TERM REPORT

Systems Modernization

**Office of the Governor
State of Hawaiʻi**

Systems Modernization

Overview

When Gov. Ige took office, the state's information technology systems were decades out of date. This created inefficiencies and delays in public services, and the governor committed to reforms that would increase efficiency, reduce waste, and improve transparency and accountability. In eight years, the state's IT modernization has accelerated, driving down operating costs while providing faster services to customers.

The administration's transition to digital document management has reduced the amount of paper printed by 24,000 pages per month. Between reductions in paper, ink, printing, and employee labor costs, the state saved almost $5M and over 2.5 years. In addition, it allows the government to communicate more effectively across islands and deliver citizen services more efficiently.

In 2019, a comprehensive overhaul of the state's tax infrastructure was completed. The old tax infrastructure was outdated, costly to maintain, and unreliable, and the four-year project replaced nearly every technical system used by the Department of Taxation (DoTAX). Today, all the department's taxes are being managed in a single, integrated, secured tax management system. This speeds payments and refunds to taxpayers and holds accountable those who do not pay their taxes.

During this administration, the state implemented new time and attendance and payroll systems for 65,000 workers. This allows for efficient, accurate accounting of taxpayers' dollars that are used to pay for employees' benefits.

Gov. Ige has always believed that the next great economic transition for Hawaiʻi would be driven by innovations enabled by technology. The state is committed to addressing the digital divide for all Hawaiʻi residents.

The state established an office to mobilize and organize state resources to strategically plan and develop its broadband assets and is actively expanding broadband networks to access global opportunities. For example, the state has established two new broadband facilities outfitted for state-of-the-art multi-gigabit connectivity that connect to 430 studios, across three continents.

The state is installing equipment to provide free high-speed broadband internet service to public housing properties. In addition, the state has increased Internet access particularly for residents in unserved and underserved areas of the state by deploying 1,000 new Wi-Fi hotspots at public parks, civic and community centers, and other public open areas and gathering places. With these and many other programs, Hawaiʻi continues to lead the charge in the field of digital equity.

Newly develop web-based programs and apps have greatly expanded access to state information and services. The state made 3.5 million pages of archival records available in a free, online repository for public access and added a bi-lingual interface (English and ʻŌlelo Hawaiʻi). A new digital hub called the Hawaiʻi Career Acceleration Navigator (HI-CAN) is connecting unemployment claimants and job seekers to high impact career pathways. And a free mobile app helps people explore hiking trails and access information on native species and plants.

The COVID-19 pandemic accelerated the state's move to upgrade its technology systems. The state's technology team supported many of the state's critical applications, including disability claims, unemployment insurance, child support enforcement, child welfare, human resources, payroll, and financial management systems of the Executive Branch and DOE, DOT-Highways.

An efficient and effective government is critical to our community. This administration has made great strides in modernizing state systems and improving transparency and accountability in state government.

Governor Ige's Mission

Restore the public's trust in government by committing to reforms that increase efficiency, reduce waste, and improve transparency and accountability.

Modernize our tax system, increase efficiency for taxpayers and hold accountable those who do not pay their taxes.

Update and adapt digital systems

- Converting to paperless systems
- IT department overhaul
- New payroll system

Commitments

"It means doing the people's business, in a business-like way; being honest and transparent, watching closely, how we spend people's money, and being accountable, for all that we do."

Governor David Ige, First Inaugural Address 2014

"The tax department, headed by Maria Zielinski, is preparing to implement a Tax System Modernization program this year. The update will better secure tax information and increase tax revenues through its efficiencies. While the project is expected to take several years, we should see a sizable increase in tax collections after the first two years. Moreover, the effort is projected to eventually pay for itself through these increased revenues. Taxpayers will also benefit by being able to file their returns electronically, getting faster payments and refunds, and having access to online account information."

Governor David Ige, State of the State 2015

"Our departments have taken a hard look at their programs to identify changes that could be made to improve the efficiency and transparency of their operations. Last year, we implemented an electronic signature program that helped to eliminate thousands of paper copies and short approval processes. We are making a continuous effort to find solutions and provide the tools that are needed to make government more efficient and effective."

Governor's Message for the Executive Budget for Fiscal Biennium, 2017 – 2019

Outcomes

"Tax modernization has been one of the priorities that allows us to improve the efficiency and effectiveness of our public servants. It gives public servants the tools to be more effective, to allow us to engage in a more appropriate way. And most importantly, it allows us to do more with less," said Governor David Ige at a news conference in 2019.

Progress & Milestones

2015

Upgrading and adapting digital systems for major paper reduction through transitioning to digital document management

Cloud-first preference (ETS/DAGS 2015)

Set a clear preference for depts use of cloud services over existing and often outdated legacy systems for which further investment of taxpayer dollars cannot be justified. Having previously reached initial operating functionality, the Hawaiʻi Government Private Cloud offers infrastructure as service to all state entities, including broad disaster recovery.

Digital document management (ETS/DAGS 2015)

Employee Claims Division (ECD) developed a digital document management system to streamline claims handling. With the technical expertise of ETS, in July 2015 ECD began developing and testing a digital document management system to make our claims handling more efficiently by eventually eliminating all manual paper processes and converting to a completely digital system and workflow. Ultimately, once we complete our development and testing and move to full implementation, we wish to realize some or all of the following benefits: savings on paper and related costs; physical space savings; automated claim filing and notification; ready retrieval and access of documents from a virtual library; health and safety for lack of physical files; improved response time to stakeholders, automated inclusion not email communication in claim files; ease of auditing; and automated interfaces with DAGS.

Ānuenue interisland digital microwave network (ETS/DAGS 2015)

Successfully achieved "full operating capability" of the Ānuenue Interisland Digital microwave Network on shared infrastructure designed by State of Hawaiʻi and U.S. Coast Guard engineering professionals to provide robust and survivable communication links and facilities throughout Hawaiʻi. The Ānuenue network is jointly managed by the state and the USCG Base Honolulu C4IT Division. This backbone communications network includes the statewide Shared Blended land mobile radio system; Maritime Wireless Network system; HIEMA; and PSD, DOH, DOT, DLNR. State sponsored users include the Maui Police Department and other agencies of all counties.

Human Resources Management System (HRMS) upgrade (ETS/DHRD 2015)

The completion of this major upgrade to the state's HRMS represents a successful collaboration between OIMT, ICSD and DHRD. The system is used by more than 200 human resource professionals to support recruitment, management, and retention of over 16,000 employees. Officially completed as scheduled on January 2015, the project resulted in a modernized system with the latest HRMS software, all deployed with vital backup and disaster recovery capability. Together, the software update and equipment/systems modernization will drive down the state's operating costs while providing faster services to customers.

State Building Asset Management system (DAGS 2015)

Completed in 2015, the State Building Asset Management (SBAM) system centralized system and dashboard accounted for more than 6,000 state owned or operated buildings. The project's objective was to identify and implement a system that would provide control and accountability over capital assets, while also providing capacity to build out additional capability for other kinds of assets and the work associated with them. Soft-launched in September 2015, SBAM provided centralized dashboard view for officials to use and to make informed asset management decisions. In addition to building asset categories, SBAM maintained information that included initial service date, building aliases, land parcel data, and square footage. The program used data from the Office of Planning's Geographic Information System and DLNR's Public Land Trust Information System, and plans were underway to add legislative districts and ceded land data. This system's expansion and full population of data has since been put on hold. It is anticipated that current work for a new asset system will incorporate these features,

**Digitized Public Works documents to ease bidding procedures (DAGS 2015)**

Public Works implemented an online plan retrieval system that included work to digitize plan documents, to index plan documents, and to train users on accessing the system. External architectural and engineering firms working on designing of DAGS projects are now able to electronically access building plans and specifications from any internet browser. Public works also initiated a design comment review process using a Web Project Management and Collaboration system for pilot design projects.

Leveraging mobile technology for advanced reporting at construction sites (DAGS 2015)

Public Works initiated Office 365 pilot for Public Works Division field staff to do project jobsite reports on their tablets. This enabled employees to submit reports and access work records easier.

TAX/ETS Tax Software Modernization (TSM) project: Developed and implemented Hawai'i Tax Online (DoTAX 2015-2019)

In 2019, the Tax Modernization project was completed and successfully implemented. The completion of the Tax System Modernization project in September 2019 represented the end of a four-year project which transformed DoTAX's operations by upgrading or replacing nearly every technical system used by the department. The old tax infrastructure was outdated, costly to maintain, and unreliable. Over the last four years, millions of records have been converted from the legacy system to a new platform. Today, all the department's taxes are being managed in a single, integrated, secured tax management system. The legacy system was decommissioned. Listed below are documented accomplishments over the three-year implementation period.
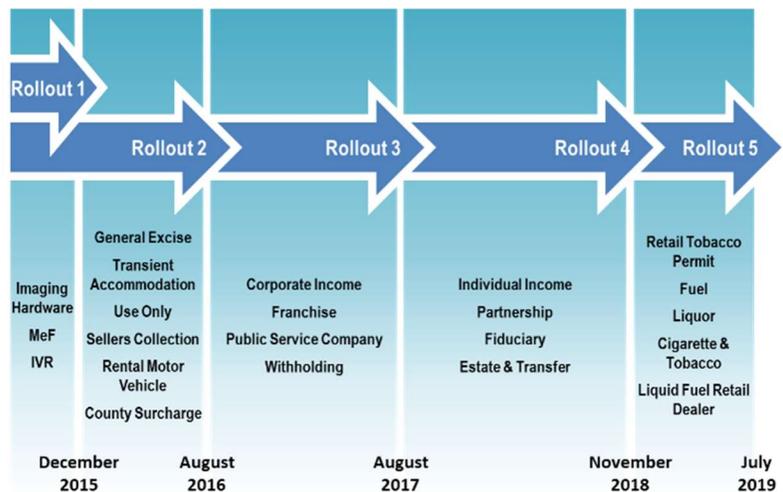
Rollout 4, the largest phase of Tax Modernization program completed (2018)
In November 2018, DoTAX rolled out its largest phase of modernization, which improved, on-demand, taxpayer services, secured fraud prevention, and ensured everyone paid their fair share of taxes. The following are accomplishments to date:

- Successfully completed the TSM on-time and on-budget for three of the five rollouts.
- Increase in taxpayers registering and filing electronically. In 2018, approximately 44% of individuals were filing online.
- Created the Taxpayer Advocate office to provide services to taxpayers who are unable to have their tax issues resolved through normal channels. In 2018, one employee staffed this office and handled approximately 300 calls monthly.
- Created the Tax Practitioner Priority Specialist office which provided the first point of contact for registered tax practitioners who have state tax related issues. In 2018, one employee staffed this office and handled approximately 1,000 calls per month.
- Created the Administrative Appeals office which administer the Administrative Appeals and Dispute Resolution (AADR) program. AADR was a streamlined process to appeal an audit assessment. The program also provided the taxpayer with an alternative to the Board of Review process or the costly Tax Appeals Court if they wished to appeal a tax assessment.
- Implemented the Interactive Voice Response (IVR) system as part of TSM. Through IVR, DoTAX was able to increase and shorten the answer rate to taxpayer inquiries with a callback feature.
- Significantly reduced paper return processing through business process reengineering. Previously, DoTAX had a backlog of upwards of 5 – 6 months for processing returns.
- Significantly reduced the timing of depositing checks utilizing TSM and business process reengineering. With most checks being deposited within 24 hours, the state benefits from significantly improved cash flow. Previously, there were upwards of six weeks to get checks deposited into the state account.
- Significantly increased collections from our Special Enforcement Section that handled investigations on non-compliant taxpayers particularly as they relate to the cash economy and short-term vacation rentals (Act 24).

Required mandatory tax e-filing (2019)

In April 2019, DoTAX announced that Fuel, Fuel, Liquor, and Cigarette and Tobacco returns and for Rental Motor Vehicle, Corporate, Withholding, Franchise, Public Service Company, Estate, General Excise, and Transient Accommodations taxes. This was the first time that the department has started using its mandatory e-filing authority (HRS, 231-8.5). By utilizing mandatory e-filing requirements, it enabled the department to process returns more quickly for taxpayers, reduced the amount of paper used, and lessened the manual processing that needed to be done previously.

New tax platform saves more than 2 million sheets of paper (2019)

More than 2.25 million returns and payments were completed using Hawaiʻi Tax Online (HTO) in 2019. 57% of all 2019 returns were processed electronically. With a 63% increase from the last year, there were more than 216,000 taxpayers registered to use HTO.

Improved Financial Operational Performance (2019)

In Fiscal Year 2019, DoTAX collected more than $8.3 billion, a 4.3% increase over the year before. DoTAX operating costs remained at about 33 cents per $100 collected.

Revoked 400,000 tax abandoned tax accounts (2019)

In September 2019, the department revoked more than 400,000 tax accounts that had not been used in seven or more years. This is the first time that the department used its legal authority to clear tax accounts due to abandonment.

Airbnb provided DoTAX with host data (2019)

DoTAX attorney generals and Airbnb agreed to terms to collaborate and improved host compliance with Hawaiʻi tax requirements. This agreement was the first substantive agreement that enabled DoTAX to work with a short-term rental platform and ensured the enforcement of Transient Tax Accommodation requirements. Under the agreement, Airbnb provided data about its hosts earning revenues to DoTAX to facilitate validation that the hosts were paying necessary taxes. In addition, Airbnb began reminding their hosts about the requirement of

displaying their Transient Accommodations Certificate of Registration number in their listing (HRS, 237D-4c).

Strategic planning & increasing cybersecurity efforts

Implementation of IT governance (ETS/DAGS 2015)

ETS implemented a mandatory governance process to ensure efficient planning review and approval processes, providing the essential oversight necessary so that the intended objectives are achieved and resulted in $11M (CY2015) in cost avoidance. These governance requirements intended to ensure that tax-payer funds for IT development and modernization programs will be subject to an efficient planning review and approval process, providing the essential state oversight necessary to achieve intended objectives. The governance process was designed to identify and maximize opportunities for efficiencies and cost savings, reduction of waste, positive return on investment, and overall success.

Established Enterprise Resource Planning (ERP) targeted strategy (ETS/DAGS 2015)

Established a result-driven strategy for ERP initiative, aimed to modernize and integrate the management of important state government admin functions, from asset management to time and attendance. In 2015, Governor David Ige tasked the ERP Executive Steering Committee, led by the comptroller, to identify targeted projects to be undertaken using available ERP funding and potentially leveraging existing systems, including underlying infrastructure required to support key applications.

Filled State Web Portal Program Manager position (ETS/DAGS 2015)

The portal manager functions as the overseers of the web portal program, vendor relationship manager, and evaluates the portal contractor's activities and financial reports.

Prioritizing accessibility and government transparency through leveraging modern platforms

Launched Aloha+ Challenge Dashboard (ETS/DAGS 2015)

In 2015, dashboard visually shared and outlined progress on state sustainability goals.

Installed fiber network for DLNR remote offices statewide (DLNR 2015-2022)

DLNR implemented a statewide point-to-point Fiber network to 25 DLNR remote offices that provide data connectivity speeds ranging from 50 Mbps to 1 Gbps for increased work productivity for Boating, Forestry & Wildlife, Enforcement, State Parks, and IT hub, with a construction cost savings of nearly $700,000.

Added public recreational permitting and information accessibility online (DLNR 2015-2022)

DLNR prioritized permitting and information accessibility and transparency for the public online. In 2016, the Division of State Parks created an online permit application process with fillable forms for vehicular access to Ka'ena Point State Park that once accurately completed, would automatedly transmit to a data base where staff would then issue a permit and bumper sticker with access to a code that allows the permittees to view a data base where each week' s gate lock combination was displayed, to only allow for permitted vehicle access only – reducing violations and impacts on the resource due to maps with instructions associated with the application and permit process. Over 8,000 permits have been issued and are renewed every two years.

The DLNR Division of Forestry and Wildlife (DOFAW) wildlife control and access permits are now also routed quickly online via esign. Interactive online story maps and island-specific hubs inform the public easily and visually of DOFAW's forest management, with photos, maps, management plans, environmental reviews, and other documents available online for transparency. Data collected and analyzed using online mapping platforms inform reporting and feed into adaptive management strategies. DOFAW established a new forestry collection permit system online in 2022.

Moved the Bureau of Conveyances into the 21st century through multi-phased digitization efforts (DLNR 2015-2022)

The Bureau of Conveyances (BOC) undertook a bold and critical, multi-phased effort to digitize all recorded documents in Hawaiʻi dating back to 1845. Digitizing each document would first and foremost, preserve and maintain the integrity of these records. It would then become the critical building blocks for business continuity, portability, and secure, remote access by anyone with internet access. The BOC has converted over 38+ million pages from microfilm as well as physical index and document books into multi-page TIFF and JPEG images since 2015; these are in different stages of enhancement and cropping, replacement, indexing and linking the digital content to the Bureau of Conveyances' new Land Records Management System (LRMS).

2016

Upgrading and adapting digital systems for major paper reduction through transitioning to digital document management

Activated and migrated operational communication platforms to Office 365 (ETS 2016)

ETS assisted executive branch departments in migration to Office 365. This included the activation of 12,394 Office 365 licenses that are now being utilized by departments and the migration of 11,576 mailboxes.

Provided all executive branch employees with Adobe Suite (ETS 2016)

As part of the eSign program, executive branch users are provided, at no additional cost to the state, unlimited access to Adobe Creative Cloud applications, including many modern technical tools, avoiding duplicative purchases and resulting in cost-avoidance.

Paper reduction pilot program (ETS 2016)

HRD/ETS- DHRD's Employees Claims Division (ECD) implemented permanent paperless processes for all operational interactions between ECD and nine different departments (DOH, DHS, PSD, DOA, DEF, BUF, LNR, LBR, Libraries).

Paper reduction pilot program (ETS 2016)

PSD/ETS- Hawaiʻi Correctional Industries (HCI) helped state agencies to go paperless: HCI partnered with ETS to securely install a document scanning operation at the Women's Community Correctional Center.

Rapid ʻŌhiʻa Death remote aerial monitoring (DLNR 2016)

Working with UH Hilo's Spatial Data Analysis and Visualization Lab, DOFAW began exploring new ways to monitor the state's ohia forest for Rapid ʻŌhiʻa Death by using artificial intelligence (AI) tools to evaluate imagery data collected aerially and by satellites, making disease surveys more cost-effective and reducing safety risk associated with regular helicopter flights.

Strategic planning & increasing cybersecurity efforts

IT backup finalized first time in state history (ETS/DAGS 2016)

MOU formalized in 2016, IT systems housed at the state's primary data center migrated to UH IT Center to provide a resilient backup for the first time in state history. The agreement represents an annual cost avoidance in the millions. Under the terms of agreement, IT systems that were housed at the state's primary data center in the Kalanimoku Building in downtown were migrated to the UH IT Center to the extent possible. By leveraging UH's Data Center, ETS is able to address some of the state's most critical systems while reducing duplicative spending, including costs associated with the design, construction, maintenance, daily operational, and staffing for an entirely new center.

Prioritizing accessibility and government transparency through leveraging modern platforms

Easing voter registration through online platform (ETS/DAGS 2016)

Office of Elections launched the Online Voter Registration website, allowing residents with either a Hawaiʻi Driver's License or a Hawaiʻi State ID card to register to vote, update their voter info, confirm their registration status, or request to vote by mail.

Launched Text to 911 capabilities (ETS/DAGS 2016)

The E911 Board formally launched its Text to 911 capabilities across all four counties. Hawaiʻi is the seventh state across the nation to have fully implemented texting capability.

2018

Upgrading and adapting digital systems for major paper reduction through transitioning to digital document management

Hawaiʻi Pay project (ETS/DAGS 2018)

Twenty-two thousand State employees are now on the modernized payroll system. The last group to rollover will include the Hawaiʻi Department of Education and the University of Hawaiʻi, which will happen at the end of 2018. With the final group, a total of 65,000 employees will be enrolled in the new system. The project is being implemented by DAGS in coordination with the Office of Enterprise Technology Services.

Paper reduction pilot program (ETS 2018)

In 3 years, the state is projected to save $500k and 10M sheets of printed paper. A six-month paper reduction program piloted by ETS has reduced paper use by 20 percent, which translates to a savings of 1M sheets of printed paper. Nine state departments participated in the pilot. Departments transitioned into producing electronic reports instead of printing hard-copy files. Additional paper reductions and cost savings are expected in the coming months as more departments eliminate many printed paper reports entirely and convert others to digital documents.

Hawaiʻi Annual Code Challenge (HACC) (ETS 2018)

Open to everyone, from students to amateurs to professionals, the HACC is a hackathon inspired competition designed to engage the community in modernizing state functions and services and support IT workforce development. Multiple state departments and agencies will put forth challenges to community participants for identifying innovative ways to create open government.

Launched eSign service (ETS 2018)

Expanded eSign services to entire executive departments by working with digital documents, reducing the amount of paper printed by 24,000 pages per month. Between reductions in paper, ink, printing, and employee labor costs, the state saved almost $5M over 2.5 years. Through eSign, the amount of paper the government uses have been significantly reduced, cutting costs, and having a positive impact on the environment. But just as important, adopting digital processes, including supporting electronic documents, helps the government communicate more effectively across islands and deliver citizen services more efficiently. The program was originally piloted in the Office of the Governor in October 2015 and expanded to all executive departments a year later.

Strategic planning & increasing cybersecurity efforts

Adopted State Information Technology Strategic Plan (ETS 2018)

ETS and community stakeholders gathered to create a state IT strategic plan in accordance with HCR94. The Hawai'i Information Technology Strategic Plan, which was completed in 2019 and posted online at: https://ets.hawaii.gov/wp-content/uploads/2019/05/ETS-Strategic-Plan-website-4.25.19.pdf, included multi-year IT tactical plans, data goals and objectives.

Prioritizing accessibility and government transparency through leveraging modern platforms

Developed translator application for executive dept. websites (ETS/DAGS 2018)

ETS worked with Google to create web apps to dynamically translate information on executive department websites. The pilot app translate content into 80 languages.

Adopted Siteimprove to track accessibility issues and document site analytics (ETS/DAGS 2018)

ETS worked with Siteimprove to improve the executive branch department websites' quality, SEO, and accessibly. Websites would be able to provide a more inclusive user experience by being cognizant of web accessibility standards, broken links and other readability issues

Adopted Brandwatch (ETS/DAGS 2018)

ETS worked with Brandwatch to assist with content curation, monitoring and management. ETS assisted Hawaiʻi County in using the tools during its disaster and volcano recovery.

- Adopted multi-factor authentication (MFA): ETS enabled MFA and subsequent policies to protect digital infrastructure and Office365 environment.
- Implemented cybersecurity awareness training: ETS began facilitating cyber security awareness training to all Office 365 users. The training measures the employees' ability to detect email based cyber threats, such as phishing.

Developed the online Public Land Trust Information System (PLTIS) (DLNR 2018)

Built the online Public Land Trust Information System (PLTIS) in 2017, and a public interface in 2018, making the inventory of State-owned and related land encumbrances available to the public along with a built-in map interface.

2019

Upgrading and adapting digital systems for major paper reduction through transitioning to digital document management

Public WiFi access increased across the state by DCCA's Cable Television Division (DCCA 2019)

To increase Internet access particularly for residents in unserved and underserved areas of the state, DCCA required the deployment of 1,000 new WiFi hotspots statewide as part of its approval of the transfer of Oceanic Time Warner Cable franchises to Charter Communications, with DCCA designating 100 of those locations at public parks, civic and community centers, and other public open areas and gathering places. These 100 designated WiFi hotspots provide one hour of free WiFi service per device per day for the public. DCCA worked with the cable provider and stakeholders to investigate and identify areas of need and available infrastructure to make the last 55 of these designations in calendar year 2019. As of November 2019, 60 of the 100 designated hotspots have been activated for public use. Designated hotspot locations include many rural areas across the State, such as Captain Cook, Pahala, Paauilo, and Hawi in Hawaiʻi County; Maunaloa, Haiku, Makawao, Lanai City, and Hana in Maui County; Kalaupapa in Kalawao County;

Wainiha, Anahola, and Kekaha in Kauai County; and Waialua, Kaaawa, and Makaha in the City & County of Honolulu.

Investing in professional development of the state work force – our greatest asset (DHRD 2019)

Implemented new Learning Management System (LMS) which impacted how each employee received training and opportunities to new skills. Each learner will have a personal learning page and plan, customized to their current position with recommended learnings. This system will not only improve our ability to track the results of training for compliance purposes, but also to reach each learner with suggestions for growth opportunities. We launched our original LMS four years ago and since then, surveys consistently point to the opportunity to learn and grow as a top (5) indicator of employee engagement. Our new LMS will provide just that – a new, exciting, and innovative approach to employee learning and development that shows we value our employees, invest in their development and take their engagement seriously. The DHRD training office takes pride in growing the people who help our state to grow, and our new LMS takes us a long way toward that end, making the State of Hawai'i an employer of choice for kama'aina.

Built narcotics enforcement division prescription drug monitoring information sharing (PSD 2019)

The Department's Narcotics Enforcement Division (NED) initiated for the first time in our State, the interstate sharing of prescription drug monitoring program (PDMP) information between Hawai'i, other states, and the United States Department of Defense (US DOD) health agencies. Interstate sharing of prescription drug information is important because it aids prescribers by providing more information about a patient's past medications, including those prescribed in other states or by US DOD facilities. This PDMP information sharing is one of the goals of the Governor's collaborative Hawai'i Opioid Initiative.

Launched new online portal to report unlicensed activity (DCCA 2019)

New completed licensing applications can now be submitted online through MyPVL. Previously, new licensing applications could only be accepted by mail, but beginning April 2020, applicants were able to submit completed applications online. Staff were also able to process the paperless applications electronically.

Implemented online reservations at State Parks (DLNR 2019)

In 2019 the Division of State Parks initiated advanced parking and entry reservation systems first for Hāʻena State Park, then in 2020 for Waiʻānapanapa State Park and in May of 2022 for Diamond Head State Monument. This technology enables the setting of capacity limits on a daily temporal basis and eliminates the exchange of currency or use of credit card use on site, facilitating managed access and reducing impacts on both resources and adjacent communities. The reservation requirement only applies to out of state visitors, and the process with vendors sets aside slots for entry and parking for residents.

2020

Upgrading and adapting digital systems for major paper reduction through transitioning to digital document management

Developed app for documenting historic buildings (DLNR 2020)

Launched the Hawaiʻi Cultural Resource Information System (HICRIS) online application and tracking system. HICRIS is an advanced Geographic Information System and data management system that integrates DHPD's vast historic and cultural resource database as well as digitized paper records of Hawaii's recorded cultural resources. It provided a single place to access those cultural records and related geographic area. It became an interactive, digital portal for agencies, municipalities, planners, researchers, and others seeking to use historic preservation data and programs, such as Hawaii's chapter 6E and the federal section 106 review processes, architecture, and archaeological survey programs, the State and Federal Income Tax Credits for rehabilitation of historic properties, as well as the State and National Registers of Historic Places programs. SHPD has now digitized 40% of its 3.5 million pages of reports and records, which will ultimately be searchable online.

Launched DLNRTip app for reporting natural and cultural resource violations (DLNR 2020)

Hawaii's official application for reporting natural resource violations received a major update. The DLNRTip app incorporated new features that allowed users to choose an island when submitting a tip This sent the tip directly to the appropriate DLNR Division of Conservation and Resources Enforcement (DOCARE) branch. Another new feature is the "use my location" button, which more accurately pinpointed a user's location.

2021

Upgrading and adapting digital systems for major paper reduction through transitioning to digital document management

Developed Safe Travels digital platform (ETS)

This mandatory digital form for all incoming travelers was a part of the multi-layered screening process during the pandemic. Since the platform officially launched in 2020, more than 8.3M travelers (November 2021) have been screened. The digital platform was critical to protecting the health and safety of our residents and played a key role in restarting Hawaii's economy with the allowance of opening the state to visitors. The objective of the Safe Travels digital forms was to reduce the amount of time the traveler stood in line at statewide airports to go through the screening process upon arrival.

Prioritized the establishment and implementation of an energy ecosystem data governance framework, including "HAVEN" and "Engage" (DBEDT)

The Hawaiʻi State Energy Office (HSEO) prioritized the establishment and implementation of an energy ecosystem data governance framework. Accessible, reliable, high quality undergirds all efforts to achieve a resilient, clean energy, decarbonized economy. Having a well-developed data governance framework enabled innovation and new business opportunities by creating a foundation of high-quality data to support information sharing, machine learning, and artificial intelligence. "Engage" is just one innovative data analytics project for which HSEO is a recognized national leader. "Engage" is an open access, publicly available web application for energy system modeling. HSEO developed Engage, previously known as Hawaiʻi Energy Visualization Initiative in collaboration with the US

Department of Energy's National Renewable Energy Laboratory (NREL). Engage can augment the energy system planning process by empowering more stakeholders to better understand and solve energy system planning problems. It can be used to explore decarbonization strategies such as the electrification of ground, aviation, and marine transportation sectors. Scenarios can provide estimates of the impact on the demand for renewable energy deployment which can be visualized and explored in tools such as the Hawai'i Advanced Visualization Energy Nexus (HAVEN). HAVEN is an innovative HSEO-developed tool designed to demonstrate visualization as an effective tool to analyze and communicate the information contained within complex energy data sets from planning models such as Engage, highlighting energy and related sector interdependencies and scenarios. HAVEN brought a new perspective to energy planning, bringing together stakeholders and policy makers to explore and discuss the implications of current and prospective policies and energy plans such as: renewable energy resource strategies, energy efficiency, the electrification of ground transportation, and land use for food and energy sustainability. HAVEN will be enhanced and continue to be utilized in community engagements to advance the discussion on the tradeoffs of alternative renewable energy buildout pathways, and how they may impact land utilization.

Enabled and managed infrastructure to allow telework during pandemic (ETS)

In the days leading up to the Hawai'i outbreak of COVID-19, ETS and department IT staff worked tirelessly to prepare to provide extended remote IT capabilities to State employees. ETS supports many of the state's critical applications, including disability claims, unemployment insurance, child support enforcement, child welfare, human resources, payroll, and financial management systems of the Executive Branch and DOE, DOT-Highways. Additionally, ETS supports more than 100 websites that allow citizens to conduct business with the state online, rather than having to go physically to a state office. Furthermore, ETS provided governance of all state IT projects to ensure they are properly aligned with needs, are well engineered, and designed to accomplish their intended purpose. Highlights in this area include remote trainings for Teams and other programs, and enabled Teams calling which allowed the State Procurement Office (SPO) to make and accept calls from anywhere in the world from anywhere a SPO staff member was teleworking. This enabled the procurement of personal protective equipment (PPE) in a worldwide competitive market.

Implemented eHawaii.gov Single Sign-On service (ETS)

The Single Sign-On (SSO) service is used by over 70 online portal services. As the state of Hawai'i made the decision to universally use Microsoft Azure SSO for online services/portals, NIC HI and ETS collaborated on integrating the eHawaii.gov SSO with the Azure Active Directory Business-to-Consumer (AD B2C) solution to allow existing eHawaii.gov portal services to continue using the eHawaii.gov SSO. ETS, in conjunction with DCCA and NIC-Hawaii, furthered the B2C deployment by including the Professional Vocational Licensing and Continuing Education portals as supported services. This unique deployment allowed professionals across the state to continue to leverage their ehawaii.gov accounts to access/update their PVL records and level up their training while upgrading our modern B2C infrastructure.

Completed the Time and Leave Project (ETS)

The Time and Leave project was launched by HiMod in May 2019 with the first departments scheduled to go live in May 2020. The project was completed in Oct. 2021, on-time and on-budget, with the State's Executive Branch, Legislature and Office of Hawaiian affairs on the unified system. The Time and Leave Project allows participating state departments, agencies, and jurisdictions to process electronic timesheets and leave requests in HIP, replacing many manual forms. The new system increases efficiency by standardizing practices and reducing pay processing times and pay errors. This project allows for efficient, accurate accounting of taxpayers' dollars that are used to pay for employees' benefits.

Prioritizing accessibility and government transparency through leveraging modern platforms

Unemployment Insurance technical support (DLIR/ETS/DAGS)

During the pandemic, 200K+ people filed for UI, causing an unprecedented stress on the UI system. ETS worked to assist DLIR in making changes including making online applications and claims status checks available 24/7, removing waiting week period from benefits system, implemented federal unemployment compensation, and installed cyber security enhancements. In a joint effort organized by the House of Representatives, ETS with DLIR, DAGS, HTA, DOT, and DOTAX, installed 280 office stations and phones at the processing and call center stood up temporarily at the Hawai'i Convention Center to address thousands of backlogged unemployment insurance claims. ETS also created more than 600 user accounts for volunteers who

assisted with processing claims. ET staff also joined the many volunteers to process backlogged claims and assist claimants at the call center.

HICAN, new digital hub connecting unemployment insurance claimants with jobseekers (DLIR/ETS)

The Hawaiʻi Career Acceleration Navigator (HICAN) was developed to be able to connect unemployment claimants and job seekers to high impact career pathways through personalized data-driven transition recommendations and by offering training programs, facilitating direct to employer job matching and referring individuals to social services to ensure success in their employment. The first phase of the HICAN launched in 2022 and provides users with access to personalized career and training recommendations. The DLIR will continue to conduct community outreach to encourage more organizations and individuals to use HICAN to pursue their career goals.

Published public IT roadmap and portfolio (ETS/DAGS)

ETS expanded transparency of the departmental IT roadmap and portfolio management by establishing a public Portfolio Roadmap to inform the public of the prioritization in IT spending and progress of architectural modernization. This assessment yields a summary roadmap disposition called TIME for each IT application. TIME translates to whether to tolerate, invest, migrate, or eliminate each application. Having the information online provides the public insight to where tax-payer dollars are spent on IT per department and the timeline of projects per department. The information is also useful for departments to make informed decisions on IT strategy.

Making public records public (DAGS)

The Hawaiʻi State Digital Archives loaded 3.5 millions pages of archival records into an free, online repository for public access 24x7x365. On Queen Liliʻuokalaniʻs birthday this year on September 2nd, the Digital Archives also unveiled its bi-lingual interface (English and ʻŌlelo Hawaiʻi) so that the public can select their language of preference to search for and receive historic records of enduring value. For the first time, the public has broad, free, easily accessible access to their most important records, through both official languages of the State, that protect their rights, identity, property, and history from anywhere in the world. This project was so successful at connecting the Public to their documentary heritage, it was named

one of the top 75 State Websites by FamilyTree Magazine. Placing such a large repository of Hawai'i's history online for everyone to access is also providing an oppurtunity for the Public to reconnect with personal, family, and societial history -- strengthing the sense of self and identity as Hawaiians. This process of discovery, reconnection, and understanding of our collective past leads to *Stengthening Our Communities* as we move forward, together based on historical facts recorded by those individuals who participated in the important events of our past.

Developed free mobile app to explore hiking trails, access information on native species and plants (DLNR)

The DLNR Division of Forestry and Wildlife (DOFAW) implemented the OuterSpatial platform to provide current and official information about trails and other outdoor recreation spots, and hunting seasons, rules, areas, and check-ins and check-outs. Users would be able to download desired trails or routes prior to taking off and even if your phone drops cell service, the app would be able to continue to provide your location via the phone's GPS. The app also had social media integration and users can take and shar3e photos and report trail hazards and problems to DOFAW or other state agencies. For land and resource managers, the application provided metrics which would better inform management decisions, such as when to open and close trails.

Overhauled the Bureau of Conveyances' core land records system to ensure improved service standards and business continuity (DLNR)

In 2021 the Bureau of Conveyances (BOC) took the much-needed step forward to replace its nearly eleven-year-old Land Records Management System. The Land Records Management System is the BOC's mission critical tool for recording, storing and managing all indexed information and images of land documents. This project was the culmination of nearly four years of assessment, planning, procurement and ultimately implementation to replace the BOC's core system. This new Land Records Management System can more efficiently and effectively utilize the Bureau of Conveyances' increasing digital content, utilize optical character reading or OCR to support staff and the public better, while it's "cloud-based" architecture ensures business continuity with any unexpected facilities emergency. This Land Records Management System is one other key component in the continued shift to digital accessibility to provide easier and more user-friendly access to Bureau of Conveyances information and service through its future "BOC Information Hub".

Looking Ahead

Moving forward with the wide variety of initiatives begun by this administration will continue to build public trust in government. An ongoing commitment to sound fiscal management, digitization of documents and modernization of outdated IT systems will increase efficiency, reduce waste, and improve transparency and accountability.