Permit Application
8 Kauai Sewer Payments
0 Modernized ePile Tax Returns
AWARDS
nagw National Association of Government Web Professionals
DAVEY AWARDS
2013 W3 AWARDS SILVER WINNER
BEST OF THE WEB

my.hawaii.gov

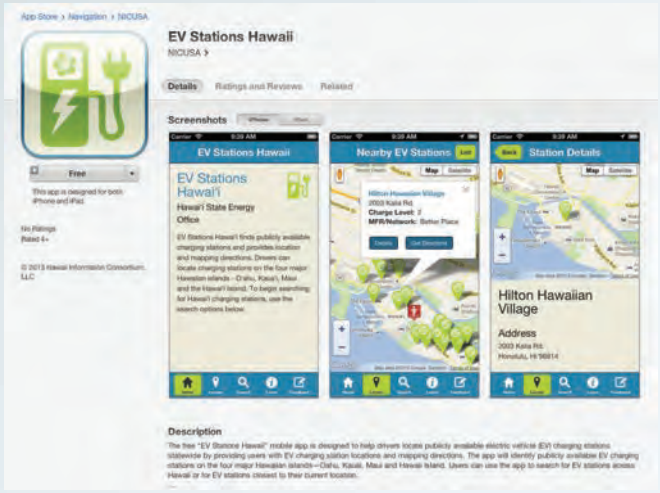
my.hawaii.gov is an online management platform for interacting with the State — anytime, anywhere, on any device. It will make many State systems accessible to the public via the Internet (e.g., pay taxes, register vehicles, pay fines, apply for permits, reserve campsites, etc.), making it easier for citizens to interact with the State — their way.

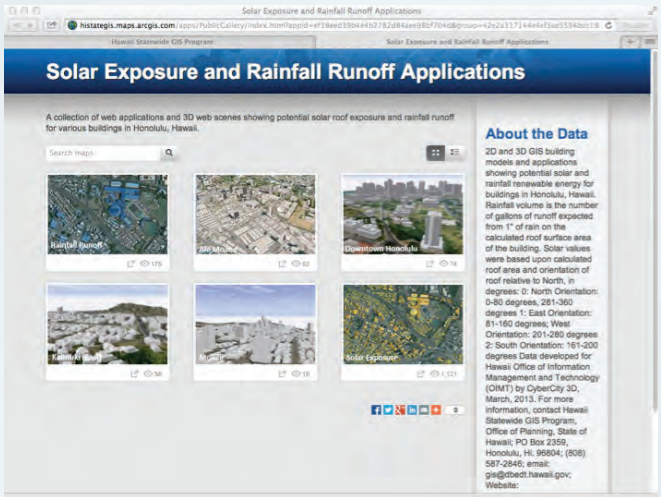
The portal is a single "user-friendly and intelligent" Web portal with a service catalog of all available online government information and services — public areas, as well as secure areas that can only be accessed with appropriate security credentials. The goal for my.hawaii.gov is to create a customized citizen experience that will lead to a tremendous increase in civic engagement and government interaction.

Transparency

The goal of the Open Government program is to improve transparency and rebuild confidence in government. Transparency.hawaii.gov is a one-stop website where citizens can search for government information on expenditures, contracts, tax collections and the budget. The checkbook explore app provides easy, intuitive ways for any user to explore and visualize the information.

Mobile Apps





To meet citizens' changing technology needs, and better provide easy, on-the-go access to government services, OIMT has partnered with several departments to develop mobile applications. A few of the mobile applications released in 2013 include:

- Department of Commerce and Consumer Affairs (DCCA): Business Registration suite of services
- Budget and Finance (B&F): Retirement calculator for citizens
- Office of Information Management and Technology (OIMT): Mobile app for Hawai'i.gov site
- Department of Tax (DoTAX): Find my refund and a tax license search app
- Department of Land and Natural Resources (DLNR): An educational, interactive game

These early mobile apps have set the stage for future mobile service applications and have been well-received. The DCCA business registration application, for example, has won national awards.

Upgrades to department websites and an increased number of mobile apps have dramatically increased mobile visits to State websites:

Mobile visits to Hawai'i State websites:

- FY 12: 593,427
- FY 13: 1,005,891
- 69.5% Increase

7.2 PROGRAM: GOVERNANCE

Objective: The governance program oversees all three lifecycle management stages of technology initiatives: Architect and Invest, Implementation, and Operations, to ensure that IT programs are being run effectively and that the State is getting the most out of its technology investments, reducing overall costs and prioritizing spending.

Description: The Governance program provides management oversight and continually monitors the cost, schedule, risk, performance, scope, and strategic alignment of the transformation activities to ensure that the highest priorities are met with the highest-quality solutions, for an optimized cost.

As part of its governance objectives, the State CIO and Chief Enterprise Architect establish enterprisewide IT policies, lifecycle management processes, capital planning and investment control (CPIC), portfolio management policies, enterprise architecture (EA) standards, and performance dashboards.

The governance program aims to improve business processes and technical capabilities within the State by focusing on:

- Enhancing interoperability (between systems and across departments)
- Managing IT investments
- Identifying reuse opportunities for technologies and processes
- Managing organizational complexity
- Reducing costs through integrated planning
- Achieving information accuracy, reliability, and timeliness

Through the governance program, the State evaluates technology initiatives, asking the following questions to ensure accountability:

Build knowledge base for IT decision making:

- Which technology to spend money on?
- Which systems to retire?

Execute future direction for the State:

- Which new technology should be embraced?
- Which services do we want to be able to provide?

Identify common platforms for sharing:

- Which services can be shared in order to save money and time?
- How do we share?

Within the area of governance, OIMT continued to make significant strides in engaging the State's business leadership in Information Technology (IT) decision making and establishing an overarching "structure" with well-defined roles and responsibilities for:

- Making/managing strategic IT decisions and ensuring that the business mission drives IT initiatives (including the allocation of IT funds), and that each IT investment supports the organizational mission throughout its lifecycle;
- Implementing IT investment portfolio management (i.e., inventorying the portfolio of IT assets [systems, hardware, projects, etc.], conducting end-of-life planning for assets, prioritizing investment funding, etc.);
- Ensuring that effective IT procurement practices and acquisition principles are incorporated in the IT investment process;
- Ensuring that IT performance is measured against defined organizational expectations and needs; and,
- Ensuring that risks associated with IT investments are identified, managed, and mitigated.

The IT governance bodies [i.e., Chief Information Office (CIO) Council, IT Steering Committee, Executive Leadership Council (ELC), and Enterprise Architecture Working Group (EAWG)], chartered in 2011 and 2012, have continued to be active and their actions have included:

- Drafting an IT Investment Review Governance Process. This IT Governance Process ensures that the IT resources (i.e., hardware, software, infrastructure, staffing-related, information) are purchased, implemented, and retired effectively and efficiently;

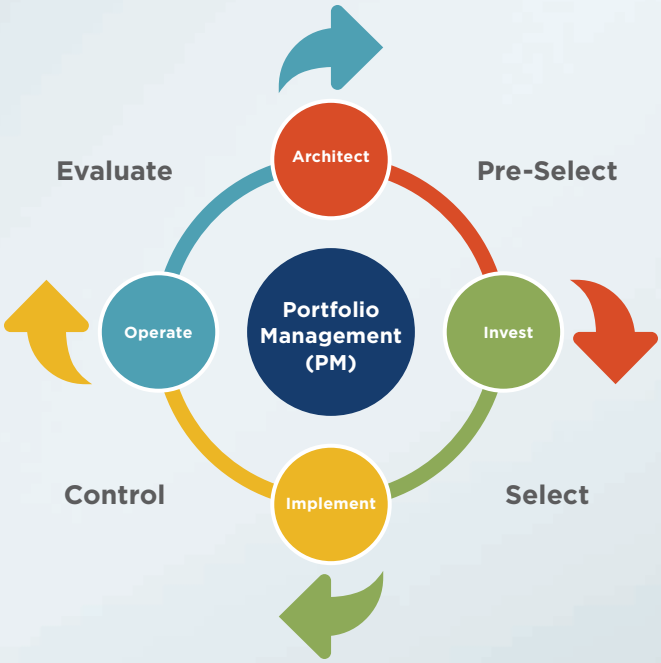
- Developing an IT Policy and Standards Evaluation Process; and,
- Developing and reviewing Security and Privacy Policy, a Non-State-Provided Device Policy — Bring Your Own Device (BYOD), and Shared Services Policy.

Impact: Governance-related projects ensure that the State is getting the most out of its IT investments — reducing overall cost, maximizing benefits, increasing efficiency, and providing accountability. Through oversight measures, the State is able to drive IT investments rather than expenses, effectively manage its IT, and ensure measurable, consistent progress is made toward the State's IT goals.

Related Projects and Initiatives:

Portfolio Management

Portfolio management is the centralized management of processes, methods, and technologies used to collectively manage and analyze a group of current and planned projects. Portfolio management is especially important for state governments, as it allows an enterprise-level view of evaluating, prioritizing, and managing a state's various IT projects and investments. In 2013 OIMT established the portfolio management function to provide oversight to enterprise-level IT projects undertaken and to ensure that projects undertaken effectively leverage from one another. Throughout the past year, OIMT has worked to validate and finalize information on portfolio policies, standards, and processes.



As part of the IT Investment Review Governance Process, OIMT, supported by the IT governance bodies, established investment thresholds to separate complex from simple investments and to identify the level of reviews that are be required for each investment business case. In addition, specific content and formats for investment data were developed to ensure consistency across the enterprise.

The OIMT team also began the process of verifying the IT investment data (originally gathered as part of the State's assessment of IT and the creation of the EA's transition and sequencing plan) to establish a baseline for future IT investment analysis and planning activities.

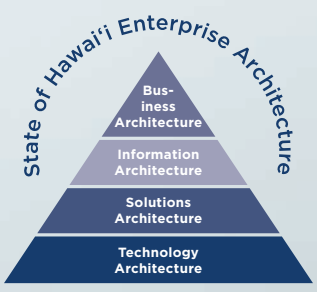
Enterprise Architecture (EA)

Enterprise Architecture (EA) describes a comprehensive framework for IT and business decisions that supports the State's strategic plan. EA guides the business decisions of government and improves the ability to deliver responsive, cost-effective government functions and services. It sets policies and standards to steer decision making and guide expected outcomes, allowing business and IT to adjust policies and projects to best achieve business goals.

Since 2012, OIMT has been actively leading EA efforts within the to State to provide high-level frameworks and IT standards to guide technology initiatives within the State. OIMT has established an EA leadership committee which includes CIOs and IT managers from various State departments and agencies.

OIMT areas of focus for EA include:

- Enterprise Business Architecture
- Enterprise Information Architecture
- Enterprise Solutions Architecture
- Enterprise Technical Architecture
- Creating a Transition and Sequencing Plan for IT

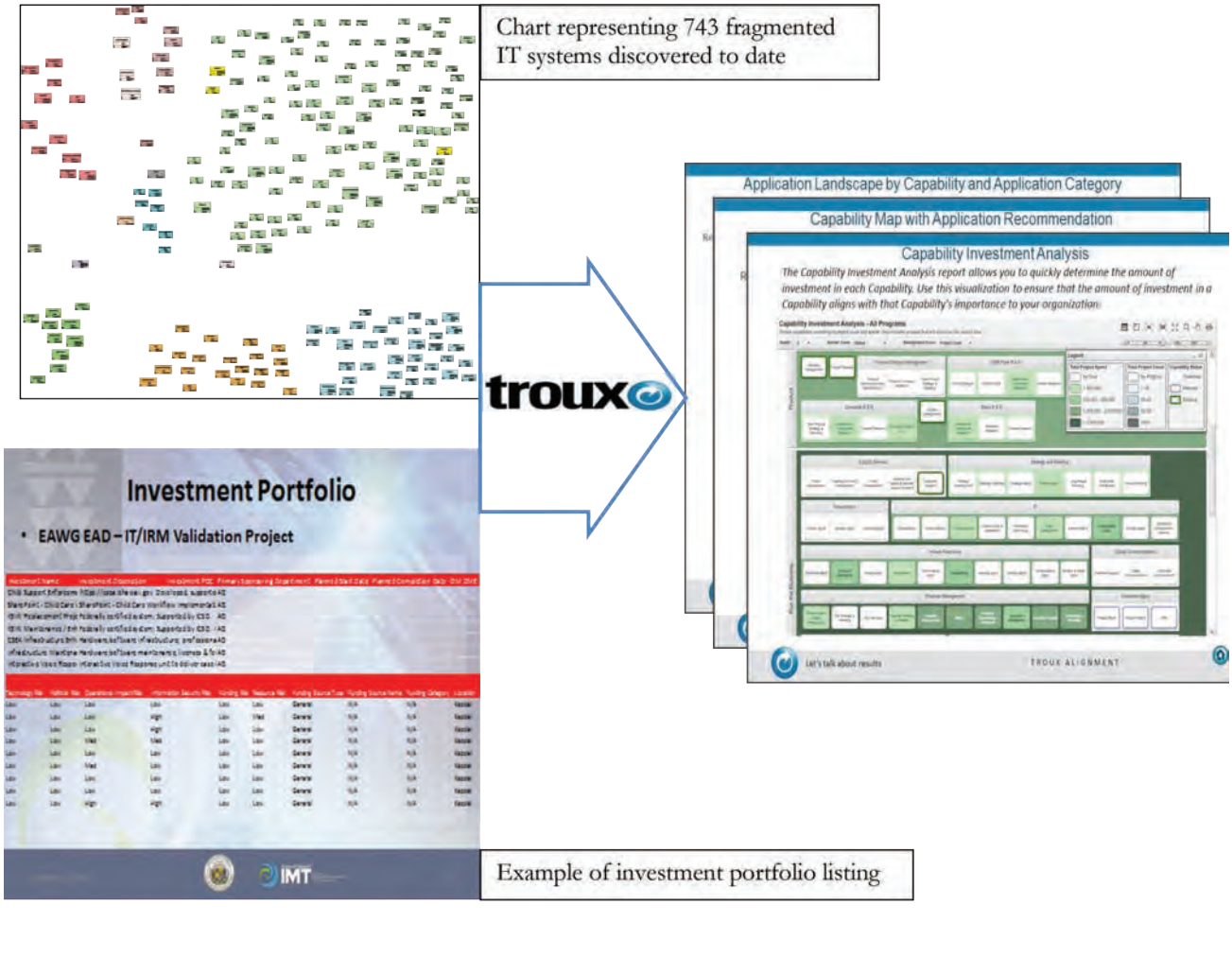


As part of the EA program, OIMT has chartered an EA Committee which consists of IT leadership across several departments. The group collaboratively discusses EA standards and provides feedback on everything from infrastructure to hardware and software.

Troux Enterprise Portfolio Management Tool

A cornerstone of the State of Hawaii's Enterprise Architecture program is an EA and Portfolio Management (PfM) integrated tool suite and an EA Repository. These tools will contain details regarding each of the current application software solutions and planned investments. The EA Repository will be the common information store for all digital data and content behind the EA program.

The baseline of the "As Is" or current state will initially be populated in the Troux Enterprise Portfolio Management tool (Troux). The Troux tool will eventually contain detailed information regarding the State's over 200 business services, over 700 application software systems, server inventory of the three data centers and over 20 server rooms, and approximately 6400 different technology product types used within the State. This Troux tool suite and integrated repository will provide a foundation for all future planning and system and technology investment decisions.



"Hawaii State Government has been sadly lagging in its utilization of modern information technologies to enable efficient, effective and accountable practices. OIMT's work represents a major step forward that will benefit the entire State and our citizens on every island."

—David Lassner
Interim President, University of Hawaii

The EA Committee, as part of its IT Policy and Standards Evaluation Process, took the next step in the maturing of the State's EA by:

- Reviewing and finalizing IT domain categories for the State;
- Identifying IT domain standards for the State;
- Identifying data necessary for the ongoing management of each EA layer (business, information, solutions, and technology);
- Ensuring the EA is an integral part of the IT investment portfolio management and evaluation process;
- Identifying performance measures associated with Lines of Business (LOBs) to identify areas of improvement or efficiencies in the State;
- Reviewing of new and existing projects to align to the State of Hawai'i Business and IT/IRM Strategic Transformation Plan;
- Serving in an advisory role to the Information Privacy and Security Council (IPSC), the CIO and CIO Council; and,
- Chartering working sub-groups to address specific topics (i.e., BYOD; Network and Security; Server and Virtualization working groups).

Performance Dashboards

In order to increase government transparency, OIMT has been working to develop a number of dashboards to openly report on departmental activity, funding, and spending. With the establishment of a governance and oversight function, dashboards will openly track specific projects' and programs' progress, and account for their outcomes.

Dashboards established by OIMT include:

CIP Dashboard

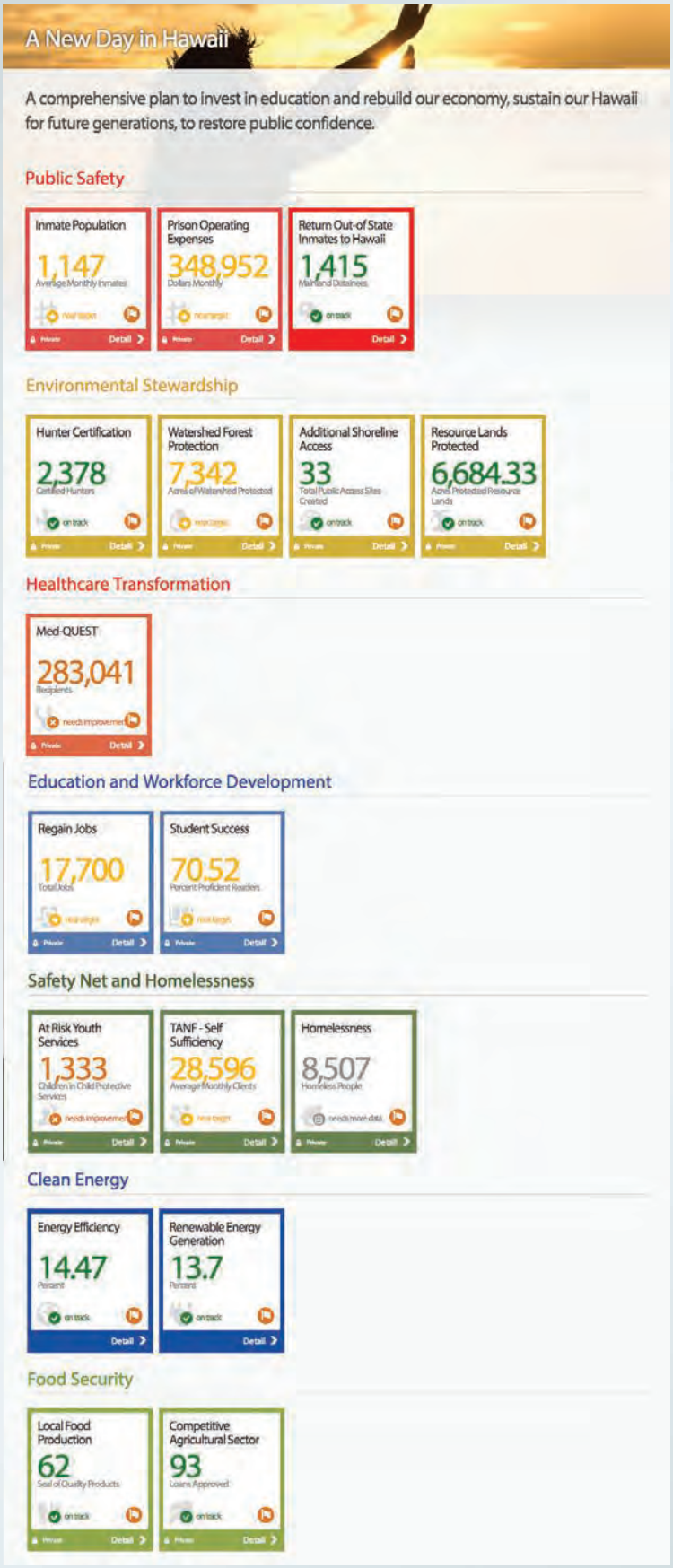
The Capital Improvement Project (CIP) dashboard shows the amount of CIP funds encumbered (placed on contract) and expended (paid) by department, by month. This allows citizens to see how the funds raised by bond issues are being spent, by whom, and when. The dashboard debuted in August 2013 — the preliminary release of the dashboard will continue to evolve, with new features and visualizations as more data are added.

State Strategic Dashboard

This dashboard shows how well the State is performing its missions. Activities are grouped into lines of business, each with its own set of performance metrics. This dashboard is under development and will be released in late 2013.

IT Dashboard

This dashboard shows the status of each of the transformation projects (both business process re-engineering and IT/IRM modernization) being managed by OIMT across the five dimensions of project management — cost, schedule, risk, performance, and scope. This dashboard is under development and will be released in late 2013.


A New Day in Hawaii
A comprehensive plan to invest in education and rebuild our economy, sustain our Hawaii for future generations, to restore public confidence.
Public Safety
Inmate Population
1,147
Average Monthly Inmates
Prison Operating Expenses
348,952
Dollars Monthly
Return Out-of State Inmates to Hawaii
1,415
Mainland Detainees
Environmental Stewardship
Hunter Certification
2,378
Certified Hunters
Watershed Forest Protection
7,342
Acres of Watershed Protected
Additional Shoreline Access
33
Total Public Access Sites Created
Resource Lands Protected
6,684.33
Acres Protected Resource Lands
Healthcare Transformation
Med-QUEST
283,041
Recipients
Education and Workforce Development
Regain Jobs
17,700
Total Jobs
Student Success
70.52
Percent Proficient Readers
Safety Net and Homelessness
At Risk Youth Services
1,333
Children in Child Protective Services
TANF - Self Sufficiency
28,596
Average Monthly Clients
Homelessness
8,507
Homeless People
Clean Energy
Energy Efficiency
14.47
Percent
Renewable Energy Generation
13.7
Percent
Food Security
Local Food Production
62
Seal of Quality Products
Competitive Agricultural Sector
93
Loans Approved
Detail

7.3 ADDITIONAL OIMT PARTNERSHIPS AND INITIATIVES

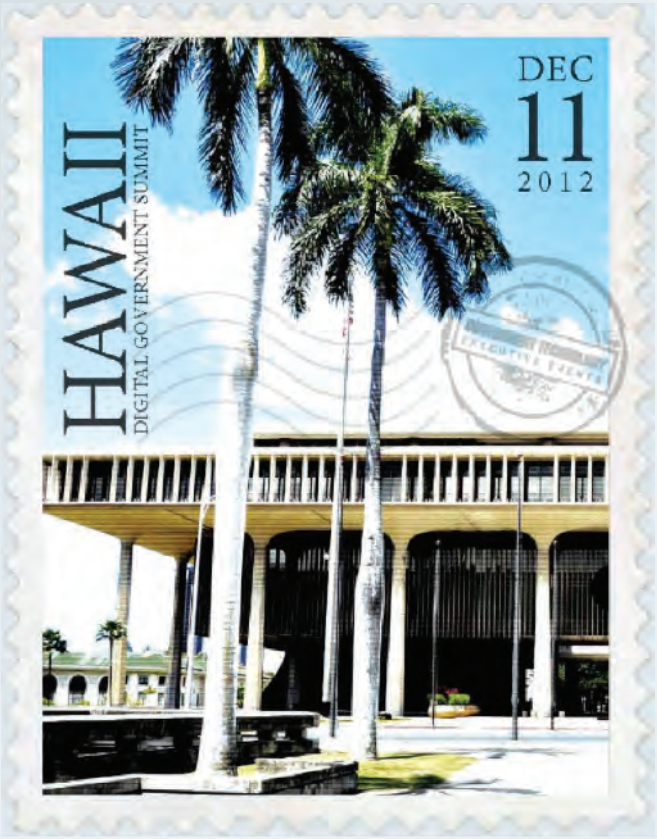
In addition to its top 10 programs, OIMT has also undertaken several additional partnerships and initiatives during the past two years to modernize IT within the State and raise Hawai'i's digital profile.

Digital Summit

OIMT, in partnership with Government Technology Executive Events and the Center for Digital Government, established the first annual Digital Summit in 2012. The inaugural summit featured nearly 700 State employees, community leaders and members of the public, and Governor Abercrombie. The event, which took place at no cost to the State, featured more than 20 sessions on topics ranging from modernization of public schools to health information technology.

The purpose of the summit was to celebrate Hawai'i's technology accomplishments, and engage employees, business leaders, and other stakeholders in the State's business and information technology transformation initiative. It also provided an opportunity for State employees to learn about how technology and best practices from the private sector and other state governments can be deployed in Hawai'i to improve the services provided to residents and businesses.

The second annual Digital Summit took place on November 21, 2013 at the Hilton Hawaiian Village with attendance far surpassing last year's event, with more than 900 attendees.




HAWAII
DIGITAL GOVERNMENT SUMMIT
DEC
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2012
December 11, 2012
Hilton Hawaiian Villiage
More information at: http://oimt.hawaii.gov


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GOVERNMENT
SUMMIT
HONOLULU
HAWAII
NOVEMBER
TWENTY-FIRST
2013
November 21, 2013
Hilton Hawaiian Village
More information at: http://oimt.hawaii.gov

Governance Committees

In an effort to better partner with, communicate with, and deliver increased IT value to State departments and the citizens of Hawai‘i, OIMT has also made it a priority to charter and participate in several statewide committees and initiatives during the past two years.

Examples of committee-involvement by OIMT leadership include:

- **Access Hawai‘i:** The duties of the Access Hawai‘i Committee (AHC) are to oversee the activities of the State of Hawai‘i’s official Internet Portal Manager: Hawai‘i Information Consortium (HIC). HIC provides, at no cost to the State, all necessary hardware, software, portal infrastructure, administration, payment processing, and other services necessary for operation of the Internet portal.
- **BPR Group:** Chartered by OIMT, the BPR group brings together IT and business-minded individuals within departments who are passionate about affecting change and want to re-engineer and improve business processes within their departments.
- **CIO Council:** The CIO Council is a working group that brings together CIOs from the various State departments to collaborate on upcoming IT initiatives and provide feedback on IT policies and standards.
- **E 9-1-1 Board:** The Enhanced 9-1-1 Board works to improve public safety by facilitating the deployment of Hawai‘i’s communications infrastructure for emergency services. Enhanced 9-1-1 provides seamless, universal emergency number access, including to wireless customers.
- **EA Committee:** Chartered by OIMT, this committee brings together several CIOs and IT managers from across State departments to establish EA standards and frameworks to guide enterprise IT initiatives.
- **ERP Steering Committee:** The ERP Steering Committee provides oversight responsibility as

the State solicits vendor responses for a new ERP solution, accepts bidder responses, and eventually awards a contract for the comprehensive solution. The ERP Steering Committee will play a crucial role in evaluating, scoring, and selecting the winning solution proposal.

- **Hawai'i Wireless Interoperability Network (HWIN) Executive Committee:** The HWIN Executive Committee provides the State with guidance as the State looks to update its statewide Communication Interoperability Plan.
- **Information Privacy and Security Council:** The council was formed to protect the security of personal information collected and maintained by State and county government agencies. The council consists of 12 members including:
  - The State, CIO who serves as the chair
  - One member each from:
    0.1. Department of Education
    0.2. Department of Health
    0.3. Department of Human Resources Development
    0.4. Department of Human Services
    0.5. University of Hawai'i
    0.6. Legislature
    0.7. Judiciary
  - One member from each of the four counties.
- **IT Steering Committee:** Mandated by the Legislature, the IT Steering Committee consists of Legislature-appointed members who assist the Chief Information Officer (CIO) in executing his responsibilities.

8.0 ACCOMPLISHMENTS AND AWARDS

8.1 FEDERAL-LEVEL AWARDS RECEIVED

Federal 100 Award

Sonny Bhagowalia, CIO State of Hawai'i

Aloha, with urgency. Hawai'i was the only state to achieve this prestigious federal recognition. As part of an effort to overhaul and modernize the Hawaiian government's IT and business culture, Sonny Bhagowalia completed two plans and 10 projects — one year ahead of schedule. He had inherited an organizational culture that was 30 years behind the times, but in an "aloha with urgency" spirit he collaborated with department and agency leaders to complete the first comprehensive analysis of the State's $11 billion government business environment, for which he created strategic and business transformation plans. He also came up with a plan to transform the State's fragmented technology environment.

8.2 NATIONAL-LEVEL AWARDS RECEIVED

National Association of State Chief Information Officers (NASCIO)

Successful information technology initiatives in state government deserve to be highlighted and shared in order to promote innovation, foster better government, and engage citizens. For 25 years NASCIO has honored outstanding information technology achievements in the public sector through its Recognition Awards for outstanding achievement in the field of information technology. The State of Hawai'i has received several NASCIO awards during the past two years, including:

- **Information Communications Technology Innovations (ICT): Winner**

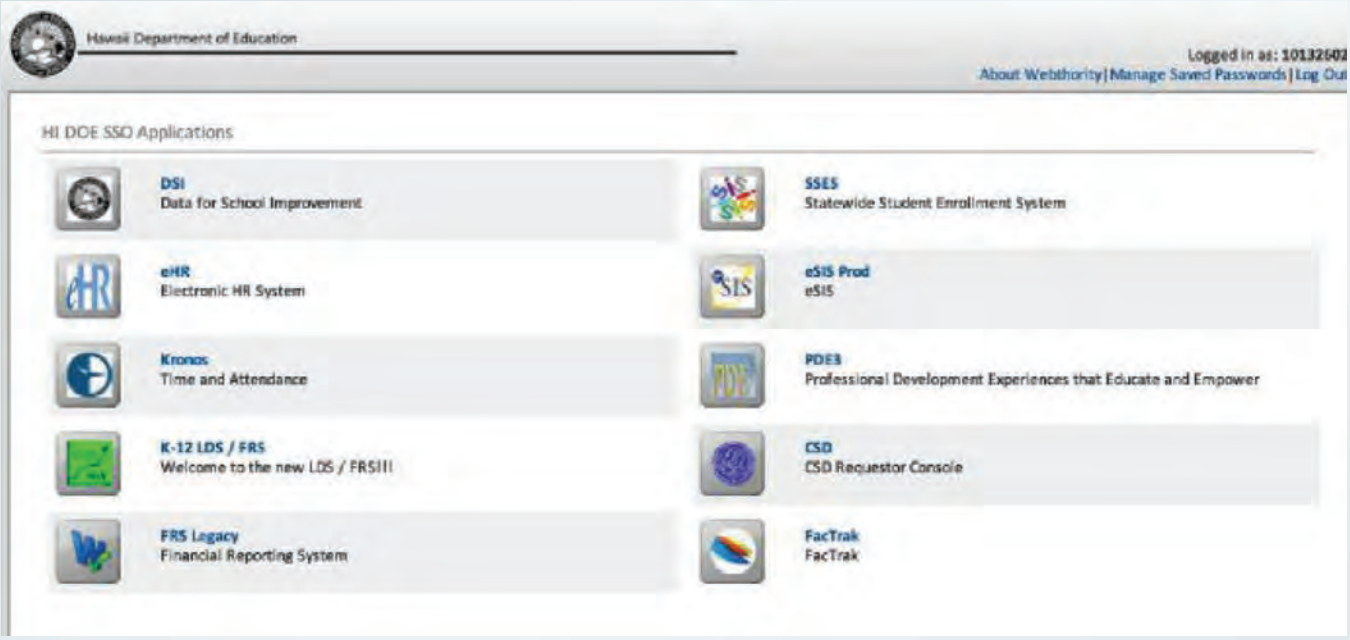
  Application Name: Mobile Emergency Command Interface (MERCI)

  The State of Hawai'i Civil Defense developed the MERCI (Mobile Emergency Response and Command Interface) system to facilitate quicker, more accurate, and more detailed damage assessments following a natural disaster. The system saves time for agency inspectors during the damage assessment process. It was estimated that the solution developed for the project can save between three and four hours per inspector, per day, during an emergency. However, the real value of the solution is its benefit to the health and public safety of the residents of Hawai'i. Improved speed, data quality, and analysis capabilities enable aid to be directed to where it is needed the most.

- **Cyber Security Initiatives — Finalist**

  Application Name: Single Sign On (SSO) for the Hawai'i State Department of Education

  As the number of deployed systems and reporting tools increases, managing access to those systems for the Hawai'i State Department of Education's (HiDOE's) 25,000 staff had become increasingly complex. The Single Sign-On (SSO) project aimed to enhance and strengthen HiDOE's identity management system by simplifying user access to key applications while maintaining the required data security and privacy standards. The implemented SSO system provides secure access to critical Web resources while protecting systems from direct exposure. It is an integrated security solution that enables HiDOE to provide employees, customers, and partners with secure, browser-based access to essential information without adding infrastructure or complexity. The SSO project started on June 29, 2012. HiDOE managers, staff, and the vendors worked closely together throughout the implementation process, and on November 9, 2012 a memo was sent out to all staff by Superintendent Kathryn Matayoshi informing staff that the SSO system was available for use. It contained five critical applications used by HiDOE, which were:



At the time of this award nomination application writing, there are now 12 applications currently running in SSO (including our Student Information System, Facilities Management System, and our Customer Support website). The introduction of the SSO system represents a milestone in the way HiDOE utilizes its resources. Now even the most disparate applications can flow seamlessly from one to another by having users enter a single username and password to sign on at the very beginning of the session.

- **Digital Government to Business (Finalist): Mobile Applications for Annual Business Filings**

  Hawai'i's Department of Commerce and Consumer Affairs, Business Registration Division (Division) produced a suite of mobile-optimized Web services, or "Mobile Apps," that are custom-designed to make the State's online business registration services easy to use, no matter what type of mobile device is employed.

National Association of Government Web Professionals (NAGW)

Pinnacle Award for Best State Website: eHawaii.gov

The National Association of Government Web Professionals (NAGW), the leading organization for local government Web professionals, announced its annual Pinnacle Award winners at the 2013 conference in Louisville, Kentucky, on September 26, 2013. The State of Hawai'i received the Pinnacle Award for Best State Website. The Pinnacle Awards represent the best in government websites from among NAGW members. Pinnacle Awards (http://www.nagw.org/pinnacles) are judged by a group of Web professionals from inside and outside of government Web development, and are awarded to the best entries based on the following judging criteria: team size; content; organization; design; performance and flexibility; accessibility standards; and interactivity.

Davey Awards

Gold Award Winner: eHawaii. gov

The State of Hawai'i website, Hawaii.gov, was honored with a Gold Davey Pinnacle Award in the Government category. With nearly 4,000 entries from across the U.S. and around the world, the Davey Awards honor the finest creative work from the best small firms, agencies and companies worldwide. The Davey Awards are judged and overseen by the International Academy of the Visual Arts (IAVA), a greater than 600-member organization of leading professionals from various disciplines of the visual arts dedicated to embracing progress and the evolving nature of traditional and interactive media.

W3 Awards

Silver Winner: eHawaii. gov

The State of Hawai'i website, Hawaii.gov, received a Silver W3 Award for its redesigned Web portal. The W3 Awards honor outstanding websites, Web marketing, Web video, and mobile apps created by some of the best interactive agencies, designers, and creators worldwide.

National Association of State Procurement Officials

Cronin Club IT Gold Award (Finalist): Hawai'i Compliance Express

The George Cronin Awards for Procurement Excellence are recognized as a premier achievement for innovative public procurement. They pay homage to a founder and the first president of NASPO, George J. Cronin. Since 1985, the Cronin Awards have recognized ground-breaking state procurement programs and have promoted the sharing of ideas between states.

Center for Digital Government Best of the Web — Finalist

State Portal Category: eHawaii. gov

The overall State of Hawai'i Web portal Hawaii.gov and departmental websites were named among the finalists for Best Government Website by the Center for Digital Government in its annual Best of the Web competition.

8.3 INDUSTRY

Web Marketing Association

Multiple awards including:

- **Best Energy Mobile Application:** EV Stations Hawai'i
- **Best Mobile Government Website:** Mobile Applications for Annual Business Filings

Digital Government Achievement Award (DGAA)

Multiple awards including:

- **Government-to-Citizen State Government Category:** Hawai'i Electronic Marriage and Civil Union Registration System
- ***Government-to-Business Category:*** Commercial Fishing License Services
- Hawai'i Mobile App for Annual Business Renewal

International Association of Commercial Administrators (IACA)

Merit Award: Mobile Applications for Annual Business Filings

Web Marketing Association

Best Mobile Government Website:
Mobile Applications for Annual Business Filings

8.4 STATE-LEVEL AWARDS

While the State CIO and OIMT have received many Federal, National and Industry awards for their accomplishments, it not just OIMT that is delivery results and being recognized. These accomplishments could not be achieved without the incredible efforts of State IT staff throughout the Departments. State IT staff's willingness to work in partnership with the State CIO and OIMT have created a force multiplier effect that is leading to new levels of success and increasing the recognition of Hawaii's efforts to top levels across country as through prestigious awards such as the Federal 100 and NASCIO MERCI award.

Excellence in Technology Awards

In addition to being recognized for a number of awards, OIMT has established the Excellence in Technology Awards to recognize IT innovation within the State and to encourage leadership.

The Excellence in Technology Awards honor outstanding technology achievements in Hawai'i State government. Emphasis is placed on recognizing those information technology initiatives which exemplify best practices, support the public policy goals of the State, assist government officials in innovatively executing their duties, and provide cost-effective service to citizens:

Categories recognized through the Excellence in Technology Awards include:

- Cross-Boundary Collaboration and Partnerships
- Data, Information and Knowledge Management
- Digital Government: Government to Business (G to B)
- Digital Government: Government to Citizen (G to C)
- Fast Track Solutions
- Enterprise IT Management Initiatives
- Improving State Operations
- Information Communications Technology (ICT) Innovations
- Open Government Initiatives
- Cyber Security Initiatives

State of Hawaii Excellence in Technology Award Recipients for 2012 and 2013

2012 award categories	2013 award Categories		
Champions of Change	CIO Employees of the year, Business and IT/IRM Transformation Team of the Year,		
Excellence in Technology Awards	CIO Unsung Heroes, and Governor's Special Recognition Award for 9-1-1 Board including CIO		
Government IT Employee of the Year	***Business Transformation***	***Technology Modernization***	***Transparency and Accountability***
Business Transformation Team of the Year awards	Aloha Award	Consultant of the Year	Consultant of the Year
CIO Innovator Award	Organization Change Management Consulting Team of the Year	Contractor of the Year	Contractor of the Year
Government IT Contributor of the Year	OIMT Consultant of the Year	Operations CAT6 cabling	Open Gov ICSD Website Team
IT Community Partner of the Year	OIMT Contractor of the Year	Operations Microwave	Open Gov Campaign Spending
IT Consultants of the Year	Strategic Consulting Team of the Year	Operations Server Virtualization	Open Gov DBEDT
IT Project of the Year	Inter-Departmental Program Team of the Year	Operations Data Centers	Open Gov Elections
NASCIO Recognition Awards	Departmental Program Team of the Year	Operations Facilities	Governance EA Working Group
Technology Transformation Team of the Year	Cross-Collaboration Program Team of the Year	Operations 10GB Backbone	Governance SPO
Unsung Heroes	KOLEA Team award	Operations System Storage	Excellence Fast Track Solutions
Cross-Boundary Collaboration and Partnerships	Business Transformation Team of the Year	Shared Services GIS	
Data, Information and Knowledge Management	Business Process Improvement Award	Shared Services email and cloud	
Digital Government: Government to Business (G to B)	Operational Process Improvement Award	Shared Services Middleware managed Services	
Digital Government: Government to Citizen (G to C)	Investment in People Award	Shared Services Enterprise License Agreements Team of the Year	
Fast Track Solutions	Business Process Re-Engineering Award	Hawaii Broadband Initiative	
Enterprise IT Management Initiatives	Efficiency in Government Award	Security and Privacy	
Improving State Operations		Excellence Information Communication Technology Innovations	
Information Communications Technology (ICT) Innovations		Excellence Digital Government Government to Citizen (G 2 C	
Open Government Initiatives			
Cyber Security Initiatives			

In 2012, 298 awards in 22 categories were awarded to recipients who were working to transform government, enable IT efficiency and make IT services more accessible to citizens. In 2013, over 450 awards in 47 categories were awarded to recipients who found even more innovative ways to transform government, improve IT efficiency and create a more transparent and open government. Pictures from the awards ceremonies and a sampling of the key awards received by the State of Hawaii employees are showcased in the next 2 pages.

HAWAII CIO AWARDS CEREMONY 2012














HAWAII CIO AWARDS CEREMONY 2013

THE FEDERAL 100

Celebrating Government Leadership

NASCIO

Representing Chief Information Officers of the States

NIEM

NATIONAL INFORMATION EXCHANGE MODEL

IACA

International Association of Commercial Administrators

nagw

National Association of Government Web Professionals

webaward 2013

THE INTERNATIONAL DAVEY AWARDS

Small firms. Big ideas.

2013 W3 AWARDS

SILVER WINNER

DGAA

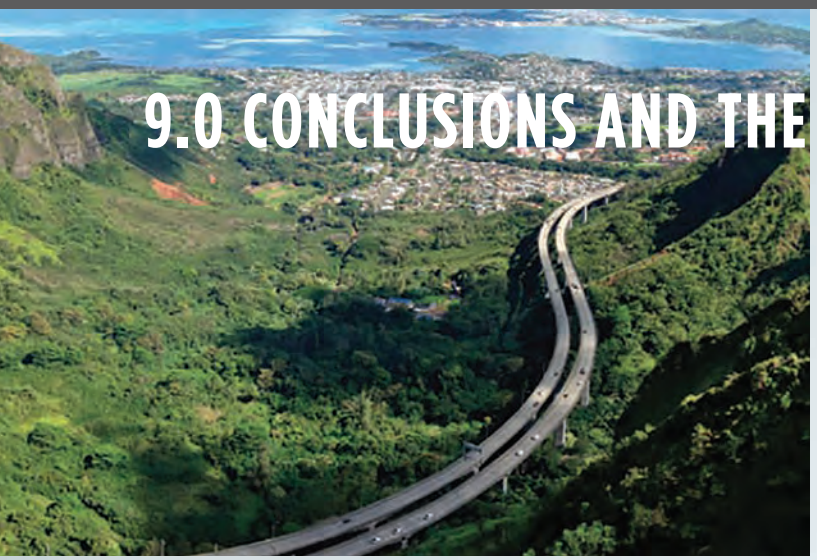
Digital Government Achievement Award

2013 WINNER

BEST OF THE WEB

NASPO NETWORK

9.0 CONCLUSIONS AND THE ROAD AHEAD



SONNY BHAGOWALIA,
CHIEF INFORMATION OFFICER STATE OF HAWAII

"Hawai'i needs to claim its rightful position as the 'crossroads of the Pacific'. To this end, we must choose to invest the necessary resources to leap-frog from the legacy environment into the 21st century. I believe we have chosen the path of success to become a leading digital state."

9.1 LEARNING FROM OUR PAST

As it looks forward and continues along its IT Transformation Plan, the State CIO and OIMT will improve upon the lessons learned from the past; addressing the chronic underfunding in IT, increasing collaboration among departments, investing in State workers, and correcting the fragmented and complex legacy IT environment to create a professional, centralized, and efficient IT organization.

In 2011, the State CIO and OIMT completed three comprehensive baseline reports of the as-is legacy environment, resulting in the following findings:

1. Inefficient manual interfaces
2. Minimal enterprise integration and sharing
3. Narrowly-focused federally funded solutions
4. Limited use of IT/IRM to enable mission service delivery
5. Aging legacy systems conditions (20-30 years old)
6. Proliferation of any and every type of IT/IRM product and service – no standards
7. Little business process coordination or information sharing across departments and programs, and major weaknesses in disaster recovery and continuity of operation
8. No clear concise way to show transparency in government or interact with constituents

9.2 LIVING IN THE PRESENT

2012 and 2013 were key years of planning the IT transformation for the State of Hawai'i. As partners to the departments and agencies, the CIO and OIMT helped pave the way for the procurement of new business applications like ERP and Tax. OIMT also expanded the State's mobile and web solutions to better serve citizens. As we look to 2014 and the years ahead, OIMT is focused on executing against the Transformation Plan and continuing new opportunities for IT to deliver value to the State. To meet the evolving requirements of Hawaii's citizens, staff and departments, OIMT will continually strive to deliver innovative solutions. The ability to mature quickly into a robust organization to meet new challenges helps improve the State's ability to deliver on the principles identified in the New Day Plan. As the State CIO looks forward, 2014 will be a year of continuing innovation and investment in the 3 key strategies and 10 Program areas.

While OIMT has achieved several tangible benefits during FY 2012-2013, it was just the foundation for the State's continuing IT Transformation. The coming year will be an especially important time as several OIMT-led initiatives move from the initial planning stages to the implementation stages—providing both residents and citizens with even more benefits. Throughout FY 2014, OIMT will be actively looking for ways to support State departments and agencies and collaborate with them on ways to transform IT within the state.

Below is a summary of efforts currently underway for each key strategy.

9.2.1 Transforming the Business

Working closely with department staff, OIMT delivered several important business process re-engineering projects, including:

- **Enterprise Resource Planning** – In order to update key business applications and enable business efficiency, information analysis, and technology modernization for seven (7) core functions, completed a comprehensive ERP Assessment and Roadmap leading up to the development and release of the ERP Request for Proposal, the creation of an ERP Program Management Office and ERP Acquisition Support to enable the successful procurement and implementation of this critical project.
- **Tax System Modernization** – In order to streamline and modernize tax systems and processing across the enterprise, completed the development of the Tax System Request for Proposal, implementation of an Analytics Program, and the implementation of the SERVICE Plan.
- **Health Information Technology** – To provide a more effective, efficient, and patient-focused healthcare system, completed the implementation of the Hawai'i Health Information Exchange (HHIE), Implementation of the Hawai'i Health Connector (Health Insurance Exchange), Medicaid Eligibility System Modernization, SNAP Modernization, Implementation of a Data Services Hub and a Health Data Repository, Health Data Governance and Standardization, and implementation of Electronic Health Records Modernization
- **Business Process Re-Engineering** – Update and re-engineer the business processes of legacy mission-critical applications and have them delivered through one portal through the creation of the Business Transformation Representative Group, establishment of the Executive Project Management Office (ePMO), creation of the Transformation Internship Program (TIP) and the launch of My.Hawaii. Gov coupled with Website Modernization

9.2.2 Modernizing the Technology Infrastructure

IT Infrastructure enhancements were a top priority of the CIO in 2012 and 2013, and OIMT placed a significant emphasis and resources in this area. OIMT invested in the upgrade of the State's network and communications backbone, increasing uptime from below 80% in 2011 to 95% in 2012 and 99.8% in 2013. OIMT also completed the implementation of several security and network management and monitoring tools, upgraded IT infrastructure and computing, and enhanced IT security support. The State CIO also focused on increasing broadband access to effectively meet citizens' needs for advanced telecommunications access.

- **Infrastructure** - Consolidated networking and computing infrastructure; enabled a reliable statewide network with guaranteed service levels; refreshed and update technology desktop and mobile equipment; provided additional computing storage via private partnerships; developed the infrastructure for departments' mission-critical applications.
- **Enterprise Shared Services** - Provided central shared services including: Email and Directory services, Content and Document Management, Geographic Information Systems (GIS), and Collaboration tools.
- **Security and Privacy** - Improved security and privacy controls including Identity, Credential, and Access Management, enabled Single Sign-on for access across various State systems, and enabled privacy protections.
- **Hawai'i Broadband Initiative** - Made significant progress toward the goal of providing all Hawai'i residents with ultra-high-speed, affordable, and reliable broadband services by 2018.

9.2.3 Establishing Transparency and Accountability

In 2012 and 2013, OIMT made significant progress in establishing IT Governance processes, procedures and policies, including:

- **Governance** - Established enterprise-wide IT policies, life-cycle management processes, capital planning and investment Control (CPIC), portfolio management, enterprise architecture (EA) and Performance Dashboards.
- **Open Government** - Making open government data widely available through an open-source environment, including mobile apps and open government data (e.g. Data.Hawaii. Gov).

9.3 PLANNING FOR THE FUTURE

In 2012, the State CIO published the award-winning, comprehensive Business IT/IRM Transformation Plan that laid out the seven phase, 12-year transformation journey for the State of Hawaii. The State CIO, OIMT team and the extended CIO Ohana also started an extensive transformational journey through three strategies and top 10 programs. These include: re-engineer the State's business processes, modernize its IT infrastructure and establish enterprise governance, all with the goal to dramatically improve operational results for the citizens, departments and their staff. As OIMT moves into the implementation phase of this journey, it has begun to transform our IT landscape. Previously IT was completely decentralized and organized largely by individual departmental needs such as tax and health and human services. OIMT has started the process of centralizing certain IT functions such as ICSD and, are now assigning employees distinct roles and implementing standard processes. Each IT service delivers a customer driven outcome and is grouped as a portfolio with other services that share a common purpose. This model is optimized by integrating lean practices into processes.

As a result of these changes, services are deploying five times faster than in 2011. Aligning to services enables the State to fully comprehend the true cost of its offerings, perform meaningful industry benchmarking, and make deliberate IT investment decisions. The State now have greater visibility into operations costs and financial trade-offs, which helps identify areas for process improvement and cost reduction.

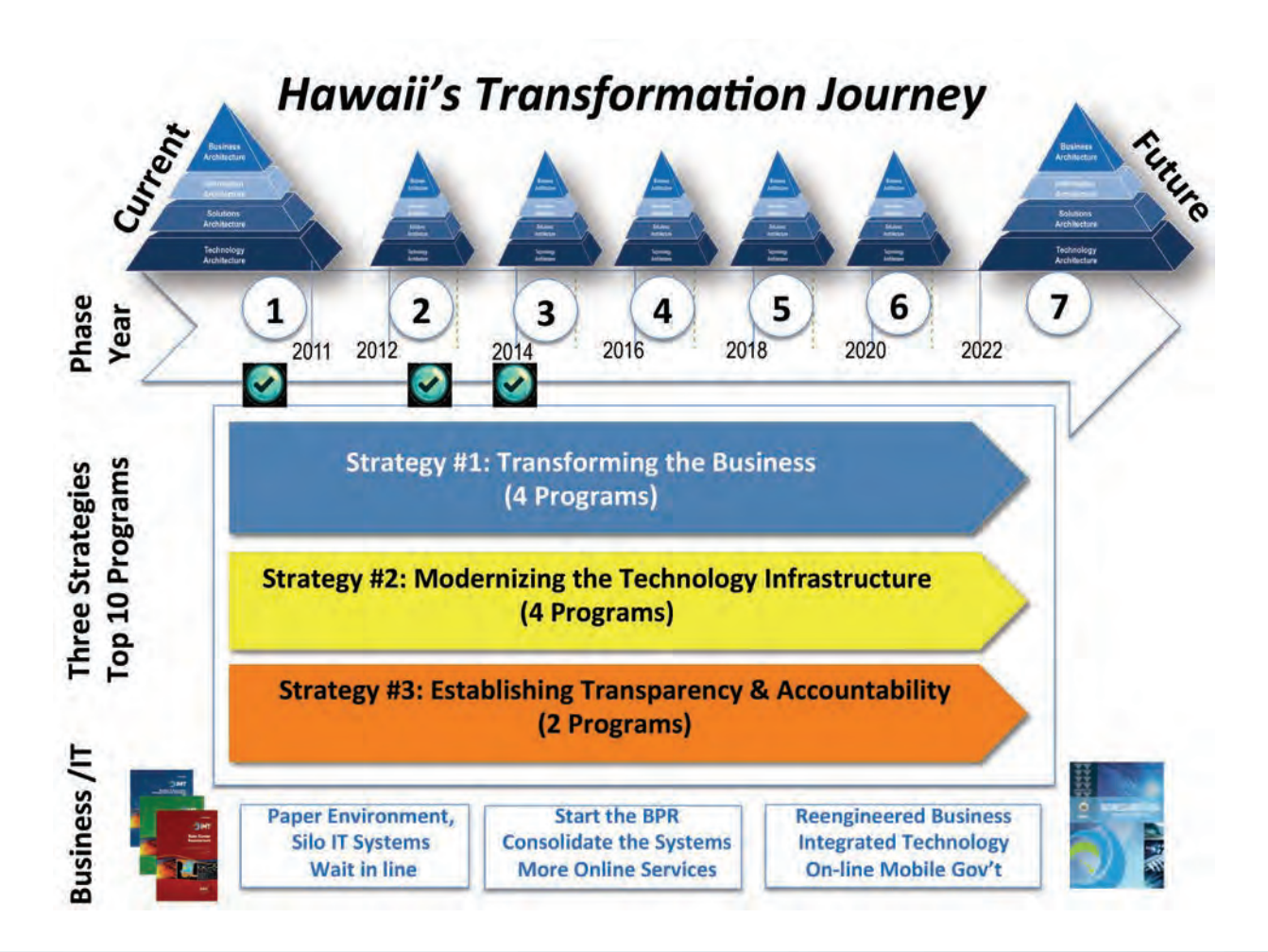
As OIMT looks ahead, its key priority will remain modernizing IT within the State to enable the Hawai'i to become a leading digital state. As the State works to transforms its technology and business environment, it will be especially important to continue strong collaboration efforts with departments and agencies—listening to their needs, soliciting input, and working together to find solutions. In the future we need to migrate more online services (currently 101), more mobile apps (currently 63), and use more social media and other website tools. This will achieve our vision of mobile-digital government, online vs. waiting-in-line.

9.4 CONCLUSIONS

Through the Transformation Plan, the State of Hawai'i is investing in technology and people to create the foundation to deliver government services that people need in a safe, reliable, simple, and transparent way. The Transformation Plan is a comprehensive plan for modernizing and transforming the State of Hawai'i and includes:

- 20 plans
- 7 phases over 12 years
- 3 key strategies and 10 priority programs

Hawaii's overall transformation journey is illustrated below.



The overall goal is "Faster, better and more accessible government information and services – anywhere, anytime on any device."

The Transformation is expected to achieve the following key results:

- Reduce overall number of IT systems by more than 65%
- Reallocate 20% of the IT workforce to better serve the departments' missions
- Streamline business and IT/IRM operations by 50%
- Increase IT service capabilities, reliability and security by 50%
- Reduce ongoing IT costs by 25%
- Improve government transparency by 100%

These results will provide the following general benefits:

For the Community

- Improved access to and delivery of services and programs (e.g. going "online" versus "waiting in line")
- A more transparent and responsive government
- Increased, secure, and timely access to information and data
- Better and faster service for their tax dollar
- Protection of vital information from security breaches

For State Employees

- Streamlined workflow processes that allow more focus on serving customers
- Access to a wider range of new technologies to better support departmental missions, programs, and services
- Improved career growth opportunities

For Departments

- Efficiently aligned services
- Reduced costs and redundancies
- Increased reliability and security
- Improved outcomes and accountability

PROBLEMS	CAUSES
1. Inefficient manual interfaces 2. Minimal enterprise integration and sharing 3. Narrowly-focused federally funded solutions 4. Limited use of IT/IRM to enable mission service delivery 5. Aging legacy systems conditions (20-30 years old) 6. Proliferation of any and every type of IT/IRM product and service – no standards 7. Little business process coordination or information sharing across departments and programs, and major weaknesses in disaster recovery and continuity of operation 8. No clear concise way to show transparency in government or interact with constituents	1. No coordinating authority for managing IT/IRM across the state 2. Lack of cross-cutting business process re-engineering 3. Deep cuts in resources and budget reductions in the state over the past decade

STATE OF HAWAIʻI	BUSINESS ENVIRONMENT	IT/IRM ENVIRONMENT	NOTES
Budget	• $11 billion	• $157 million	• 1.4% (versus best practice of 3-5% of total budget)
Organization	• 18 departments, 108 attached agencies, 168 boards & commissions • 41,000+ employees	• Each department & some attached agencies have dedicated IT/IRM staff • 746 employees	• 1.8% (versus best practice of 3-5% of total personnel)

KEY METRICS	FY2012 STATE OF HAWAIʻI	BENCHMARKS FROM OTHER STATES
Percentage of central IT spend to total budget	<.07%	.5%
Percentage of total IT spend to total budget	1.50-1.90%	2.75 – 3.0%
IT spend per employee per year	$2,100	$8,400
End user to IT ratio	100-130:1	25-30:1

The Transformation Plan identifies 3 key strategies and 10 priority programs to help achieve the benefits and results desired for Hawaiʻi. Progress against these plans is outlined in the following table.

STRATEGY	KEY POINTS	LEARNING FROM THE PAST	LIVING IN THE PRESENT	PLANNING FOR THE FUTURE
		"As-Is legacy Environment" (Circa 2011-2012)	**Transition & Sequencing Plan – "Bridging the Gap" (2012-2022)**	**"To-Be: Future Environment" (Circa 2022)**
		Paper-based, Silos, Fragmented, Single-Point-of-Failure, wait "in line"	Top 10 Programs and 50 Projects launched with accomplishments across all 3 Strategies	Final Vision = A Fully Digital, Mobile Government that is on-line through a single view and intelligent portal (myhawaii.gov)

BUSINESS		• Lack of workflow among departments
		• Lack of consistent IT procurement standards
		• Lack of Lines of Business integration
		• Lack of Business Process Engineering for targeted Lines of Business
		• Paper based services
		• Manual "wait in line" customer service
			• The environments were thoroughly (1) assessed; (2) benchmarked against the best corporations, State governments and federal agencies; and (3) documented by top consultants, including SAIC and Gartner with the full engagement of all State and Agency stakeholders. Findings included
			  • 18 Departments & Univ. of Hawaii
			  • 35 lines of business with 220 Business functions/services
			  • High duplication of effort
			  • Wide funding disparities
			• Implemented focused program areas of excellence to transform the business with four key programs & 20 projects:
			  1. Enterprise Resource Planning (ERP): completed 7 detailed reports on business effectiveness, technology readiness, business case, RFP, security environment, workforce skills and benchmarks. Interim Grants and Uniform Chart of Accounts launched
			  2. Tax System Modernization (TSM): including interim BPR with 80% improvement in processing time and Tax Analytics identifying a potential uncollected revenue of $ 1 B and a new SERVICE Strategic Plan and an accompanying RFP
			  3. Health Information Technology Performance and Standardization, and implementation of Electronic Health Records Modernization and full study of Health IT environment. Helped HHC implement HHIX. Secured additional federal funding for Hawaii HIT.
			  4. Business Process Reengineering (BPR): established BTRs with matrix team across all Departments, completed three BPRs and launched 11 BPR Projects across enterprise. Implemented BPR methodology
			• Instituted Project Management Professional (PMP) Certification Program and PM discipline for all projects with an Executive Sponsor, Program Executive and PM for all programs with an Enterprise Architecture foundation. All Projects currently underway with delivery in 3-6 months increments. Established a PM Tool called PMIS with open Dashboards
				• A business-first environment that is efficient and effective with radically improved internal government processing and open government
				  1. ERP allows internal and external users to get all information easily across comprehensive seven functions (Acquisition; budget, finance, accounting; assets; time/attendance; human resources; payroll and grants management) in single portal in Open government
				  2. TSM – an intelligent portal with business analytics to maximize revenue for state with appropriate security and privacy protections
				  3. Health IT – A health ecosystem that allows users and stakeholders to share appropriate information with role-based access control and business analytics for just-in-time decision making. Improved business information exchange and between disparate health processes allows for lower costs and efficiency with security and privacy protections
				  4. BPR methodology in place to allow all users to have all business applications be business-driven with ease-of-user: "mobile first", fully digital, intelligent workflow with information available anywhere, any time on any device securely and reliably
				• Ability for PMs and BPRs to be business-driven with customer relationship management ability to collaborate across a common business and program environment

STRATEGY	KEY POINTS	LEARNING FROM THE PAST	LIVING IN THE PRESENT	PLANNING FOR THE FUTURE
		"As-Is legacy Environment" (Circa 2011-2012)	**Transition & Sequencing Plan – "Bridging the Gap" (2012-2022)**	**"To-Be: Future Environment" (Circa 2022)**
		Paper-based, Silos, Fragmented, Single-Point-of-Failure, wait "in line"	Top 10 Programs and 50 Projects launched with accomplishments across all 3 Strategies	Final Vision = A Fully Digital, Mobile Government that is on-line through a single view and intelligent portal (myhawaii.gov)

TECHNOLOGY		• Chronic underfunding in IT
		• Inefficient collaboration between State agencies
		• Decentralized and fragmented services
		• Lack of Disaster Recovery and Continuity of Operation
		• Lack of Security and Privacy protections
		• Lack of Virtualization
		• Lack of application modernization
		• Lack of capacity planning
		• Lack of Enterprise license agreements for software
		• No economies of scale in IT purchasing, or computing
		• Alarmingly Inadequate infrastructure
			• The environments were thoroughly (1) assessed; (2) bench marked against the best corporations, other State governments and federal agencies; and (3) documented by top consultants, including SAIC and Gartner with the full engagement of all State and Agency stakeholders. Findings included
			  • Over 743 applications/systems
			  • High duplication of effort
			  • Wide funding disparities
			• Implemented focused program areas of excellence to modernize the Infrastructure with four key program & 20 projects:
			  1. Consolidated Infrastructure: Increased uptime of network from below 80% to 98% and network and computing capacity by 1000% with a Government Private Cloud with monitoring ability and alternate routes for survivability. Completed a Network and Data Center study across entire enterprise
			  2. Enterprise Shared Services: realized 40-60% in reduction in software costs and launched collaborative tools such as Intranet, GIS, Cloud-email/Office 365 pilots to improve productivity
			  3. Security/Privacy: Completed a comprehensive assessment of the security and privacy landscape across 17 categories and 63 projects; Established 1st-ever SOC and CSIRC to unify all security controls across enterprise with ten tools/policies
			  4. Hawai'i Broadband Initiative: Completed an assessment of the enterprise/state and helped partner with two departments to secure $ 20 M to improve security of trans-pacific landing sites and begin to implement a $ 6 M pilot for HBI goals.
			• Served as Governor's POC for FirstNet securing grant for Study and Phase 1; and Enhanced 9-1-1 Board member (Hawaii one of first states with operational NG 9-1-1)
				• A secure and reliable technology environment that is efficient and effective with radically improved infrastructure, shared services, security/privacy and ubiquitous/affordable broadband
				  5. Consolidated Infrastructure allows intelligent on-demand computing and network services at 99.99% reliability anywhere, anytime and any digital service. Five data centers with two in Oahu and one each in other three major islands with full backup
				  6. Shared Services – an intelligent shared services environment with a service catalog that unifies and provides enterprise services with ELA's/BPA's
				  7. Security/Privacy – Appropriate security and privacy protections through five collocated SOCs and 17 categories of security
				  8. HBI in place with ubiquitous and affordable 1 Gig broadband signal available in urban areas and appropriate bandwidth in rural areas across state.
				• FirstNet is operational and so is Next generation 9-1-1 with full traffic prioritization with a Business Continuity Plan
				• Integrated IT with 66% reduction in disparate applications and systems (743 to 250) with Disaster Recovery Plan, Redundancy at all support levels

STRATEGY	KEY POINTS	LEARNING FROM THE PAST	LIVING IN THE PRESENT	PLANNING FOR THE FUTURE
		"As-Is legacy Environment" (Circa 2011-2012)	**Transition & Sequencing Plan – "Bridging the Gap" (2012-2022)**	**"To-Be: Future Environment" (Circa 2022)**
		Paper-based, Silos, Fragmented, Single-Point-of-Failure, wait "in line"	Top 10 Programs and 50 Projects launched with accomplishments across all 3 Strategies	Final Vision = A Fully Digital, Mobile Government that is on-line through a single view and intelligent portal (myhawaii.gov)

GOVERNANCE		• Lack of an Architecture Planning for Business, Information, Technology, and Data
		• Lack of overall IT Governance
		• Lack of transparency and integrated planning for investments
		• No Open Government capability
		• Lack of transparency
			• The environments were thoroughly (1) assessed; (2) bench marked against the best corporations, other State governments and federal agencies; and (3) documented by top consultants, including SAIC and Gartner with the full engagement of all State and Agency stakeholders. Findings included
			  • $157.5 million IT/IRM budget (-1.2%)
			  • 746 IT/IRM staff (– 1.8%)
			  • Over 743 applications
			  • High duplication of effort with no Governance and oversight and virtually no open government
			• Implemented focused areas of excellence to establish Transparency & Accountability with two key program & 10 projects:
			  1. Governance: Published the National Award-winning (Federal 100) Business and IT/IRM Transformation Plan - 20 comprehensive plans in 7 phases & 12 years for Hawaii's transformation. Created 20 dashboards (17 full business dashboards for governor's New day Plan and three dashboard frameworks for IT projects). Improved EA, ITIM, Policies and first-ever portfolio management tool to track all enterprise investments.
			  2. Open Government: Launched first-ever Data.hawaii.gov and published 1144 data sets from departments and launched transparency.hawaii.gov to allow unprecedented access to data. Launched the award-winning Hawaii.gov portal and myhawaii.gov portal, which have garnered four awards with access to 101 on-line services, 63 mobile apps and 44 modernized websites across state. Launched transparency.hawaii.gov (first-ever consolidated view of state)
				• A efficient and effective governance framework with radically improved transparency and accountability through two approaches:
				  9. Governance: An integrated IT/IRM Transformation Strategic Framework with Enterprise Architecture, Standards, Policies, Portfolio Management that allows full visibility and control of enterprise investments. Full dashboards provide StateStat-level visibility to all investments and project performance
				  10. Open Government: An open government environment with intelligent, semantic web-enabled Data.hawaii.gov, transparency.hawaii.gov and dashboards.hawaii.gov enabled through an integrated my.hawaii.gov portal to allow citizens and residents unprecedented, authorized, easy access to data anywhere, anytime, any device securely and reliably through appropriate role-based access controls
				• Integrated governance, digital-mobile-first, open government environment with an organizational culture of default Open Gov, with an can-do empowered workforce and citizen/customer-first orientation

By undertaking its key strategies and top programs, OIMT has begun to transform the State's IT environment and start along the roadmap laid out in the State's IT Transformation Plan—becoming a world-class IT environment and offering cutting edge technology and services to residents, state employees, and government and business partners.

From a technology standpoint, the State will have a simplified, streamlined, and technologically-advanced environment: This new environment will allow the State to rapidly develop and deploy applications and technology-enabled solutions that provide direct benefits to residents, State employees, and government and business partners. It will also enable the State to train its IT workforce in the latest technologies, thus improving their skills sets and marketability.

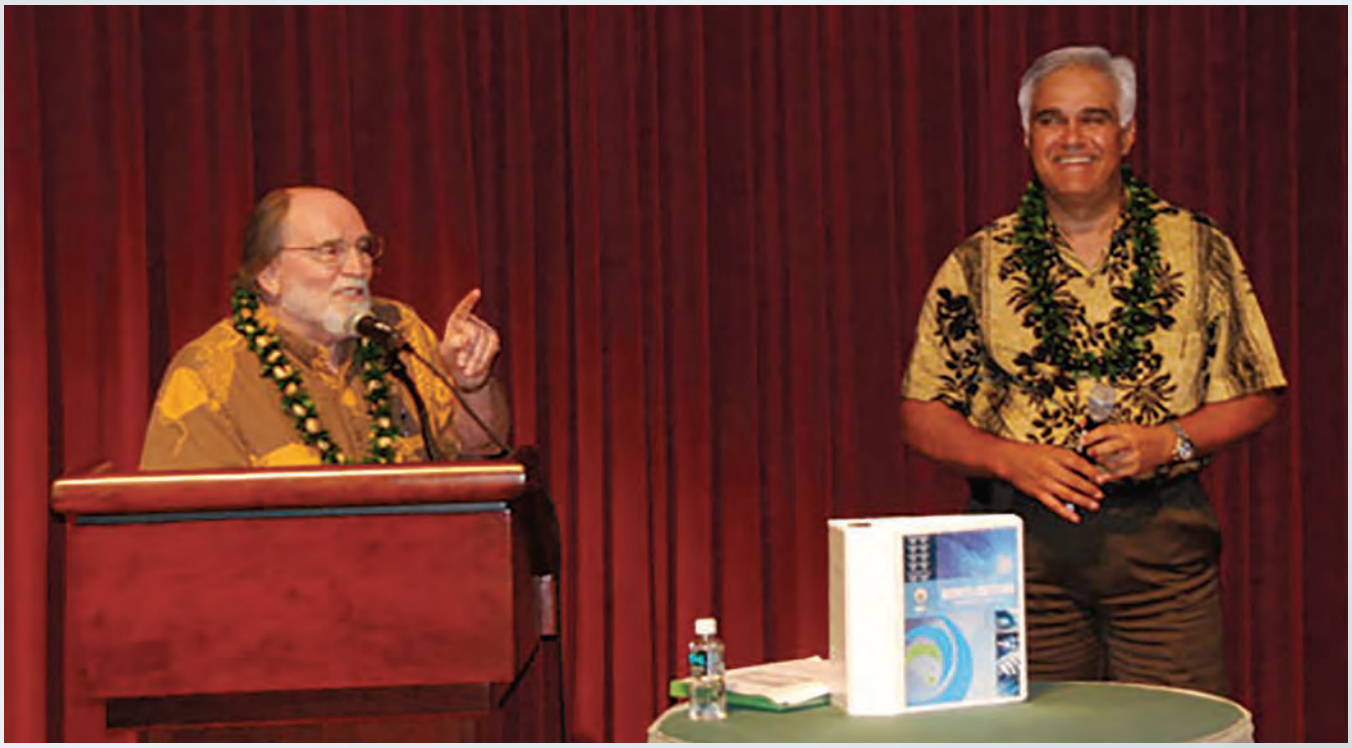
The memories and incredible energy, passion and momentum across all departments, Legislature, Industry and public is palpable and measurable.

The People of Hawaii want this transformation as evidenced by recent polls in 2013. In a statewide poll conducted by the OmniTrak Group, **75 % of Hawaii residents said they support the idea of investing state funds to modernize business processes and technology within the state's government:**

http://oimt.hawaii.gov/survey-hawaii-residents-strongly-support-state-it-modernization/

Our focus on updated business applications, an improved technology infrastructure, and strong open government, and new governance structure with a can-do organizational culture is taking full effect. Transformation is not only achievable, but well under way. We look forward to the next step in our transformation journey together.

Hawaii's Transformation Journey is well on its Way! Please Join Us - Help the Great State of Hawaii! Aloha and Mahalo!



AN INCREDIBLE TRANSFORMATION JOURNEY WITH THE CIOs, STAFF AND LEADERSHIP OF HAWAII





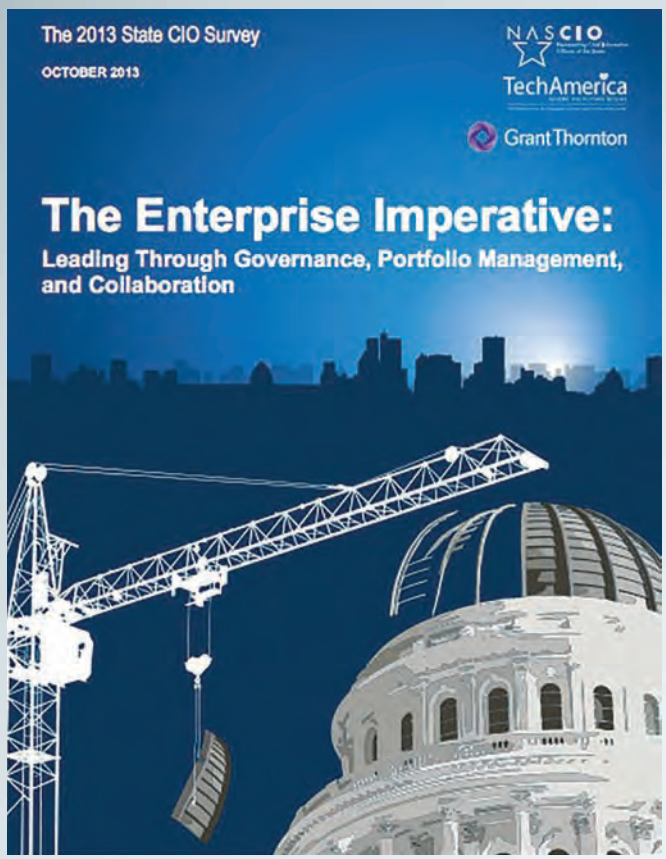




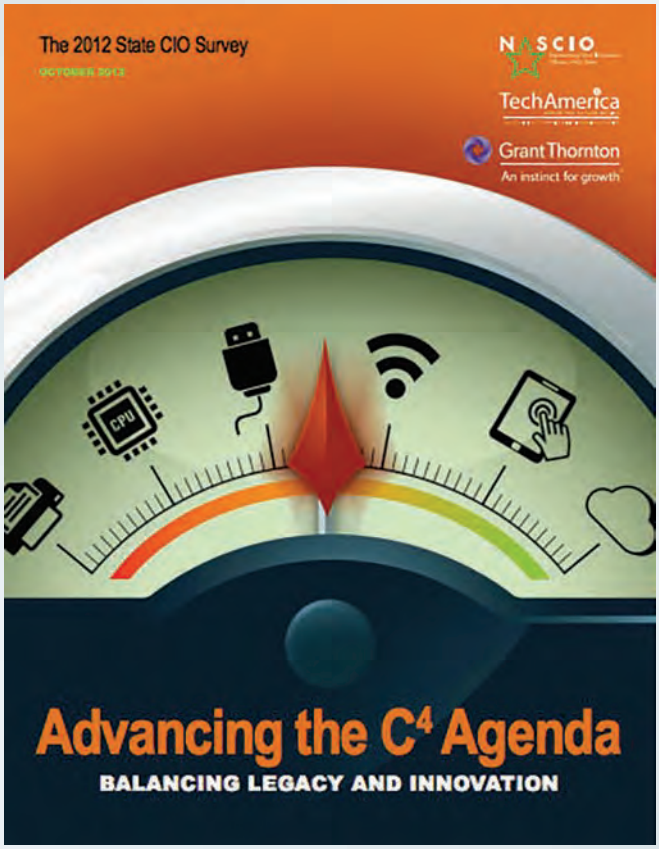




The State of CIO has been participating for the past 2.7 years in state surveys, committee chairs, and at meetings and conferences to exchange ideas on best practices, lessons learned and benchmarks against other states. Furthermore, ten independent studies have been conducted by Gartner, a leading technology research company, that have validated that the State has the right strategy, the right plan and are executing against the plan in the right way.


The 2013 State CIO Survey
OCTOBER 2013
NASCIO
TechAmerica
Grant Thornton
The Enterprise Imperative:
Leading Through Governance, Portfolio Management, and Collaboration


NASCIO
2013 ANNUAL CONFERENCE
October 13-16, 2013 | Philadelphia, Pa.
Leading Through Innovation and Collaboration
Sonny
Sonny Bhagowalia
Chief Information Officer
Office of Information Management and Technology
State of Hawaii
STATE MEMBER
CIO
COMMITTEE CHAIR
AWARD RECIPIENT
SPEAKER
I GAVE BACK


The 2012 State CIO Survey
NASCIO
TechAmerica
Grant Thornton
An instinct for growth
CPU
Advancing the C4 Agenda
BALANCING LEGACY AND INNOVATION

10.0 APPENDIX

10.1 TWELVE CIO CORE COMPETENCY AREAS

The State CIO was tasked with 12 subject area responsibilities directly related to competencies identified by the Federal CIO Council. These included:

- **Policy and Organization**: Work effectively with a wide range of people across multiple organizations.
- **Leadership/Managerial**: Provide oversight and work to attract, retain, and develop personnel.
- **Process/Change Management**: Work in strong partnership with department directors and other key stakeholders as part of the change management process. Facilitate open, effective communications to ensure organizational buy-in.

- **Information Resources Strategy and Planning**: Address cross-governmental and inter-agency planning issues as well as external drivers.
- **IT Performance Assessment**: Define and understand the importance of qualitative and quantitative baseline assessment measures.
- **IT Project/Program Management**: Provide oversight to IT projects and programs including goals, objectives, requirements, lifecycle costs, and beginning and end dates.
- **Capital Planning and Investment Control (CPIC)**: Provide legislation and fiscal guidance, which are significant contributors to effective capital planning and investment control.
- **Acquisition**: Create an innovative acquisition environment throughout the organization that links end users to business outcomes.
- **E-Government**: Facilitate digital interactions between government, citizens, businesses/commerce, and state employees.
- **Information Security/Information Assurance (IA)**: Develop and maintain an agency-wide cyber security/ informationassurance (IA) program, including security policies, procedures and control techniques to both protect and defend information, systems and networks.
- **Enterprise Architecture**: Establish the agency-wide road map(s) to meet mission and strategic goals.
- **Technology Management and Assessment**: Identify and evaluate the strategic benefits of technology applications within the business environment.

www.ndu.edu and http:www.cio.gov

PROGRESS OF THE 12 CIO CORE COMPETENCY AREAS 2012–2014

Throughout 2012–2014, OIMT made significant progress against all 12 CIO Competencies.

10.1.1 POLICY AND ORGANIZATION

Governance is the set of the organizational structures, policies, and processes by which the State selects business transformation and Information Technology (IT)/Information Resource Management (IRM) investments to ensure that strategic objectives are met efficiently and effectively, while controlling risk. Information Systems Audit and Control Association (ISACA), an international professional association that deals with IT Governance, defines Governance as the practice that:

"...ensures that stakeholder needs, conditions and options are evaluated to determine balanced, agreed-on enterprise objectives to be achieved; setting direction through prioritization and decision making; and monitoring performance and compliance against agreed-on direction and objectives."

In establishing IT governance for the State of Hawai`i, the Office of Information Management and Technology (OIMT) and the defined IT governance bodies [i.e., Chief Information Office Council (CIOC), IT Steering Committee (ITSC), Executive Leadership Council (ELC), Enterprise Architecture Working Group (EAWG)] develops State policies for managing and making IT investments within the enterprise. These policies drive department and agency actions regarding steady-state, development enhancement, and modernization actions for IT.

10.1.2 LEADERSHIP/MANAGERIAL

The CIO has exhibited leadership by example, and has worked across organizational lines to unify a fragmented, 30- to 40-year-old legacy environment and organizational culture, and to provide an award-winning plan to transform the State of Hawai'i as it progresses through the 21st century. The CIO's leadership motto used a hybrid "Aloha with Urgency" approach that also fostered staff to "think globally but act locally."

- **State of Hawai'i Business and Technology Transformation Plan**

  The CIO articulated, documented and published the seven-phase, 12-year Transformation Plan with 20 detailed plans covering all aspects of CIO best practices. All 18 departments of the Executive Branch collaboratively authored this multi-phase plan. Phase I began the journey with the completion of a baseline assessment (FY 2012) and two pilot projects. Phase II oversaw the publication of an award-winning Business and Technology Transformation Plan with five pilot projects (FY 2013). Phase III began the first of five two-year steps of the implementation phase. Three strategies and top 10 programs were announced to transform and leapfrog the 743 legacy systems and 746 IT staff and additional contractors into the 21st century. The CIO secured additional funding ($4.5M in FY 12, $25.3M in FY 13 and $120M in FY 14–15) to supplement base funds to begin the business and technology transformation of the State of Hawai'i. All three phases of the seven-phase plan are on schedule, within scope, and within budget.

- **State of Hawai‘i IT Human Resources (HR) Transformation**

  The CIO implemented Phase I of the HR Transformation Plan by bringing OIMT and Information Communications Services Division (ICSD) together and using an established CIO Framework for Success. The CIO has executed (in partnership with the Comptroller and the Governor's Office) an agreement that immediately transferred control and oversight of the under-CIO's authority (as originally intended under the Act 205). With functional oversight of the ICSD completed as part of Phase I, OIMT is now working toward reorganization and integration of the two organizations. OIMT is working with the Governor's Office and the Departments of Accounting and General Services (DAGS), Human Resources Development (DHRD), and Budget and Finance (B&F) to formalize the reorganization and draft suggested legislation, if necessary.

  A new Human Resources Organizational Framework will comprise three divisions that entail three parts of a best-practice business and technology information lifecycle: Architect/Invest, Implement, and Operate and Maintain. These three parts also align with the three key strategies of the transformation: Governance, Business Transformation/Project Management, and Technology Modernization (including Security/Privacy). Clearly defined Mission, Vision, Goals, Objectives, and Performance Measures every fiscal year, with roles, responsibilities, authority, empowerment, and accountability for every employee are coming next. The proposed organization framework will focus on better customer relationship management, better administration of daily work, better governance, improved systems integration and architecture, improved program management, more security focus on IT environment, and improved IT operations.

- **State of Hawai‘i Organizational Change Management (OCM)**

  There were three dimensions of change: business, technology and organizational culture. The CIO engaged with an enterprise OCM effort to train and develop the extended CIO team staff on a change management process for the State of Hawai‘i Business and Technology Transformation, while specifically addressing the cultural and contextual factors unique to Hawai‘i. The primary task was to implement Phase I of the HR Transformation Plan [i.e., unify the offices of Office of Information Management & Technology (OIMT), Information & Communication Services Division (ICSD)] into one team and "ohana" (family), as well as to operationalize the 1,400-page Transformation Plan into a workable Strategic Operating Plan. The ultimate goal of this process is to get the entire team involved in implementing the transformation. Additionally, the CIO has already begun the next phase of OCM by involving the CIOs of all 18 departments. The team has worked together and jointly arrived at the following:

  - **Name**: Office of the Chief Information Officer (OCIO)
  - **Vision**: Transforming Government at the Speed of Life
  - **Mission**: Connecting Hawai‘i to the World, with People and Technology
  - **Core Values**: Trust, Professionalism, Leadership, Humility

  The CIO also improved IT workforce and stakeholder communications by: (1) increasing the training budget of the IT workforce by 250%; (2) improving communications with the IT workforce through weekly staff meetings, monthly program management reviews, metrics, newsletters, and a website; (3) scheduling quarterly All-Hands Meetings; and (4) producing the Annual Report and IT Summit.

- **State of Hawai‘i Governance (Transparency and Accountability)**

  The CIO chairs four committees: Access Hawai‘i Committee, Information Privacy and Security Council, CIO Council, and IT Steering Committee; co-chairs the Hawai‘i Wireless Initiative (HWIN); and is a member of the E 9-1-1 Board, the National Association of State CIOs, and the CIO Council of Hawai‘i.

10.1.3 PROCESS/CHANGE MANAGEMENT

n support of Business Transformation Office initiatives, a comprehensive organizational change management framework and plan has been developed based on industry best practice and direct feedback from State employees representing various departments and functional areas. Input and participation by State workers through numerous informational briefings, workshops and cross-departmental collaboration meetings have been crucial to the development of the plan and for ongoing activities.

With an underlying philosophy of holistic collaboration, the plan revolves around five focus areas:

- **Leadership** — Governance; feedback; change management and mentoring training; messaging
- **Communication** — Information packet; email blasts; coaching; engagement with champions
- **Learning and Technology Knowledge Transfer** — Customized learning; capability analysis
- **Organization and Job Redesign** — best practice methodologies; evaluation and validation
- **Resistance Management and Conflict Resolution** — Clear roles; conflict resolution strategies

The plan details specific action phases and tasks, many of which are in progress. Key initiatives include:

- Quarterly newsletters
- Network map of key influencers
- Collaboration teams and functional charters
- Communications training
- Business process mapping and alignment

10.1.4 INFORMATION RESOURCES STRATEGY AND PLANNING

Information Resources Strategy and Planning activities include a variety of IT planning functions that are aligned with the State's strategies and plans and are focused on ensuring enterprise solutions to IT challenges and needs. Noted elements that have been developed include: State of Hawai'i Business and IT/IRM Strategic Transformation Plan and the Information Assurance (IA) and Cyber-Security Strategic Plan. The result of these collaborations is the State's first-ever Business Transformation Strategy and IT/IRM Strategic Plan that documents the mission, vision, goals, business outcomes, objectives, performance measures, and, more importantly, strategies and specific prioritized projects and initiatives that will be launched during the next 10 years. This IA and Cyber-Security Plan recommend both a strategic and tactical approach to IT security improvements using a risk management framework that addresses current and future needs of the State's security posture, while recognizing the technical, financial, and cultural needs of the State's organizational subcomponents.

10.1.5 IT PERFORMANCE ASSESSMENT

The Performance Improvement Life Cycle, established by the Office of Budget and Management (OMB) of the federal government, is composed of three phases: Architect, Invest, and Implement. OIMT uses this basic structure in managing the transformation of the State's IT environment. Each lifecycle phase is comprised of integrated processes to transform an agency's top-down strategic goals and bottom-up information services needs into a logical series of work products and identified performance metrics.

These performance metrics help the State judge the effectiveness of its efforts related to the business transformation's goals and business outcomes.

The Performance Reference Model (PRM) is designed to clearly identify and illustrate the cause-and-effect relationship or "line of sight" between inputs, outputs, and outcomes. PRM is built upon "line of sight" relationships and is critical for the executive leadership, IT management, project managers, and other key stakeholders to understand how, and to what extent, key inputs enable progress toward desired business outcomes regarding mission achievement and delivery of services to residents. The PRM captures and reports, based on the "line of sight" — how value is created for each LOB, as inputs impact outcomes. Guiding the entire PRM are the "strategic outcomes" identified in the New Day Plan, Strategic Plan, and the departments' Measures of Effectiveness (MoE); both are illustrated below.

10.1.6 IT PROJECT/PROGRAM MANAGEMENT

The vision of the Enterprise Program Management Office (EPMO) is to enable world-class proficiency in the application of project management fundamentals statewide. The goal of the EPMO is to simplify, expedite, and support the departments in the State by:

- Offering valuable training, coaching, and mentoring in various areas including project management, portfolio management, Six Sigma, contract administration, presentation skills, negotiation, teamwork, and leadership;
- Encouraging program and project management discipline so that work is better managed;
- Building capacity by offering new tools, including a program management information system, Alanui, that includes enterprise project management software and collaboration tools;
- Providing analytics such as dashboards that will assist project managers in running their projects more efficiently;
- Offering training so that program and project managers will be prepared to be PMP Certified by the Project Management Institute (PMI);
- Serving as a resource as subject matter experts on project management and other areas such as facilitation, communications, risks, technology, enterprise architecture, and acquisition;
- Creating a safe place for collaboration, communication, innovation, and team building.

The EPMO will help save project manager's time by more effectively managing resources. The EPMO is just getting off the ground and has already made progress in the following areas:

- Developed an EPMO Charter;
- Created a Training Plan;
- Scheduled training for the first quarter;
- Built the Alanui, a program management information system with integrated SharePoint collaboration tools;
- Assisted with Business Process Reengineering efforts utilizing different approaches such as Design Thinking and business process mapping;
- Developing and enhancing dashboard and reporting tools;
- Developing a governance process and designing automated workflows for new project/program setup and approval.

10.1.7 CAPITAL PLANNING AND INVESTMENT CONTROL (CPIC)

The Clinger-Cohen Act (CCA), formerly the Information Technology Management Reform Act of 1996 (ITMRA), is a 1996 United States federal law, designed to improve the way the federal government acquires, uses, and disposes of information technology (IT). The Clinger-Cohen Act supplements the information resources management policies by establishing a comprehensive approach for executive agencies to improve the acquisition and management of their information resources, by:

- Focusing information resource planning to support their strategic missions;
- Implementing a capital planning and investment control process that links to budget formulation and execution; and
- Rethinking and restructuring the way they do their work before investing in information systems.

The State of Hawai'i implements the concepts of CPIC through the governance process of "Invest," tied closely to the implementation of Enterprise Architecture (EA).

SARAH ALLEN, HAWAII STATE PROCUREMENT ADMINSTRATOR STATE PROCUREMENT OFFICE

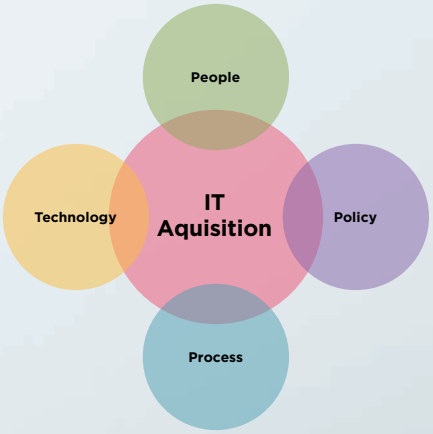
"OIMT has taken the initiative to reach out for innovative ways to acquire IT systems in a way that better aligns IT with the 21 century! Agile IT constructs, innovative contract vehicles and excellence in governance has positioned OIMT to be a guiding force within the State for all IT acquisitions and the business management thereof. I am delighted to see such serious thought taken in each IT procurement -- to see they all align with the Governor's vision of IT Transformation. OIMT is customer-service friendly, responsive, innovative, and energized to guide us into a world of online, real-time systems that work for us!"

10.1.8 ACQUISITION

The IT Acquisition Strategic Plan identifies discrete and actionable necessary steps to be taken to address short-term gaps to streamline and optimize the IT acquisition process for the State, and identifies an appropriate IT acquisition lifecycle model to best meet long-term needs of the State for IT acquisitions. This plan works within the existing acquisition framework of the State to transform IT acquisition practices wherever practical, and to work in concert with the State Procurement Office in areas of mutual responsibility. State leadership has stated the need, with the creation of the Office of the CIO and Legislative directives, for expedited implementation of business re-engineering and foundational technology initiatives, and specifically has established its intent to expedite the procurement approval process for IT projects that are funded for FY 2013, as outlined in Act 222.

The IT Acquisition Strategic Plan ensures that four key variables — people, processes, policies and technology — as related to the acquisition of IT goods and services are appropriately aligned to provide for an effective and efficient acquisition lifecycle model that drives the greatest value for IT acquisitions for the State (see below).

To support plan development, review of current best practices relevant to the State of Hawai'i were examined, along with the current practices of other states as they relate to IT acquisition. From this review, an initial target future-state model for the State was developed, along with initial recommendations. These recommendations and the initial target future-state model were presented to many of the same stakeholders from the current-state phase of work for comment and feedback.



Lastly, the gap between the current state and the target future state was assessed to identify discreet actionable projects that would help the State to move from the current state to the target future state. This effort culminated in this plan, and it provides a prioritized matrix of initiatives and associated projects to be implemented by the State, including descriptions, policy considerations, and possible technology requirements for each initiative.

Acquisition reports were provided to the legislature (senate president and house speaker) on a monthly basis since 2012, providing full accounting and transparency of IT acquisitions. A sample is enclosed.

EXECUTIVE CHAMBERS

HONOLULU

NEIL ABERCROMBIE
GOVERNOR

December 30, 2013

The Honorable Donna Mercado Kim,
President
and Members of the Senate
Twenty-Seventh State Legislature
State Capitol, Room 409
Honolulu, Hawaii 96813

The Honorable Joseph M. Souki, Speaker
and Members of the House of
Representatives
Twenty-Seventh State Legislature
State Capitol, Room 431
Honolulu, Hawaii 96813

Dear President Kim, Speaker Souki, and Members of the Legislature:

For your information and consideration, I am transmitting a copy of the Office of Information Management and Technology Procurement Report, as required by Act 222, Session Laws of Hawaii 2012. In accordance with Section 93-16, Hawaii Revised Statutes, a copy of the report may be viewed electronically at: http://oimt.higov.net.

Sincerely,

Neil Abercrombie

NEIL ABERCROMBIE
Governor, State of Hawaii

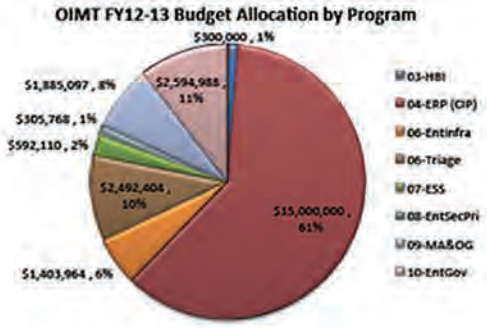
Enclosures

OIMT

State of Hawai'i
Office of Information Management and Technology
Procurement Report Quarterly as of November 30, 2013

I. Overview and Summary

The following pages detail the expenditures for each project using these funds during both FY12-13 and FY13-14. Assessment, phasing, alignment, and planning analysis have been completed for the OIMT project portfolio of procurements, which were targeted for completion by the close FY13. All general funds were expended with no dollars lapsing. Below is a breakdown of OIMT funded and managed projects noting their area of focus, estimated cost, and number of sub-programs[1].



[1] *Amounts may be adjusted as procurements are developed and/or completed and additional project synergies are realized.*

10.1.9 E-GOVERNMENT

The goal of the Open Government program is to improve transparency and rebuild confidence in government. In the past two years, the Open Government program has made incredible progress in creating a more efficient, effective and accountable government.

Dashboards and Open Data

A performance dashboard is being developed to serve as a tool in gauging progress on the State's goals. These tools will assist the Administration in making important decisions about Hawai'i's future. Hawai'i will be using the dashboard model developed by the State of Maryland, as it has been recognized as one of the best in the country for transforming business practices and delivering high-value outcomes (https://data.maryland.gov/goalsl).

The State's open data platform, Data.Hawaii.gov, will be leveraged to share data and build dashboards to help refine internal processes, highlight success and best practices, and increase departments' visibility to metrics and deliverables, as well as demonstrate a direct line of sight to the State's larger vision. More importantly, the tools allow for real-time collaboration to align resources and solutions to address challenges as they arise.

Website Modernization

This project will make government more accessible by following a user-centric design process, making it easy for citizens to find the information they're looking for. The vision of this project is to improve usability and organization of information on State of Hawai'i websites. The OIMT provided State agencies with a standard template for their websites. The new design offers advanced features and functionality, and provides an opportunity to present a consistent look and feel across all official State of Hawai'i websites. 18 department sites and 44 attached agency sites have been moved to the template.

Mobile Apps

The increasing use of Internet-enabled smartphones and tablets has changed the way people find and use information and services. One year ago, approximately 15% of all visits to State websites were through a mobile device. Today, that mobile device percentage has doubled to 30%. Hawai'i has released 59 mobile applications, and the new websites are built using a mobile-first design that is responsive to mobile devices.

my.hawaii.gov

my.hawaii.gov is a single "user-friendly and intelligent" Web portal with a service catalog of all available online government information and services — public areas, as well as secure areas that can only be accessed with appropriate security credentials. Transparent to users, State processes will be unified and improved through (a) BPR and mission-oriented applications; (b) enterprise shared services and a consolidated infrastructure; and (c) a strong governance foundation.

10.1.10 TECHNOLOGY MANAGEMENT AND ASSESSMENT

Enterprise Consolidated Infrastructure — These projects begin to consolidate the State's infrastructure, including data center management, to reduce the overall number of IT systems; reduce ongoing costs; increase IT service capabilities, reliability and security; and streamline IT operations.

The Government Private Cloud (GPC) virtualization systems have been set up and the cloud operations leadership team (COLT), made up of OIMT, ICSD, and other department staff, is working to configure the cloud services and launch operational capability for departments so they may begin migrating their servers over to the new systems, thereby offsetting costs for hardware, software, and labor. Training will begin next quarter for the cloud provisioning interface.

Enterprise Shared Services — These projects will centrally provide services that are common across departments (i.e., email, document management, collaboration, geographic information systems, etc.), which will result in reduced overall IT maintenance costs, increased IT services and capabilities, and streamlined IT operations.

The Office 365 pilot is under way, and a handful of accounts have been migrated to the cloud. The hosted voice pilot (Voice over IP) has been launched and the cabling upgraded to CAT6 in the Keoni Ana building to support the project. The State Archives Division (DAGS) has prepared an RFP for document imaging pilot and paper document conversion to digital format. The procurement is in progress for a Geographic Information System (GIS) enterprise license, which would provide unlimited licensing of GIS software statewide. OIMT is beginning to communicate with departments and promoting consolidated purchasing of equipment and software, as well as setting up an internal services chargeback mechanism.

Hawai'i Broadband Initiative (HBI) — Under the Hawai'i Broadband Initiative (HBI), OIMT, in coordination with DBEDT and the DOD, is pursuing a plan to land new transpacific fiber optic cables in Hawai'i. The design includes constructing secure cable landing sites and deploying a fiber optic transport that connects new transpacific cables with the existing transpacific cable infrastructure and landing stations. The State is also increasing the reliability and security of interisland and backbone networks by providing 10 Gbps bandwidth and a network reliability of 99.9%. The new networks are secure, resilient, redundant, and follow diverse pathways to mitigate any interruption of service.

10.1.11 INFORMATION SECURITY/INFORMATION ASSURANCE (IA)

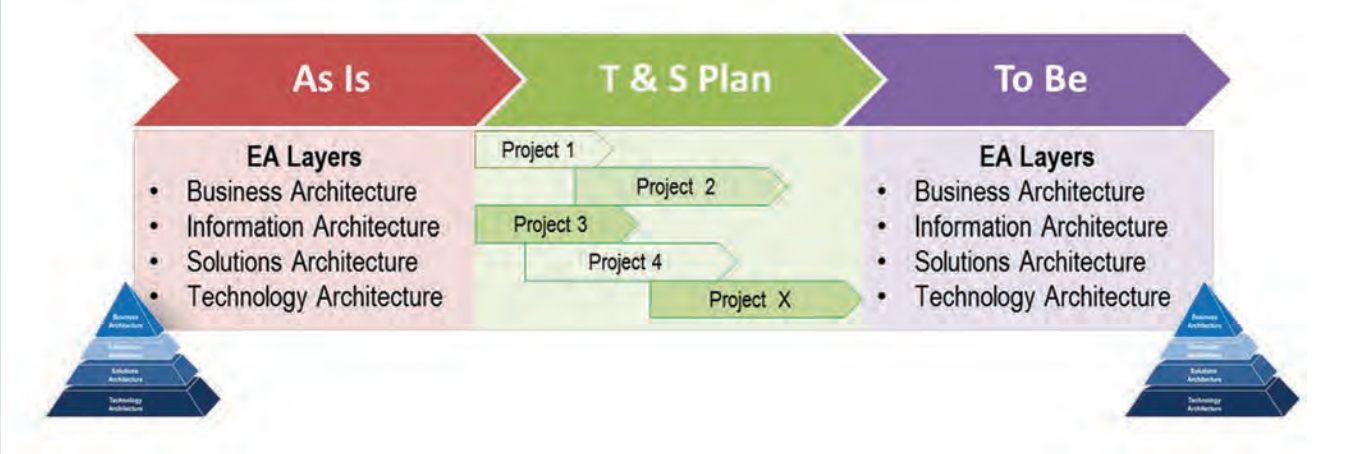
Enterprise Security and Privacy — These projects will improve the State's cyber-security posture to ensure protection of the State's valuable information and data assets.

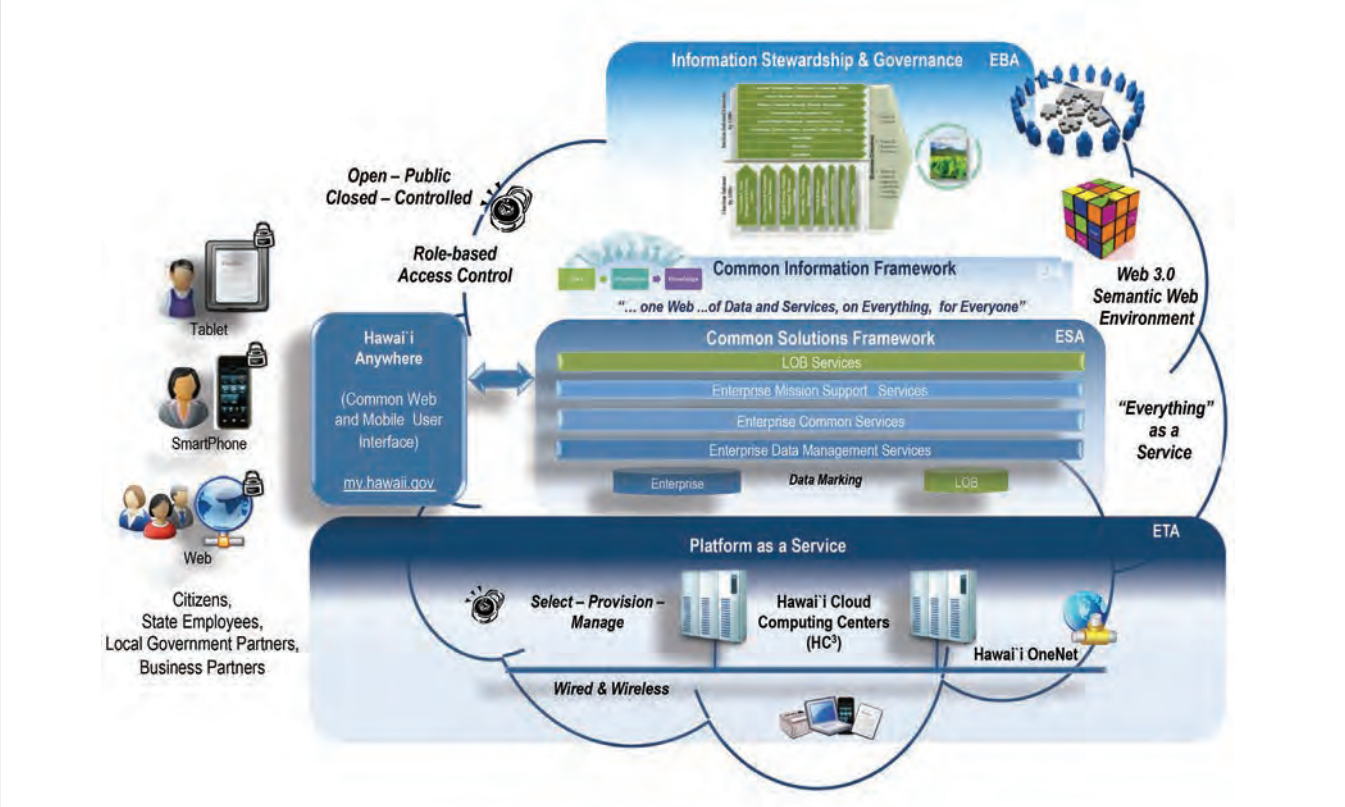
OIMT and ICSD have just completed setup of the Security Operations Center (SOC) in the Keoni Ana building. The team is now configuring the networking and security monitoring software that will run in the SOC.

One of the 20 business and technology transformation plans completed in 2012 were exclusively devoted to security and privacy. In 2013, the State of Hawaii in partnership with Gartner conducted a comprehensive security assessment across 17 categories. 63 projects were identified to remedy and enhance the existing security posture of the State. 10 of these projects have already been launched and/or completed.

10.1.12 ENTERPRISE ARCHITECTURE (EA)

The State of Hawai'i's EA was established based on the business transformation and IRM/IT goals and strategies. It describes the as-is and defines the to-be architecture for the enterprise from four perspectives or architectural layers: business, information, solution, and technical. The figure below illustrates the elements of the EA practice. The EA also serves as the recipe for aligning resources to improve business performance, and helps the State and each department better execute their core missions. In addition, the EA defines a plan for transitioning from the current state to the desired future state through the transition and sequencing of projects.





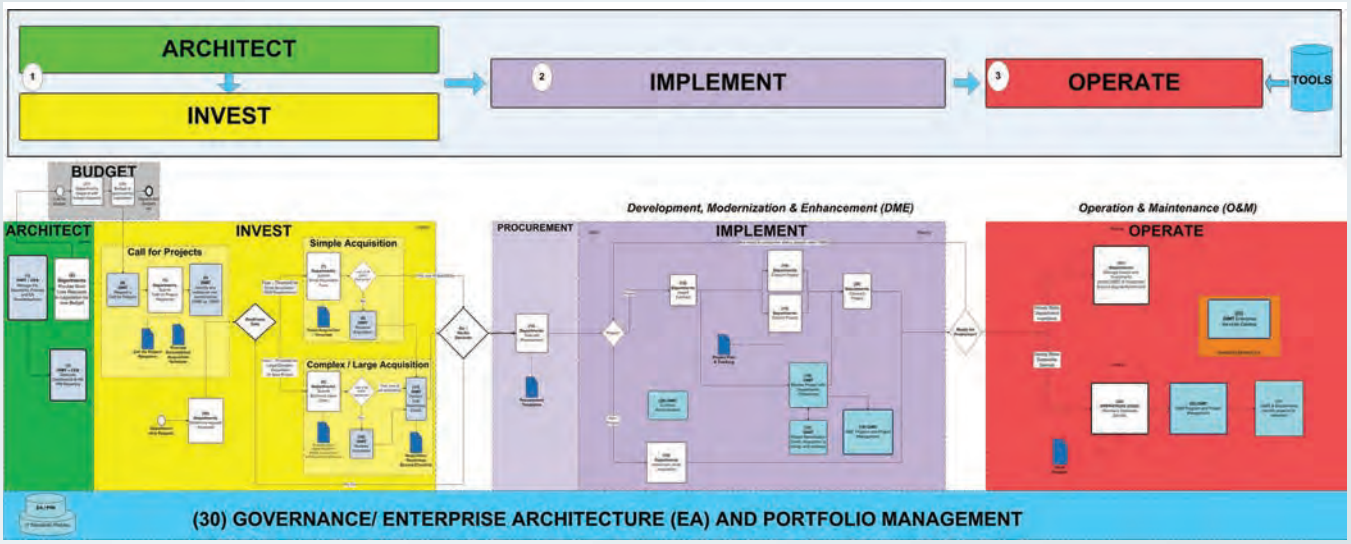
10.2 PROGRESS OF THE INTEGRATED LIFECYCLE MANAGEMENT (LCM) APPROACH

10.2.1 INTEGRATED LIFECYCLE MANAGEMENT (LCM) METHODOLOGY

An integrated lifecycle management methodology ensures that investments are on track and delivering expected performance results. The methodology provides a framework for effective IT management practices, end-to-end governance of IT investments, and the alignment of IT investments with the State's strategic goals to achieve desired outcomes and results. The IT investments are managed to create a lifecycle that is divided into three phases: Architect/Invest, Invest, and Maintain/Operate.

10.2.2 ARCHITECT/ INVEST

A successful Enterprise Architecture (EA) is not a one-time deliverable or effort, but an ongoing management discipline featuring the continual evolution of alignment with the evolving business and transformation needs and priorities, to achieve the future-state EA. The State will follow a four-step process of "Architect-Invest-Implement-Operate."



This IT governance process ensures that IT resources are purchased, implemented and retired in the best possible manner. This governance structure and policies will be a work in progress to ensure the State is making the best use of common practices and is moving toward an efficient use of its IT resources, whether the technology is hardware, software, infrastructure, staffing-related, or information.

The Architect phase analyzes the needs of the department, and identifies potential investments and solutions. An investment, in terms of governance, is simply a package of funding whose purpose is to improve the performance of the State. An investment is funded because of the belief it will improve the efficiency and/or effectiveness of the efforts to achieve the State's goals and objectives.

In the Investment phase, the departments identify and describe their investments, and align the investments with the future vision of the State, as defined by the "to be" architecture. A Call for Projects is initiated in order to reduce redundancy, leverage economies of scale, and increase efficiency throughout the State. The planned investments are evaluated and determined to be simple or large/complex. A go/no-go decision occurs following the Investment phase, where the acquisition is evaluated as to whether it will be pursued and procured.

The departments execute the procurement and complete the appropriate documentation.

The mission of the IT Governance, Enterprise Architecture (EA) and Portfolio Management Office for the State of Hawai'i is to provide an integrated, actionable, and comprehensive EA and associated management processes (e.g., architecture governance, communications, toolset management, integration with budget, IT investment, strategic planning, and other planning offices, etc.), and associated segment and solution architectures.

10.2.3 IMPLEMENT

In the Implementation phase, the acquisition is identified as a project or non-project, based upon the complexity and cost of the acquisition. For small acquisitions that are identified as non-projects, the departments implement the small acquisition, and proceed to the production readiness gate. For investments requiring system development or a complex enhancement, a detailed requirements and system design phase occurs. Monitoring and control activities occur throughout the Implementation phase to ensure adherence to cost, schedule, and scope.

The Implementation phase of the life cycle management approach includes the acquisition of the investment and the deployment of the system in its target environment. Successful deployment involves providing the proper framework for managing the project so that all aspects of the project are properly and consistently defined, planned, and communicated to stakeholders.

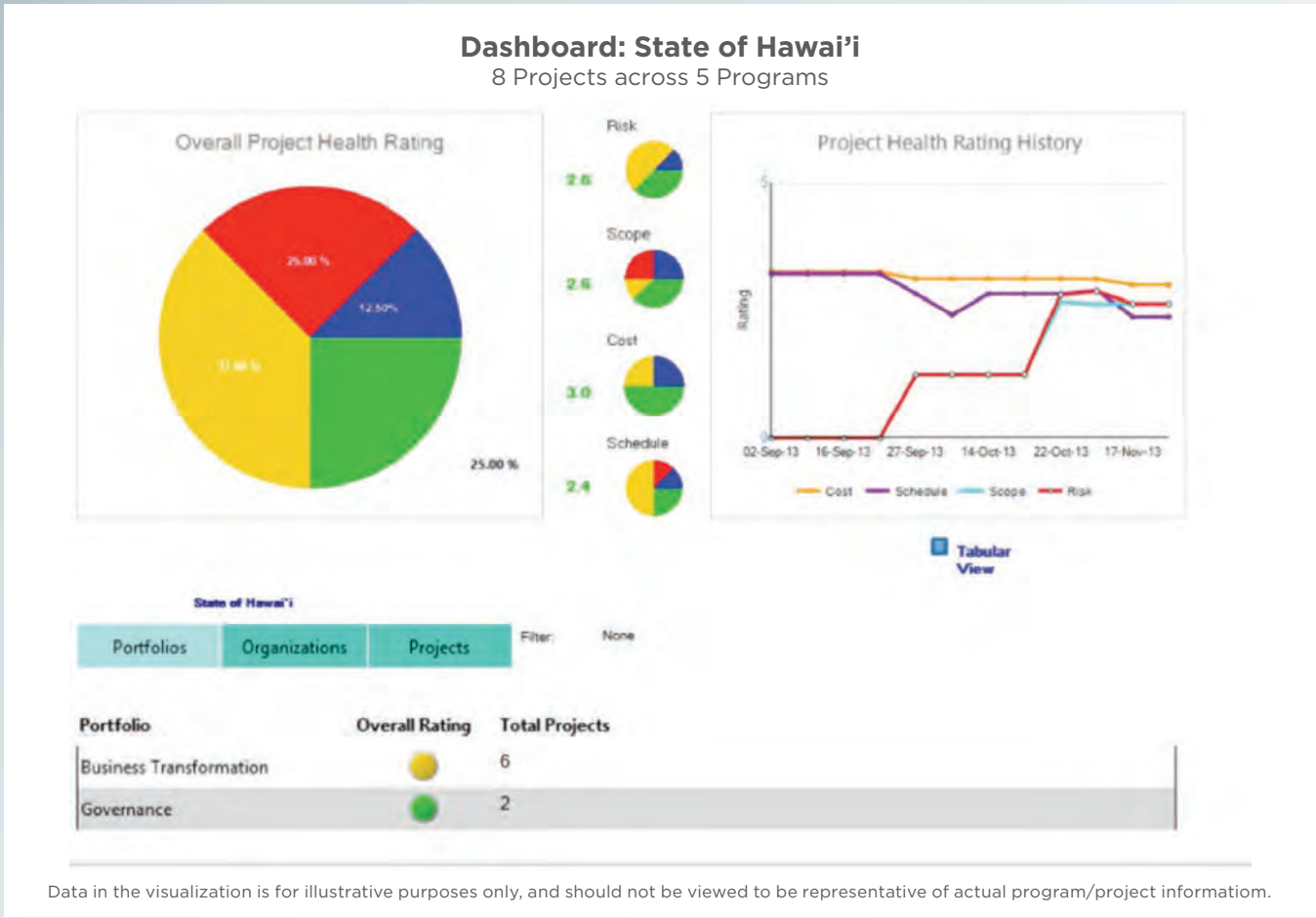
Successful implementation should include the following:

- Provide senior management and other decision makers with insights into project risks and ongoing performance;
- Facilitate and promote the use of best practices for program and project management, leveraging tools and training to improve capabilities;
- Ensure a common understanding among project team members and target users;
- Properly prepare users for change and provide appropriate and timely communications.

A critical factor to successful implementation is the establishment of the EPMO (Enterprise Program Management Office). The mission of the EPMO is threefold:

- Create a foundation for consistent project success throughout the State through development of a strong, pervasive project management (PM) and business analysis (BA) discipline;
- Manage strategic projects to a successful conclusion while improving the quality and repeatability of project lifecycle processes. These processes include business analysis and technology procurement;
- Work with IT governance bodies to establish, facilitate, and manage the enterprise IT project portfolio selection, funding and reporting process.

As part of the EPMO, the Alanui project management information system (PMIS) is being deployed. Alanui is a software solution that will assist program and project managers in collecting and utilizing project information. Dashboard reports will be created to provide insights on project risks and overall performance, including resource allocation. Alanui also includes a collaboration component using Microsoft SharePoint that will serve as a repository for project information across the enterprise. A training plan is being developed that will provide regular and consistent training opportunities for State employees on best practices and methodologies to help advance program and project manager maturity within the State. During this lifecycle management phase, State employees will be encouraged to participate and provide input in the implementation of the new technologies, as well as offer opportunities to take part in related process improvements.



Data in the visualization is for illustrative purposes only, and should not be viewed to be representative of actual program/project informatiom.

Organizational Change Management (OCM) efforts are also under way that will help ensure that consistent and appropriate messages are communicated and that users are properly aligned. In its most basic form, OCM aligns expectations, builds and integrates teams, provides governance and structure, and helps staff with the transition through communication, training, and other means. Performance measures, such as financial results, operational efficiency, leadership commitment, and communication effectiveness, help to monitor effectiveness and the need for modifications. OCM may occur during a structural change, a cultural change, a change in operations due to technology, or a combination of changes. The OCM plan embodies the following most common success factors:

Clarity and Transparency: Be clear, honest, direct, consistent and unambiguous about the purpose of the change, its direction, and the approach. Prevent surprises about new/updated processes and decisions.

Engagement: Build a sense of ownership and commitment. Consult with and involve the people who will be affected by the change. Create a safe, comfortable environment with open channels for everyone to provide feedback and voice their questions.

Resources: Put in place the needed resources, including financial, human and technical, to enable change.

Alignment: Ensure that systems and processes, such as information and training, support the change.

Leadership: Guide, train, and equip leaders at every level so that they display consistent commitment to the change and effectively respond to employee and customer questions and reactions.

Celebrate Success: Demonstrates that sacrifices are worth it, builds morale, helps fine-tune vision and strategies, undermines cynics, keeps executives and the public informed that the transformation is on track, and builds momentum.

10.2.4 OPERATE AND MAINTAIN (ICSD; DEPARTMENT CIOs)

The Operate phase is about managing the steady-state investments and performing the operations and maintenance tasks and activities to keep the State running. The Operate/Maintain services of the integrated lifecycle management framework are provided by the Information & Communications Services Division (ICSD).

Services Provided

The Program provides: (1) statewide information systems and operations support for computer and telecommunications facilities; (2) computer systems services; (3) application systems development and ongoing support; (4) technical end user support; (5) network design, engineering, and facilities for data, voice, and video; and (6) radio transmission services to all of State government. In addition, the Program provides statewide administrative support and leadership in planning, standards, and overall strategy/direction for information and communication technology and cyber security. The operational support and services provided by the Program are an integral part of the day-to-day operations of the various State agencies, and are especially critical to the agencies that deal with the health and safety of the public on a timely basis. The services of the Program are critical to assure that Hawai‘i will continue to progress in its use of information technology to solve problems, improve the delivery of public service and public access to information, and operate its programs efficiently.

Description of Business/IT Environment

More than 1,000 devices are housed in the State's data center, which includes mainframes, servers, routers, switches, PCs, printers, and controllers. The ICSD operates two IBM mainframes that are supported by 1,500 shared disk drives, 56 tape cartridge drives, two laser printers, and a variety of peripheral input and output devices. A virtual tape system (VTS), in conjunction with a tape library management system (TLMS), automates the management of magnetic tape and cartridge media resources.

Although most output equipment is located at the State's data center, remote printing may be performed at certain user departments. The systems also currently support a number of online terminals and printers within DAGS and selected user departments.

General system development and program change request policies and procedures have been documented by ICSD in the Information Technology Standards manual ("IT Standards"). Detailed procedures for these areas are further supplemented in the Standard SDM Manual.

10.3 DEPARTMENTAL ACCOMPLISHMENTS AND PARTNERSHIPS WITH STATE CIO

10.3.1 DEPARTMENT: ACCOUNTING AND GENERAL SERVICES

Information about the Department:

- **IT Manager Name: Glenn Segawa**
- **Things to know about the department:** DAGS has diverse agencies doing tasks from running an art museum to running parking lots.
- **Department website:** www.hawaii.gov/dags

Current Business/IT Environment:

- **Business/IT Mission and Vision:** The DAGS Systems and Procedures Office coordinates and advises the Comptroller on all functions pertaining to computer applications, departmental website and network.
- **Description of Business/IT Environment:** It is a heterogeneous environment with multiple computer application systems.
- **IT Systems and Applications:** See attachment.

Key Applications:

- Departmental Financial Management System
- Project Tracking System
- Statewide Bond Fund System
- Work Order System
- Motor Pool System
- Parking Control System

Challenges, Opportunities and the Road Ahead:

- Challenges and opportunities the department is facing in implementing business/IT projects: With the current staffing level, it becomes difficult to undertake new projects. Most of the human resources are being utilized to maintain daily operations of the department.
- Next steps the department is taking on these projects? Currently, no new projects in the pipeline.
- **Current initiatives/opportunities:** The department is funneling small new developments through the OIMT intern program.

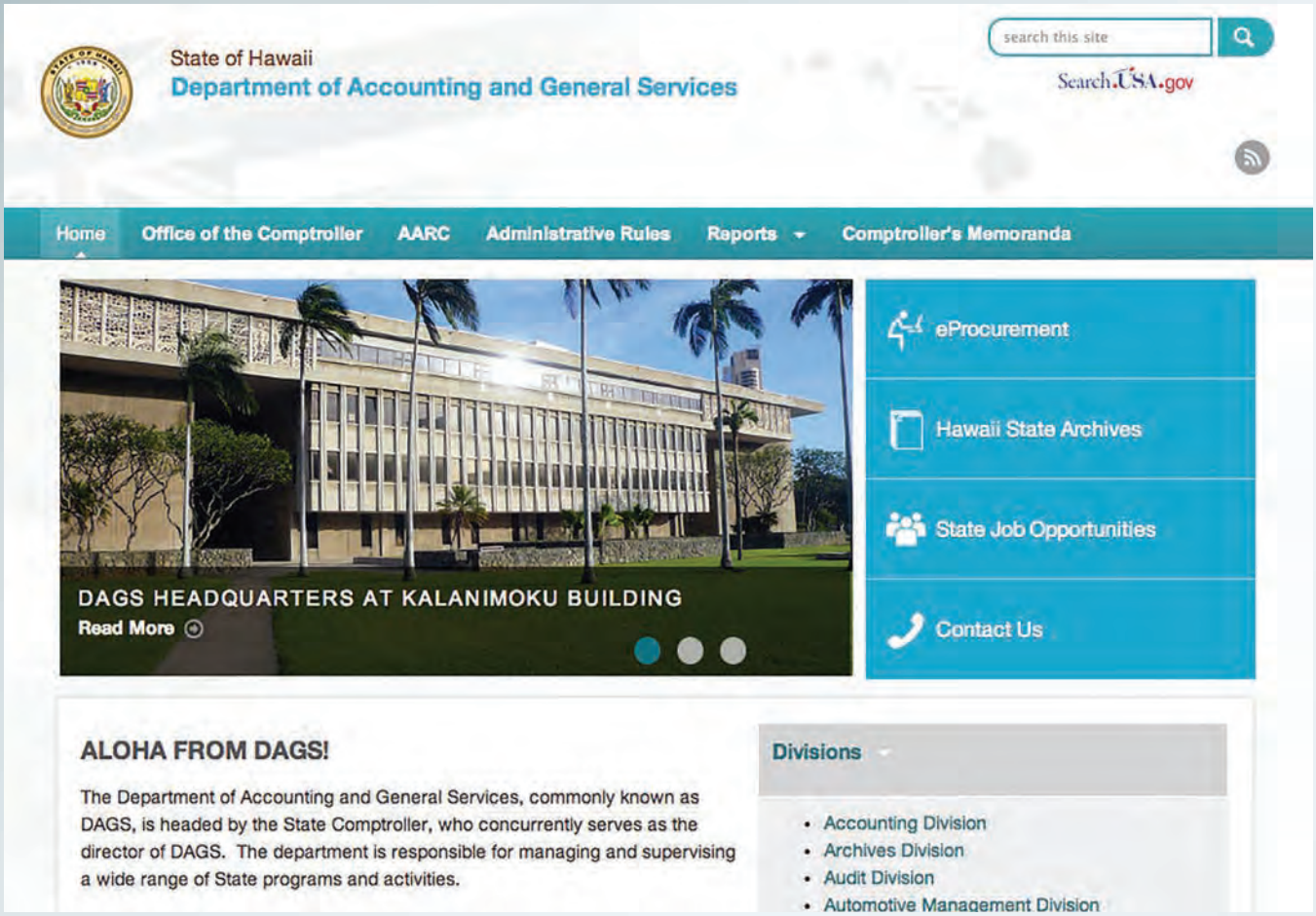
Key IT Initiatives/Opportunities Summary:

- Staffing is at the minimum level to maintain operations.
- Need to overhaul the procurement system to eliminate the need for a six-part carbon PO form and the use of dot-matrix printers.
- Need to overhaul the payroll system; migrate from the mainframe system.
- Need to overhaul the finance system; migrate from the mainframe system.
- Need to overhaul the Inventory Management System; migrate from the mainframe system.

Your Key Business/IT Portfolio

IT Quick Wins

- Interns developed for the Public Works Division a prototype Automated File Plan System.
- Key business/IT accomplishments FY2012-2013: The office completed over 300 requests from the various DAGS agencies.
- How do business/IT projects align with the Governor's New Day Plan? By improving work processes through automation.



- How do the department's current projects help achieve the business and technology transformation for the State of Hawai'i? By reducing the use of paper output and converting to electronic media.
- How do projects align with OIMT's Top Three Strategies (re-engineer business processes and applications, modernize technology and infrastructure, and establish oversight management and governance)? We are constantly working on our processes to align with the State's and OIMT's strategies.

10.3.1.1 DEPARTMENT: ACCOUNTING AND GENERAL SERVICES, INFORMATION AND COMMUNICATIONS SERVICES DIVISION

Information about the Department

- **Acting Administrator's Name: Sharon Wong**
- **Things to know about the department:** DAGS is headed by the State Comptroller, who is responsible for managing and supervising a wide range of State programs and activities, including 8 Divisions, 3 Staff Officers, 3 District Officers, and 11 Attached Agencies, Boards & Commissions. As of February 20, 2013, the Information and Communication Services Division was placed under the authority of the Chief Information Officer.
- **Department website url:** http://ags.hawaii.gov/icsd, http://ags.hawaii.gov/icsd/cyber-security/

Current Business/IT environment

Business/IT Mission and Vision

ICSD Vision: The reliability and efficiency we offer, combined with our customer focused and technically competent staff make us the technology services provider of choice for State of Hawaii Departments and Agencies.

ICSD Mission: To provide information technology support services and leadership for State programs. Its mission assures that the objectives of State programs; services to the public, and access to information are achieved through the effective implementation of information processing and communication technologies.

Services Provided

The Program provides: (1) statewide information systems and operations support for computer and telecommunications facilities; (2) computer systems services; (3) application systems development and ongoing support; (4) technical end user support; (5) network design, engineering, and facilities for data, voice, and video; and (6) radio transmission services to all of State government. In addition, the Program provides statewide administrative support and leadership in planning, standards, and overall strategy/direction for information and communication technology and cyber security. The operational support and services provided by the Program are an integral part of the day-to-day operations of the various State agencies, and are especially critical to the agencies that deal with the health and safety of the public on a timely basis. The services of the Program are critical to assure that Hawaii will continue to progress in its use of information technology to solve problems, improve the delivery of public service and public access to information, and operate its programs efficiently.

Organizational Structure

The ICSD is composed of six branches, two staff offices, and clerical support staff.

Six branches:

- **Systems Services Branch** — Provides systems software support and control programming; database management and operational support; installation and maintenance services for distributed systems; development, implementation, and maintenance of specialized systems software used in support of applications and control systems; analyses to improve the efficiency and capacity of computer systems; security of information; centralized file transfer services; production data back-up facility; and guidance in the effective and efficient use of systems software.
- **Telecommunications Services Branch** — Plans, designs, engineers, upgrades, and manages the State's telecommunication infrastructure that delivers voice, data, video, and radio communications services to State agencies. Implements, manages, and supports public and private information systems.
- **Production Services Branch** — Operates and monitors a centralized computing facility and a distributed data communications network that provides comprehensive and efficient computing services to all State agencies. Manages and implements production activities associated with

electronic information processing. Plans, designs, implements, installs, and manages a physical security program to protect equipment, hardware, and software media.

- **Technology Support Services Branch** — Provides planning, design, management, maintenance, coordination, and technical consulting and support for the State's emerging technologies programs. Provides technical consulting and expertise in computer hardware and software for the establishment and proper operation of local area networks, office automation, Internet, and Intranets. Provides support services to clients in the selection and utilization of public and government access systems and services to obtain information.
- **2 Client Services Branches** — Two branches provide application systems development and maintenance services for both statewide applications and department/agency specific applications. Provides systems analysis, systems design, and computer programming, application systems installation and client training, as well as post-installation support; provides assistance to clients in developing analytic and technical capabilities to enable them to plan and maintain their own systems and applications.

Two staff offices:

- **Planning and Project Management Office** — Provides planning, advice, assistance, and guidance in the proper and efficient use of information processing and telecommunications procedures, techniques, and systems development methodologies. Provides statewide information processing and telecommunications procedures, standards, and guidelines to ensure effective and compatible utilization of all computer resources in State government. In addition, this office administers the State-wide cyber security program, and provides cyber security direction to ICSD and State agencies to protect the State's computer systems and information against cyber threats, vulnerabilities, and cybercrime.
- **Management Services Office** — This office provides direct support in management analysis, budget, expenditures, and policy planning and provides program support for legislative matters. It is also responsible for providing daily operations and support for the fiscal functions of ICSD.

Description of Business/IT Environment

Over 1,000 devices are housed in the State's Data Center which includes mainframes, servers, routers, switches, PC's, printers, and controllers. The ICSD operates two IBM mainframes that are supported by 1,500 shared disk drives, 56 tape cartridge drives, 2 laser printers, and a variety of peripheral input and output devices. A Virtual Tape System (VTS) in conjunction with a Tape Library Management System (TLMS) automates the management of magnetic tape and cartridge media resources.

Although most output equipment is located at the State's Data Center, remote printing may be performed at certain user departments. The systems also currently support a number of online terminals and printers within DAGS and selected user departments.

General system development and program change request policies and procedures have been documented by ICSD in the Information Technology Standards manual ("IT Standards"). Detailed procedures for these areas are further supplemented in the Standard SDM manual.

Protection of the State's Information Assets

The IT Standards specify that the State agencies shall be designated as owners of information stored in micro, mini, and mainframe computers. The owners are responsible for data integrity and accuracy over the systems under their control. The IT Standards also specify that custodians and users are responsible for implementing adequate logical security safeguards for the entrusted data.

The areas of responsibility and accountability for ensuring the security of the State's information assets residing on mainframe, micro, mini, and mainframe computers are grouped into the following categories:

- Owner
- Computer Security Liaison
- Custodian
- User
- Security Administrator

The Owner is the State agency that is charged with the responsibility for specifying the content of a system and to authorize user access to information assets that are under the agency's jurisdiction. The Owner may delegate duties and/or responsibilities of ownership to the agency's Computer Security Liaison or other selected individuals within the agency; however, final accountability for the information assets rests with the Owner.

The Owner's responsibilities include ensuring that established controls are appropriate and effective, determining who will have access to data and to what extent, and specifying the necessary security controls that need to be placed over the data, and communicating the security control provisions to the Security Administrator.

The Computer Security Liaison is the individual assigned by the Senior Manager of the agency to represent the agency's interests in information security matters. The Computer Security Liaison performs the computer and network security tasks for the agency and is the information security point of contact for ICSD.

The Custodian is the agency that enters, stores, processes, and/or produces information for the Owner. The Custodian is the agency that has physical control of the computer equipment on which the information is stored; in most cases, this agency is ICSD.

The User is an individual in an agency who is authorized by and has permission from the Owner, or the Custodian if the Owner has delegated such authority, to access and use the information.

A Security Administrator is a person within ICSD who is the focal point for information security matters and is responsible for security administration and access management for specific ICSD's computer systems.

Responsibilities of User Departments

- Establishing, maintaining, and monitoring physical access controls to restrict unauthorized access to terminals, databases, files, or records that can affect the integrity of ICSD user transaction processing activities, including, but not limited to, financial information.
- Assuring that user-owned or managed networks, applications, platforms, databases, and network devices that may process data exports to ICSD-managed systems are logically secured.
- Enforcing and monitoring the segregation of duties that exist among individuals responsible for critical/secure activities.
- Assuring that user-owned or managed applications, platforms, databases, and network devices are properly maintained.
- Requesting and approving any desired modification requests for changes to ICSD-managed mainframe applications.
- Specifying frequency of data backup jobs, frequency of offsite rotation, and retention periods for departmental backup media.
- Environmental controls to protect user-owned or user-managed physical assets such as computer and network equipment and devices.

Key Applications

The Division develops, operates, and maintains many specific applications, computer systems, and telecommunications networks that the State departments and agencies rely on to meet their statutory and business missions. The following bulleted list describes the general key support areas that the Division provides to all State departments and agencies:

- Provide guidance in the use of information technology and standards.
- Develop, enhance, and maintain applications systems at the statewide and department level.

- Provide technical support for the State's computer hardware and software, local area networks, office automation, database management, Internet, and Intranets.
- Provide overall technical support for the State's telecommunications infrastructure.
- Operate a centralized computing facility and the network facilities that interconnect all State departments, agencies, and external entities, such as the Federal Government.
- Provide technical expertise to define agency computing and network requirements, procurement guidance, systems and software implementation assistance, problem resolution and troubleshooting expertise.

Noteworthy Outages

Fiber Optic Cable Damage Caused Loss of Network Connectivity for Many State Locations:

On the January 15, 2013, a fire under the H-1 freeway viaduct damaged Time Warner Oceanic fiber optic cables near the airport which resulted in lost network connectivity for the majority of the locations on the Oahu Institutional NETwork (INET) for most of the business day. A fiber optic bypass at the INET fiber hub at Kapiolani Community College (KCC) was put into place by ICSD and University of Hawaii staff to restore services in the afternoon. After restoration of Oceanic services, the fiber optic bypass was removed and the original connectivity was restored.

On January 24, 2013, another outage occurred in the same area which resulted in another similar loss of service. A fiber optic bypass was again put in place by noon.

For both outages, departments and agencies that were affected included: Department of Agriculture, Plant Quarantine Branch, DAGS Central Services Division, DOT Highways Division, DOT H-3 tunnel, Hawaii State Public Library, Aloha Stadium, Office of Elections, DOH State Labs, DOH Waimanu Training School & Hospital, Waipahu Civic Center, Kapolei State Office Building, and Hawaii State Hospital.

To reduce the State's dependence on one fiber optic communication provider, the State has since installed circuits from two public carriers in three geographic areas (Leeward, Windward, East Honolulu) for network redundancy and survivability.

UPS Caught on Fire Caused Data Center Outage:

On February 11, 2011, the 150kVA UPS in the Data Center caught on fire. The fire was quickly extinguished, but caused the UPS to shut down, causing all the attached computer and network equipment to be unavailable. A bypass switch has since been installed on the 150kVA UPS, allowing the Data Center equipment to be connected directly to the electric company's power source for any reason, including scheduled maintenance work, UPS failure, or during emergencies.

Halon Fire Suppression System Discharge Caused Data Center Operations to Halt:

On August 2, 2013, the Halon fire suppression system accidently discharged, which caused a 4 1/2 hour evacuation of the Data Center. The halt to the normal computer production jobs resulted in requiring staff to work overtime to get back on schedule.

The fire suppression system was fully operational in less than three months with the approval of conducting an emergency procurement. Prior to the fire suppression system being fully operational, 16 handheld fire extinguishers were purchased and deployed throughout the Data Center to provide interim fire suppression capability.

Challenges, Opportunities and the Road Ahead

- What are the challenges and opportunities the department is facing implementing business/IT projects?

  OIMT has been successful in developing the State's Business and IT/IRM Transformation Plan and have also been able to obtain funding from the Legislature. ICSD staff is participating in OIMT initiatives and projects, many of which align with improving and expanding the current ICSD operations, as well as looking to re-engineer existing business processes to reduce costs and improve the efficiency of State government.

  ICSD's staffing was severely reduced during the reduction in force (RIF) in 1995 and 2008. Staffing

dropped from 200+ full-time employees to 137 full-time employees which represents a reduction of over 33%. The loss of positions and potential future leaders has impacted the division's succession readiness, ability to take full advantage of business/IT opportunities, and increased the use of overtime. Compounding matters is an aging work force which will result in the loss of knowledge, skills, and abilities as staff retire with no one to pass their experience to.

Because of the staff shortage, there are many single points of failure which jeopardizes the operations of the division, should a staff member be on extended leave. The staff shortage also puts a strain on existing staff members as they are frequently asked to do more, whether it is for operational purposes or for new initiatives. Juggling and shifting work priorities and staff overload have become the norm.

Continued funding is required to maintain current operations and insure that the State's IT infrastructure is maintained at supported hardware/software levels. Failure to do so could result in cyber-attacks on the State's systems, databases, and networks which have personal identity information and/or critical financial data.

- **What are the next steps the department is taking on these projects?**

  The Cyber Security Team was established to address cyber threats. The team provides alerts to reduce the State's vulnerability to cyber-attacks, viruses, malware, and other suspicious activities. The State's security program is a key initiative that will continue to expand and grow.

  To address increasing demands for IT services, the division actively pursues updating/replacing components within the State's IT infrastructure to take advantage of newer technologies which is in concert with the State's Business and IT/IRM Transformation Plan. For example: The creation of a Private Cloud is one initiative that will address the need to consolidate the nearly two dozen data centers identified by an SAIC report. These data centers range from a handful of "data closets" of less than 200 square feet to large dedicated data centers that warehouse vast amounts of State information. Many of these data centers are essentially unprotected from unauthorized access, posing a risk to State data. Their scattered nature also complicates service, maintenance, and disaster recovery.

  One of the key initiatives of the OIMT is the creation of a new primary data center that will be located outside of the flood zone and capable of supporting increasing IT demands.

  The ICSD needs to request new positions which will be used to resolve staff shortages (e.g., single points of failure), improve succession readiness, and reduce overtime. Funding will also be solicited to maintain hardware and software at levels that will minimize vulnerabilities to cyber-attacks and obsolescence.

- **Current initiatives/opportunities:**

  Re-engineer business applications that are based on old methods, technology, or computer systems, which are no longer relevant and may hinder business transformation. Re-engineered business applications will enhance customer satisfaction by streamlining processes and improving efficiency.

  Go "green" by utilizing technologies that will reduce the amount of paper used. For example, PDF (portable document format) is a viable alternative that will reduce costs associated with paper supplies, make available floor space in the computer room used to store paper, and reduce manual labor associated with separating, checking, and boxing paper reports. During calendar year 2013, the division ordered 2,845 cases of paper to meet its Customer's need for hard copy reports. This equates to 13,162,500 sheets of paper.

  Offer network/application monitoring and configuration backup to departments. This service will allow departments to monitor and maintain their own IT infrastructure. Most departments have no monitoring systems and are unaware of problems until they are reported. Increasing awareness at the department level is a critical component to increasing network and application availability. A limited pilot is currently underway and responses have been very favorable.

Develop an information technology infrastructure that is based on standardized services and technologies that will facilitate the sharing of the State's IT resources, improve transparency, and reduce cost.

Develop services that are based on new technologies while reducing and/or eliminating dependency on "old" technologies. Old technologies, such as reel-to-reel tape drives, have been replaced with virtual tape systems that require minimum manual intervention and deliver faster processing speeds that improve data backup and recovery services.

Establish a private/hybrid cloud that will address the need to consolidate the nearly two dozen data centers identified by an SAIC report. These data centers range from a handful of "data closets" of less than 200 square feet to large dedicated data centers that warehouse vast amounts of State information. Many of these data centers are essentially unprotected from unauthorized access, posing a risk to State data. Their scattered nature also complicates service, maintenance, and disaster recovery.

Partner with the DAGS, Public Works Division (PWD) to: 1) have an engineering firm/consultant inspect the electrical system at the data center and produce an updated electrical blue print that maps equipment and circuit breaker connections; and 2) replace the Halon fire suppression system in the data center since Halon systems have been taken off the market.

Acquire short-term professional services to assist in the research, development, and implementation of new services, technologies, and standards while providing training and opportunities for State IT staff so they will be able to take over ongoing support. As an example, professional services can facilitate problem resolution, implement new services, and assist with monitoring existing services to proactively address potential issues.

Continue to increase network reliability to the ultimate goal of 99.999% availability through additional redundancy, hardening of critical sites (backup power, security, etc), and network redesign.

Establish additional data and telecommunications facilities on the islands of Oahu, Kauai, Maui, and Hawaii for redundancy and disaster recovery.

Key IT Initiatives and Opportunities/Challenges

- **ICSD's two key initiatives are to:** 1) maintain and operate the current systems that are used by State Executive Branch agencies and other State governmental entities; and 2) participate in the development and implementation of OIMT's initiatives as outlined in the 2012 IT/IRM Transformation Plan.
- ICSD now has the opportunity to improve the quality of IT services to benefit the State of Hawaii with increased funding given to OIMT from the Legislature. Historically, ICSD has not been provided sustainable additional funds over and above funds required to maintain existing computer and telecommunication systems. During periods of difficult economic times for the State, ICSD has had to reduce maintenance on existing equipment and software when budgets were reduced, which affected the services provided to State departments who serve the public.
- ICSD lacks an appropriate number and type of staff required to sustain operations for the current departmental business needs of the State while pursuing OIMT initiatives to apply new technology solutions through business re-engineering and process improvements.

Key Business/IT Portfolio

IT Quick Wins

- **What are the department's key business/IT accomplishments FY2012-2013?**

1. **Campaign Spending Commission**

    - To promote transparency in candidate and non-candidate committee contributions and expenditures, data from the Campaign Spending Commission (CSC) systems was extracted, transformed, and placed on the State's open data site, Data.Hawaii.Gov for easier access and improved search features that the public can use to locate information on candidate and non-candidate committees.

The Client Services Branch (CSB) applications support team received a letter of appreciation from the Executive Director of the CSC for the work performed.

- Act 112, SLH 2013 promotes transparency in spending by non-candidate independent expenditure only committees (i.e. Super Political Action Committees). Modifications were made to the CSC system to capture expenditures made by these committees and made available to the public for their review to determine which candidates are being supported or opposed by these committees.

  The CSB applications support team received a letter of appreciation from the Executive Director of the CSC for the work performed.

2. **State Government**

   Generation of 85,165 Form W-2 Wage and Tax Statements for calendar year 2012 for employees of the State Branches of government consisting of the Executive Branch Departments, the Department of Education, Hawaii Health Systems Corporation, the Judiciary Branch, the Legislative Branch, Office of Hawaiian Affairs, Library Services, and the University of Hawaii in accordance with the Internal Revenue Service.

3. **Department of Accounting and General Services**

   - The Affordable Care Act, a United States federal statute mandated a Medicare tax rate increase of 2.35% on high income earners that have gross earnings exceeding $200,000 annually. Changes were made to tax this group of income earners at the higher rate.
   - The Payroll Project Team consisting of CSB payroll applications support staff and the Department of Accounting and General Services' (DAGS) Central Payroll staff were recognized as DAGS' 2013 Team of the Year for their outstanding performance.

4. **Department of Accounting and General Services and Hawaii Employer-Union Health Benefits Trust Fund**

   - Determined the cost of an employee's employer-sponsored group health coverage and placed it on their W-2 Wage and Tax Statement to be in compliance with § 6051(a)(14) of the

Internal Revenue Code, enacted as part of the Patient Protection and Affordable Care Act of 2010 (the Affordable Care Act).

- Implemented new State tax withholding changes in recognition of Civil Unions in the State of Hawaii which was signed into law and became effective as of January 1, 2012. The law granted same-sex couples the same rights as married couples. The tax changes were needed because Civil Unions were not recognized under Federal law.
- The "Favored Nations Clause" allow Hawaii Government Employee Association (HGEA) members to receive the same benefits as another union if a better agreement is reached between that union and the State. To be in compliance with the "Clause" 24,961 medical reimbursement checks were generated for HGEA members since the United Public Workers (UPW) received a more advantageous medical premium percentage "split" than the HGEA received.

2. **Department of Accounting and General Services and the Employees Retirement System**

   - Retirement contribution rates for both employee and employer for those employees hired after June 30, 2012 were changed to be in compliance with Act 163, Session Laws of Hawaii (SLH) 2011. There are now two different employee and employer contribution rates based on an employee's hire date. A member's contribution is used in their benefit calculation.
   - Act 152, SLH 2012 amended the definition of "compensation" for Employee Retirement System members hired after June 30, 2012. Changes were

made for this group of members such that "compensation" is defined as normal periodic payments including shortage differentials; and does not include overtime, supplemental payments, bonuses, lump sum salary supplements, and other types of differentials. There are now two different definitions for "compensation" based on an employee's hire date. A member's compensation is used in their benefit calculation.

3. **Department of Accounting and General Services and Department of Human Resources Development**

   The "Favored Nations Clause" allow Hawaii Government Employee Association (HGEA) members to receive the same benefits as another union if a better agreement is reached between that union and the State. The imposed 5% across-the-board pay reduction for United Public Workers (UPW) and HGEA members was not applied in the same manner. Because of the "Favored Nations Clause", the HGEA was entitled to the same adjustment as UPW members. To be incompliance with the "Favored Nations Clause", salary schedules were restored to pre-reduction rates, HGEA members received a Statutory Time Off Without Pay adjustment amount similar to the UPW's Directed Leave Without Pay (DLWOP), and personnel actions of affected employees were retroactively corrected.

4. **Department of Budget and Finance, Budget Program Planning & Management Division (BPPMD)**

   - Enhanced web-based Capital Improvements Program (CIP) application (eCIP) to support HRS 37-72 by adding a function that generated Form S documents. The Form S is a summary of the department's proposed CIP lapses and new CIP requests. Departments and agencies will no longer have to enter information into spreadsheets. The BPPMD staff will have CIP detail and summary information in one source – eCIP. On average 500+ Form S documents are generated during the biennium budget and 300+ Form S documents are generated during the supplemental budget.
   - Enhanced web-based operating budget application (eBUDDI) by adding a function that eliminated the use of paper reports during the operating budget edit cycle. Edit reports are now available in electronic format, which eliminates waiting for the messenger and walking to the datacenter to pick up reports. This enhancement has been well received and other processes are being investigated.

5. **Department of Labor and Industrial Relations, Unemployment Insurance Division**

   - Implemented the Federal Unemployment Insurance Tax, Wage Reporting Interchange System (WRIS) Distributed Data Base Index (DDBI) to allow all states to access and share information from other states on reported wages via electronic requests. Allow Federal, state, and City & County government agencies to view Hawaii wage information on individuals who are seeking government benefits (e.g., unemployment benefits, Federal food stamps).
   - Implemented the Treasury Offset Program (TOP), which is a debt matching and payment offset system developed by the U.S. Treasury Department that allows database matches of delinquent debtor records owed to various Government agencies against Government payments (e.g., tax returns) to the debtor so that payments can be intercepted and delinquent debts can be offset in whole or in part.
   - Implemented direct deposit to provide a secure and faster method of unemployment benefits payment to claimants, which reduced manual processing, postage costs, and the amount of paper used.

6. **Department of Commerce and Consumer Affairs, Professional & Vocational Licensing Division**

   The application developed and supported by the ICSD tracks individuals and businesses from the time they submit an application for a license through the various review phases to final issuance of that license. Once licensed, the system helps ensure that the licensee complies with all regulations associated with the maintenance of that license. Over 40 professions and vocations encompassing over 100 license types are maintained by this system. Using information from the Hawaii Information Consortium's (HIC) web applications over 39,000 licenses were renewed on-line.

7. **Multi-Department, Legislative Tracking System (LTS)**

   This system helps monitor bills of interest during the legislative session. A workflow function is available to speed the approval of draft testimony thus helping to ensure its timely submission to the Legislature. The LTS can also serve as a repository of final testimonies as well as other documentation related to a bill. During the upcoming session, the system will be used by eight departments: Department of Business, Economic Development, and Tourism; Department of Transportation; Department of Public Safety; Department of Budget and Finance (B&F); Department of Land and Natural Resources; Department of Agriculture; Department of Labor and Industrial Relations; and Department of Human Resource Development. After each session, recommendations for improvement are collected and reviewed. Those agreed upon are scheduled for implementation the next session. This process promotes the use of a single shared version of the software, system consistency, scheduled system enhancement, and ease of software maintenance.

8. **Pilot Project to Reduce Mainframe Paper Usage**

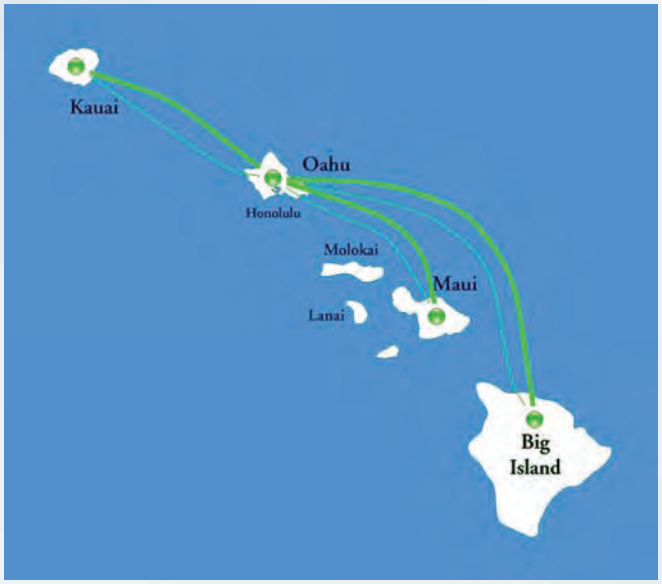
   The objective of this pilot is to investigate ways to reduce the amount of paper used by systems running on the IBM mainframe. To date, standard mainframe listings (e.g. Panvalet reports) have been converted to electronic format. The conversions of other paper reports are being investigated.

9. **Electronic File Transfer Systems**

   Upgraded the State's Secure File Transfer Facility that is utilized to transfer electronic files between the State and its business partners in a secure manner. The upgrade included the migration to shared storage with load balanced architecture to increase the availability of the service and enhanced account requirements in the form of password complexity, lifetime and failed login attempt requirements to increase the overall security of the system.

10. **Mainframe Security**

    - Upgraded the State's Virtual Private Network (VPN) System that is utilized to access the State's Mainframe. The upgrade included the migration to an Active/Passive environment to increase the availability of the system and implemented enhanced account requirements in the form of password complexity, lifetime and failed login attempt requirements to increase the overall security of the system.
    - Password complexity was enhanced by implementing 100 character passphrases for Time Sharing Option (TSO) IDs on the State's Mainframe Hosts.

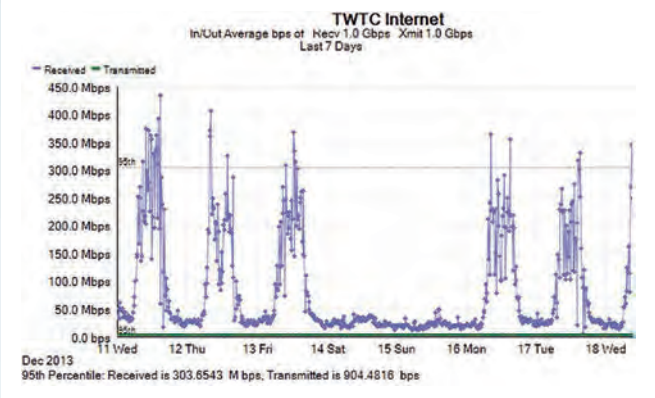


11. **Network Improvements**

    - Network upgrades to downtown Honolulu has increased network capacity by 10 fold (1Gbps to 10Gbps) to provide a high speed infrastructure to support services to government agencies for critical applications such as Enterprise Resource Planning, Private Cloud, Virtual Desktop Interface (VDI), Voice over IP (VoIP), desktop video, high speed data backups, and other services. These services not only reduce cost to government but provide productivity gains by allowing State agencies to work more efficiently and collaboratively as an organization.
    - Upgrades to the data center network infrastructure now allow speeds up to 40 times faster (1Gbps to 10Gbps and 40Gbps) than previously available. The infrastructure will support the deployment of Private Cloud and consolidated computing services that allows State agencies to deploy public and

internal support services faster while reducing cost and deployment time of services to State agencies and the public.

- Completed 99% of the State's network migration from a Virtual Local Area Network (VLAN) based network to a private Multi-Protocol Label Switching (MPLS) network. MPLS supports faster recovery from network faults over a VLAN based network and provides additional network services to customers i.e. Quality of Service (QoS), Traffic Engineering, etc while keeping network traffic in distinct virtual private networks.
- The deployment of redundant broadband Ethernet circuits from two public carriers to various locations on Oahu, Kauai, Maui, and Hawaii has resulted in unprecedented reliability for the State's network and supports the "always on" nature of today's network and computing services. Network failures that previously affected hundreds/thousands of users or an entire island that could last several hours may now go unnoticed or result in an outage lasting just a few seconds. These circuits have been installed in separate geographic regions on the islands. On Oahu, the circuits are located on the Leeward, Windward, and East Honolulu sides of the island. On Hawaii, circuits are located in Hilo and Kona. On Maui the circuit is in Wailuku and a circuit will be installed in Kihei in the coming months. In addition, the use of two public carriers results in further network diversity that reduces the likelihood that a single event affects all connectivity.
- Completed the installation of a 100Mbps broadband Ethernet based host circuit that provides high speed connectivity to remote State offices across the State. The host circuit provides significant savings to the State by eliminating the need for each department/agency to acquire departmental host circuits for their respective remote offices. By December 31, 2013, this circuit will completely replace a 45Mbps Frame Relay host circuit that supported approximately 80 remote offices with speeds up to 1.5Mbps. The broadband Ethernet circuit can be scaled up to 1000Mbps to support higher remote office bandwidth speeds i.e. 100Mbps and more locations providing an Enterprise wide solution over a ubiquitous network technology.
- Completed the deployment of three Internet Service Provider (ISP) connections to two separate locations among two providers. These connections assures redundant delivery of Internet services to the main data and telecommunications centers and ensures that no single location or ISP failure will result in a loss of Internet service to State departments or public access to online government services. In addition a fourth ISP connection with one of the two carriers will be established on the island of Maui for additional diversity.

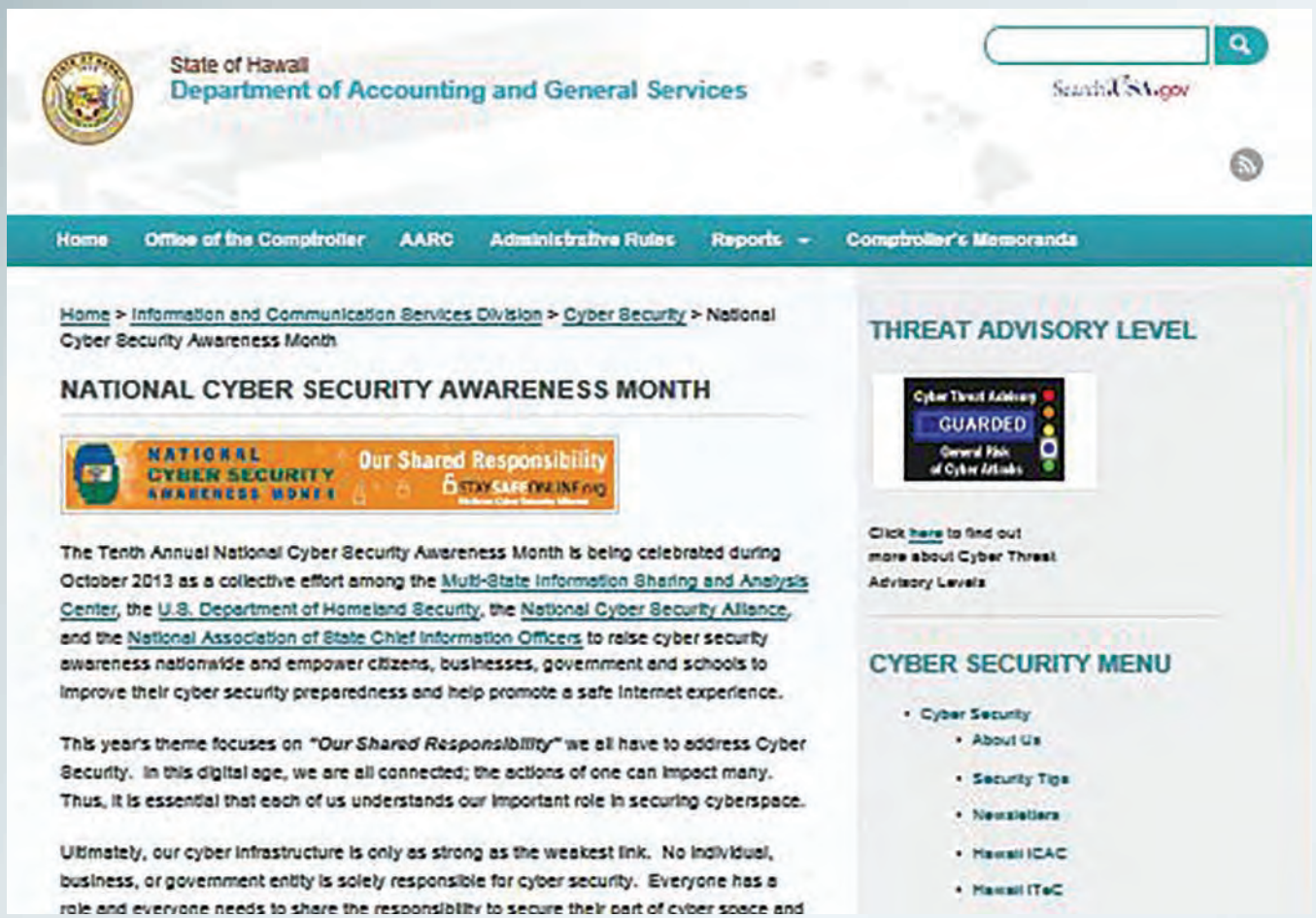


Bandwidth from Internet over TW

- In the process of turning up additional, purpose built, data and telecommunication facilities for network and computing redundancy and disaster recovery (DR). Space at collocation facilities at DRFortress and SystemMetrics on Oahu has been procured. In addition, space has been acquired at the Maui Research & Technology Center (MRTC) for an interim data center in Kihei, Maui. Space for DR, backup, and telecommunications services have been reserved at the new University of Hawaii Information Technology Center. All locations are expected to be fully operational by the close of fiscal year 2014.

12. **Data Center Improvements**

- The Data Center returned to 24/7 operation after additional computer operator positions were authorized and hired. The increase in shift operations allows computer production jobs to be run on the weekends and holidays, instead of during the day shift, and provides our customers with more systems availability. For example, the on-line CICS regions start at 6:00 a.m. instead of 8:30 or 9:00 a.m. on the weekends and holidays.



- **Completed two physical security replacement projects to protect the Data Center:** door access system and a video surveillance system. The systems were too old to be placed on maintenance, was experiencing problems, and replacement parts were no longer available. The new systems provide the required physical security needed to protect the Data Center.

13. **Cyber Security Initiatives**

- Participated in the annual October is Cyber Security Awareness Month program sponsored by the MS-ISAC, the National Cyber Security Division, and the National Cyber Security Alliance to raise cyber security awareness among the government work force, and hosted a Cyber Security awareness presentation that was opened to interested staff in all State departments.

Cyber Security Awareness Month

- Investigated and notified users of 262 State-wide security events, an increase of 188% over last year. Events are identified by internal devices such as Intrusion Prevention Systems (IPS), Security Information and Event Manager (SIEM) and Secure Web Gateway (SWG), and external sources such as the MS-ISAC Albert Systems, Symantec Managed Security Service (MSS), and US Computer Emergency Readiness Team (US-CERT).
- Upgraded the Data Loss Prevention (DLP) System to position it to work seamlessly with the OneNet Network that will be implemented in the near future. Also installed and configured the Email solution for the Lotus Notes Email systems.
- Upgraded the Security Information and Event Management (SIEM) systems to enable logging and correlation of events at a higher events-per-seconds (EPS) rate in order to facilitate the future OneNet network.

- Researched, tested and procured a File Integrity Management (FIM) solution to monitor Tier1 servers for unauthorized changes to core files within the servers. The FIM solution will provide information of any changes to the core files and display exactly what was changed, and can also prevent files from being changed.
- Developed and implemented the Cyber Security Team (CST) Application. This application allows CST to track and record all phases of a security event. The application also tracks firewall rules associated with the event and is able to create reports on Cyber Security incidents. CST utilizes this application on a daily basis.
- Procured 1250 seats of SANS Securing the Human Security Awareness Program. Cyber Security Team will be administrator of the Securing the Human Cyber Security Awareness Program which is a computer based online training for all users of the State of Hawaii Electronic Information systems.
- Built and currently configuring the Security Operations Center (SOC) which is tentatively scheduled to be in operation by the end of December 2013. The SOC will allow the Cyber Security Team to have the latest in technology to monitor and maintain a safe enterprise for the State of Hawaii.

- **How do the department's business/IT projects align with the Governor's New Day Plan?**

1. We strive to be a shared services delivery and support unit that focuses on providing standardized information technology (IT) services to its customers. This model allows us to leverage our skills, resources, and assets while reducing costs through economies of scale and standardized solutions. Our customers will benefit from effective, coordinated, and cost-beneficial IT services. We also seek to develop partnerships with others to foster the sharing of State IT resources.
2. We seek to develop services that are based on new technologies while reducing and/or eliminating dependency on "old" technologies.
3. **We support government transparency by adding enhancements which will make information more available to the public. For example:** We have enhanced the Campaign Spending Commission systems such that data can be extracted and transformed for use in the State's open data site, Data.Hawaii.Gov. Contribution and expenditure data is now more readily available and searchable by the public. Pre-developed views (reports) can be accessed by the public and/or the data can be downloaded such that the public can create their own views.
4. In-house projects which promote electronic file transfers, enhance security, and maintain up-to-date software align with making sure that existing facilities and services are dependable, efficient, and secure.
5. Implement technology that is more redundant and implements infrastructure capable of recovering from failures without system outages.

- **How do the department's current projects help achieve the business and technology transformation for the State of Hawaii?**

1. Provide IT services that support mission critical applications (e.g., payroll, human resources, and accounting) that are key components of the new Enterprise Resource Planning system (ERP) system. Staff assigned to these applications are members of the "Future Support Team" and will serve as subject matter experts who will participate in the development, implementation, and on-going maintenance of the ERP system. The ERP system is one of the top initiatives in the State's Business and Information Technology Transformation Plan as proclaimed by Governor Abercrombie.
2. The hardware and software maintained by the division, such as the electronic file transfer software and mainframe security software, directly or indirectly contribute to the consolidation and modernization of the IT infrastructure. Working in concert, they provide reliable and redundant services for all State departments and agencies.

- **How do projects align with OIMTs Top 3 Strategies (Re-engineer business processes and applications, modernize technology and infrastructure, and establish oversight management and governance)?**

1. Looking for opportunities to add more value to existing legacy IBM mainframe applications by incorporating new technology, such web based front ends that will allow users to enter and retrieve information on-line, real time. These are temporary improvements until new solutions are in place.
2. Becoming more "Green" by replacing paper reports with information available in electronic format will not only save money but will make government more transparent by increasing the availability of information.
3. Participating in the reengineering of existing business processes (e.g., payroll, human resource, and accounting) by joining work groups involved in key IT projects, such as the ERP Project. "The implementation of the ERP system is one of the top initiatives in our state's Business and Information Technology Transformation Plan, unveiled and launched last year," Gov. Neil Abercrombie said. "The ERP system will dramatically improve the way government conducts its business by reducing labor-intensive, paper-based processes, eliminating the need for duplication of efforts, and allowing state workers to provide improved services to taxpayers faster, more efficiently, and at a reduced cost."
4. Joining work groups that will develop oversight and governance policies and procedures.
5. Initiating projects to implement/modernize the State's IT technology and infrastructure, such as the electronic file transfer systems, security, and software upgrades.
6. Implementing network improvements which are critical to supporting business transformation by ensuring IT services are always available and responsive for government to effectively and efficiently serve the public. Prolonged network outages or severe response times affect not only online services but impact store front services to the public when customer support applications are unavailable or unresponsive.
7. Replacing computer equipment that is out-of-date will modernize, improve the reliability, and provide for a stronger infrastructure.

10.3.2 DEPARTMENT: AGRICULTURE

Information about your Department:

- **CIO Name: Helene Okamura**
- **Things to know about the department:** More than 270 employees located in 18 offices throughout the State of Hawai'i; support, protect and promote Hawai'i's agriculture and aquaculture industries. The Department of Agriculture's (DOA's) activities range from providing land and water for local farmers, financial assistance, and raising the demand for local foods, to preventing the introduction of alien species and diseases. The DOA is also responsible for protecting consumers, businesses, and manufacturers from unfair practices, based on a measurement process or subject to a standard of quality which includes devices such as scales, taxi meters and gas pumps, grading of eggs and labeling of Hawai'i agricultural products.
- **Department website URL:** hdoa.Hawaii.gov

Current Business/IT Environment

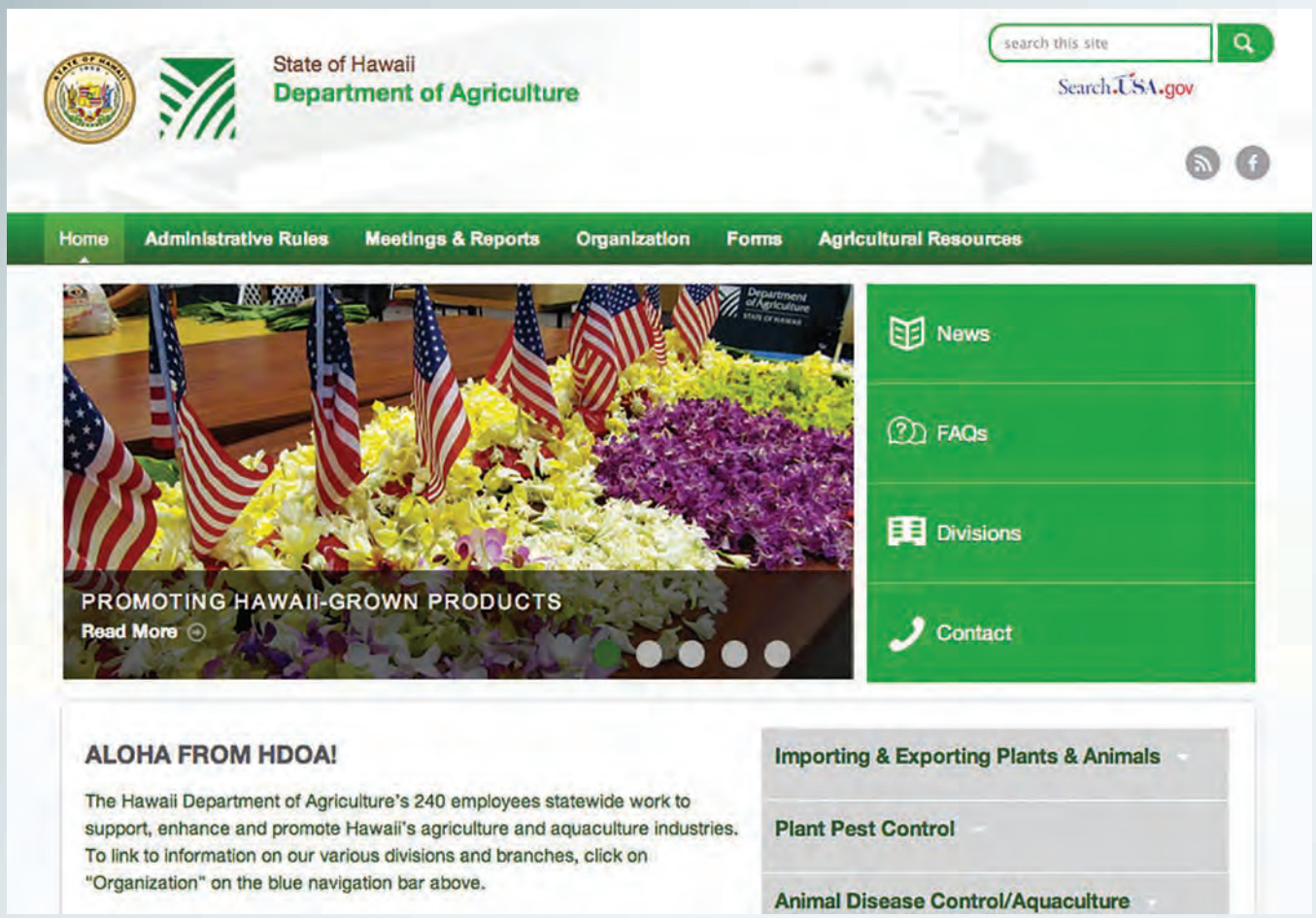
- **Business/IT Mission and Vision:** The Department of Agriculture's mission is to re-establish agriculture as essential to the well-being of our island society by rejuvenating the economy, protecting important resources, and gaining greater self-sufficiency in food production and alternative energy development. The Department works to support, enhance, and promote Hawai'i's agriculture and aquaculture industries. It is responsible for animal quarantine, plant and pest control, and is a resource for travel and shipping information.
- **Description of Business/IT Environment:** Historically, the department has been self-sufficient, enhancing and maintaining legacy systems in-house and updating devices at end of life. Only one application is being maintained by a consultant. Today, the department is looking to re-engineer its business processes to take advantage of new technologies and OIMT enterprise architecture.

Key Applications

- Agriculture Resource Management Information System for Irrigation Systems, Agricultural and Non-Agricultural Parks
- Scada system for Moloka'i and Waimanalo irrigation systems
- Accounting/requisition/purchase order and petty cash system
- **Invicta** — Plant quarantine permit and inspection information system
- **Animal Quarantine Information System** — Pet/owner information, animal veterinary qualification, operation and accounting for the Animal Quarantine Station
- **WinWam/AR** — Weights and measures device tracking and accounts receivable system
- Agriculture Loan Management System
- Pesticides Registration System
- Hawai'i Agricultural Food and Products Database

Challenges, Opportunities and the Road Ahead

- The major challenges faced by HDOA are funding and resources. Less than 1% of the State's budget is allocated to the Department of Agriculture. There are only two IT Specialist positions for the department. Only one is currently filled.
- As for next steps, the Department of Agriculture is updating equipment no longer under warranty and is replacing legacy applications to take advantage of newer technologies and business processes, while being in line with OIMT enterprise architecture and business transformation goals.



- Current initiatives/opportunities:
  1. Updating older computers and implementing Microsoft Office 365 department-wide.
  2. Re-engineering legacy systems as funding is available.
  3. Educating the agricultural community and the public on food safety, and promoting local agriculture.

Key IT Initiatives and Opportunities/Challenges

- Need more public-facing Web applications to get information out to the community (e.g., promoting local agriculture, food safety, product availability, agricultural education and regulations).
- Allow agricultural community and public the means to access frequently requested information. Some legacy systems will need to be re-engineered.
- Re-engineer business processes and implement technologies to be more efficient and reduce the amount of paper processed. Looking at using SharePoint to address some of the workflows.
- The DOA is very interested in adopting a system used in California because it tracks produce statistically; food safety is federally mandated, so a process must be developed; Invicta is working toward this.
- Re-engineer legacy business applications to streamline processes and improve efficiency as funding is available.

Your Key Business/IT Portfolio

IT Quick Wins

- **Key business/IT accomplishments FY 2012–2013:**
  1. More transparency and improved communication with the agricultural community and the public.
     - Licensed Pesticides Listing available through Data. Hawaii.gov is top-viewed site.
     - Statewide farmer's market listing available through Data.Hawaii.gov is the second-most-accessed site.
     - Department of Agriculture available on Facebook.

2. **Improving the State's irrigation systems** — Implementation of Scada systems for the Moloka'i and Waimanalo irrigation systems.

3. Updating the department's infrastructure to be in line with OIMT's Enterprise Architecture.

   - DOA is now an Organizational Unit (OU) under OIMT/ICSD's Active Directory.
   - Converted DSL lines to RNS lines at 10 remote sites.

- **Alignment with the Governor's New Day Plan:**

  Food and Agriculture — An Agriculture Renaissance in Hawai'i calls for protecting important resources, gaining greater self-sufficiency in food production, increasing demand for local foods and supporting agricultural exporting. The department's mission and projects fall in line with the Governor's New Day Plan. More specifically:

  1. The installation of the Scada system provides tools to maximize the transportation of water efficiently. Currently installed at the Moloka'i and Waimanalo irrigation systems, it will be expanded to include the other irrigation systems.
  2. Utilize various media to raise the demand for local foods and agricultural products such as the "Buy Local, It Matters" promotion and "Seals of Quality" program.
  3. Based on previous statistics, the majority of leafy greens consumed locally was imported. The department worked with local farmers to increase production of leafy greens, and the latest statistics show that 40% of the leafy greens consumed are now from local farms.

- **How current projects help achieve business and technology transformation for the State of Hawai'i:**

  The department looks at ways to be more efficient, especially when personnel resources are limited. The use of technology is often a means to streamline and provide improved access to information. For example:

  1. The Licensed Pesticides Listing available through Data.Hawaii.gov allows staff, dealers, and the public to not only see which pesticides are licensed in Hawai'i, but also to look at the actual label that contains directions on its use. Pesticide companies are able to run their own reports as to which pesticides need to be renewed. A current project is to integrate all the activities for the Pesticides Branch to improve the sharing of information.
  2. Through solar-powered devices, the Scada systems allow for the monitoring of irrigation water flows from a computer at a central site. Future projects will expand monitoring to include additional irrigation system. Enhancement will include the ability to remotely control water valves, gates, and pumps.

- How department projects align with OIMT's Top Three Strategies (re-engineer business processes and applications, modernize technology and infrastructure, and establish oversight management and governance):

  Aligning projects with OIMT strategies is highly beneficial, especially for smaller agencies with limited resources.

  1. Being an OU under the State's Active Directory already positions the department to be under the oversight and management of OIMT. Working on implementing Office 365 department-wide. Future plans are to move department servers to OIMT VM servers when they near end of warranty.
  2. All sites network through OIMT/ICSD to enable oversight and management by OIMT/ICSD. Future plans are to expand the fiber network to include multi-agency sites.
  3. Looking at re-engineering business processes and applications solutions to replace legacy applications in line with OIMT's Business Transformation. This includes investing in systems/modules that have enterprisewide licenses, provided they meet project requirements. Coordinating with other agencies that have the same business function.

10.3.3 DEPARTMENT: ATTORNEY GENERAL

Information about your Department:

- **CIO Name: Liane Moriyama**

  a. **The department has four distinct Information Technology (IT) groups:**

  - Hawai'i Criminal Justice Data Center (HCJDC)
  - Juvenile Justice Information System (JJIS)
  - Child Support Enforcement Agency (CSEA)
  - Information Systems & Technology (IST) — management for the Legal Services Divisions

  b. The department does not have a department-level IT Manager currently; however, a supplemental budget request has been submitted to add a department IT Manager to direct and coordinate the department's overall IT strategy.

  c. **The department's website can be found at URL:** http://ag.Hawaii.gov/

Current Business/IT environment:

a. Our Business/IT Mission is to move toward a more unified IT management structure under a department-wide IT strategic plan. This would improve the effective use of resources and also take advantage of synergies and buying power for the entire department. These recommendations came from a study done in 2003 by the Conference of Western Attorneys General and reinforced by a 2012 study done by the National Association of Attorneys General.

b. Our budget request for a department IT Manager who will lead the development of a Strategic Plan is the first significant step in achieving this goal.

Key Applications:

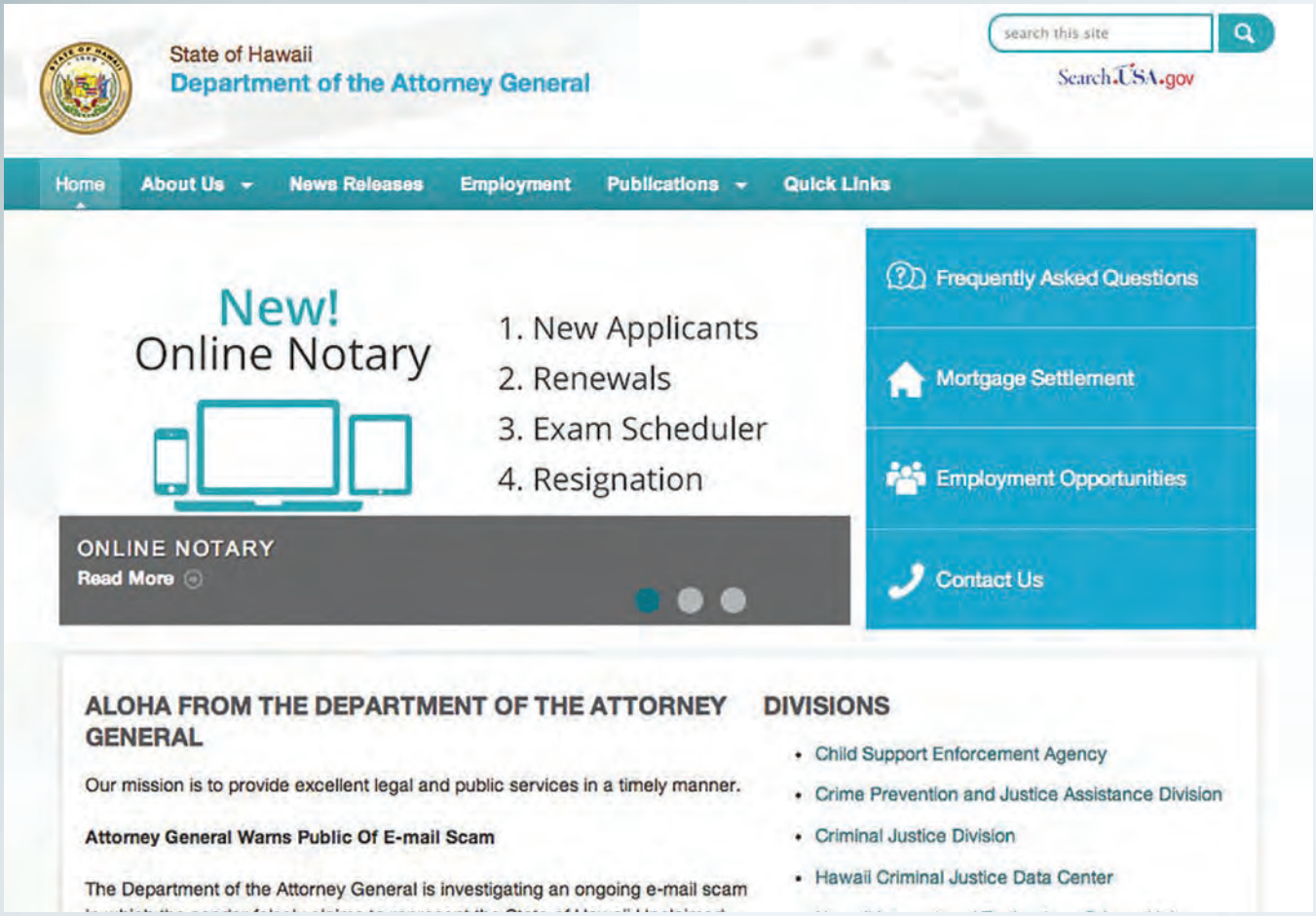
- ProLaw (case management)
- iManage (document management)
- Westlaw (for research)
- Word and Word Perfect
- **HIJIS** — Hawai'i Integrated Justice Information Sharing
- **JJIS** — Juvenile Justice Information System
- **CJIS-Hawai'i** — Criminal Justice Information System
- **AFIS** — Automated Fingerprint Identification System (federal)
- **NCIC/NIets** — National Crime Information Center/ The International Justice and Public Safety Network
- **Green Box** — Statewide Real-Time Arrest Booking
- Sex Offender Registration
- **Criminal history record checks** — eCrim and Public Access
- **KEIKI** — Child Support Enforcement (federally certified system)

Challenges, Opportunities and the Road Ahead

a. When a department has four IT entities that provide such diverse services using information technologies that are just as diversified, our challenge is to implement and maintain business/IT systems that can maximize the use of limited resources, streamline operations, and accomplish all of this in a practical and cost-effective way.

b. Given the resources needed, we have an immense opportunity to take advantage of more-current and improved technology to merge operational systems such as our case management and document management systems, reduce overall costs, and raise staff efficiency at the same time.

c. Our department is taking the first critical step by seeking to establish an IT leadership position, one that will be empowered to assess all IT operations, to develop and manage a Strategic Plan that will unify operations, as much as practical.



Key IT Initiatives/Opportunities:

- CSEA has a digital project under way for content management of all case records.
- CSEA has a new decision support system that views all cases to identify trends and trouble spots.
- HCJDC has digital end-to-end Lights Out processing (fingerprints, mug shots, etc.) in CJIS-Hawai‘i.
- HCJDC, in partnership with the Honolulu Police Department (HPD), is implementing facial recognition.
- HCJDC launched the HIJIS program, which is one of the largest information-sharing initiatives in the State. More details are provided in the attachment.
- JJIS is working on a “next generation” system redesign.
- There is a critical need for IT strategic direction to reach our goal of an all-digital, paperless environment. There are challenges with tying information to case documents.
- There are issues with storing documents in native formats, due to difficulty locating information and the fact that the search function in iManage does not work well. Therefore, we are looking for better legal services software packages that support trial documentation, research support, and practice management.

Key Business/IT Portfolio

a. **IT Quick Wins:**

- Migration to Office 365. A more robust email system (than Lotus Notes) that enables mobile access and integrates with ProLaw and iManage. This is a critical need, especially because attorneys and certain professional staff must have access to email at all times.
- Our department's one key business/IT accomplishment in FY 2012–2013 was to upgrade our Pro-Law system; however, a further upgrade to Pro-Law and iManage may be necessary to integrate with Office 365.
- Need calendar/scheduling software (something with the functionality of TimeMatters to provide reminders for complaint/answer dates).
- Need to upgrade to the latest versions of Microsoft Office products — there are too many versions in existence, which makes it difficult to share files.
- Need to upgrade computers; not sure if their processors are adequate for the latest versions of the software.
- Need remote access to documents; many attorneys and professional staff work from remote locations or at home as needed.
- Disaster recovery and business continuity plans are a priority, and an AG backup strategy is the first essential part that is being addressed for these plans.
- Need fast and efficient training for staff to bring them up to speed quickly on new versions of software; train power users to mentor others.

b. **How current projects help achieve business and technology transformation for the State of Hawai'i:**

- **CSEA** — These business/IT projects align with the Governor's New Day Plan by: 1) improving the level of services we are able to provide client agencies; 2) improving the services we are able to provide to children of divorced households; and 3) providing better information and service to enforcement agencies who depend on our information.
- **HCJDC** — The projects listed under key IT Initiatives/Opportunities contribute to the business and technology transformation for the State by: 1) providing near-real-time response for key criminal justice agencies, such as the police and parole/probation agencies; 2) improving query services to multiple systems, which reduces data retrieval time and errors; and 3) working on single sign-on capabilities for authorized users of multiple systems.

c. How department projects align with OIMT's Top Three Strategies (re-engineer business processes and applications, modernize technology and infrastructure, and establish oversight management and governance):

- The projects listed under key IT Initiatives/Opportunities are in alignment with OIMT's strategic direction because each initiative addresses the re-engineering and modernization of existing business and IT processes. For example, for HCJDC/HIJIS 1) working to develop federated identity management (FIM) for single sign-on access by authorized users to different but related systems under the HIJIS project; 2) incorporating crime-fighting technology such as Morpho Face Investigate (MFI), which performs facial recognition; and 3) providing instant email alerts on re-arrested offenders for certain criminal justice agencies.

10.3.4 DEPARTMENT: BUDGET AND FINANCE

Information about your Department:

- **CIO Name: Budget & Finance (B&F)** does not have a CIO.
- **IT services are provided by the following IT groups:**

  a. The Administrative and Research Office (ARO) Information and Technology (IT) that supports the B&F Proper divisions [Director's Office, ARO, Financial Administrative Division (FAD), Budget, Program Planning & Management Division (BPPM), and Office of Public Defender (OPD)];
  b. The Employees' Retirement System (ERS) IT;
  c. The Hawai'i Employer Union Trust Fund (EUTF) IT;
  d. The Public Utilities Commission (PUC) IT.
- **Department website:** http://budget.hawaii.gov
- **Current Business/IT Environment:**
  - **Business/IT Mission and Vision:** To support the departmental business strategies through the development, implementation and management of its technological resources; to provide department staff with timely and professional IT support and services through collaboration with IT professionals among the B&F programs, attached agencies and the external IT agencies and their staff.
  - **Description of Business/IT Environment:** The B&F IT includes the IT professionals in the B&F proper and the administratively attached agencies. Led by the ARO IT, the IT employees are responsible for providing IT services to their corresponding divisions and agencies that are responsible for Hawai'i State's budget and financial administration, employee healthcare and retirement benefits, as well as various public services functions such as Public Utilities Commission, Public Defender and Unclaimed Property. Responsibilities include the creation of departmental IT policies and procedures (including use of Wi-Fi and BYOD); providing oversight and coordination for the execution of departmental IT policies and procedures with regards to the ERS, EUTF, and PUC. The ARO IT is also responsible for providing direct technical and user support for the Director's Office, ARO, BPPM, FAD and the OPD, which is also an attached agency.

Key Applications:

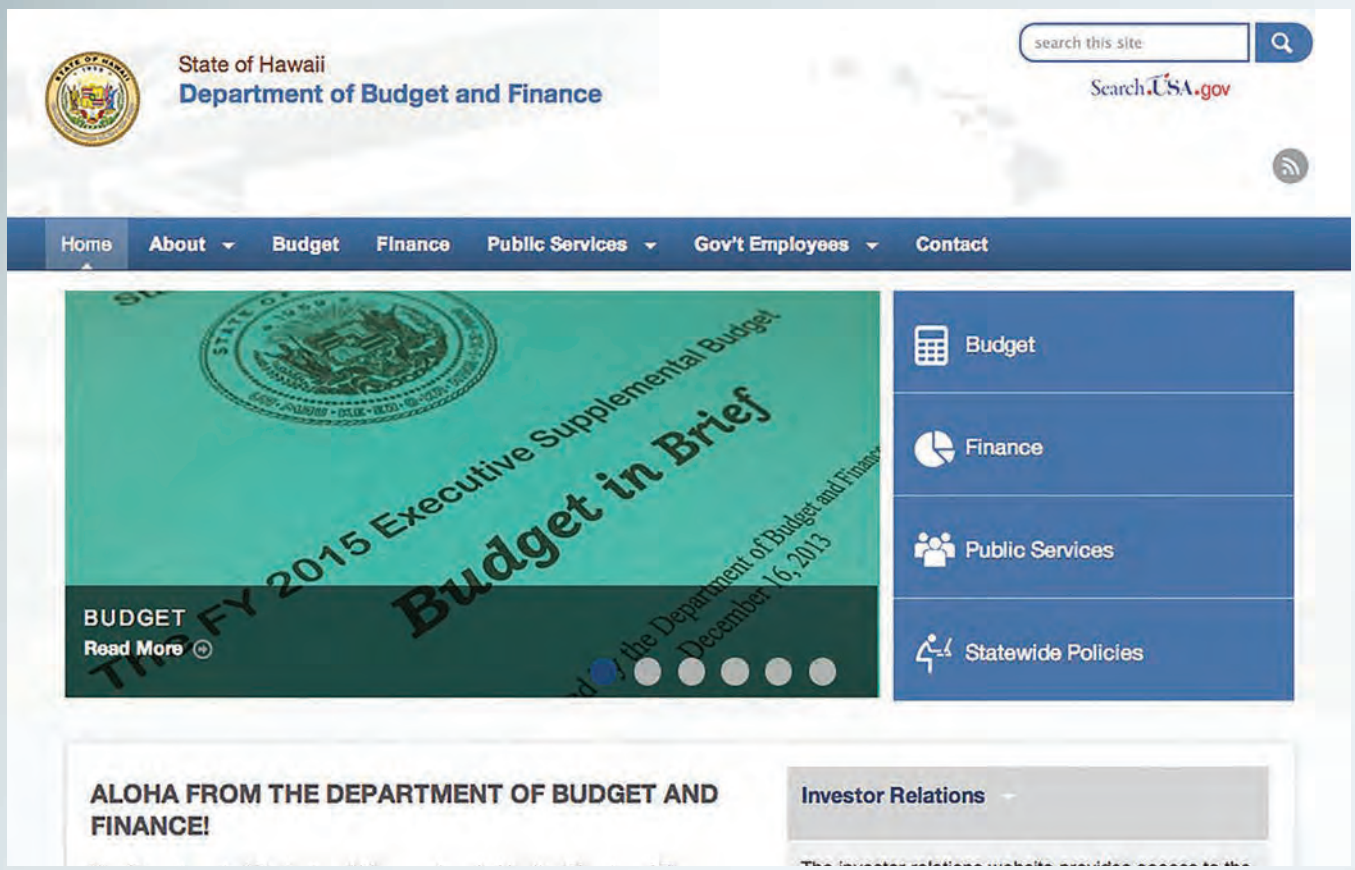
- Email (Lotus Note for all divisions; Outlook/Exchange for ERS)
- E-Applications that support the central agency budget functions for BPPM
- DMS (Document Management System) for PUC
- Telephone Automated Call Distribution (ACD) System for EUTF
- UPS 2000 (Unclaimed Property System)
- Great Plains (Treasury Division)
- Oracle Financials (Accounting for ERS)
- V3 (Benefit Administration System for EUTF and Pension Management Information System for ERS)
- QuickBooks (Accounting and Financials) for EUTF

Challenges, Opportunities and the Road Ahead:

- **Challenges and opportunities the department is facing in implementing business/IT projects:**

  a) The lack of IT staff resources limits our ability to effectively lead, develop, and manage the department's strategic IT missions; enforce the IT policy and procedures; thoroughly research and provide technical oversight for requests submitted by the programs; and ensure timely and successful execution of projects.
  b) Budgeting, changing regulations, enforcing HIPAA regulations.
  c) ICSD's retirement of the on-premise Lotus Notes email system in 2014.
  d) Office 365 migration possibility for the programs and attached agencies.
  e) PUC management staff requirements for mobility inside and out of the office.
  f) Changes in laws and regulations, and the continuing need to provide quality customer service.
- **Next steps the department is taking on these projects:**

  a) The department submitted a budget request for additional professional IT staff to add the capacity to effectively perform and fulfill the operational IT



needs; implemented Wi-Fi networks to enable the department's executives to utilize a secured Wi-Fi network using State-issued devices, and to allow other State personnel, associates, and vendors to access Internet resources via our guest wireless network. Departmental Wi-Fi policies are in development.

b) **ERS:** Planning, scheduling, and implementing computer system modification to address statute changes;

c) **PUC:** joined the Office 365 pilot project and is in the process of migrating to the State's Enterprise Active Directory (EAD) and converting existing Lotus Notes email accounts to MS Outlook; installing Wi-Fi at the office, and expanding distribution of mobile devices to selected management and professional staff; developing mobile strategies and supporting policies.

d) **EUTF:** Joined the Office 365 pilot project and is in the process of reaching out to OIMT to obtain Business Associated Agreements required to comply with the HIPAA security regulations to ensure that State employees' confidential health information is protected properly; if needed, to hire new staff; to prioritize hardware and software purchases; and to implement and review encryption options for all hard drives.

Key IT Initiatives/Opportunities:

- Centralized purchasing for commodity IT is an opportunity;
- Budget-to-actuals computer system;
- Implementing changes in the laws and regulations requires programming changes to the ERS and EUTF systems;
- Interfacing with the proposed Enterprise Resource Planning (ERP) system for data requirements.

Key Business/IT Portfolio:

IT Quick Wins

- 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 the citizens of Hawai'i, the Legislature, and each department;

- **Security assessments of systems with PII and HIPAA** — EUTF would like this done;
- Enterprise approach to financials statewide (vs. Tax, DOE, ERS, etc., procuring separate solutions);
- A statewide procurement system that facilitates smart buys across the state (e.g., licenses, selected solutions);
- An updated system capable of producing budget-to-actuals spending report;
- EAD and email migration;
- Great Plain (accounting application for Treasury) server and UPS 2000 server (Unclaimed Property System) virtualization.

- Key business/IT accomplishments in FY 2012–2013

  - DBF website migration from Plone to WordPress;
  - Developed and implemented the new IT policies and procedures; deployed user access forms for departmental IT security control;
  - PUC DMS enhancement for electronic filing (eFiling);
  - ERS has implemented Phases 2 and 3 of Act 153/2012 and Act 163/2011;
  - EUTF prepared W-2 employee and employer contribution amounts for several departments based on Affordable Care Act requirements; HGEA Favored Nation refund project to calculate premium refunds to employees.

- How do business/IT projects align with the Governor's New Day Plan?

  - Where a common ground can be established that serves both parties, ERS is looking to align with the Governor's New Day Plan. An example of this would be data exchange of Payroll, Personnel, Vacation and Sick Leave, and Death notification information;
  - The IT infrastructure upgrade will better position the department for ERP, which is part of the Governor's New Day Plan;
  - EUTF is starting to work with various departments to share employee demographic information, starting with the DOE.

- How do the department's current projects help achieve the business and technology transformation for the State of Hawai'i?

  - The replacement of the updated network equipment allows the network to be manageable, and offers higher bandwidth and network stability and reliability so that the data transfers and access to the internal and State network are more efficient.
  - In November, the Unclaimed Property System was upgraded. The new UPS 2000 system should position B&F to proceed with the digital archive and process automation. The new server is moved to ICSD's computer room to ensure physical security, and to enable us to utilize the backup infrastructure to back up and safeguard the data properly;
  - PUC updates to DMS and website improve accessibility to the Commission's information and services;
  - EUTF is starting the process to exchange employee demographic information with other departments. EUTF also has redesigned its website for mobile access and ADA compliance. EUTF continues to reduce paper usage by scanning all enrollment documents into electronic format.

- How do projects align with OIMT's Top Three Strategies (re-engineer business processes and applications, modernize technology and infrastructure, and establish oversight management and governance)?

  - Virtualizing B&F servers utilizing OIMT's VM infrastructure will ensure faster system recovery in case of disasters, and reduce the cost of procuring new hardware and maintenance; the department is also interested in OIMT's proposal of simplifying and consolidating common hardware and software procurement and administration.
  - By providing secure data exchanges, ERS has significantly reduced paper and has enabled the use of workflow efficiencies; ERS will also be working to modernize and re-engineer its investment and accounting functions during the latter portion of FY 2014; ERS would like to participate in the streamlining and consolidation of selective procurement activities such Microsoft licenses, personal computers, laptops, mobile devices, Oracle licenses, etc.
  - EUTF is working to reduce errors by facilitating the exchange of employee demographic information with other departments; EUTF is also on the pilot program to move its email system to the cloud using Microsoft Office 365; EUTF is looking to upgrade its telephone system to a cloud-based system, which would allow more-flexible use in the case of a disaster.

10.3.5 DEPARTMENT: BUSINESS, ECONOMIC DEVELOPMENT, AND TOURISM

Information about your Department:

- **Things to know about the department:** refer to http://dbedt.hawaii.gov/overview
- **Department website:** http://dbedt.hawaii.gov

Key Applications:

- IBM Notes
  - **Legislative Tracking System (LGS)** — created internally by DCCA
  - Document Tracking System (DTS)
- GIS for the State (maintained by the Office of Planning)
- Creative Industries Division
  - Film permit log
  - Purchase order log
- **HHFDC** — Microsoft Great Plains HTDC — QuickBooks Pro

Key IT Initiatives/Opportunities:

- The organization is very creative in identifying ways to use social media, forwarding its 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 levels 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 downtime, so that State GIS users would like ICSD removed from support of the State GIS. OP has been investigating alternatives.
- **No data center** — just a space for servers within an office.

Your Key Business/IT Portfolio:

IT Quick Wins

- Ability to do email blasts
- Electronic signatures coupled with Document Tracking System (DTS)
- Improved document management system
- IT solution that supports use of credit cards
- Electronic signatures/paperless transactions
- Getting to a paperless environment

- Key business/IT accomplishments in FY 2012–2013:

1. Email system was moved from a locally hosted IBM Domino/Notes system to the IBM SmartCloud cloud-based email system
   1. 25GB storage available for email
   2. 5GB storage available for file sharing
   3. Online collaboration tools (document editing/sharing, conferencing, desktop sharing, etc.)
2. Conference rooms in No. 1 Capitol District (NCD) building upgraded with Skype capability, HD-quality Polycom video conference system
3. Wireless (Wi-Fi) networking enabled for most DBEDT areas of NCD and Leiopapa A Kamehameha (LAK) building
4. Wired network in NCD and LAK has been upgraded and standardized with Layer 3 Power-over-Ethernet Gigabit Cisco equipment, as well as being secured with a Cisco security appliance
5. Continuing the process to update all the department's websites to conform to the State website standard

State of Hawaii
Department of Business, Economic Development & Tourism

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ALOHA FROM DBEDT!

The Department of Business, Economic Development & Tourism is Hawai'i's resource center for economic and statistical data, business development opportunities, energy and conservation information, and foreign trade advantages.

What's New

- State Airports Energy Project to Continue Hawaii's Efficiency Momentum - December 18, 2013
- State More Optimistic on Economic Growth in 2014 - December 4, 2013
- State Energy Office Honored in Two Categories at 2013 Hawaii Technology Excellence Awards - November 22, 2013
- 2013 Hawaii VC Summit and Startup Paradise Demo Day - November 20, 2013
- Hawaii Refinery Task Force Submits Interim Report to the Governor - November 19, 2013

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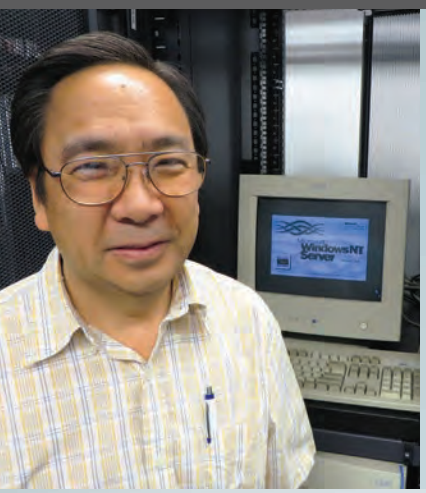


DONN YABUSAKI,
INFORMATION SYSTEMS MANAGER FOR THE DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS (DCCA)

"Within the EA Committee everyone talks about their initiatives and a lot of frank discussions happen. Because the meetings are very interactive and collaborative, people walk away with a sense that not only are we getting things done — but that the right decisions are being made."

10.3.6 DEPARTMENT: COMMERCE AND CONSUMER AFFAIRS

Information about your Department:

- **CIO Name: Donn Yabusaki**
- **Department website:** http://www.hawaii.gov/dcca

Your Current Business/IT Environment:

- Business/IT Mission and Vision: DCCA's Information Systems and Communications Office (ISCO) works to ensure all of the divisions' greater effectiveness and efficiency by providing network, infrastructure, and software guidance and support. In order to accomplish this, ISCO is working to fundamentally transform the way DCCA collects, analyzes, and presents data for Hawai'i's businesses, professionals and consumers by equipping our staff with the latest technologies, and implementing cutting-edge, world-class tools, while maintaining alignment with the State's IT-IRM Transformation goals.
- Description of Business/IT Environment: ISCO works to identify and deploy technologies that can be leveraged to better serve and protect businesses, professionals, and consumers.
- IT Systems and Applications:

Key Applications:

- Applicant/Licensing Integrated Automated System (ALIAS)
- Business Registration Information Management System (BRIMS) — business registration system
- Registered Document Processing and Management System (RDPMS) — electronic documents and workflow system
- HI Insurance Division System (HIDS)
- Complaint Management System (CMS)
- Financial Institution Management System (FIMS)
- Director's Office Referral System
- Legislature Tracking System (LTS)
- Employee Leave System (ELS)
- In/Out Board
- Incident (Bug) Tracking System (ITS)
- RICO Citation Database (Citation)
- Computer Account Request (CAR) System
- Request for Action (RFA)
- Request for Services (RFS)
- State-Certified Arbitration Program (SCAP)
- Licensing Advisory Board Members Database (License Boards)
- Conference Room/Equipment Reservation System (CRERS)
- Investment Advisors/Broker Dealers/Mutual Funds/ Franchises (IA/BD/MF/FR)
- DCCA Financial System (4Gov/DILOG)

Key IT Initiatives/Opportunities /Challenges:

- 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 or its replacement.
- Need better video conferencing to drive down the cost of flying people in from Neighbor Islands.
- Microsoft Windows XP will sunset in April 2014. Of DCCA's more than 400 users, we have 172 XP desktops remaining. Since these desktop are not currently scheduled for replacement, upgrading them in-place from XP to Windows 7 will be very difficult. While running a virtual desktop is a viable option, the added cost of software licenses for two desktops per user is very cost-prohibitive, so we are considering upgrading existing servers and services to the Windows 2012 server platform.
- Solutions branch is preparing for the replacement of five major Oracle Forms systems with an enterprisewide, highly customizable Business Process Management System with workflow, document and process management tools.
- Need to perform business process re-engineering to provide efficiencies and upgrades to enable analysis and reporting of business performance through the use of dashboards.
- Just beginning a project to enhance the Computer Account Request (CAR) system.

Your Key Business/IT Portfolio:

IT Quick Wins

- Integrate the DCCA financial system and other custom applications with the central financial system to eliminate duplicate data entry.
- Increase the automated clearinghouse (ACH) processes to speed the deposit of monies into the State's treasury.
- Allow initial online applications for professional and vocational licensing.
- Need a more efficient way to allow for more-timely transfer of Legislature data to DCCA during Legislative sessions
- **Disaster Recovery** — DCCA now maintains critical server backups off-site at Switchnap, located in Las Vegas, Nevada; the application software resides locally at DCCA.

  - **Key business/IT accomplishments in FY 2012–2013:**

    We have completed the installation of the Avamar backup system, which is providing off-site storage and disaster recovery. DCCA's servers are currently 82% virtualized using VMWare. In addition to this, we have also upgraded network infrastructure, firewall, and Internet security software.

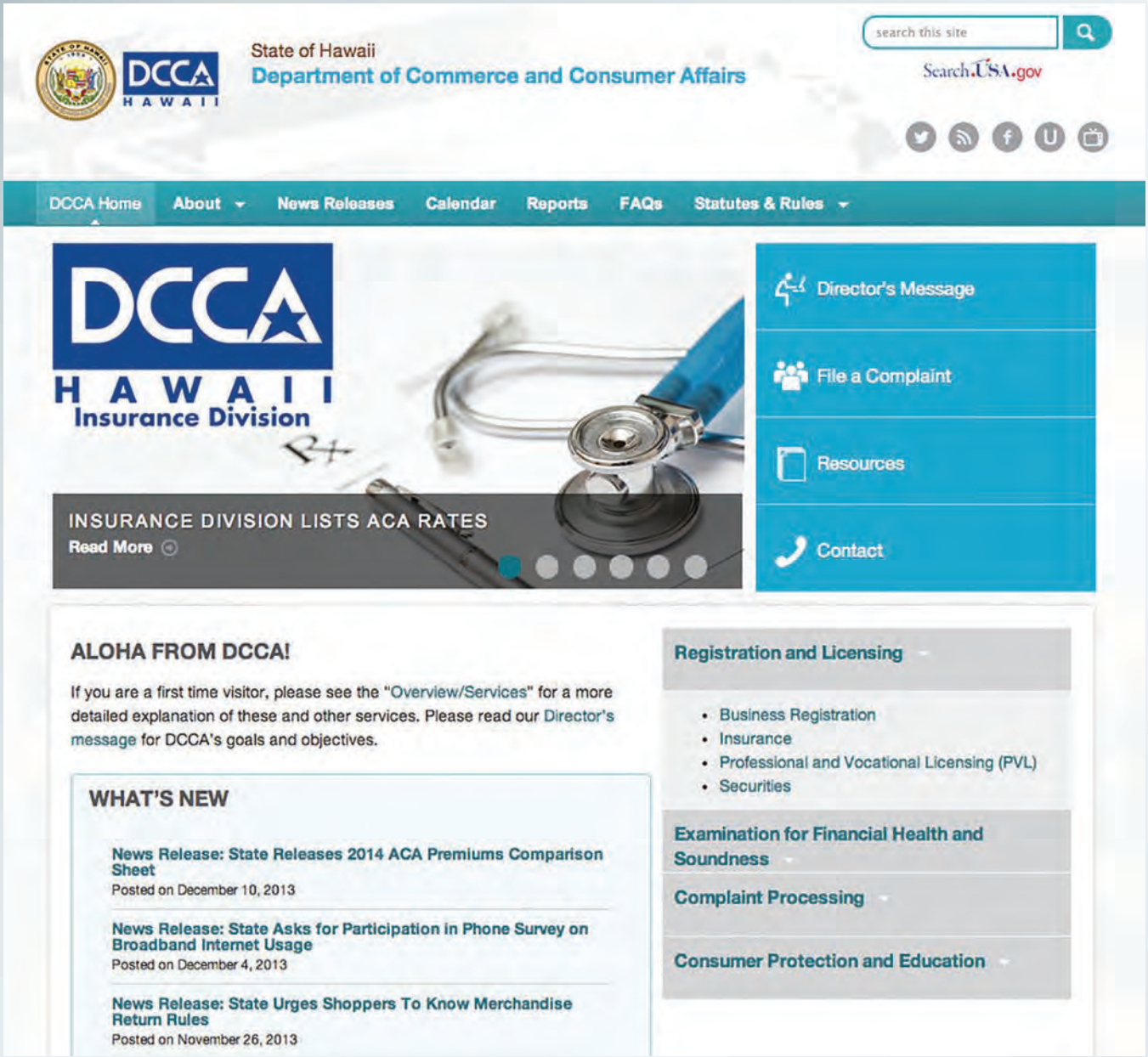
  - How do business/IT projects align with the Governor's New Day Plan?

    Because DCCA's plans were already in alignment with the Governor's New Day Plan, ISCO's projects are also in alignment with the Governor's New Day Plan. DCCA's projects are intended to modernize our systems and operate in the enterprise environment as defined by the New Day Plan.

  - How do current projects help achieve the business and technology transformation for the State of Hawai'i?

    ISCO's current projects are the result of identifying technologies that allow us to operate more efficiently and offer a wider range of services to the public, without the need to increase staff or operating expenses. These projects coincide with goals to achieve the business and technology transformation for the State as a whole.

  - How do projects align with OIMT's Top Three Strategies (re-engineer business processes and applications, modernize technology and infra structure, and establish oversight management and governance)?



DCCA is working closely with OIMT by participating in numerous working groups and councils. This close participation has allowed us to align our projects with OIMT's Top Three Strategies. The department has ongoing efforts to re-engineer our processes and applications, and we are in the process of replacing some decades-old applications. Because these applications require modern technology and infrastructure, the department has recently completed major infrastructure projects (server virtualization, off-site backup, etc.) that will allow us to proceed with the deployment of new application software. In addition to this, we are laying the foundation to provide for improved business process analysis and better, increased transparency of the metrics associated with our major Mission Applications. All of this is being done in close alignment with OIMT policies and goals.

10.3.7 DEPARTMENT: DEFENSE

Information about your department:

- **CIO Name: Colonel Reynold T. Hioki**
- **Things to know about the department:**

1. The department partnered with the University of Hawai'i to develop a cyber-range and held a cyber-security exercise in August, which fostered an exponential leap in cyber-security awareness and collaboration between all levels of governmental and non-governmental agencies in Hawai'i.
2. The department, through the Hawai'i National Guard, has deployed satellite-based emergency IT communication packages statewide to support county emergency operations centers.
3. Department users regularly operate on several federal department networks to include the U.S. Army, U.S. Air Force, and the U.S. Department of Veterans Affairs, in addition to the State DOD network.
4. The Hawai'i Air and Army National Guard, the State's militia, are part of the Department of Defense.
5. 87% of the HI Army National Guard were deployed between 2004–05, the highest percentage of any state since 9-11.
6. The Royal Guard is made up of current HI Air National Guard members who have native Hawaiian blood. The ceremonial unit wears uniforms similar to those worn in the late 1800s, and just recently celebrated the 50th anniversary of their recreation.
7. Fort Ruger, headquarters to the Department of Defense, is regularly used to portray Honolulu Police Department facilities on the popular TV series Hawaii Five-0.

- **Department website URL:** dod.hawaii.gov

Current Business/IT Environment:

- **Business/IT Mission and Vision:** Consolidate current department IT networks to one advanced, standardized enterprise environment that meets the diverse IT business needs of all divisions and staff/special offices. This targeted environment will directly align and integrate with the future-state enterprise environment currently under development by the State CIO.
- **Description of Business/IT Environment:** The current IT environment includes a diverse collection of systems and networks, with opportunities for integration and core services expansion.

Key Applications:

- **WebEOC** — State-standard crisis information management system (CMIS) used to manage emergency operations and collaborate with responding mission partners. This system also provides the capability to document the status and history of emergency operations carried out.
- **Hawai'i Region Secure Server (HRSS)** — Department-standard SharePoint-based information sharing and collaboration platform that supports departmental and other responding mission-partner activities during State emergencies.
- **Mobile Emergency Response Command Interface (MERCI)** — iPhone/iPad-based damage assessment tool that facilitates urgent collection of detailed damage assessment data. The MERCI system securely uploads collected information real-time from the field to decision makers, where the data can be analyzed and actions taken.

Challenges, Opportunities and the Road Ahead:

- **Challenges and opportunities the department is facing in implementing business/IT projects:** Many of the department's systems are mission-critical and required to support both day-to-day operations and all phases of a State emergency response. As such, the department strives to develop fully redundant and fault-tolerant systems that virtually guarantee continuity of operations of core services.
- **Next steps the department is taking on these projects:** The department is integrating satellite/cell-based services into both day-to-day and emergency systems to augment standard terrestrial service solutions. These technologies will substantially increase the reliability of all departmental systems.
- **Current initiatives/opportunities:**

1. **State Active Duty System** — A new departmental military orders publishing system is being developed to rapidly publish orders to support State emergencies. This system is expected to significantly streamline the current military orders publication system that consists of a more than 20-year-old dBase III legacy system.
2. **Network of Care website** — In partnership with State DOH and DAGS, the DOD developed an interactive website to provide service members, veterans, and their families with a one-stop-shop for virtual advocacy. This public service brings together critical information for all components of the veterans' community, including veterans, family members, active-duty personnel, reservists, members of the National Guard, employers, service providers, and the community at large. It also enables these individuals to access jobs, services, and support groups, to store personal records in a secure environment, and much more.
3. The Hawai'i National Guard is partnering with the University of Hawai'i to develop a cyber-range that will be used by academia, industry, government, military, and community to facilitate the overall development of the computer network security domain in the State of Hawai'i. The cyber-range is expected to support awareness, exercises/gaming, education/training/certification, research and development/testing/demonstration, and other computer network security activities.
4. The Hawai'i National Guard is in the initial phase of developing a deployable State-centric computer network security response capability to support network security incidents in the State of Hawai'i. This capability will consist of both Army and Air National Guardsmen trained and certified in computer network security operations.

Key IT Initiatives and Opportunities/Challenges:

IT Quick Wins

Need:

- Fully engage with OIMT planning process to leverage statewide enterprise architecture and core services under development.
- Consolidate departmental network enterprise, and benefit from resulting efficiencies.
- Organize, train, and equip departmental IT security personnel to provide the State of Hawai'i with computer network security capabilities that can actively respond to adverse computer security-related incidents.
- Deploy advanced technologies to include VoIP phones, virtualization, and high-speed bandwidth services.
- What are your department's key business/IT accomplishments in FY 2012–2013?
  - Deployment of satellite-based emergency communication packages to islands of Kaua'i, O'ahu, Maui, Lāna'i, Moloka'i and Hawai'i during the statewide Makani Pahili 2013 hurricane exercise. Leveraged support from California Air National Guard communication units that deployed personnel and equipment to support this exercise.
  - The HING, in partnership with UH, developed a cyber-range which served as the cornerstone that supported a State-sponsored cyber-exercise that included participants from DOD, State of Hawai'i, FBI, UH, and other computer security entities. This exercise fostered an exponential leap in cyber-security awareness and collaboration between all levels of governmental and non-governmental agencies in Hawai'i.

- The department migrated from two to one network domains to consolidate departmental IT services and to increase efficiencies.
- The department's IT resources were reorganized to provide IT customer support to all departmental personnel.

- **How do business/IT projects align with the Governor's New Day Plan?**

  1. **Education** — DOD personnel actively partner with high schools in technology programs to include the competitive Cyber Patriot cyber-security and Robotics technology programs as well as the Cyber Hui cyber-security professional community. The DOD is also actively engaged with the University of Hawai'i to development an innovative cyber-range that is envisioned to support cyber-security awareness, exercises/gaming, education/training/certification, research and development/testing/demonstration, and other cyber-security activities. Lastly, the DOD is working to appropriately transfer excess IT equipment to the State to augment existing equipment.
  2. Technology and Innovative — DOD is in the initial phase of developing a deployable State-centric computer network security response capability to support network security incidents in the State of Hawai'i. This capability will leverage technical expertise from National Guardsmen who will be trained and certified in computer network security operations.

- **How do current projects help achieve the business and technology transformation for the State of Hawai'i?**

  1. DOD IT personnel are actively participating in critical State IT enterprise working groups to assist with business and technology transformation. The department is pursuing advanced technologies to include VoIP phones, virtualization, high-speed bandwidth services, applications, and other core services in alignment with envisioned State IT enterprise architecture.
  2. DOD personnel are actively pursuing a technical solution to appropriately sign and encrypt government data to provide information assurance services. Specific focus is to federate this capability with federal, state, and local agencies.

- **How do projects align with OIMT's Top Three Strategies (re-engineer business processes and applications, modernize technology and infrastructure, and establish oversight management and governance)?**

  1. Efforts are under way to understand business processesal to integrate into the Enterprise Resource Planning (ERP) system currently under development. For example, the State Active Duty process has been documented for future ERP incorporation. Other department services are being reviewed for migration and hosting by the State virtualized core services.
  2. All network infrastructure is being upgraded to include management capability and high-bandwidth capacity. Where appropriate, fully redundant and fault-tolerant systems that virtually guarantee continuity of operations of core services are being pursued.
  3. The department recently established a Chief Information Officer (CIO) who has oversight of all IT equipment and services. The CIO has since established a department IT Council at the division level for governance issues and IT coordinators to provide technical support at the customer level. Lastly, technical certification for both users and administrators is currently being pursued.

State of Hawai`i
Department of Defense

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WHAT'S NEW

Philippine Air Force Tours Hawaii National Guard Facilities at Wheeler Army Airfield.
Posted on October 23, 2013

Isle Army Guard to be eyes in sky in Afghanistan
Posted on October 9, 2013

Hawaii National Guard Soldiers take part in NCO Development in Indonesia
Posted on October 7, 2013

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Staff Offices

Director

The Adjutant General, Major General Darryll D.M. Wong

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Newsletters

Nakahu - Hawaii DOD Newsletter, kukailimoku - HIANG News letter, and Hawaii Veteran Newsletter.

Videos

A collection of the video packages the Hawaii National Guard has put together.

Spotlight

A highlight of department activities.

Read more

10.3.8 DEPARTMENT: EDUCATION

Information about your Department:

- **CIO Name: David Wu**
- **Things to know about your department (factoids)**: Approximately 180,000 students served, one of the top 10 largest districts in the nation.
- **Department website URL**: www.hawaiipublicschools.org

Your current Business/IT environment

- **Business/IT Mission and Vision**: For DOE's strategic plan, see http://www.hawaiipublicschools.org/VisionForSuccess/AdvancingEducation/StrategicPlan/Pages/home.aspx
  - DOE Goals
    i. **Student Success:** All students demonstrate they are on a path toward success in college, career, and citizenship.
    ii. **Staff Success:** The department has a high-performing culture where employees have the training, support, and professional development to contribute effectively to student success.
    iii. **Successful Systems of Support:** The system and culture of the department work to effectively organize financial, human, and community resources in support of student success.
  - IT Goals/Mission:

    The mission of OITS is to partner with DOE stakeholders to provide systems of support, and enable student achievement and staff success by:

    - Modernizing our IT systems and infrastructure
    - Supporting 21st century learning
    - Providing best-in-class customer support to our schools and offices

- **Description of Business/IT Environment:** Although much progress has been made, many systems require modernization.
- IT Systems and Applications:

Key Applications:

- 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.
- eHR system to recruit and hire teachers, aides, and administrators.

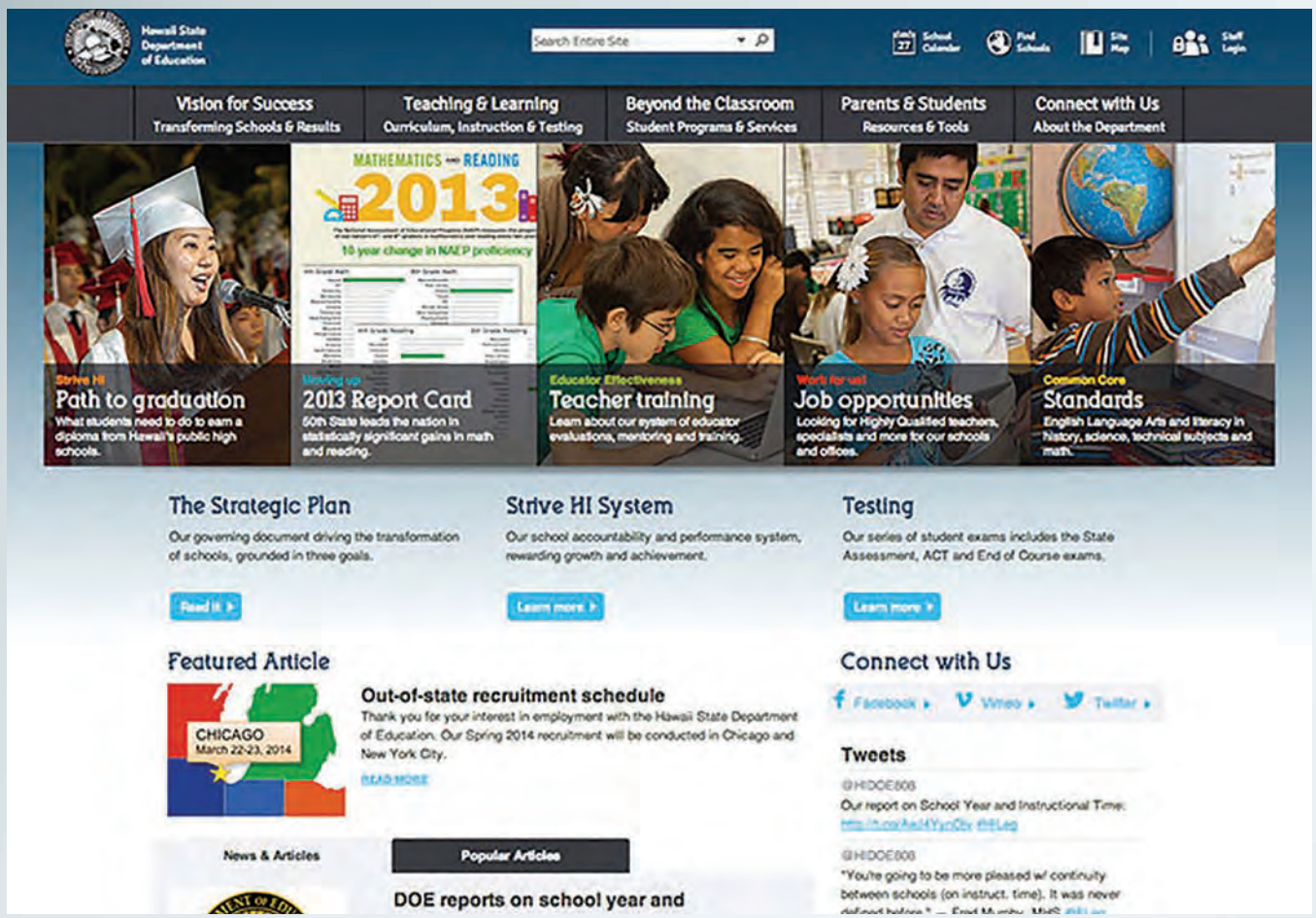
Key IT Initiatives and Opportunities/Challenges

- New financial system, specifically an ERP solution, is on top of the DOE list (leveraging a 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.
- **Upgrading the network in every school during the next three years** — three schools per month (wireless is also part of the equation).

Key Business/IT Portfolio

IT Quick Wins

- Leverage DOE's standards and processes; e.g., governance, PMO (under development), performance measurements, disaster recovery, and collaboration.



- Leverage DOE's new data center for at least critical server disaster recovery and/or alternate support site.
- **Key business/IT accomplishments in FY 2012–2013:**
  1. Completion an extensive reorganization of the Office of Information Technology services.
  2. Implementation and rollout of an SSO (single sign-on) project statewide, allowing our employees to sign into 14 of our most-often-used systems with a single password.
- How do business/IT projects align with the Governor's New Day Plan?
  1. Our Common Core Digital Curriculum projects promote the use of digital devices in the classroom and linking these devices to a standardized curriculum.
  2. Our Converged Network Infrastructure project is modernizing our school networks for 21st century learning, dramatically increasing the amount of Internet bandwidth available to schools.
- How do current projects help achieve business and technology transformation for the State of Hawai'i????
- How do department projects align with OIMT's Top Three Strategies (re-engineer business processes and applications, modernize technology and infrastructure, and establish oversight management and governance)?
  1. Our participating in the State's ERP project is deep, as we are key stakeholders.
  2. Our data center plans were coordinated closely with OIMT.

The DOE has one of the highest participation rates in the OIMT workgroups.

10.3.9 DEPARTMENT: HAWAIIAN HOMELANDS

Information about your Department:

- **CIO Name: Linda Inouye**
- **Things to know about the department:**
- **Department website URL:** http://dhhl.Hawaii.gov

Current Business/IT Environment

- Business/IT Mission and Vision: DHHL's mission is to reaffirm and assert Trust status; ensure the financial well-being of the Trust; provide excellent customer service; and deliver diverse homesteading opportunities.
- **Description of Business/IT Environment:**

Key Applications:

- The Applicant/Lessee, Recordation and Mortgage Loan Systems are more than 20 years old (although they are continuously being updated and the application was recently upgraded), are managed in-house, are minimally effective, and are partially documented.
- The Department of Hawaiian Home Lands (DHHL) has LAN and WAN connectivity. The WAN allows Neighbor Island branch offices connectivity to the Kapolei main facility through thin clients over PCoIP. The WAN and LAN are configured for file sharing, printing, and access to internal resources, as well as State of Hawai'i resources and the Internet.
- Homestead Services Division (HSD) utilizes the Recordation System; HSD and Fiscal Office utilize the Mortgage Loan System and all divisions utilize the Applicant/Lessee System and Oracle Financial Management System (FMS); DHHL uploads information from the FMS (10 years old) to the FAMIS system.

Challenges, Opportunities and the Road Ahead

- The department is challenged by limited disk space, as we have a fully populated SAN that is at end of life; ever-expanding backup window as data keep growing; security concerns; storage and accessibility of physical files; and outdated, minimally effective key application systems.
- **Next steps the department is taking on projects:** DHHL is currently in the process of imaging the physical applicant and lessee files and, depending on the success of this first phase, may image additional physical records in other divisions and offices. The department shall be bidding out a replacement SAN/EVA and is looking to hire a consultant to assist with the modernization of the outdated key application systems.

Key IT Initiatives and Opportunities/Challenges

- Modernization and integration of key applications (Applicant/Lessee System, Recordation System, Mortgage Loan System) with GIS, financial and imaged data.
- DHHL needs a concrete electronic methodology for managing The List (see "Departmental Items of Note").
- 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.

Established by Prince Kūhiō & the U.S. Congress
Department of Hawaiian Home Lands

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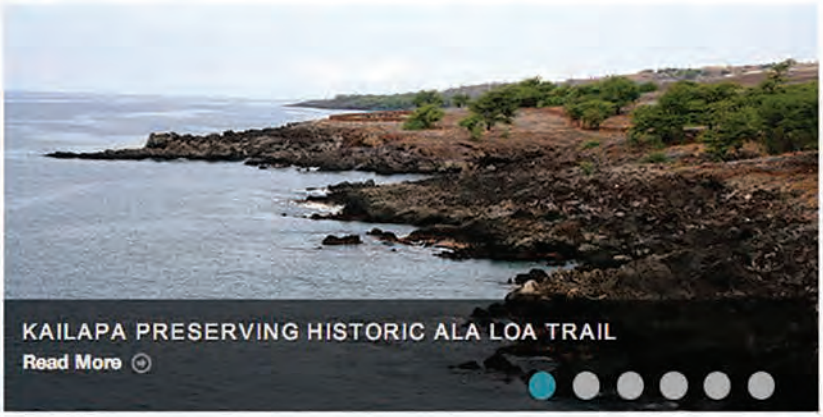

- Applications & Wait List
- Lessees - HSD
- Hawaiian Homes Commission
- Beneficiary Consultations

Nānākuli-Wai'anae Community Meeting

Posted on December 16, 2013

Here is the presentation from tonight's Nānākuli-Wai'anae Community Meeting. Download the Nānākuli-Waianae Community Meeting Powerpoint PDF Print PDF

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Kalawahine, Kekaha Star-Advertiser Q&A

Posted on December 16, 2013

Star-Advertiser questions and DHHL answers submitted to the paper on Dec. 12, 2013. • Why have the problems in Kalawahine related to settling and water infiltration taken so long to resolve? Some of the homeowners have been complaining for more than a decade, I'm told. DHHL's current administration has taken steps to investigate and analyze [...]

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La'i 'Ōpua Celebrates New Health Center

Posted on December 12, 2013

KEALAKEHE, HAWAI'I – La'i 'Ōpua Hawaiian homesteaders joined the West Hawai'i Community Health Center (WHCHC) in celebrating the beginning of construction for a new health care center on Hawaiian home lands in Kealakehe. Government officials and community leaders joined La'i 'Ōpua and WHCHC in blessing the grounds of the first phase of a medical and dental facility near [...]

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New Solar Leasing Program on Moloka'i

Posted on December 10, 2013

Program could save Moloka'i homesteaders $3,000 a year on electricity HO'OLEHUA, MOLOKA'I – Moloka'i residents pay among the highest electricity bills in the nation. But a new solar photovoltaic leasing program aims to change all of that. A new partnership between Moloka'i Habitat for Humanity and Kala Power hopes to save Moloka'i families an estimated [...]

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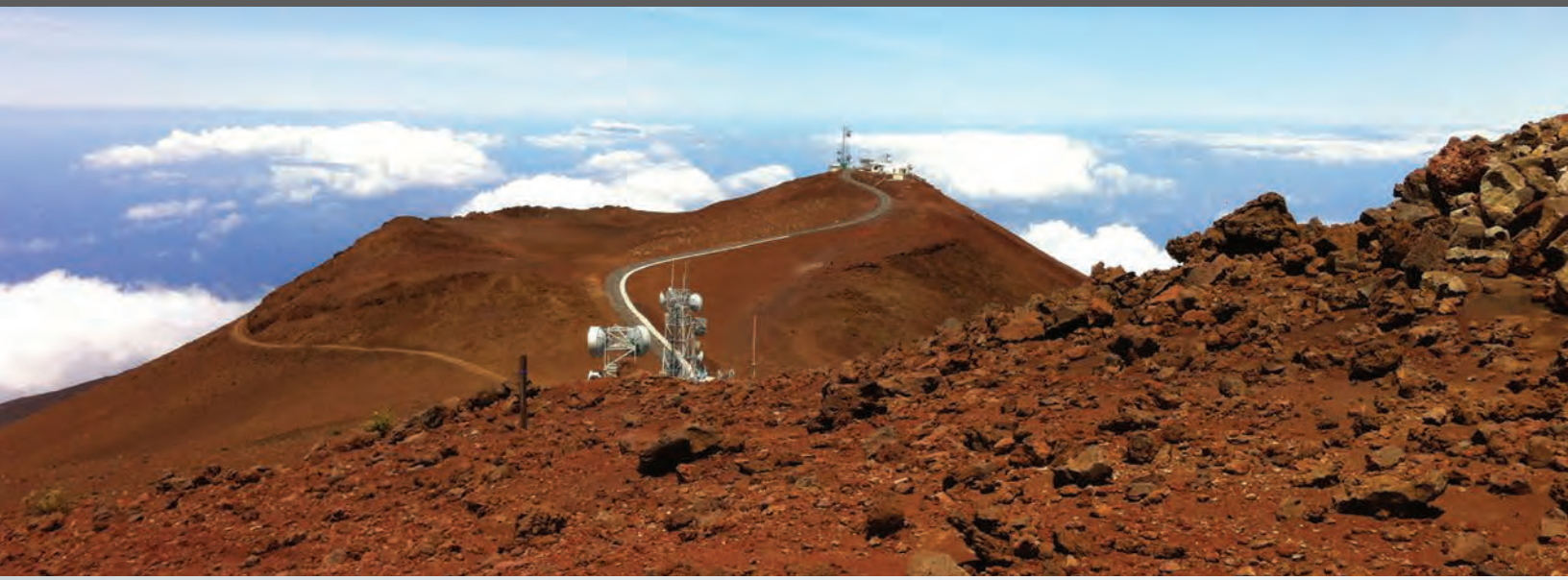
Maui Homesteader Appointed to Hawaiian Homes Commission



- 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 or obtain status information online. Managing The List is an issue due to a lack of information between entities. A ~$3M request made for a beneficiary study was denied during a previous Legislative session. A $1.5M request was made in the FY 2015 executive budget request for a Wait List assessment.

Key Business/IT Portfolio

IT Quick Wins

- Provide online access for current constituents, including minutes and community.
- Provide an interface for current constituents to add/update their information.
- Post Wait List online.

- **Department's key business/IT accomplishments in FY 2012–2013:** The key accomplishments in FY 2012–2013 include assisting HSD with bid preparation for a vendor to convert physical applicant and lessee files into digital format for storage and access in the cloud (ongoing); purchasing, installing and configuring a replacement LAN firewall appliance to connect to the State of Hawai'i NGN backbone per ICSD connectivity policy; desktop refresh to MS Windows 7 (ongoing); updating and reconfiguring VMware ESXi hosts and VMware view clients to latest versions, including VMware objects between cluster servers to load balance and leverage hardware resources; upgrading all Neighbor Island VM view clients to MS Windows 7; converting Utility Star Standard Water Billing Access 97 application to Utility Star Gold SQL database; replacing color laser printers with color copiers/printers; and delivered and is installing statewide network scanning/copying functionality.
- **How business/IT projects align with the Governor's New Day Plan:** DHHL's business/IT projects align with the Governor's New Day Plan by supporting staff in better serving our native Hawaiian beneficiaries.
- **How current projects help achieve business and technology transformation for the State of Hawai'i:** DHHL has virtualized the Neighbor Island offices and most of the servers, in preparation for the move to the State's planned data center.
- How department projects align with OIMT's Top Three Strategies (re-engineer business processes and applications, modernize technology and infrastructure, and establish oversight management and governance): The department is working on modernizing the key applications and is in the process of digitizing critical physical documents.

10.3.10 DEPARTMENT: HEALTH

Information about your department:

- **CIO Name: Dwight Bartolome**
- **Things to know about your department:**

  Promotes healthy living and insures a healthy environment for the people of Hawai'i
- **Department website URL:** http://health.Hawaii.gov/

Current Business/IT Environment:

- **Business/IT Mission and Vision:**
  1. **Vision:** Healthy People, Healthy Communities, Healthy Island
  2. **Mission:** To protect and improve the health and environment for all people in Hawai'i
  3. **IT Mission:** Develop, implement, and service information systems that contribute to the efficiency and effectiveness of the Health Department.
- **Description of Business/IT Environment:**
  1. Partnerships and data sharing and exchange with organizations and stakeholders are broad and far-reaching; encompasses coalitions, working groups, businesses, non-profits, and others making up the healthcare community, environmental protection, and human services safety net.

Key Applications:

- Disease Outbreak Control and Emergency Preparedness and Response:
  - Electronic Communicable Disease (ECDR)
  - Public Health Sentinel Surveillance System (PHS3)
  - Electronic Lab Reporting (ELR)
  - Laboratory Information Management System (Starlims)
  - Hawai'i Immunization Registry (HIR)
  - Response Manager (RM)
  - Incident Management System (ETEAM)
  - Public Safety Incident Management System (PSIMS)
  - Resource Management (Maximo)
- **Emergency Medical Services and Injury Control:**
  - Hawai'i Emergency Medical Services Information System (HEMSIS)
  - Trauma Registry
- **Social and Safety Net Services Health Plan Processing:**
  - Behavioral Health Management Information System (BHMIS AVATAR/ECURA)
  - Child Adolescent Mental Health Information System (CAMHIS) eVista
  - Developmental Disabled Client Services Tracking (DDCARES DDMIS)
  - Public Health Nursing System (PHNSYS)
  - Healthy Start and Early Intervention System (CHEIRS)
  - DHDS
  - WEB Information for Treatment Service (WITS)
  - Track Children with Special Health Needs (CSHN)
- **Communicable Disease:**
  - TB Screening/Registry (TIMS/TBMIS)
  - STD/AIDS Registry/Tracking
  - (STDR/HPMMS)
  - Hansen's Disease Registry/Tracking System

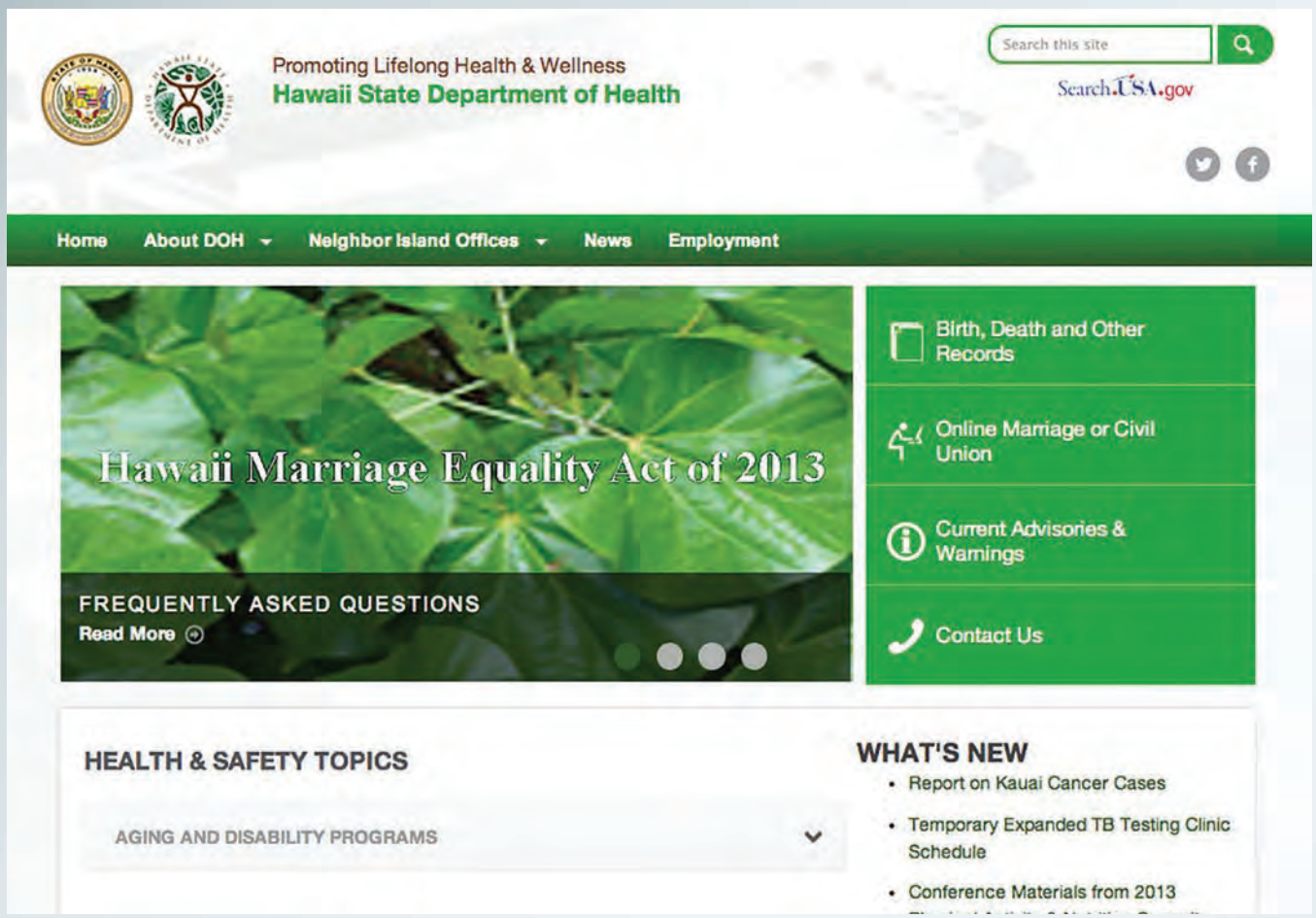
- **Genetic Disorder Women and Children Services:**
  - Newborn Metabolic/Hearing Screening
  - Birth Defects Registry
  - Child Death Review
  - Pregnancy Risk Assessment (PRAMS)
  - WIC Online Voucher System (SWICH)
  - Request/Process Reimbursements (CHCPoint)
- **Vital Records Registry: Birth, Marriage, Death:**
  - Vital Statistics System (VSS)
  - Electronic Birth Registration System (EBRS)
  - Electronic Death Registration System (EDRS)
  - Electronic Marriage Application and License Reporting System (EMRS)
- **Environmental Health Monitoring and Reporting:**
  - Hawai'i Environmental Information Exchange (HEIX)
  - Hawai'i Environmental Health Warehouse (HEHW)
  - Air Monitor Reporting System (ADMS)
  - Laboratory Management Information System (Starlims)
- **Permits and Licensing:**
  - Environmental Impact Statement (EIS)
  - Document Management System
  - CMS Nursing Facilities Tracking System (MMDS)
  - Electronic Permitting System (ePermitting)
- **Chronic Care Quality of Health Improvement:**
  - Behavioral Risk Factor Surveillance System (BRFSS)
  - Health Surveillance System (HSS)
  - Hawai'i Health Data Warehouse (HHDW)
- **Administrative Support:**
  - Employee and Position Management System (POINTS)
  - FAMIS/Data Mart Financial Reporting
  - Purchase Order Generation System
  - Payroll Reporting System Final Report
  - G1 Vacation/Leave Tracking System
  - Legislative Tracking System (LTS)
  - Correspondence/Contract Log
  - Contract Generation System (Contractgenie)
  - Grants/Contract/Financial Management and Reporting System
  - Pcard Reconciliation System
- **HPS Handicap Placard Registration and Query System**

Challenges, Opportunities and the Road Ahead:

- Challenges and opportunities faced in implementing business/IT projects:
  1. Most IT positions in DOH are federally funded exempt positions, so this limits how the department can use these positions because work assigned must be grant-related.
  2. Migrating DOH IT to be part to OIMT shared services transformation strategy. These initiatives include migrating DOH remote connection to the OIMT Onenet, converting to Office 365, and migrating DOH IT infrastructure to the OIMT virtual environment.
- **Next steps the department is taking on projects:**
  1. Completed planning of all DOH remote location connectivity from Frame Relay to RNS/MPLS. Migration effort starts January 2014.
  2. Migrate DOH Exchange and SharePoint service to OIMT Office 365 by completing migrations planning and developing funding strategy for this recurring cost.
  3. Move more physical servers to a virtual environment and participate in the OIMT Virtual Desktop pilot.

Key IT Initiatives and Opportunities/Challenges

- Electronic Medical Records (EMR): CAMHD conversion to RPMS; AMHD upgrading AVATAR system; DDD secured funding to procure an EMR solution.
- Work with Hawai'i Health Information Exchange so clinicians can meet public health meaningful use in the area of immunization, electronic lab reporting and syndromic surveillance.
- **Hawai'i Health Emergency Surveillance System:** disease outbreak reporting, confirmation, and alert notification.
- Complaints Tracking, Compliance Enforcement in the area of environmental variance permitting.
- Electronic Verification of Vital Events (EVVE); HI is one of eight states participating in the national initiative.



- Genetic Disorder Information System.
- WIC Electronic Bank Transfer (EBT); migrating to Web-enabled.
- Integrate social media into public information dissemination/education.
- Increase use of video and audio files to share information.
- 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.
- Vital Records is adding civil unions and same-sex marriage application and license registration.
- Use of SharePoint (under way) to increase collaboration and document sharing/tracking, documentation management.
- **Increased access to data:**
  - Hospital and community health data
  - Insurance/claims data
  - County-level data
  - DOE student data
  - DHS Medicaid and child welfare 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

Key Business/IT Portfolio:

IT Quick Wins

- DOH views social networking as an important way to communicate with the public, but staff needs to be assigned to keep the information current.
- Expand/facilitate SharePoint initiatives (priority of the current administration):
  - Continue to build on the SharePoint intranet portal by training and having more users administer content for the portal

- Continue to leverage features that promote document sharing and collaboration
- Create additional workflows to streamline the review and approval process

- More user-developed applications that can leverage the capability of SharePoint.
- Begin strategic move to paperless environment and automate document workflow and tracking.
- Improve DOH intranet; outlying offices' connectivity is not good.
- Upgrade department website by migrating to WordPress.
- Cell phone consolidation.
- Resolve firewall issues at ICSD to facilitate using video streams.
- Create social networking policies, procedures, and training (e.g., Facebook, Twitter, YouTube).
- Assistance with Vital Records: upgrade for verification and issuance of licenses (civil unions); system is due out in January 2012, but needs to be up and running in December 2011.
- **Department's key business/IT accomplishments in FY 2012–2013:**

  1. Implementation of an electronic permitting system.
  2. Implementation of a food establishment inspection tracking system.
  3. Preparing Vital Records marriage system to accommodate civil union and future possibility for same-sex marriage.
  4. Streamlining the contract execution process by automating the process of generating the number of contract forms.
  5. Automated the T205 review/approval process using SharePoint workflow.
  6. Implementing Leave tracking system.

- **How business/IT projects align with the Governor's New Day Plan:**

  1. The key objective met was the streamlining of business processes through automation to improve staff productivity and increase quality of service to citizens of Hawai'i.

- **How current projects help achieve business and technology transformation for the State of Hawai'i:**

  1. Moving to OIMT OneNet, planning for Office 365 migration, and virtualizing servers and workstations will set DOH on a path toward the shared services technology of OIMT.
  2. Streamlining a number of business processes using technology is in line with OIMT business process re-engineering plans.

- **How department projects align with OIMT's Top Three Strategies (re-engineer business processes and applications, modernize technology and infrastructure, and establish oversight management and governance):**

  1. Automating business workflows and moving to a more paperless environment require looking at new ways to meet processing objectives through re-engineering of current business processes.
  2. To position DOH within the shared services strategy of OIMT, upgrading technology and infrastructure are key requirements.

BARBARA KRIEG,
DIRECTOR DEPARTMENT OF HUMAN RESOURCES

"We have been fortunate to work with the Office of Information Management and Technology (OIMT) on various business transformation initiatives to include an in-depth review of the recruitment process and the establishment of a statewide Transformation Internship Program (TIP). The leadership and strategic vision provided by OIMT has reinforced the State's commitment to continue to invest in its people by introducing technology advancements that enable our state workforce to sufficiently respond to the needs of those we serve."

10.3.11 DEPARTMENT: HUMAN RESOURCES

Information about your department:

- **CIO Name: David Keane**
- **Things to know about the department:**
  - HRMS services 17 State agencies not including UH, DOE, and HHSC
  - HRMS has more than 200 registered users
  - HRMS contains more than 1.5 million transaction records
- **Department website URL:** http://dhrd.Hawaii.gov

Current Business/IT Environment:

- **Business/IT Mission and Vision:**

  The Mission and Goal of the Department of Human Resources Development

The Department of Human Resources Development ("DHRD") provides timely and responsive leadership, resources, and services to fully support the State in the recruitment, management, and retention of a high-performing workforce.

DHRD conducts recruitment activities; provides guidance and support for personnel actions; classifies positions based on duties and responsibilities; ensures compensation of employees at proper pay levels; supports the collective bargaining process; directs effective employee-employer relations; administers workers' compensation benefits; and ensures a safe and healthy work environment.

DHRD's goal is to recruit and retain "the best and the brightest" employees, so that State government can deliver efficient and effective services to the public.

- **Description of Business/IT Environment:**
- **IT Systems and Applications:**
  - PeopleSoft HRMS 8.3, AIX, Windows Server, and XP environments
  - Dell PowerEdge and Optiplex, IBM AIX, and Cisco Switch Gear

State of Hawaii
Department of Human Resources Development

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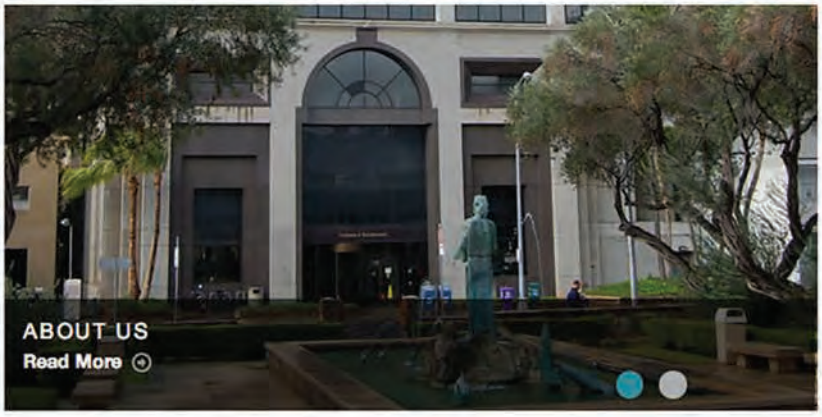


- State Job Listings
- Returning Applicants
- Merit Appeals Board (MAB)
- Contact Us

THE MISSION AND GOAL OF THE DEPARTMENT OF HUMAN RESOURCES DEVELOPMENT

The Department of Human Resources Development ("DHRD") provides timely and responsive leadership, resources, and services to fully support the State in the recruitment, management and retention of a high-performing workforce.

DHRD conducts recruitment activities; provides guidance and support for personnel actions; classifies positions based on duties and responsibilities; ensures compensation of employees at proper pay levels; supports the collective bargaining process; directs effective employee-employer relations; administers workers' compensation benefits; and ensures a safe and healthy work environment.

DHRD's goal is to recruit and retain "the best and the brightest" employees, so that State government can deliver efficient and effective services to the public.

Welcome Message

Director
Barbara A. Krieg

Deputy Director
Leila A. Kagawa

WHAT'S NEW

- DHRD Posts the State Observed Holiday Calendar for 2014 & 2015
- Executive Branch Training Catalog January – June 2014
- DHRD Announces 2014 (Jan-June) Safety Training Schedule
- Governor Abercrombie Releases FAQs for the Hawaii Marriage Equality Act
- DHRD Hosts Gov. Neil Abercrombie
- DHRD Opens New Communication Line
- DHRD Announces NEW P&P 601.001 – Discrimination/Harassment-Free Workplace Policy
- State of Hawai'i Announces: 2014 Spring Session of the Transformation Internship Program for College Students
- UPDATED: Affordable Care Act Employer Notice
- State Requests Proposals for Statewide Financial & Human Resources Management System

More News

Key Applications:

- HRMS (PeopleSoft) v8.3
- HRMS Modules
  - Position Management
  - Personnel Transactions
  - Claims Management
  - Training Administration
- Workers Comp Access applications
- **Neo.gov recruitment system (stand-alone system** — stops at the point of providing a list of candidates)

Challenges, Opportunities and the Road Ahead:

- Challenges and opportunities faced implementing business/IT projects: Problems and challenges include budget and staffing issues.
- What are the next steps your department is taking on these projects? We are moving from a planning phase to an implementation phase in efforts to stabilize our operational systems.
- **Current initiatives/opportunities:**

1. DHRDNet/HRMS Stabilization Project
2. Migration from Windows XP to Windows 8

Key IT Initiatives and Opportunities/Challenges:

- **HRMS (PeopleSoft) PeopleSoft platform** — Have used PeopleSoft for about 15 years. Current version (v. 8) is no longer supported. It is heavily customized (20%–50%).
- New services or changes to the application.
- Restoring training and employee assistance counseling that were previously cut.
- Adding an EEO component for reasonable disability accommodations.

Key Business/IT Portfolio:

- **IT Quick Wins:**

1. Alignment with OIMT's PCaaS, cloud services catalog initiatives, and systems consolidation efforts

- Enhance skills and/or solutions for end-user data query and reporting for items such as:
  - **Media inquiry** — some queries can take days.
  - Workforce profile is periodically performed and is very difficult to do.
- **Address no or minimal integration/interfaces:**
  - **Hiring lifecycle** — data re-entry from PeopleSoft to Neogov and then back to PeopleSoft.
  - **Pay lifecycle** — data re-entry from PeopleSoft to Payroll. Have to enter pre-tax benefit information, dependent care information, and medical information; this is not automatically sent to Payroll.
  - Currently, DHRD sends a file/document and it gets re-entered. This process introduces a great number of errors and differences.
  - One of the biggest issues is overpayment because of the timing of when an employee leaves and when they are actually removed from the payroll. It can take several weeks/months to communicate to Payroll.
- **Key business/IT accomplishments in FY 2012–2013:**

1. Replacement of our Cisco switch gear equipment
2. Begin migration from the existing (P)hysical to (V)irtual server environment
3. First implementations of Windows 8 into our production environment

- **How department projects align with OIMT's Top Three Strategies (re-engineer business processes and applications, modernize technology and infrastructure, and establish oversight management and governance):**

1. DHRD's technology and infrastructure modernization efforts are in keeping with OIMT's move toward a more centrally managed and secure environment. These efforts will enable DHRD to assign certain technology-related responsibilities (including systems and server administration, database administration, and security and networking) to the central agency, while refocusing its scarce technical resources on mission-critical and value-added services.

DWIGHT Y TAKAMINE, DIRECTOR

" The Department of Labor and Industrial Relations (DLIR) is excited about the Office of Information Management and Technology's (OIMT) Enterprise Resource Planning (ERP) Program, and the expected IT functionalities that will definitely benefit our departmental operations. The OIMT's ERP staff has already successfully assisted the DLIR in updating a critical legacy IT program that other vendors could not resolve for the past 14 years, and will be shortly addressing more of these. The DLIR anxiously looks forward to continue working in close partnership with the OIMT to help successfully bring the benefits of current information technology to the State of Hawaii, and meet the fulfillment of the Governor's vision."

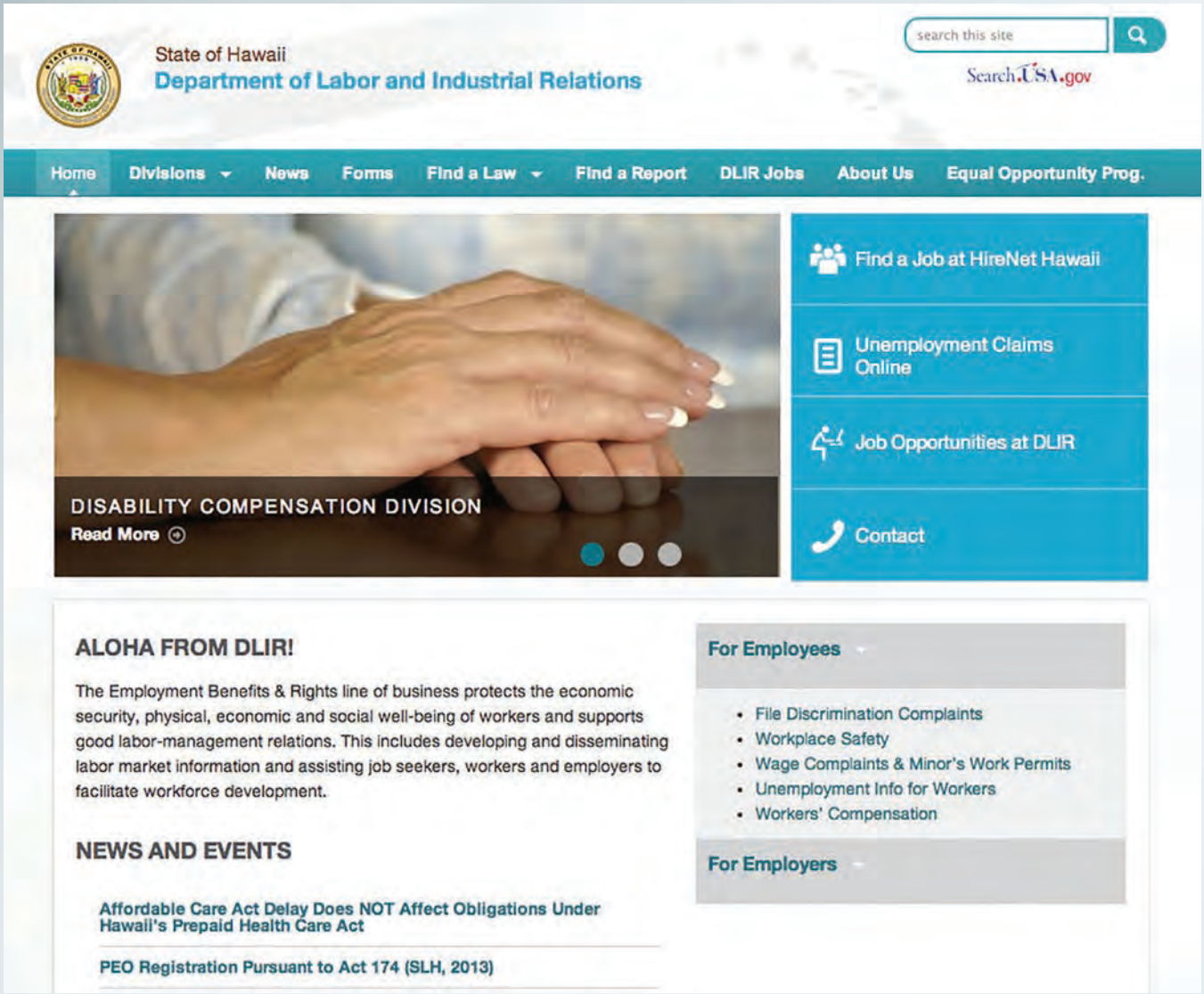
10.3.12 DEPARTMENT: LABOR AND INDUSTRIAL RELATIONS

Information about your Department:

- **CIO Name: Jade T. Butay**
- **Department website URL:** http://labor.hawaii.gov/

Current Business/IT Environment:

- **Business/IT Mission and Vision:** To administer programs designed to increase the economic security, physical and economic well-being and productivity of workers, and to achieve good labor-management relations in accordance with Section §26-20, Hawai'i Revised Statues. IT Mission and Vision: To apply state-of-the-art technology to the fullest extent to: increase efficiency, effectiveness and productivity; expedite/facilitate and enhance delivery of service to clients/customers; maximize utilization of scarce resources (dollars and employees); utilize Internet capabilities in a secure environment; and aggressively protect confidentiality, security, and integrity of data.
- **Description of Business/IT Environment:** §26-20 Department of Labor and Industrial Relations. The Department of Labor and Industrial Relations is headed by a single executive known as the Director of Labor and Industrial Relations. The department administers programs designed to increase the economic security, physical and economic well-being, and productivity of workers, and to achieve good labor-management relations, including the administration of workers' compensation, employment security, apprenticeship training, wage and hour, and industrial relations laws. The department shall also have the function of developing, preparing, and disseminating information on employment, unemployment, and general labor market conditions. The Labor and Industrial Relations Appeals Board provided for in Chapters 371 and 386 is placed within the Department of Labor and Industrial Relations for administrative purposes. The respective functions, duties, and powers, subject to the administrative control of the Director of Labor and Industrial Relations, and the composition of the Board provided by law. IT Environment: The DLIR network connects sixteen (16) locations, five (5) on O'ahu (Honolulu Main, Honolulu ICSD, Kaneohe, Waipahu WDD, and Waipahu UI), three (3) on Kaua'i (Lihue WDD, Lihue DCD, and Lihue DCD), three (3) on Maui (Wailuku WDD, Wailuku DCD, and Wailuku



UI), one (1) on Moloka'i, and four (4) on Hawai'i Island (Hilo, Hilo DCD, Kona WDD, and Kona UI) to the core computer room located on O'ahu. Six (6) sites communicate via RNS at 5mb speed, and one site connects via DSL modem. The remaining 10 locations utilize the State of Hawai'i's high-speed communication backbone known as the NGN (Next-Generation Network). Internet connectivity is provided by the State's Information and Communication Services Division (ICSD) through one non-secure connection on the NGN. The DLIR core switch and DLIR firewall in the Honolulu Main location secure and control external traffic, and separate internal networks.

The DLIR network consists of approximately 1,000 personal computers, 100 network printers, and 50 servers statewide. A majority of the PCs operate in the Windows 7 environment, with a few still using Windows XP. Each PC uses a static, private IP address to allow Internet access. The current network operating system is Windows 2003 or Windows 2008 with Windows Active Directory.

Key Applications:

- **Unemployment Insurance** — prints unemployment checks
- **Disability Compensation Information System (DCIS)** — shared database monitored and used by Workers' Compensation (WC) Temporary Disability Insurance (TDI) and Prepaid Healthcare (PHC) programs.

- **Workforce Development** — job banks/Geosol
- **Public assistance systems** — various cost accounting systems (CASs) — a timesheet system that feeds FAMIS; supports UI, WDD, and HIOSH
- Interactive Voice Response System (IVR)
- **HCRC Custom Database** — tracks discrimination cases
- **WSD Employer Information Database** — emerged from DCD and then UI databases

Challenges, Opportunities and the Road Ahead:

- **Challenges and opportunities the department is facing in implementing business/IT projects:** There are two major challenges facing the DLIR to implement business/IT projects: first: a source of funding to create a DLIR IT budget that will meet the State's Business and Technology Transformation Plan; second: an nadequate number of IT staff positions with the required training and skill sets to support new technologies.
- **Next steps the department is taking on these projects:**

Key IT Initiatives and Opportunities/Challenges:

- Want to be able to link information with DCCA to help people find jobs and/or retrain.
- Want to be able to link information with DBEDT to understand labor needs (increases and decreases).
- Want to be able to link information with the University of Hawai'i to assist job seekers with their career development and increasing knowledge/skills.
- For planning purposes, DLIR, Department of Tax, and DCCA need to know when a new business comes to Hawai'i.
- IT should support business services; DLIR has a great vision to better serve the community, but IT deficiencies are hampering its ability to deliver on that long-term vision; it needs more-efficient automation to free up people to deliver on that vision.
- **Examples of how IT can better support DLIR business services:**
  - Insurance companies could electronically send their renewals to them.
  - DLIR is pushing the use of Symantec across the department to reduce its security risk.

Key Business/IT Portfolio:

IT Quick Wins:

SIDES — State Information Data Exchange System, or SIDES, is an automated response system used by State Unemployment Compensation Offices to collect claim-related information from employers and third-party administrators. The State of Hawai'i, Department of Labor and Industrial Relations, Unemployment Insurance Division, with support from ICSD, is in the process of developing a secure electronic-based system that enables communication and transmission of unemployment insurance separation information and other information between UI agencies and large multi-state employers or third-party agents (TPAs), as well as smaller employers. The SIDES employer website portion of the project will allow employers/TPAs to enter separation information into the system to allow electronic collection.

TOP — On September 30, 2008, the President signed Public Law 110-328, the "SSI Extension for Elderly and Disabled Refugees Act." Among other things, this Act amended federal law to permit the states to recover certain UC debts from federal income tax refunds under the "Treasury Offset Program" (TOP) operated by the United States Department of the Treasury. In response to Public Law 110-328, new statutes were required under HRS 383 to implement new requirements. Act 3 was signed by Governor Abercrombie on April 1, 2013 in an effort to improve the integrity of State UI programs. A new section will be added to allow deductions from individual federal income tax returns to recover delinquent debts under TOP, effective April 1, 2013. The State of Hawai'i, Department of Labor and Industrial Relations, Unemployment Insurance Division, implemented changes to the HUI benefit system to allow for the processing and collection of debts through the Treasury Offset Program. The project will increase benefit overpayment and delinquent tax

collections. Offsets can be applied to individuals with overpayments resulting from fraud or unreported earnings, and to employers with delinquent accounts.

- **Need defined standards and policies** — in particular, security standards so that DLIR will know what to buy to facilitate sharing of data and interfacing between systems.
- Network monitoring is needed to be able to see if the network is meeting users' needs.
- Need a standard mechanism to perform inventorying with automated discovery.
- Need a Tier 1, 2, and 3 escalation process supported by a contractor for IT problems the department cannot address.

- **Key business/IT accomplishments in FY 2012–2013:**

  The DLIR Disability Compensation Division (DCD):

  The DLIR-DCD replaced its aging hardware (six years in service) and unsupported Windows 2000 Server operating system (nine years in service) with current versions of Windows 2008 R2 Server built on a cutting-edge virtualized platform running VMware's vSphere 5 and View 5 Premier Desktop. This new environment allows DLIR-DCD to maintain operation of its Domino/Lotus Enterprise Integrator (LEI) and proprietary applications well into the future. DCD further upgraded its SQL program to Microsoft SQL 2012 and its Domino Application from version 6.5 to version 8.5 to comply with ICSD's standards for Lotus Notes email (ICSD hosts the DLIR-DCD Lotus Notes ID accounts).

  The newly installed virtualized environment of the DLIR-DCD reduced its server hardware infrastructure and benefited the State by reducing IT personnel support. The DLIR-DCD reduced the number of its physical servers from eight to three, with a fourth server being configured solely for backup purposes, thereby significantly reducing the maintenance required for upgrades and (security) patches. The client systems utilize Zero Client technology, whose support for applications and client operating systems is performed on the server instead of on each machine. Furthermore, the features of VMware (high availability and backup) and its storage system allow DLIR-DCD data to have a higher availability to our end users.

  The EDPSO upgraded/replaced a nine-year-old Cisco 6506E, thus improving the speed and bandwidth of DLIR networks. There were communication upgrades (frame relay to Hawaiian Telcom's RNS network) made to seven offices located outside the DLIR on O'ahu and the Neighbor Islands. The EDPSO also replaced a number of aging Cisco 10/100 switches to a faster 1G Cisco 3750X.

- **How do the projects align with OIMT's Top Three Strategies (re-engineer business processes and applications, modernize technology and infrastructure, and establish oversight management and governance)?**

  The DLIR is investing its limited resources to upgrade its aging network infrastructure and to incorporate VMware on servers and desktops. This is in keeping with the Governor's New Day Plan by creating a structure that is focused toward the future and will allow this department to commit itself to developing new and innovative technologies that will better serve the citizens of Hawai'i.

10.3.13 DEPARTMENT: LAND AND NATURAL RESOURCES

Information about your Department:

- **CIO Name: Lila Loos**
- **Things to know about your department:** The Department of Land and Natural Resources, headed by an executive Board of Land and Natural Resources, is responsible for managing, administering, and exercising control over public lands, water resources, ocean waters, navigable streams, coastal areas (except commercial harbors), minerals, and all interests therein. The department's jurisdiction encompasses nearly 1.3 million acres of State lands, beaches, and coastal waters, as well as 750 miles of coastline (the fourth longest in the country). It includes State parks; historical sites; forests and forest reserves; aquatic life and its sanctuaries; public fishing areas; boating, ocean recreation, and coastal programs; wildlife and its sanctuaries; game management areas; public hunting areas; and natural area reserves.
- **Department website URL:** http://dlnr.Hawaii.gov/

Current Business/IT Environment:

- **Business/IT Mission and Vision:** The DLNR's Information Technology Office supports the department's mission is to enhance, protect, conserve and manage Hawai'i's unique and limited natural, cultural and historic resources held in public trust for current and future generations of the people of Hawai'i, and its visitors, in partnership with others from the public and private sectors.
- **Description of Business/IT Environment:** The DLNR IT Office supports more than 850 network connections located at 50 remote office locations throughout the State of Hawai'i from our main data center in Honolulu.

Key Applications:

- **SLIM** (State Land Information Management System) collects land inventory, encumbrances, leases, permits, licenses, easements, Executive Orders, and reports to the Legislature and county tax offices; information is collected from other agencies to which they need to report on fees/leases
- BCIS (Bureau of Conveyances Information System) provides conveyance recording, online searching, and ordering of documents
- Enforcement Management Information System reports time tracking, enforcement of complaints, investigations, reports, and activities
- National Flood Insurance Program is an assessment tool for floodplain management within federal, State and local flood regulation laws and ordinances; and it offers a newsletter
- BARS (Boating Accounts Receivable System) is used for commercial licensing and fees for small boat harbors, vessel registration of boat owners, and boat ramp use permits
- State Parks Reservation System
- Commercial Fisheries Licenses and Permits
- Nā Ala Hele Commercial Hiking Permits
- Recreational Freshwater Game Fishing License
- Civil Resource Violation System

Challenges, Opportunities and the Road Ahead:

- Challenges and opportunities faced implementing business/IT projects: A main challenge is providing high-speed bandwidth connectivity to remote office locations to support their field work necessary to protect our water, land, and forests.
- Next steps the department is taking on these projects: Utilizing the State's routing network system and installing high-speed leased Ethernet connections where feasible.

Making Hawai'i a Great Place to Live!
Department of Land and Natural Resources

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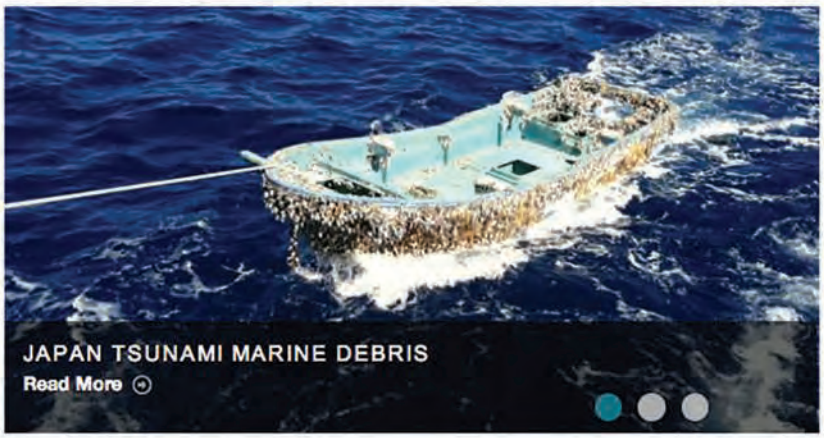


Education

Online Services

Jobs

Contact

ALOHA FROM DLNR!

Mission Statement

"Enhance, protect, conserve and manage Hawaii's unique and limited natural, cultural and historic resources held in public trust for current and future generations of the people of Hawaii nei, and its visitors, in partnership with others from the public and private sectors."

(Photo: Maui Air)

The Department of Land and Natural Resources (DLNR) releases plan to ensure mauka watersheds are fully functioning so fresh water resources can be utilized and enjoyed by the people of Hawaii in perpetuity

NEWS RELEASES

12/17/13 – High-Tech Study Shows Hawaiian Petrel Parents Make Epic Journeys To Feed Their Chicks
Posted on December 17, 2013

12/13/13 – DLNR Issues Plea To Dog Owners As Returning Albatross Are Slaughtered
Posted on December 13, 2013

Chairperson
William J. Aila, Jr.

Contact
DLNR Main Office
Kalanimoku Building
1151 Punchbowl St.
Honolulu, HI 96813
Ph: (808) 587-0400
dlnr@hawaii.gov

Hotlines
DLNR Enforcement: 643-DLNR
Burials: (808) 692-8015

Permits
Camping: (808) 587-0300
Hiking: (808) 587-0166

Licenses
Fishing: (808) 587-0109
Hunting: (808) 587-0166

Civil Resource Violation System
Admin Proceedings Office
Ph: (808) 587-1496;

QUICK LINKS ...

- Administrative Rules
- Hunter Education Classes
- 2013 Legislative Proposals

- Current initiatives/opportunities: Increase network security and continue implementation progress with the department's business continuity initiative.

Key IT Initiatives and Opportunities/Challenges:

- Expand the Civil Resource Violation System to improve compliance with State laws and ordinances protecting Hawai'i's natural resources, in support of the Office of Civil Compliance
- Implement Phase III of the disaster recovery and business continuity plan
- Provide data replication through virtualization and storage area networks
- Implement change management to support essential business process engineering
- Improve the network infrastructure in the areas of bandwidth, services, and security

Key Business/IT Portfolio:

- IT Quick Wins: Increased IT staff by three specialists to provide dedicated support to program systems

IT Quick Wins:

- **Key business/IT accomplishments in FY 2012–2013:**

  1. Complied with the Federal Communications Commission's telecommunications narrowbanding channel spectrum for public safety users: Conservation and Resources Enforcement and Forestry programs
  2. Implemented a video conferencing system to increase public participation on the Neighbor Islands
  3. Continued development of the Conservation and Resources Enforcement's Management Information System

- **How do your business/IT projects align with the Governor's New Day Plan?**

  1. Continue information technology support to ensure proper enforcement of rules and laws that protect cultural resources and practices

- **How current projects help achieve business and technology transformation for the State of Hawai'i:**

  1. Align technology in support of the Office of Information Management & Technology for enterprise resource planning efforts

- **How department projects align with OIMT's Top Three Strategies (re-engineer business processes and applications, modernize technology and infrastructure, and establish oversight management and governance):**

  1. Continue to utilize re-engineering guidance provided by OIMT
  2. Continue to establish routed network services for remote offices
  3. Continue to pursue transparency through dashboard participation
  4. Continue to work in alignment with OIMT through governance participation

10.3.14 DEPARTMENT: PUBLIC SAFETY

Information about your Department:

- **CIO Name: Judy Yamada**
- **Things to know about your department:** Public Safety provides correctional and law enforcement services.
- **Department website URL:** http://dps.Hawaii.gov/

Current Business/IT Environment:

- **Business/IT Mission and Vision:** To develop technological workflows that will enhance the delivery of services by our department.
- **Description of Business/IT Environment:** We support interfaces within other State agencies, have in-house applications, and provide user support.

Key Applications:

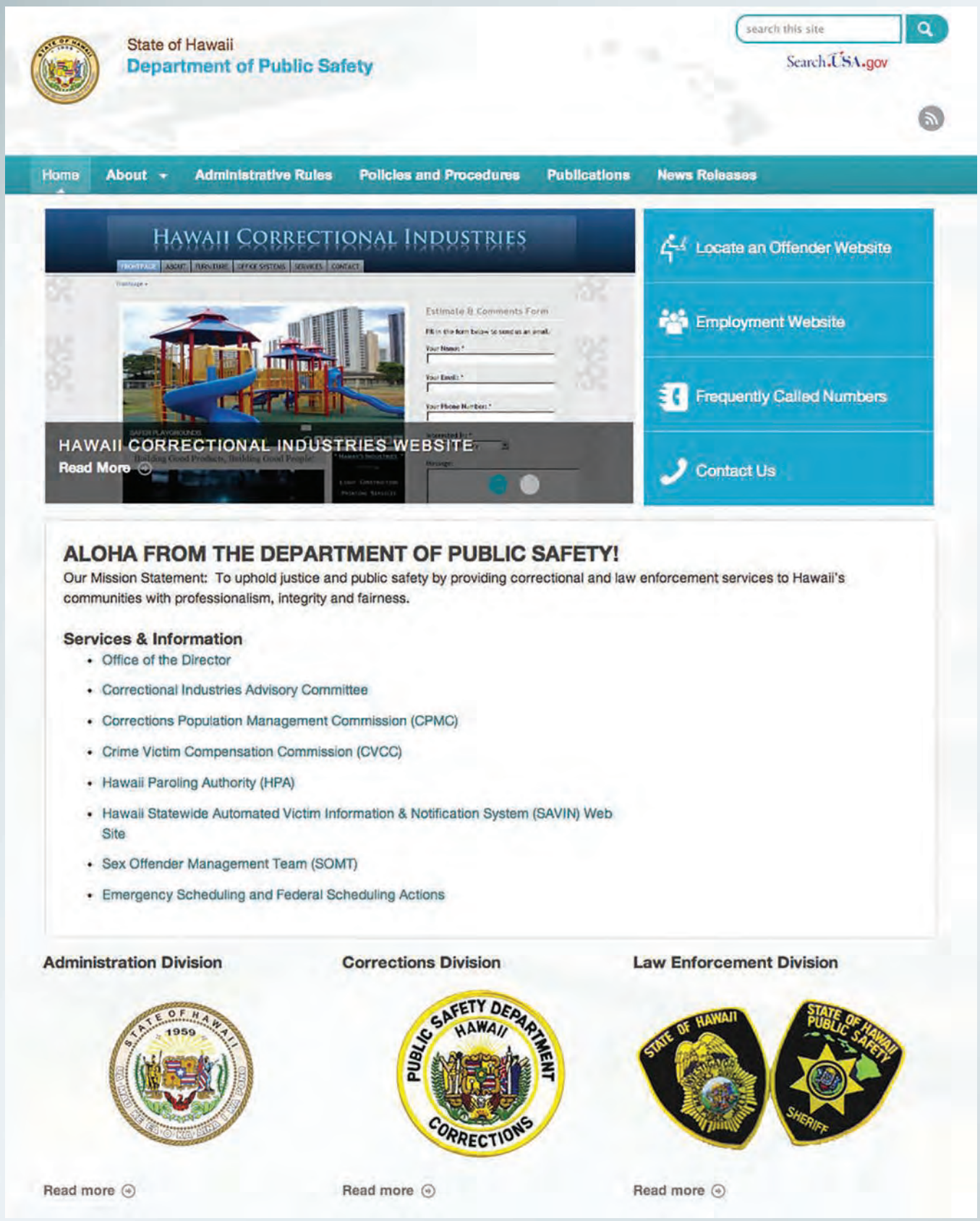
- Offendertrak (tracking/classifying inmates and parolees)
- Records Management System for Law Enforcement
- Statewide Automated Victim Information Notification (SAVIN)
- **eClinical Works** — Electronic Medical Records (near future)
- Financial Management System
- Hawai‘i Paroling Authority Database
- Intake Service Centers Database
- CJIS-Hawai‘i (HCJDC)
- Lotus Notes
- Correspondence Log
- Inmate Trust Account System

Challenges, Opportunities and the Road Ahead:

- Challenges and opportunities faced implementing business/IT projects: Because our staff provides more than just IT services, we don’t have enough staff to address many issues. Training is needed to work with the opportunities as technology grows. As we move toward adding new databases to the State’s network, we are looking forward to technology advancements.
- **Next steps the department is taking on these projects:** Learning to support and maintain these projects.

Key IT Initiatives and Opportunities/Challenges:

- The Justice Reinvestment Initiative (JRI) to review Hawai‘i’s criminal justice system has just begun.
- The department is trying to solve the problem of a lack of a common system for law enforcement and corrections; some data are being collected by PSD, while some are 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.
- PSD systems are antiquated and most of their applications are more than 10 years old; they want to learn more from other departments about modernizing/upgrading; they want more Web applications and open-source systems.
- An electronic records management system for each branch within the department would result in savings of paper, time, and space, and create overall efficiencies in the workforce.
- Need more real-time data in most of their systems, especially Offendertrak.
- Need automatic software upgrades across the board.
- 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).


State of Hawaii
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Publications
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HAWAII CORRECTIONAL INDUSTRIES
HAWAII CORRECTIONAL INDUSTRIES WEBSITE
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Employment Website
Frequently Called Numbers
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ALOHA FROM THE DEPARTMENT OF PUBLIC SAFETY!
Our Mission Statement: To uphold justice and public safety by providing correctional and law enforcement services to Hawaii's communities with professionalism, integrity and fairness.
Services & Information
Office of the Director
Correctional Industries Advisory Committee
Corrections Population Management Commission (CPMC)
Crime Victim Compensation Commission (CVCC)
Hawaii Paroling Authority (HPA)
Hawaii Statewide Automated Victim Information & Notification System (SAVIN) Web Site
Sex Offender Management Team (SOMT)
Emergency Scheduling and Federal Scheduling Actions
Administration Division
Corrections Division
Law Enforcement Division
Read more
Read more
Read more

- Need to update their systems so they can status the overall prison population (location, health, prison records, etc.).
- Need better budget and expenditures management.
- Need more information sharing with other agencies and within the department, from medical services to inmate re-entry.

Key Business/IT Portfolio:

IT Quick Wins

- Need computer equipment and printers that share the same software throughout the department and that are compatible with other State offices, to allow document printing among offices.
- Need sufficient memory to facilitate printing large documents.
- **Procurement issues:** want to make IT purchases in bulk; need centralized IT procurement.
- Need a good security policy to address cyber-security.
- Need remote (VPN) access for IT staff.
- Need more help desk support; current backlog of 60 calls.
- Need a mechanism to facilitate sharing knowledge within the State's IT staff on IT-related issues and resolutions.
- Need a solution to address the sun-setting of XP in 2014.
- Need a single sign-on solution.

- **Key business/IT accomplishments in FY 2012–2013:**

  - Upgrade of archaic applications for our facilities, fiscal, and personnel offices. Upgrade hardware/software for our admin users.
  - HPA application was updated and subscription notification was implemented.
  - Three locations were added to the NGN/iNet.
  - Upgrade Oracle database for our Offendertrak application.
  - Developed a new warrant system for law enforcement.

- **How the department's business/IT projects align with the Governor's New Day Plan:**

  Our MIS section is actively participating with the Information Technology Transformation Strategy of the Chief Information Officer, which aligns with the New Day initiative. As the State's network infrastructure is being developed, we are in support of a reliable and secure environment for our department.

- **How current projects help achieve business and technology transformation for the State of Hawai'i:**

  Our projects are helping the department run more effectively and efficiently. As these projects are deployed, users will be able use these new applications/programs to provide better information to assist their overall responsibilities in providing services — along with the new network infrastructures that will supports the environment.

- **How department projects align with OIMT's Top Three Strategies (re-engineer business processes and applications, modernize technology and infrastructure, and establish oversight management and governance):**

  As we move toward upgrading our archaic systems, we are working within our department's section to define a workflow that will help us work efficiently. As we meet and plan, we are communicating to improve the process. We are collaborating with OIMT to ensure that all State departments are on the same path.

ROBERT SU,
CIO, DEPARTMENT OF TAXATION (DoTAX)

"The tax system generates significant revenues for the State and is too important to experience a crash. One day down with the system costs the state $25 Million dollars a day. Modernizing the system is crucial for the State and OIMT has been extremely supportive in our modernization efforts."

10.3.15 DEPARTMENT: TAX

Information about your Department:

- **CIO Name: Robert L. Su**
- **Things to know about your department:** The Department of Taxation (DoTAX) has more than 400 employees, with district offices in O'ahu, Maui, Kaua'i, and Hawai'i.
- **Department website URL:** http://www.hawaii.gov/tax

Current Business/IT Environment:

- **Business/IT Mission and Vision:**

  The mission of the Hawai'i Department of Taxation is to administer the tax laws for the State of Hawai'i in a consistent, uniform, and fair manner.

  The Information Technology Services Office supports business initiatives of the Department of Taxation by being responsive to customer needs, proactively seeking innovative solutions, and utilizing technology effectively.

- **Description of Business/IT Environment:**

  The DoTAX consists of two divisions, five staff offices, a public information officer, and a taxpayer advocate. The two divisions are the Tax Services and Processing Division and the Compliance Division. The five staff offices are the Administrative Services Office, the Rules Office, the Tax Research and Planning Office, the Information Technology Services Office, and the System Administration Office.

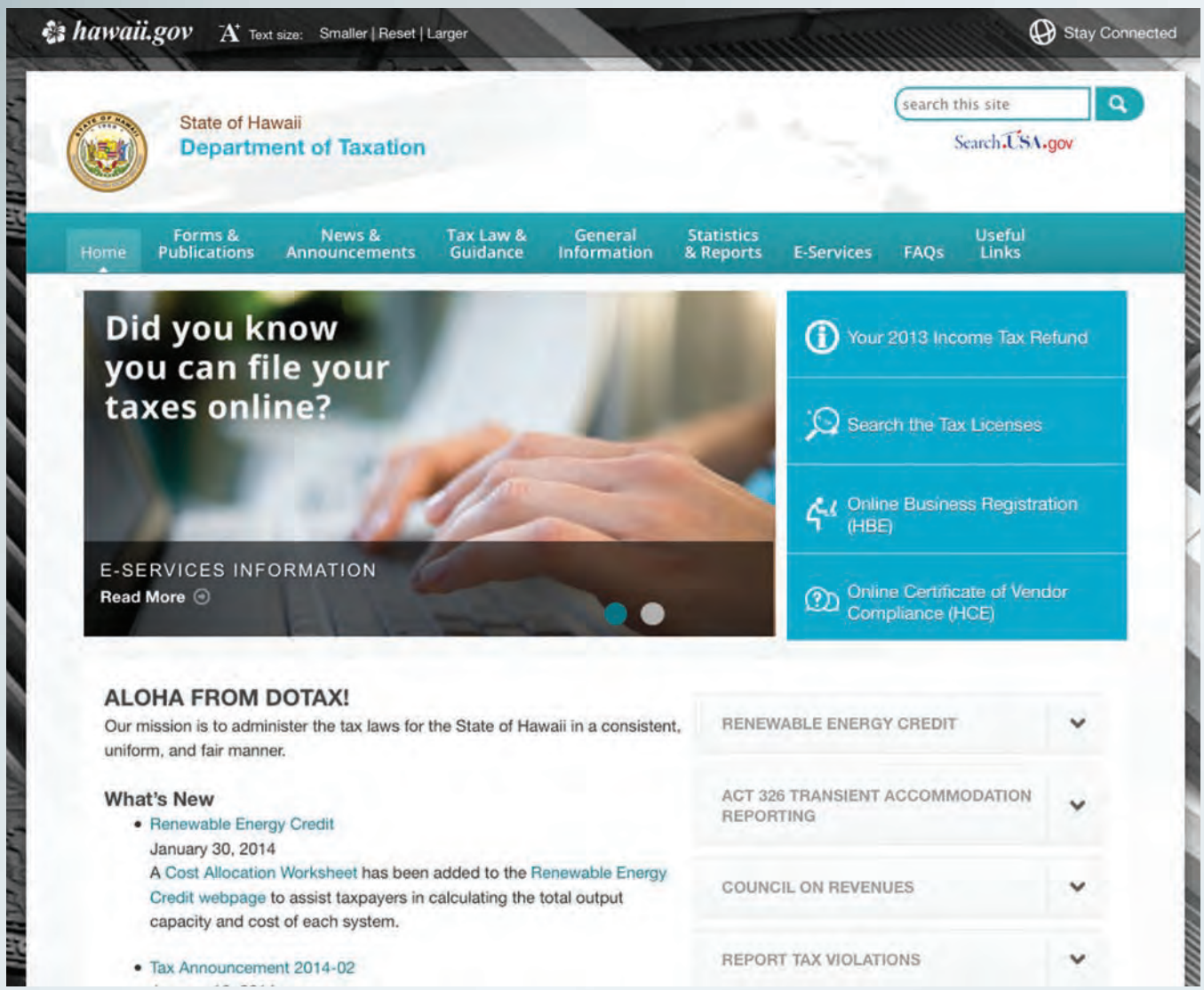
Tax Services and Processing Division

The Tax Services and Processing (TSP) Division consists of three branches: the Document Processing Branch, the Taxpayer Services Branch, and the Revenue Accounting Branch. The TSP Division performs the following functions:

1. Centralized processing, editing, and controlling of tax information received from paper documents or electronic data
2. Receiving, securing, depositing, and accounting for tax payments
3. Functions relating to account management, licensing, and providing taxpayer services to the public
4. Maintaining revenue control and reconciliation functions for all State tax revenues, including the preparation of the Preliminary Report, the Statement of Tax Operations (STO), and other revenue-related reports

Document Processing Branch

The main function of the Document Processing (DP) Branch is to quickly and efficiently process all tax returns and documents; to receive, secure, deposit, and account for tax payments; to ensure proper storage and retrieval of documents; and to perform various functions relating to electronic filing. The branch has the following six sections: Receiving



and Sorting, Data Preparation, Imaging and Data Entry, Monetary Control, File Maintenance, and Electronic Processing.

Revenue Accounting Branch

The main function of the Revenue Accounting (RA) Branch is to maintain accounting records for all tax revenues, refunds (including cashier refunds) and adjustments, district transfers and closing adjustments, and other adjustments, including preparation of all Journal Vouchers and Summary Warrant Vouchers. The RA Branch controls, and is responsible for, all adjustment, error resolution, accounting, and reconciliation functions for all State tax revenues. Specific tasks include the preparation of the Preliminary Report, the Statement of Tax Operations (STO), the Daily Cash Collection Report (O'ahu District), and the Monthly Segregation of Taxes Reports for Miscellaneous Taxes.

Taxpayer Services Branch

The Taxpayer Services (TPS) Branch has three main functions: to provide efficient customer assistance and information on all taxes administered by the DoTAX (customer inquiry); to perform computer-based error correction activities to allow expedient processing, posting or updating of tax returns, payments and other documents (account management); and to process, issue and update all licenses and permits issued by the DoTAX in a timely and efficient manner (licensing).

Compliance Division

The objective of the Compliance Division is to maximize taxpayer compliance with Hawai'i's tax laws in a consistent, uniform, and fair manner. The Compliance Division is composed of the O'ahu Office Audit Branch, the O'ahu Field Audit Branch, the O'ahu Collections Branch, the Maui District Tax Office, the Hawai'i District Tax Office, and the Kaua'i District Tax Office.

Three programs are established in the Compliance Division to meet the objectives of the voluntary compliance, self-assessment tax system: auditing/examination, collection, and taxpayer services (information dissemination).

Office Audit Branch

The Office Audit Branch performs examinations and audits to enhance voluntary compliance.

Field Audit Branch

Similar to the Office Audit Branch, the Field Audit Branch performs examinations and audits to enhance voluntary compliance.

Collection Branch

The Collection Branch consists of the O'ahu Collection Branch and the collections sections in the Maui, Hawai'i, and Kaua'i district tax offices.

Staff Offices

The staff offices lend support to the overall department.

Administrative Services Office

The main responsibilities of the Administrative Services Office are to oversee budgeting, fiscal, and personnel management matters.

Rules Office

The function of the Rules Office is to serve as a resource for complex policy recommendations and complex internal support. The Rules Office also assists in the DoTAX's implementation of new legislation and the creation and maintenance of tax forms.

Tax Research and Planning Office

The following are the main functions of the Tax Research and Planning (TRP) Office:

1. Prepare reports on data collected by the DoTAX, including reports on statewide tax collections, on the income patterns of individual and business taxpayers, and on tax credits claimed by taxpayers
2. Provide administrative and technical support to help the Council on Revenues to prepare its forecasts of General Fund tax revenues and total personal income
3. Provide economic and statistical analyses to help the DoTAX execute its policies and programs
4. Prepare reports on the revenue consequences of proposed tax legislation for the Legislature, for the Governor, and for other agencies in the Administration
5. Provide administrative and technical support for the Tax Review Commission when it is in session

Information Technology Services Office

The Information Technology Services (ITS) Office is responsible for providing technical support for the DoTAX's computerized tax systems and applications, for its local area network, and for networking-related components and infrastructures.

System Administration Office

The System Administration Office provides technical support for implementing computer system changes that are mandated by tax law changes or user requests.

Information Technology (IT) Environment

The IT environment is comprised of a local area network infrastructure along with customized hardware, software applications, and database/server environments.

- **IT Systems and Applications:**

Key Applications

- **ITIMS** — Integrated Tax Information Management System
- ITIMS Tax Processing System (ITPS)
- ITIMS Collections System (ICS)
- ITIMS Imaging System (IIS)

- Hawai'i Information Consortium (HIC)
- Modernized e-File (MeF)
- E-Filing (ELF)
- Hawai'i Business Express (HBE)
- Hawai'i Compliance Express (HCE)
- Bulk Filing
- Tax Refund Status Search
- Tax License Search
- EFT Payments via ACH Debit and ACH Credit
- Interactive Voice Response (IVR)
- IRS Secure Data Transfer (IRS-SDT)
- DoTAX website
- **Approximately 20 other internal application elements:**
  - Return Refund Payment Extract
  - EFT Pay Plan Payment Extract
  - Refund External Offset Extract
  - Unemployment Insurance Extract
  - Direct Deposit ACH Refund Payment Extract
  - Federal Refund Offset (FRO) Extract
  - 106 Paper Refund Payment Extract
  - Paper Refund Payment Extract
  - Retail Tobacco Permit Extract
  - Payment Plan Extract
  - GE/TA/RV License Extract
  - Business Booklets Extract
  - Individual Booklets Extract
  - 1099-G and 1099-I Printing Extract
  - 1099-G and 1099-I for IRS Extract
  - Jury Duty Selection Process Extract
  - Summary Warrant Voucher for FAMIS Extract
  - ZENworks
  - New ITPS-ICS executable to users
  - Revised and/or new ITPS-ICS templates to users

Challenges, Opportunities and the Road Ahead:

- **Challenges and opportunities the department is facing in implementing business/IT projects:**

  Challenges

  - Recruiting, retaining, and training knowledgeable resources
  - Organizational readiness

  Opportunities

  - Increasing efficiency and productivity
  - Streamlining operations
  - Reducing costs

- **Next steps the department is taking on these projects:**

  The DoTAX is recruiting, training, and organizing resources, as well as preparing the organization to undertake major business and IT projects, namely the multiyear Tax System Modernization (TSM) Project.

Key IT Initiatives and Opportunities/Challenges:

- Began staffing and organizing the Tax System Modernization (TSM) Project Team.
- Increased staffing is an opportunity to resolve cases and bring in revenue faster, but technology is needed to support investigations.
- ITIMS was a failed system for the State of Kansas, and it is not working for Hawai'i either.
- DOTAX is very concerned about the lack of disaster recovery for its primary systems that ICSD houses/hosts.
- There are numerous hardware and software components in the current systems that are toward the end of their lifecycle and/or out of warranty. These components will need to be maintained until they can be replaced by TSM.

Your Key Business/IT Portfolio

IT Quick Wins

- Increased e-filing
- Electronic check acceptance
- Improved collections analytics
- Tax information system
- Improved case management processes
- Improved network connectivity to Kona and Moloka'i

- **Key business/IT accomplishments in FY 2012–2013:**

  FY 2012

  The DoTAX:

  - Continued with its non-filer collection initiative for general excise taxes
  - Continued work for the eventual migration from the Joint Electronic Filing (JELF) program to the Modernized Electronic Filing (MEF) program planned for early January, 2013
  - Strengthened security for ITIMS applications, as well as supporting network and database infrastructures
  - Continued work toward upgrading the DoTAX bulk filing website, with implementation of the upgrade to go live toward the end of 2012
  - Implemented the automation of the Hawai‘i Compliance Express (HCE) tax clearance process in response to Act 190 Session Laws of Hawai‘i (SLH) 2011, which significantly increased the number of tax clearance requests
  - Implemented House Bill (HB) 1039, increasing the rental motor vehicle and tour vehicle surcharge tax rate from $3.00 to $7.50
  - Upgraded and enhanced selected local area networks' hardware components

  FY 2013

  The DoTAX:

  - Collected $6.23 billion in taxes
  - Processed approximately 3,700,000 returns of various tax types, including 1,530,000 (41%) electronically transmitted returns, an increase of 708,214 over FY 2012
  - Approximately 1,857,422 million payments totaling close to $6.37 billion during FY 2013 were processed, nearly $408 million more than in FY 2012
  - Completed and implemented the migration from the Joint Electronic Filing (JELF) program to the Modernized Electronic Filing (MEF) program in February 2013, as mandated by the Internal Revenue Service, resulting in the following benefits:
    1. Taxpayers can submit payments via the ACH debit method
    2. Attachments can be sent that are not supported by JELF
    3. Taxpayers can file returns year-round
    4. Acknowledgement of taxpayer filings occurs faster
    5. Problems are easier to resolve and error messages are more descriptive
    6. Images of returns are available directly online for DoTAX staff via the main Integrated Tax Processing System (ITPS) application
  - Completed the upgrade of the Bulk Filing website in November 2012, improving the aging infrastructure of the old website, allowing bulk filers to upload payments via the ACH debit method, and making images of returns available directly online for department staff via the main ITPS application
  - Implemented system modifications in 2013 to change processing for all first-time filers from direct deposits to paper refunds when taxpayers file annual tax returns, resulting in savings of $1,170,369 through the capture of 562 fraudulent returns claiming refunds using stolen Social Security Numbers
  - Implemented system modifications to automatically generate taxpayer notification correspondence, as well as to automatically post tax return information for taxpayers who fail to attach and submit a Form W-2 with their tax return, greatly streamlining what was formerly a manual process
  - Upgraded the transmission process with First Data Corporation to receive ACH debit payments from a modem connection to a more secure file transfer protocol (FTP) connection
  - Upgraded the transmission process with First Hawaiian Bank to upload EFT Pay Plan payments and receive ACH credit payments to a more secure FTP connection
  - Changed how electronic payments were processed through the Hawaiian Information Consortium (HIC) to deposit the payments directly to the State's account at First Hawaiian Bank, rather than to HIC's account at Central

Pacific Bank — ensuring that the State receives funds as quickly as possible and reducing the float period involved
- Upgraded DoTAX computers, printers, network routers, and switches to resolve end-of-life, technical support, reliability, and security issues

- **How the department's business/IT projects align with the Governor's New Day Plan:**

  Governor Abercrombie's New Day Plan called for the State to lead by example by infusing technology and innovation into operations. It specifically calls for the upgrade of government agencies that lack capacity or sufficient IT infrastructure. The DoTAX TSM Program aligns with this mandate by leveraging technology to improve the government services the DoTAX offers to citizens and businesses. With its potential to increase tax revenues through better enforcement of tax laws and to enhance transparency through better alignment between accounting systems, the TSM Program implicitly aligns with the New Day Plan's emphasis on fairness, restoring public trust, and the proper management of existing public resources.

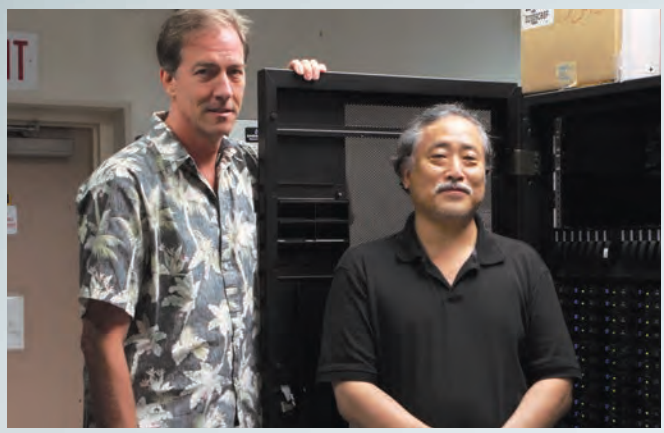
- **How the department's current projects help achieve the business and technology transformation for the State of Hawai'i:**

  The DoTAX TSM Program will help achieve business and technology transformation by completely updating the technology infrastructure underlining operations at the DoTAX. This provides the opportunity to streamline DoTAX processes, lowering the time and resource costs taxpayers and businesses need to invest into complying with tax processes, and the costs the State has to invest into maintaining tax collection processes. By improving the DoTAX's ability to fairly enforce tax regulations for all taxpayers, and by improving the DoTAX's ability to report what funds are available, the TSM Program will help provide the information and resources necessary for elected officials and leaders of government agencies to make decisions to fuel business and technology transformation throughout Hawai'i.

- **How do projects align with OIMT's Top Three Strategies (re-engineer business processes and applications, modernize technology and infrastructure, and establish oversight management and governance)?**

  The OIMT Business and Information Technology/ Information Resource Management (IT/IRM) Transformation Plan lists tax modernization as one of its top strategic priorities. The DoTAX TSM Program is a strategic initiative to actively look for a new system to streamline and modernize tax processing tasks currently supported by the aging Integrated Tax Information Management System (ITIMS). By expanding the overall use of electronic tax filing and electronic payment, improving analytics, and improving case management processing, the TSM Program seeks to improve the quality of service the citizens of Hawai'i receive, while positioning the enterprise for broader financial management improvements. This initiative also presents an opportunity for partnership through integration with another OIMT top strategic priority, the new ERP system being implemented by the Department of Accounting and General Services (DAGS) and Budget and Finance (B&F). Given the TSM Program's emphasis on critically re-examining and re-engineering business processes instead of replicating existing business processes through a completely customized system, the TSM Project clearly aligns with all of the OIMT's Top Three Strategies.

10.3.16 DEPARTMENT: TRANSPORTATION



Information about your Department:

- **CIO Name: Arthur Minagawa**
  (IT Manager currently deployed to OIMT/ERP)
  Charles Kitsuki or **Robert Kiessling**
  (Acting IT Managers)
- **Things to know about the department:** Department of Transportation is responsible to plan, design, construct, operate, and maintain State facilities in all modes of transportation, including air, water, and land.
- **Department website URL:** http://hidot.Hawaii.gov/

Current Business/IT Environment:

- **Business/IT Mission and Vision:**

  The Department of Transportation (DOT) is here solely to satisfy the transportation needs of the people of Hawai'i in the most economical, efficient and effective manner.

- **Description of Business/IT Environment:**

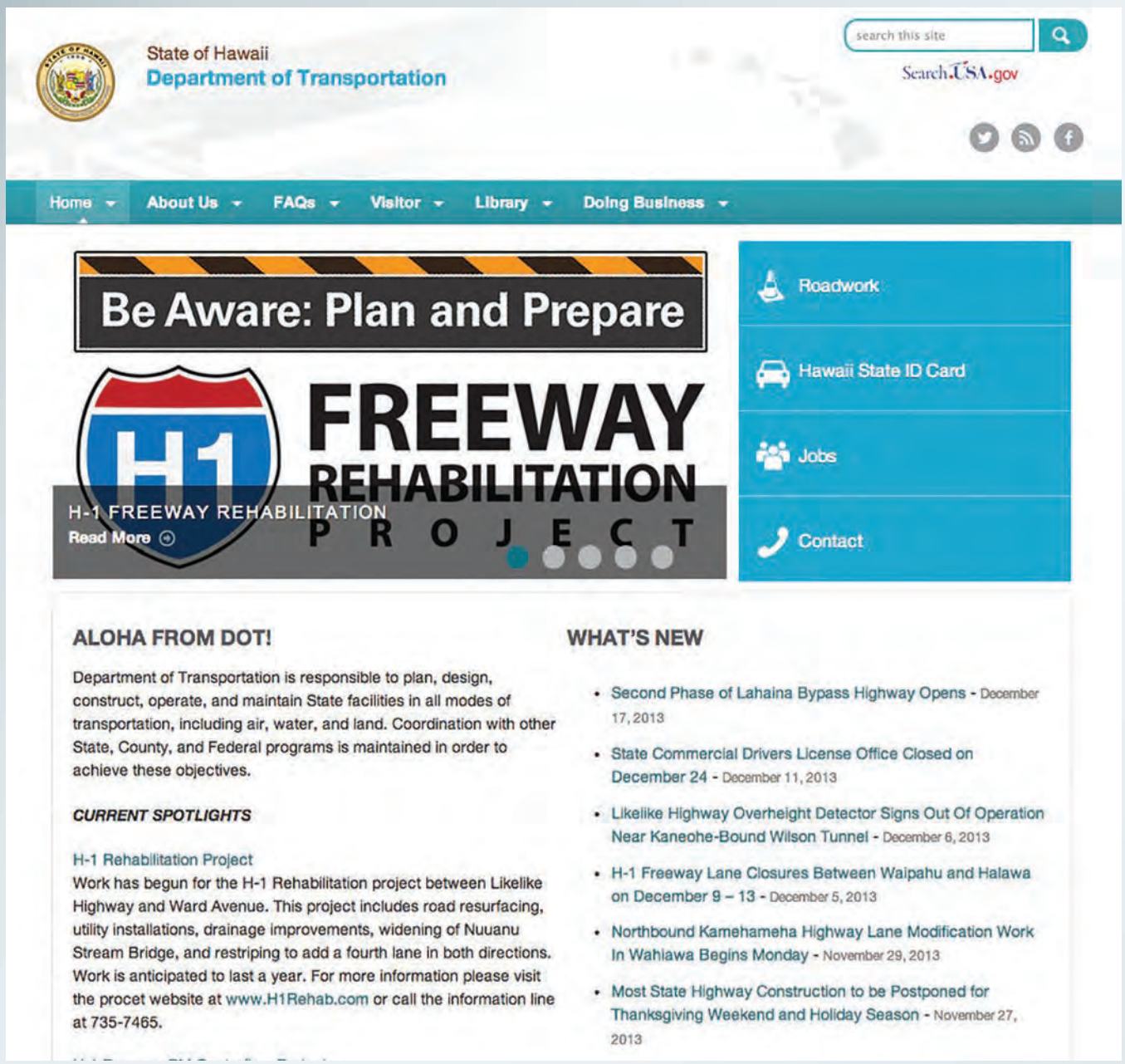
  The DOT information systems can be described in terms of the department's activities, the automated applications available to the department in performing these activities, the automated databases used to store information, and the department's hardware configurations. The department's business environment is organized under the following major functional areas: engineering, accounting, budget, payroll, personnel, project and construction management, contract administration, office automation, and operations.

  The DOT has a large concentration of employees at its division locations, as well as district, branch, and operation offices located on all major islands. The department has centralized many of its critical information system as server farms located in its data center at 869 Punchbowl Street, Honolulu, Hawai'i. This centralized location allows the DOT to manage, maintain, and support its information systems efficiently and effectively.

  The DOT is planning to leverage many of the new centralized services and infrastructure features that are currently being developed and deployed by OIMT in order to reduce costs, eliminate redundant systems, and free up resources.

Key Applications:

- **Departmental:**
  - **Budgeting:** Department system for O&M budgeting.
  - **Human Resources:** Small Domino databases used as document repositories and logs.
  - **Document/Content Management System (DOTCMS)** — repository for correspondence, contracts, As-Builts, and project documents at the departmental level. The Airports Division has a separate system for engineering documents.
  - Small Workgroup-Level Tracking Systems for correspondence and procurement requests, including Capital Improvements Program budgeting, construction contracts, operations and maintenance budgeting.
- **Highways:** HWYAC is a 30-year-old system that supports financial and cost accounting for DOT highways. HWYAC is essential for all accounting and federal highways billing functions, and is essential for division cash flow.



- **Airports:**
  - **Administration Application Types:**
    - Accounts Receivable
    - Property Contract Management
    - Space Management
    - Cash Management/Grant Tracking
    - Warehouse Supplies Management
    - Fuel and Fleet Management
  - **Engineering Application Types:**
    - Project Management
    - Environmental Tracking
    - Computer-Aided Design (CAD) and Geographical Information System (GIS)
  - **Operations Application Types:**
    - Security Access Control and Badging System
    - Fingerprinting and Background Checking System
    - Flight Information Display System
    - Public Announcement System
    - Gate Management
    - Energy Management

Challenges, Opportunities and the Road Ahead:

- **Challenges and opportunities the department is facing in implementing business/IT projects:**

  Challenges the DOT often faces when implementing a business/IT project include: lack of adequate resources (people, money, and time), shifting organizational priorities, unrealistic deadlines, communication deficits, lack of clarity in the scope of a project, and lack of user buy-in and support. DOT is currently working with OIMT to overcome many of these challenges when implementing future business/IT projects.

  Opportunities include: partnering with other agencies on similar projects to reduce costs; utilizing third-party expertise to help projects succeed; and having a strong strategy or road map for change.

- **Next steps the department is taking on these projects:**

  The next steps include ensuring that each project is carefully planned, has good leadership, can mitigate risk, and can be completed on time with no additional costs.

Key IT Initiatives and Opportunities/Challenges:

- Financial management systems need to be upgraded and consolidated. Currently stalled at Harbors.
- Highways regrouping after major contractor problems. Highways Financial System is Oracle Financials.
- Create an interface to DAGS FAMIS and Fed FMIS to track cash flow and grant money, eliminating the use of spreadsheets. The interface would provide the ability to invoice and appropriate money from funding sources. DOT is working through this, but the approach for handling appropriations in the DAGS system is problematic.
- Automate tracking and reporting of Capital Improvement Program (CIP) projects. Currently delayed (e.g., current status of CIP Strikeforce).
- Collaboration and social networking tools need to be introduced or upgraded. This is currently delayed by changes in budget execution policies and procurement rules.
- Director emphasis: bring divisions and offices together to create an electronic sense of place, using vehicles such as the intranet or WebSphere. Build on the success of Polycom, and add instant messaging.
- Equipment in the data center needs to be replaced or upgraded, due to age.
- Disaster recovery and business continuity initiatives need to be restarted and implemented. After complications in project funding and personnel issues caused the initial effort to stall in 2006, the department lacks strategy, policies, and facilities to recover from a disaster.
- Formal project organization with dedicated staff needs to be established department-wide, along with the necessary changes to corporate culture.
- Need electronic review and approval workflow applications.
- **Airport's improvement initiatives:**
  - Work order and trouble call service tracking
  - Expansion of Fuel Dispensing and Fleet Management System
  - Automation of cash receipting at district offices
  - Space Inventory and Classification System
  - Inspection Tracking
  - Statewide Radio Communication Connectivity
- Asset Management System

Key Business/IT Portfolio:

IT Quick Wins

- Departmental intranet to provide a single electronic place for employees to work together, share information, leverage knowledge gained, and prevent duplication.
- Disaster recovery and business continuity.
- Project management system for the department with summary-level roll-up and dashboards.
- Consolidated reporting on project status.
- Asset management system; real property (need a system to help track).
- Time and attendance and online timecard approval.
- Document management system for electronic routing and workflow of forms and documents. Important things get lost with manual logs used for tracking the location of physical items.

- Proper software versions compatible with outside agencies, and funding to replace aging equipment.
- Creation of an enterprise data warehouse to eliminate duplication of data stores and reuse of similar objects.

- **Key business/IT accomplishments in FY 2012–2013:**

  The DOT recently launched the new 511 GoAkamai by Phone system that provides real-time traffic information and updates for the island of O'ahu. Callers can dial 511 and quickly get current information on roadway delays and drive times, reach the Freeway Service Patrol, and hear public transportation information. The 511 technology includes a "self-tuning" feature that allows it to adapt over time to callers' needs, including capturing new destinations and improving voice recognition capabilities based on pronunciation. The convenient memory function allows 511 callers to save time by pulling up previously requested routes and information automatically. The just-released GoAkamai Mobile App for iPhone and Android provides 24/7 traffic congestion information and includes drive times and images from more than 200 traffic cameras. Recent enhancements will allow access to an Incidents tab that highlights specific types of travel delays such as construction and accidents.

  The DOT launched a new vehicle safety inspection program that creates an efficient and secure method of keeping vehicle information. The program will do away with monthly reporting by the inspection stations and will provide immediate recordation and proof of the vehicles' current results via wireless communication.

  The DOT Harbors Division has been successfully constructing and installing a Honolulu Harbor Surveillance Command Information System (H2S-CIS). The system is designed to provide real-time optical and radar surveillance of critical port areas, waterborne traffic tracking, and an alert monitor system to secure the harbors.

  Another key business/IT accomplishment is the modernization of DOT's network infrastructure, which will provide DOT with a stable and secure high-speed network within the state. DOT's IT staff is working closely with OIMT's network staff to meet this objective. DOT has taken steps to replace aging equipment and upgrade network connections, and is moving most of its network circuits to the State's NGN and/or hosted Ethernet circuits — all of which will help build the foundations for OIMT's OneNet, one network for the state.

- **How the department's business/IT projects align with the Governor's New Day Plan:**

  The DOT is committed to promoting Hawai'i's economic development by continuing to improve and expand transportation facilities within the State of Hawai'i and by addressing transportation issues on all islands in order to improve the business climate and quality of life for the State's residents.

- **How current projects help achieve business and technology transformation for the State of Hawai'i:**

  Many of the department's current projects will help modernize IT for the State of Hawai'i.

- **How department projects align with OIMT's Top Three Strategies (re-engineer business processes and applications, modernize technology and infrastructure, and establish oversight management and governance):**

  The DOT is currently participating in the following OIMT projects/work groups: enterprise resource planning (ERP), business process re-engineering, enterprise architecture, Web-based email migration, and network NGN infrastructure upgrades.

10.3.17 DEPARTMENT: UNIVERSITY OF HAWAI'I INFORMATION TECHNOLOGY SERVICES

Information about your Department:

- **CIO Name: Steven Smith,** Interim Vice President for Information Technology and Chief Information Officer (CIO)
- **Things to know about the department:**

  1. The UH Information Technology Services (ITS) unit supports all 10 accredited UH campuses, as well as distance learning and research sites on six islands
  2. UH employs a centralized/decentralized approach to IT support (like all universities)
  3. All enterprise systems (ERP and Teaching & Learning) are available system-wide and accessed via a robust optical 10 Gbps statewide network

- **Department website URL:** http://www.Hawaii.edu/its/

Current Business/IT Environment:

- **Business/IT Mission and Vision:**

  The mission of Information Technology Services (ITS) at the University of Hawai'i is to provide access for students, faculty, and staff to a first-class information technology infrastructure, support, and services that sustain and enhance University instruction, research, service, and administration within the University, throughout Hawai'i, and beyond.

- **Description of Business/IT Environment:**

  ITS provides enterprise IT services for the UH System statewide and the UH Monoa campus. It must ensure continuous, secure, and compliant availability of complex infrastructure and services providing more than 70,000 students, faculty, and staff on six islands, with more than 250 continually evolving services on a 24/7 basis.

Key Applications:

- **Administrative**
  - Kuali Financial System (open source);
  - Ellucian Banner Student Information and Financial Aid Systems;
  - Kuali Coeus for Research Administration (open source);
  - PeopleSoft HR Management System;

- Electronic Payroll Change Schedule System for automated interface to State of Hawai'i Payroll System (homegrown);
- Online Leave (vacation, sick) System for all UH collective bargaining units;
- eTravel system to simplify preparation of travel documents and direct deposit of reimbursements (homegrown).

- **Teaching & Learning**
  - Hawai'i Interactive Television System (HITS) using standards-based high-definition IP videoconferencing;
  - Laulima Course Management System (Sakai);
  - Halawai Realtime Web Conferencing (Adobe Connect Pro);
  - eCafe Online Course Evaluation (homegrown);
  - Statewide Educational Access Cable Television, including Video on Demand.
- **Network**
  - Provides network engineering and operation services for the UH System;
  - Manages statewide network that interconnects all campuses and education centers;
  - Manages redundant network connections to national and international research and education, and the commodity Internet;
  - System-wide integrated VoIP services and wireless authentication.
- **Services**
  - Robust Identity Management of the UH System for students, faculty and staff;
  - Security management and coordination for all UH campuses;
  - ITS Help Desk available statewide;
  - Data Center available for enterprise services and departmental hosting or co-location;
  - Emergency Notification Service (homegrown);
  - Web hosting;
  - Cloud based email, calendar, and collaboration tools for the UH System;
  - Site license coordination for major software applications;
  - Collaboration with State agencies (DOE, HSPLS) on major statewide broadband projects.

Challenges, Opportunities, and the Road Ahead:

- Challenges and opportunities faced in implementing business/IT projects:
  1. Expanding cyber-infrastructure to support advanced research and instruction
  2. Completing system-wide VoIP implementation
  3. Improving security in a distributed, open environment that depends on a free flow of information
  4. Developing online workflows to improve services to all University constituents
- **Next steps the department is taking on these projects:**
  1. Bring new Data Center online
  2. Establish High-Performance Computing (HPC) capacity
  3. Next-generation network infrastructure for research
  4. Install improved network detection appliances for security
  5. New workflow processes for student information system, document imaging, and curriculum management
  6. Further development of online procurement

Key IT Initiatives and Opportunities

- Implementing a second site for disaster recovery/ business continuity;
- Initiating next phases of development of new system-wide financial system;
- Enhancing and continually improving performance of core ERP systems;
- Offering expanded departmental hosting and co-location services with new data center online to improve institutional efficiency, sustainability, and security;
- Enabling "big data" capabilities for research: high-performance computing; data visualization; analytics; support of economic development

Your Key Business/IT Portfolio

IT Quick Wins:

- Implementing new workflows for student information systems;
- Implementing new curriculum management system;

- Significantly upgrading of UH Manoa network for research with federal funds;
- Migrating from campus-based to enterprisewide document imaging system.

- **Key business/IT accomplishments in FY 2012–2013:**

  1. Completion of new IT Center building with Data Center.
  2. Upgrading UH intercampus network connections to 10 Gbps.
  3. Retirement of last UH administrative mainframe.
  4. Registering UH servers and scanning for better security.

- **How do business/IT projects align with the Governor's New Day Plan?**

  1. Support the entrepreneurial professor.

     1. Increased support with active cyber-infrastructure end-to-end support and collaboration

  2. Facilitate innovation and technology transfer.

     1. Increased virtual server environment
     2. Migrating to next-generation network environment

  3. Support renovation efforts.

  1. Upgrading UH Manoa campus cable plant and wireless environment

  4. Maximize accessibility for students on all islands.

     1. Improved network connections between all campuses

  5. Support premier education and research projects.

     1. Implementing HPC environment to support researchers

- **How current projects help achieve the business and technology transformation for the State of Hawai'i:**

  1. Improved centralized UH financial system.
  2. Single UH system identity management system for secure access.

  3. Collaboration with education and labor on P-20 Project for a Statewide Longitudinal Data System.
  4. Significant improvement of broadband connectivity to schools and libraries, and establishing public computer centers in public libraries and UH community colleges.

- **How do the projects align with OIMT's Top Three Strategies (re-engineer business processes and applications, modernize technology and infrastructure, and establish oversight management and governance)?**

  1. Re-engineer business processes.

     1. New open-source UH financial and electronic research administration systems completed their first year of operation successfully; now expanding and improving capability including new business processes;
     2. Workflow project for student information system will change and improve student services processes;
     3. Electronic Payroll Change Schedule system for automated interface to State of Hawai'i Payroll System (homegrown);
     4. Online Leave (vacation, sick) System for all UH collective bargaining units;
     5. eTravel system to simplify preparation of travel document and direct deposit of reimbursements (homegrown);
     6. New curriculum management system provides re-engineering curriculum creation processes.

  2. Modernize technology and infrastructure.

     1. Completion of federally funded broadband project that brings broadband to every public school and library and UH location in the state;
     2. New LEED certified (Silver) system IT building with Data Center;
     3. Migration from dedicated proprietary hardware to virtualized commodity platform environments.

  3. Oversight management and governance.

     1. Data Governance Policy put into operation; ongoing Data Governance Committee;
     2. Continued escalation of security practices;
     3. Revised Records Management Policy;
     4. Revised Distance Education Policy.

10.3.18 HAWAI'I STATE PUBLIC LIBRARY SYSTEM

Information about the Department/Organization:

- **State Librarian: Richard P. Burns**
- **Department website URL:** www.librarieshawaii.org/

Current Business/Information Technology (IT) Environment (FY 2012-2014):

During the last twenty four months, the Hawaii State Public Library System's Technology Division has transformed itself entirely from its foundation to its edge operations, through a clear vision and complete alignment with the present Governor's goals, and has positively affected not only the 550 state employees within HSPLS (52 buildings across the entire state), but also its broad patron base of approximately one million members. Libraries are transforming themselves into educational centers and leaving behind the image of being merely an informational hub for the community. The Hawaii State Public Library System understands that in the evolving educational landscape of today, it can serve a pivotal role by cultivating, enhancing, and providing crucial 21st century digital skills to all patrons across the state, without burdening them with cost or constraining them to a schedule.

For this reason, HSPLS IT has stepped up to provide unprecedented services in the state. It is the hope of HSPLS that the state can find merit in the comprehensive, holistic, and business driven approach that led to the modernization of this IT unit and its infrastructure, and that it can serve as an example of how few resources, a limited budget and minimal workforce (3 ITS positions in an IT unit of 17 individuals) can still be overcome when creativity, ingenuity, innovation and dedication are utilized with a passion for committing to the "life-long learning" mission of our system. The decisions made by HSPLS/IT have saved our state approximately $3,000,000 within the first 20 months of changes being implemented. This is a significant amount, considering that the total yearly budget for the 50-branch/52 building library system is approximately $28,000,000 covering all its sections, units and divisions, with all their operations and acquisitions. The most remarkable accomplishment in HSPLS IT has been that of demolishing and re-building the concept, function, purpose, mission, and operations of IT itself – all based on a simple, clear and powerful vision; that of adding true value (asset) to the citizens of Hawaii. The new vision has restructured IT and aims at fulfilling modern G2C and G2G demands as a value center. The IT department added to its core objectives the need to reach out aggressively to our underserved communities with a caliber of education that would otherwise be considered beyond the means of most. HSPLS became, as a result of this, the only library system in the world to offer an unprecedented portfolio of 1500 certified-path Microsoft courses to 1,000,000 patrons with remote, in-house, and unlimited access across the world. From advanced Excel to datacenter architecture and database programming courses, all citizens can engage in an IT career based on these free classes. These are the same courses being taught by private sector companies specializing in certification-path curricula for hundreds or thousands of dollars per class.

The method of achieving this was quite simple. We trustingly and faithfully took to heart the Governor's vision in his "New Day Plan" and extracted those pieces that would be applicable to our section. Moreover, these mandates were applied in earnest and the results are visible today. HSPLS is grateful for the opportunity to elucidate what has transpired over the last couple of years, thereby exhibiting the potential of the state workforce within the technology realm. We have chosen to address the accomplishments of this unit spread over a few categories, but with an overarching classification of 'business driven-technology modernization', simply because by themselves each project was aimed at modernizing the technology of our system, but together they pursued a greater vision of changing this unit from a cost center to a value center, and created a fair amount of simplicity and transparency to the front end user, while keeping the complexity layers at the backend-datacenter level.

What are the Department's Key Business/IT Accomplishments (FY2012-2014)?

The following projects/acquisitions were undertaken with administration's plan in mind and the new vision for IT. Unless otherwise noted, they were all initiated and completed within 12 to 24 months.

1. Complete re-design of the network
2. Implementation of virtualization of and storage consolidation at the datacenter
3. Elevation of vendor relationships from suppliers to partners with long-range goals and vision alignment
4. Implementation of modern collaboration tools
5. Replacement of 1400 desktops & laptops
6. Implementation of Active Directory Services and modern policies for rights management governance
7. Massive Security Implementation of datacenter, middle-tier and edge components at network, server, and PC level
8. Deployment of unified communication components, including new email system
9. Design and implementation of secure, internally-hosted virtual cloud
10. Disaster Recovery, Business Continuity, Replication of Data
11. Design and Implementation of shared platform – inter-departmental workflows
12. Deployment of Fiber (1Gb) to every branch (in progress)
13. Creation of IT Learning Corner for all staff members
14. New Portal for public use
15. Implementation of digitization repository
16. Social media and advanced Web 2.0 tools on public portal collaboration components
17. Deployment of Hi Tech Academy (Digital Literacy and IT Academy (services from keiki to kupuna in all walks of life)
18. Creation of three computing centers across the state (deployed by mid-June 1012)
19. Deployment of E-2-go project to empower the communities with tangible resources regardless of connectivity means (in progress)
20. Partnership with DHRD leverage HSPLS assets, eliminate DHRD costs and fuel inter-agency collaboration

10.3.19 OFFICE OF HAWAIIAN AFFAIRS (OHA)

Information about the Department/Organization:

- **Head of Organization: Kamana'opono M. Crabbe, Ka Pouhana/CEO**
- **Size of Organization:** approximately 160
- **Budget of Organization:** Annual operating budget is approximately $40 million
- **CIO Name:** Not applicable. Chief Operating Officer is Kawika Burgess
- **CIO Team Size and Budget:** Team size is 5
- **Things to know about the department/organization:**
  1. OHA grew out of organized efforts in the 1970s to right past wrongs suffered by Native Hawaiians for over 100 years. Hawaiians' newfound activism brought their plight to the consciousness of the general public.
  2. OHA was established through Article XII of the State Constitution. Chapter 10 of the Hawaii Revised Statutes outlines OHA's duties and purposes, including promoting and protecting the rights of Native Hawaiians.
  3. Under federal law, OHA is recognized as a "Native Hawaiian Organization," empowered to engage federal entities on matters important to Native Hawaiians. OHA administers programs established by federal law, and plays a leadership role in congressionally-established entities that serve Native Hawaiians.
- **Department website URL:** http://www.oha.org/
- Empowering Hawaiians, Strengthening Hawai'i

Current Business/Information Technology (IT) Environment (FY 2012-2014):

Business/IT Mission and Vision: Ka Paia Kanaloa (Resource Management) supports the OHA mission by providing fiscal and technical support for the organization, as well as land management and grant administration for beneficiaries. The purpose of the Information Systems & Records Management program is to provide business tools, technology tools, applications, network services, and records management to the Office of Hawaiian Affairs so they can conduct business and achieve results in a reliable and efficient computing environment. The mission of IT is to provide the highest level of computer-related support for OHA employees. We also seek to compile and gather data in order to identify gaps and important issues; inform our advocacy efforts; and, ensure OHA's actions and initiatives are based on the best information available.

Key Applications/Systems Supporting the Business Environment (FY 2012-2014):

1. Office suite
2. Accounting software
3. Media development

Key IT Challenges, Opportunities and the Road Ahead in Interfacing with Executive Branch of the State of Hawaii (FY 2012-2014):

- **Challenges**
  1. Institutionalize IT governance concepts that are based on industry standards and best practices.
  2. Allow IT to exercise governance in a standard manner.
  3. Improve value management on a continual basis, based on lessons learned.
- **Opportunities**
  1. Enhance and align project management principles introduced via performance-based modeling.
  2. Provide a solution that is appropriate for an organization with limited staff resources that is scaled to the size of OHA.
  3. Formalize IT principles that have been absent since the creation of OHA.

- **Road Ahead/Next Steps**

1. An introduction to the need for a comprehensive and structured governance framework.
2. Further define expectations, roles, responsibilities, goals, processes and activities.
3. Alignment of IT with OHA's Strategic Plan and its various initiatives.

What are the Department's Key Business/IT Accomplishments (FY2012-2014)?

- **Top 3 Accomplishments Internal to the business**

1. Establish the governance framework for value management in a manner that is fully integrated with overall enterprise governance.
2. Provide strategic direction for the investment decisions.
3. Define the characteristics of portfolios required to support new investments and resulting IT services, assets and other resources.

How do Key Business/IT Projects or Systems Interface with the State and align with the Top 3 Strategies of the State of Hawaii Business and Technology Transformation Plan?

1. Programs that are selected based not just on their desirability but also on the organization's ability to deliver them.
2. Having methodologies in place that are used by business managers.
3. Crafting robust and realistic business cases that are used and include benefits for stakeholders.

- Modernize technology and infrastructure

In the last couple of years OHA has launched several new and innovative technologies for internal and external use as related to our mandated, mission and vision, and Strategic Plan.

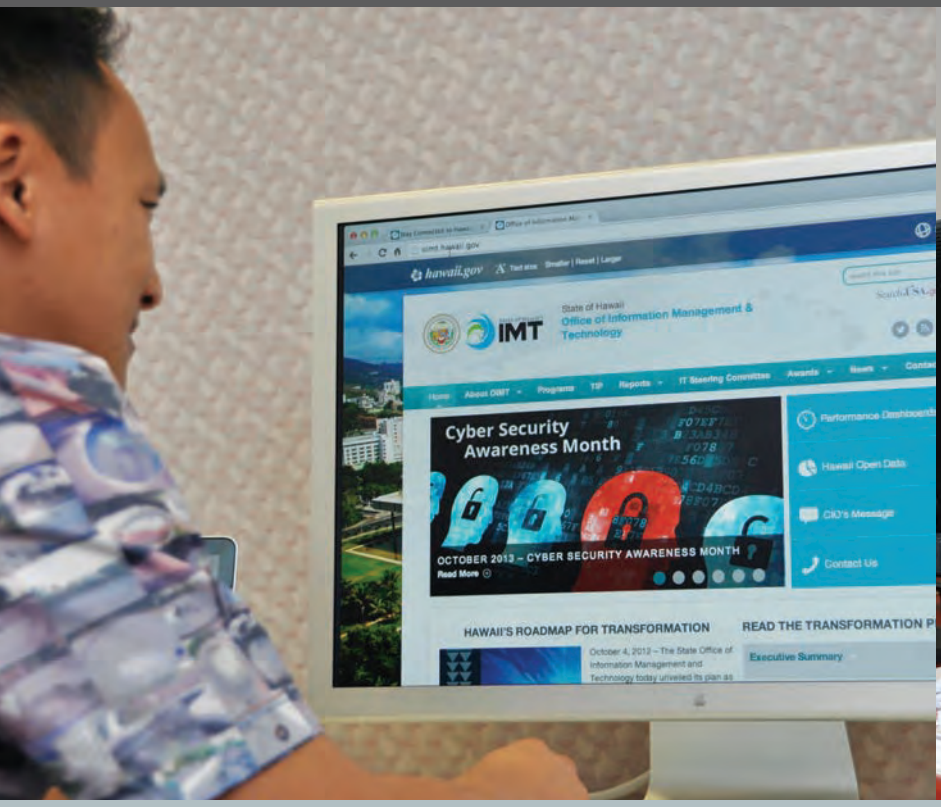
We seek to create a repository of knowledge where information about Hawai'i's land, culture and history can be easily accessed, to develop virtual mo'oku'auhau in Hawai'i, and to provide an opportunity for individuals to forge new relationships between themselves and the 'aina (land) that is most important to them. These technologies are ongoing development of cutting edge and comprehensive applications consisting of varied collections of data pertaining to our organization and its stakeholders. These online repositories of data will greatly increase OHA's ability to preserve and perpetuate cultural and historical information and practices, thus providing an invaluable resource to educate other regulatory agencies, OHA's Native Hawaiian beneficiaries, and the general public.

- Establish oversight management and governance (3-5 sentences)

1. Integrating planning that addresses benefits of delivery as well as organizational, process and technology changes.
2. Lessons learned that are consistently gleaned from both successful and unsuccessful programs, and used to improve the planning and management of new ones.
3. Business ownership and accountability that is assigned for all benefits and changes targeted.

What is your view of the State of Hawaii's Transformation Plan and progress towards a Smarter, Mobile, Digital Government?

- We view the State of Hawaii's Transformation Plan as progressive and timely. Our organization's ability to help is based on the similarity to our own agency priorities and areas we are trying to achieve within our respective networks. Our ability to collaborate, participate, and transparently share across these networks would maximize our ability to impact these goals set forth. The plan's focus is achievable within 21st century models for how information is obtained, managed, and disseminated.



TRANSFORMING GOVERNMENT
AT THE SPEED OF life

THE MEANING OF ALOHA

A — Akahai: kindness, expressed with tenderness.

L — Lokahi: unity, expressed with harmony.

O — Olu‘olu: agreeable, expressed with pleasantness.

H — Ha‘aha‘a: humility, expressed with modesty.

A — Ahonui: patience, expressed with perseverance.

Aloha is more than a word of greeting or farewell or a salutation. Aloha means mutual regard and affection and extends warmth in caring with no obligation in return. Aloha is the essence of relationships in which each person is important to every other person for collective existence. Aloha means to hear what is not said, to see what cannot be seen and to know the unknowable.

MAHALO NUI LOA! A HUI HOU!

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REPORT FOR THE **STATE OF HAWAIʻI**
BY THE **STATE CHIEF INFORMATION OFFICER**

STATE OF HAWAIʻI CIO ANNUAL REPORT
FOR FISCAL YEARS **2012–2014**