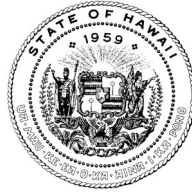


JOSH GREEN, M.D.
GOVERNOR



DOUGLAS MURDOCK
CHIEF INFORMATION OFFICER

OFFICE OF ENTERPRISE TECHNOLOGY SERVICES

P.O. BOX 119, HONOLULU, HI 96810-0119
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ETS.HAWAII.GOV

December 12, 2022

The Honorable Ronald D. Kouchi
President of the Senate
and Members of the Senate
Hawai'i State Legislature
State Capitol, Room 409
Honolulu, Hawai'i 96813

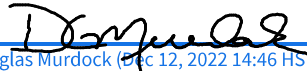
The Honorable Scott K. Saiki
Speaker and Members of the
House of Representatives
Hawai'i State Legislature
State Capitol, Room 431
Honolulu, Hawai'i 96813

Dear President Kouchi, Speaker Saiki, and Members of the Legislature:

Pursuant to sections 27-43(a)(6) and 27-43(e), Hawai'i Revised Statutes (HRS), the attached annual report is hereby submitted to update you on the status and implementation of the State information technology strategic plan, the activities and programs under the authority of the CIO and the IT Steering Committee, and the expenditures of all moneys received from all sources and deposited into the IT Trust Account and the Shared Services Technology Special Fund.

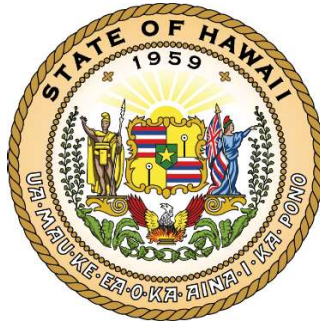
In accordance with HRS section 93-16, this report may be viewed electronically at <http://ets.hawaii.gov> (see "Reports").

Sincerely,


Douglas Murdock (Dec 12, 2022 14:46 HST)

Douglas Murdock
Chief Information Officer

Attachment



**ENTERPRISE TECHNOLOGY
SERVICES
ANNUAL REPORT 2022**





TABLE OF CONTENTS

<i>About Us</i>	3
<i>COVID-19 Response</i>	5
<i>State IT Strategic Plan</i>	13
<i>Partner for Successful Business Outcomes</i>	17
<i>Expand Statewide Cyber Security Strategy</i>	29
<i>Enhance the Value of State Data</i>	33
<i>Optimize Enterprise Systems (Legacy)</i>	36
<i>Extend IT Portfolio Governance</i>	39
<i>Implement Dynamic and Sustainable IT Operations (Evergreen)</i>	46
<i>Digital Workforce Development</i>	56
<i>Analysis of FY2022 Expenditures</i>	63



ABOUT US

The Office of Enterprise Technology Services (ETS) provides governance for executive branch IT projects and seeks to identify, prioritize, and advance innovative initiatives with the greatest potential to increase efficiency, reduce waste, and improve transparency and accountability in state government.

Composed of nine branches, ETS also supports the management and operation of all state agencies by providing effective, efficient, coordinated, and cost-beneficial computer and telecommunication services. The nine branches include: Production Services, System Services, Technology Support Services, Client Services, Enterprise Systems, Network, Security, Enterprise Architect, and Program Management.

The Office of Enterprise Technology Services (ETS) was established by Hawai'i Revised Statutes §27-43. ETS is headed by a full-time chief information officer (CIO) to organize, manage, and oversee statewide information technology. The chief information officer is appointed by the governor and reports directly to the governor. A key responsibility of the CIO is to develop, implement, and manage the state information technology strategic plan.

Hawai'i Revised Statutes §27-43 also establishes an Information Technology Steering Committee (ITSC) to work with the CIO in developing the State's information technology standards and policies, including the strategic plan. The ITSC meets quarterly and held four meetings in 2022.

IT STEERING COMMITTEE MEMBERS (served during 2022)

Douglas Murdock (Chair), Office of Enterprise Technology Services, State of Hawai'i

**Christine Sakuda (Vice Chair),
Transform Hawai'i Government
Benson Choo, Finance Factors
Mel Horikami, Optimum Business Solutions
Jarrett Keohokalole, Hawai'i State Senate
Arnold Kishi, Center for Internet Security,
MS-ISAC**

**Joel Kumabe, Ohana Pacific Health
Michael Nishida, First Hawaiian Bank
Christine Shaw, Department of Education
Kevin Thornton, Hawai'i State Judiciary
Kyle Yamashita, Hawai'i State House
Marcus Yano, CBTS Hawaiian Telcom
Garret Yoshimi, University of Hawai'i**

The CIO or designee also serves on the following state committees:

- Access Hawai'i Committee (ex officio Chair)
- Information Privacy and Security Council (ex officio Chair)
- Enhanced 911 Board (ex officio)
- Hawai'i Health Data Steering Committee (ex officio)
- Broadband Assistance Advisory Council (appointed)



State of Hawai'i Information Technology Program earns A- grade for Exceptional Use of Technology to Improve Public Services and receives "Future Ready Award" in national surveys

The State of Hawai'i received an overall grade of A- in the Center for Digital Government's 2022 Digital States Survey. An "A" grade reflects a state government that has demonstrated "very strong innovation, high performing solutions, and...excellent practices in all aspects of their operations, governance, and administration," according to the Center for Digital Government. Hawai'i's A- grade this year is up from a B in 2020, and this is the first year Hawai'i has ranked among the top performing states.

"We have made tremendous progress modernizing State IT systems, including our tax and payroll systems," said Gov. David Ige. "I'd like to thank our employees for their commitment and dedication to making our State more efficient and effective in order to better serve our citizens."

The Center for Digital Government, a national research and advisory institute on information technology policies and best practices in state and local government, conducts the Digital States Survey biennially to evaluate the information technology practices of all 50 states. The Center evaluates use of technology to support their state priorities and policies, to improve operations or services, to achieve hard- and soft-dollar savings/benefits, to deliver innovative and citizen-centric services, and to assess the effective collaboration and progress since the last survey. States receiving high grades demonstrate strong results across all the criteria. Hawai'i is among 18 states that received an A grade.

In addition, the Center for Digital Government presented the State of Hawai'i Office of Enterprise Technology Services with the "Future Ready Award" for outstanding work on developing the Safe Travels Digital Platform. The Future Ready Awards are presented to jurisdictions that are laying the foundation for the disruptive and converging forces that are shaping an uncertain future — through technology or process changes; innovation; engagement with partners; and by harnessing emerging technologies to solve problems.

"I am proud of the Enterprise Technology Services team and what they accomplished with the Safe Travels system," said Doug Murdock, chief information officer. "The team developed and implemented the Safe Travels system in a very short timeframe. It allowed the State to reopen our travel industry during the pandemic while safeguarding our citizens. More than 12 million arrivals were recorded in the digital platform, and more than 270-thousand people took advantage of the digital SMART Health Card program."

In addition, Hawai'i was one of six states named finalists for the Government Experience Award that recognizes states who have redesigned websites with enhanced languages and accessibility features, developed apps to streamline the flow of funds to those with the greatest need, and used mobile apps, social media, e-newsletters and digital service analytics to improve constituent experience and customer service delivery.



SAFE TRAVELS DIGITAL PLATFORM



Hawai'i launched its Hawai'i Safe Travels platform to meet the challenges of keeping people safe during the COVID-19 pandemic. The Safe Travels platform was a one-stop online platform where visitors from anywhere in the world registered to visit Hawai'i, detailing their vaccination status and COVID-19 test results. The goal of the

program was to encourage tourism, while also protecting the health of citizens. Travelers filled out an online application, providing a verifiable phone number, email, flight information and address while in the state. They were then sent a QR code that allowed them to share their information with officials upon entry. Travelers who uploaded valid PCR tests or vaccination cards were ruled exempt from quarantine. If not exempt, the QR code would indicate when their quarantine would end. The QR code also was checked by rental car agencies, hotels and other attractions to verify that a visitor was not under quarantine. Quarantined travelers were sent an automated text and email every day reminding them to check in with officials on each day of quarantine. Those who did not check in were given safety checks by law enforcement. The pilot phase was completed in August 2020 and all travelers were included by September 2020. By the end of March 2022, when the program concluded, Safe Travels had recorded about 12 million trips and granted 11.5 million exemptions from quarantine. Even with the return of large numbers of tourists, Hawai'i maintained the lowest COVID-19 case counts per capita and lowest death rates of any state.



OFFICE OF ATTORNEY GENERAL TRAVEL EXEMPTION ONLINE APPLICATION

The ETS staff developed an online system for the submission and approval process of quarantine exemptions issued by the Department of the Attorney General (ATG) under the Safe Travels Hawai'i program. The system was launched September 18, 2020.

On the ATG website, travelers entering the State of Hawai'i applied for a limited exemption from the mandatory self-quarantine. By the end of the program in March 2022, the ATG Office processed over 113K travel exemption requests for reasons such as CISA work, medical, funeral, compassion, and COVID-19 recovery related travel.

SAFE TRAVELS HEALTH PASS PARTNERS

Safe Travels implemented the Health Pass Program with partners CLEAR, CommonPass and AZOVA. These partners helped Hawai'i enhance the traveler experience by providing them with another avenue to verify their COVID-19 test and vaccine information before arrival.

The Health Pass partners also expanded the network of testing partners and validated before entering into the Safe Travels system. The vaccine information was validated with databases available from other States.



The partnerships offered another option to the multi-layered approach of reviewing travelers' information and providing exceptions before arriving in Hawai'i. These options supported the reopening of our economy by allowing more travelers to enter Hawai'i while considering the health and safety of visitors and residents alike.

HAWAI'I SMART HEALTHCARD



Hawaii SMART Health Card

The Hawai'i SMART Health Card enabled individuals who received their COVID-19 vaccinations in Hawai'i to create a state-issued digital SMART Health Card that may be used to confirm their vaccination status to businesses and venues that require it. On the program's first day alone, 19,125 health cards were created. With updates made to the application after the rollout, more than 270-thousand people were issued a Hawai'i SMART Health Card.



SUPPORTING TELEWORKING

The creation of ETS allowed the state to take a fresh look at the capabilities and infrastructure that allow government operations to continue in the event of unplanned disruptions, disasters, and emergencies. New mobile workforce and remote computing (telework) initiatives permitted employees to work from any location outside their usual offices that offered wired, wi-fi, or cellular phone internet access.



As specific examples, the state's Cloud First policy guides the migration of critical infrastructure and services from on-premise data centers to mainland cloud service providers; ETS works with all Executive Branch departments to implement the broad package of cloud-based Microsoft Office 365 tools that offer secure data sharing within and among departments using OneDrive and SharePoint, and convenient

remote group meetings using Teams; ETS adopted the Adobe Sign platform providing digital signature workflow; and ETS conducts periodic training and education activities for departments and employees to learn how to use and redesign their business processes to apply those new productivity tools. In 2022, one of the many enhancements to the Teams collaborative service was the ability to have any Teams conference meeting provide a dial-in telephone number for invited participants who cannot or will not use the Teams client or web interface. This effort is continuing with our movement of State Enterprise Resource Applications to a managed environment and our current effort to shift from a physical mainframe to mainframe as a service. The migration of the ETS mainframe to a managed service was completed in January 2022. This completed the migration of both the primary and backup mainframe systems.

ETS also provides leadership, technical guidance and administrative support to the Access Hawai'i Committee, which is responsible for management and oversight of the state-wide citizen portal. This portal allows citizens to complete many state and county government services online and complete transactions without having to go to a government office.



MICROSOFT TEAMS CALLING PHONE SYSTEM

In June 2021, Teams Calling was implemented for the Office of Enterprise Technology Services (ETS), and a division in DOH ran a pilot project. Teams Calling provides a cloud-based phone system built on Microsoft Teams. All ETS staff were migrated to Teams Calling from Hawaiian Telcom phone lines, which provided cost savings and better communication abilities for teleworking with external parties. In 2022, ETS restarted its research of enhancing communication survivability when using Teams Calling.

ENHANCED HYBRID MEETING SYSTEMS



Figure 1. Microsoft Teams Proof-of-concept System for Enhanced Hybrid Meetings

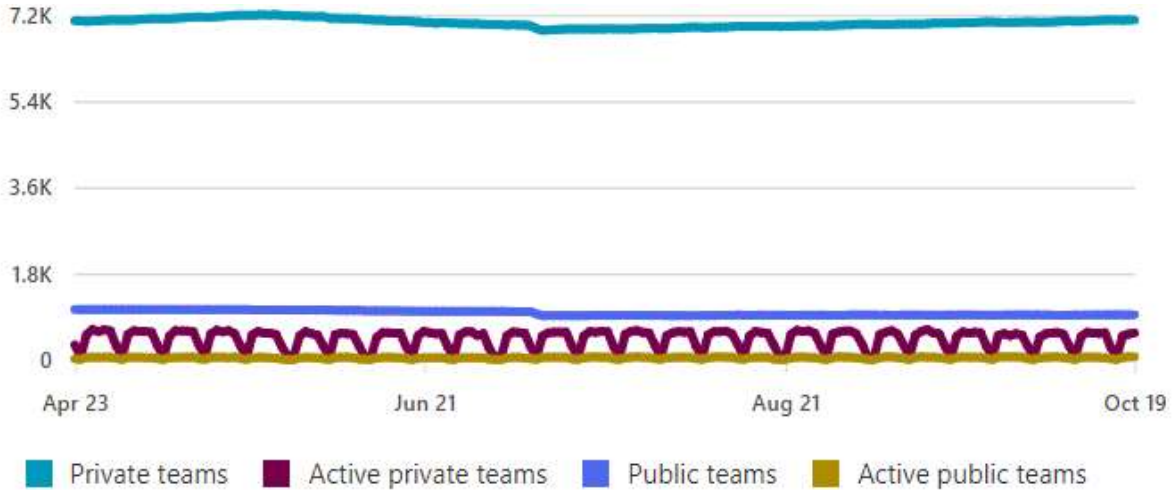
ETS began work on developing best practices and low-cost system configurations to enhance hybrid-meetings to facilitate collaboration between groups that are both on-premise as well as teleworking or remote consultants.



Microsoft Teams Activity 2022

Team usage

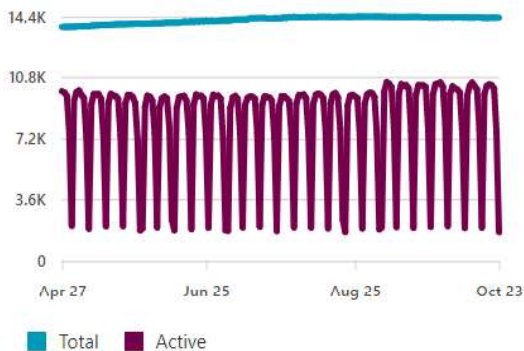
Number of teams, by type and activity



Exchange Email Usage 2022

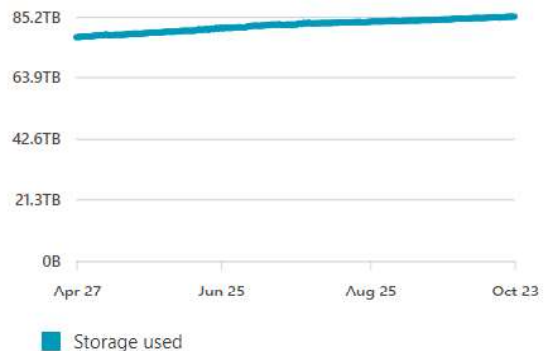
Mailbox

Number of total and active user mailboxes



Storage

Amount of storage used

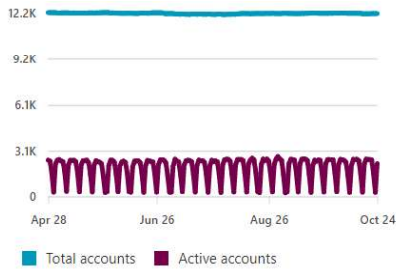




OneDrive Usage 2022

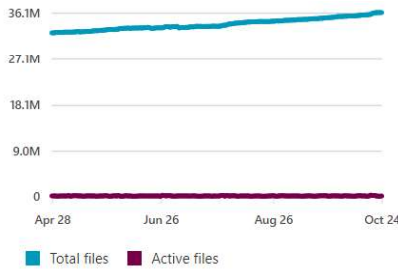
Accounts

Number of total and active accounts



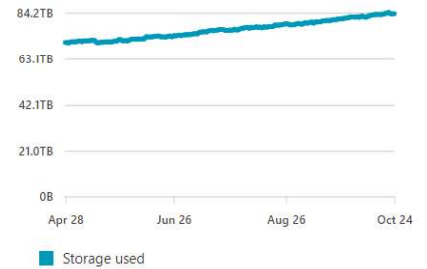
Files

Number of total and active files



Storage

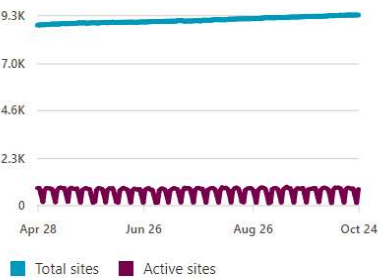
Amount of storage used



SharePoint Usage 2022

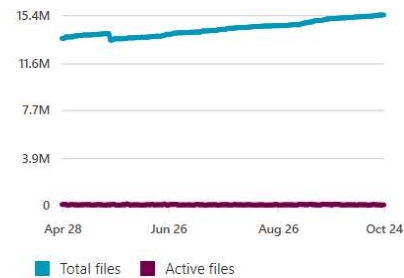
Sites

Number of total and active sites



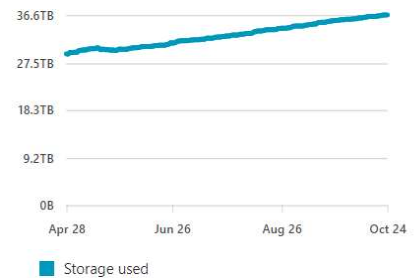
Files

Number of total and active files



Storage

Amount of storage used





SUPPORTING AGENCIES

Department of Labor and Industrial Relations. Since the pandemic began in 2020, ETS continues to support and assist the Department of Labor and Industrial Relations' (DLIR), Unemployment Insurance (UI) Division with its response. In 2021, the Federal government provided funding assistance through several programs to aid Hawai'i residents who filed claims.



Although the programs listed below have ended, ETS continues to support DLIR with the distribution of funds for claimants who still meet program eligibility qualifications and have filed claims which fall within the date range for each of the programs.

- 1) Federal Pandemic Unemployment Compensation (FPUC)
- 2) Pandemic Emergency Unemployment Compensation (PEUC)
- 3) Low Earnings Act (LWA)
- 4) Multi Earner Unemployment Compensation (MEUC)
- 5) Extended Benefits (EB20), and
- 6) American Rescue Plan Act (ARPA).

The Client Service Branch (CSB) Project Team continues to support DLIR's UI efforts and will continue do to so until the DLIR UI modernization project is completed.

Department of Commerce and Consumer Affairs. Support provided by the CSB Project Team included "Salesforce Support Case Analysis" and assistance with the preparations for 4 license renewal cycles: June 2021, December 2021, April 2022, and June 2022.

EMERGENCY OPERATIONS

ETS has been providing 24/7 IT & telecommunication staffing support for the State Emergency Operations Center at Diamond Head where they monitor operational status of statewide communications networks, assist with expanding state worker telework and teleconferencing capabilities, and provisioning Internet broadband and IT services for a newly created State Law Enforcement Coalition (SLEC) command center.



ETS assisted the Hawai'i Emergency Management Agency (HI-EMA) in the implementation of Dynamics application in their business processes to help track inventory and usage of personal protective equipment.



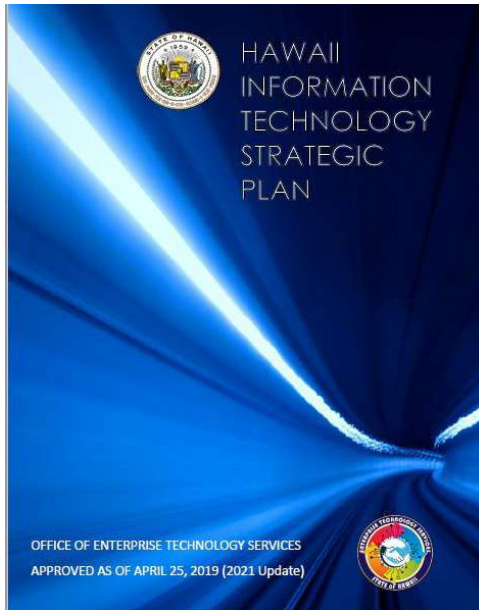
PUBLIC ACCESS TO MEETINGS

With state government offices limiting public access during the COVID-19 disruption, ETS staff has been working with many state boards and commissions to

evaluate virtual meeting platforms to safely convene their public meetings and continue to conduct business. Several pilot demonstrations and implementations continue to integrate new technologies into the state meeting processes. The Video Conference Center (VCC) in Kalanimoku was decommissioned and repurposed by DAGS in July 2022. This was followed by the decommissioning of all VCCs in the State.



IT STRATEGIC PLAN PROGRESS



Pursuant to HRS section 27-43, an updated Hawai'i Information Technology Strategic Plan was submitted to the Legislature before the convening of the 2021 Session. The plan updates the IT Strategic Plan that was to be submitted ahead of the 2020 Legislative Session.

The 2019 Hawai'i Information Technology Strategic Plan was developed with input from stakeholders, including the staff at ETS, the ITSC, representatives from departmental business and IT staff, and members of the community. The final plan was approved by the state Information Technology Steering Committee for implementation.

The purpose of the Strategic Plan is to:

- Clearly articulate the State Information and Technology future vision, mission, strategic priorities, expected outcomes, major initiatives to achieve those priorities, and responsible owners for key plan elements.
- Establish a system for implementation of the plan over the first year and next four years.
- Provide guidance to ETS and department IT organizations to help with alignment throughout the state.
- Create an instrument to support awareness and accountability for all parties to the strategic plan.
- Fulfill the requirement of Hawai'i Revised Statutes §27-43 and House Concurrent Resolution 94.

VISION, MISSION, VALUES

The Vision, Mission, and Core Values statements that guide the Strategic Plan are listed on the following pages:



VISION, MISSION, CORE VALUES

VISION STATEMENT

Transformative information and technology-enriched government that serves all the people of Hawai'i and the 'āina*

MISSION

Seamlessly blend innovative IT with well-engineered business processes to deliver and support dynamic and sustainable systems that empower our workforce to accelerate excellent outcomes in support of the state's policies, decisions, operations and services.

CORE VALUES

<i>Aloha</i>	We treat everyone with dignity, respect and kindness, reflecting our belief that people are our greatest source of strength.
<i>Kuleana</i>	We uphold a standard of transparency, accountability and reliability, performing our work as a government that is worthy of the public's trust.
<i>Laulima</i>	We work collaboratively with business, labor and the community to fulfill our public purpose.
<i>Kūlia</i>	We do our very best to reflect our commitment to excellence.
<i>Pono</i>	We strive to do the right thing, the right way, for the right reasons to deliver results that are in the best interest of the public.
<i>Lōkahi</i>	We honor the diversity of our employees and our constituents through inclusiveness and respect for the different perspectives that each brings to the table.
<i>Ho'okumu</i>	We continually seek new and innovative ways to accomplish our work and commit to finding creative solutions to the critical issues facing this state.

*The 'āina (land) is not just soil, sand or dirt. The 'āina is a heart issue for the people of Hawai'i. The very word 'āina brings forth deep emotion evolved from ancestral times when people lived in nature as an integral part of it. We chose to incorporate the ethical, philosophical, and spiritual aspects not only present in the state's vision and mission statements, but also that are present in the culture that make Hawai'i Hawai'i.



STRATEGIC PRIORITIES

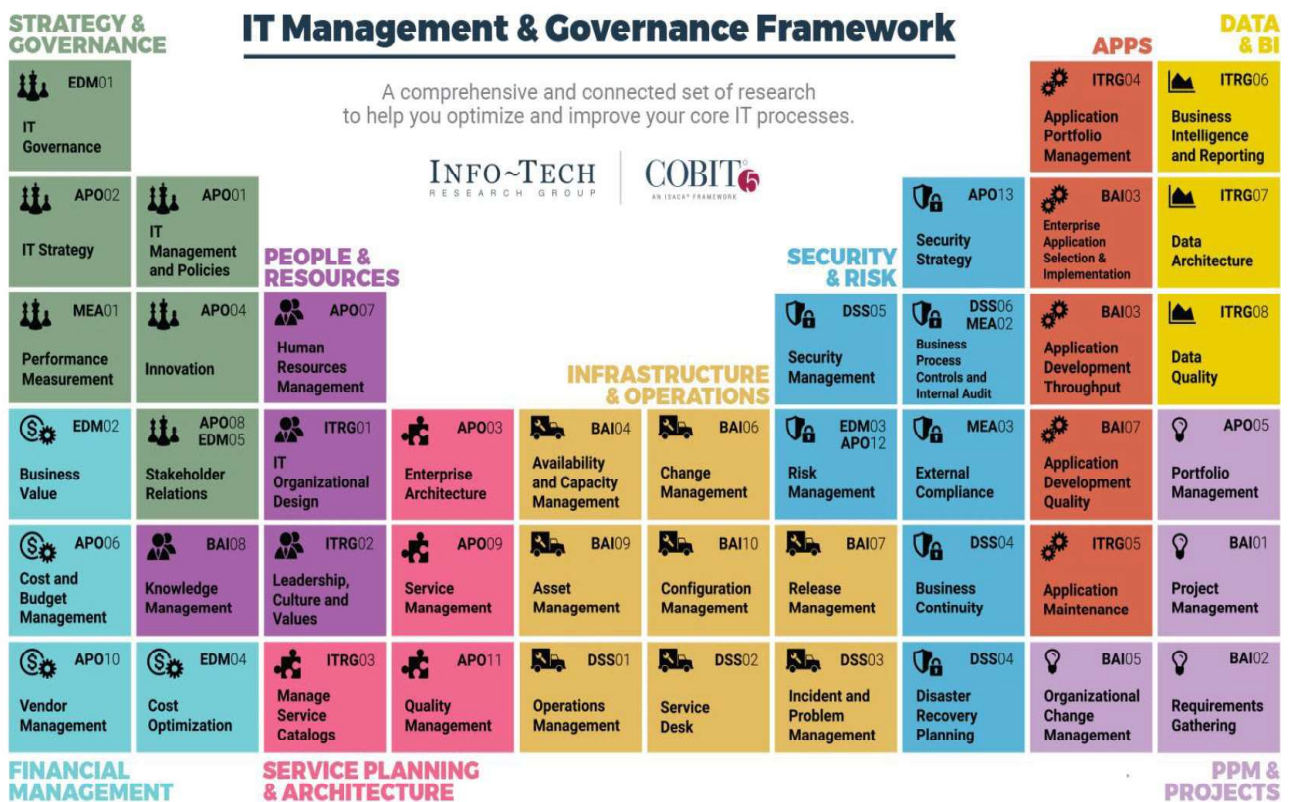
Our IT Strategic Priorities reflect 7 key focus areas necessary to take full advantage of the state’s investments and attain long-term success:

<p><i>Partner for Successful Outcomes</i></p>	<p>Shape the partnership between government functions and IT by creating a standard framework to ensure successful outcomes.</p> <p style="text-align: right;">❖ <i>Team Lead: ETS Enterprise Program Manager</i></p>
<p><i>Expand Statewide Cyber Security Strategy</i></p>	<p>Extend the statewide cyber security strategy to protect the State’s IT infrastructure and constituent data through adoption of cyber security industry best practices across the State’s IT systems.</p> <p style="text-align: right;">❖ <i>Team Lead: ETS Chief Information Security Officer</i></p>
<p><i>Enhance the Value of State Data</i></p>	<p>Maximize the value of State data by designing, implementing and governing State systems for data stewardship, sharing, and public use.</p> <p style="text-align: right;">❖ <i>Team Lead: ETS Business Architect</i></p>
<p><i>Optimize Enterprise Systems</i></p>	<p>Optimize ETS enterprise systems to leverage the state’s investment in centralized IT services.</p> <p style="text-align: right;">❖ <i>Team Lead: ETS Chief Operations Officer</i></p>
<p><i>Extend IT Portfolio Governance</i></p>	<p>Extend the State IT Governance Model to better align the state’s functions with resources and ensure the State follows industry best practices and garners the full benefits of its investments.</p> <p style="text-align: right;">❖ <i>Team Lead: ETS Senior Enterprise Architect</i></p>
<p><i>Implement Dynamic and Sustainable IT Operations</i></p>	<p>Implement dynamic and sustainable IT operations to ensure business systems are up-to-date and ready to support the current and future needs of business users and citizens at all times.</p> <p style="text-align: right;">❖ <i>Team Lead: ETS Chief Governance Officer</i></p>
<p><i>Digital Workforce Development</i></p>	<p>Establish a continuous learning culture and growth mindset to modernize how we work and enable the state to develop and sustain the digital workforce needed in a constantly evolving IT world.</p> <p style="text-align: right;">❖ <i>Team Lead: ETS Personnel Officer</i></p>



IT STRATEGIC PLAN ADOPTION PROGRESS

- In 2022, ETS continued to refine strategy governance process, executive sponsor, charter, program lead, and working group in each strategic area.
- ETS adopted the IT Management & Governance Framework shown below as our high-level prioritized reference model for best practices in tactics, techniques and procedures. ETS is working with Info-Tech Research Group since 2019 to develop common processes and tools for use by ETS and state agencies in managing IT operations.



- A high-level Capability Maturity Model measurement framework is available in the IT Management and Governance Framework for implementation. We are working on measurement dashboards.



PARTNER FOR SUCCESSFUL OUTCOMES

Shape the partnership between government lines of business and IT by creating a standard framework to ensure successful outcomes.

The following programs align with the key focus area of Partner for Successful Outcomes, which is one of the strategic priorities of the Hawai'i Information Technology Strategic Plan.



The Hawai'i Modernization Initiative, also known as HiMod, is the State's modernization project team that works to transform government by

replacing legacy systems to create the state's new integrated Enterprise Resource Planning program.

Our strategy, adopted in 2016, is to break strategic systems into smaller transactional pieces in order to reduce complexity and increase success. So far, we have upgraded the state Human Resource Management System and implemented the new Payroll and Time and Leave Management systems. The team is currently preparing for design, development, and implementation of a new Financial Management System. HiMod is governed by an Executive Governance Committee. Membership includes the Governor's Administrative Director, State Budget & Finance (B&F) Director, State Human Resources Director, State Comptroller, State Chief Information Officer, and Enterprise Program Manager-Hawaii Modernization Initiative.

STATEWIDE FINANCIAL SYSTEM REPLACEMENT

The 2020 Legislature granted funding to continue modernization programs to include finance operations and business processes. In late 2021, the state contracted with invenioLSI to implement an SAP-based system and issued a Notice to Proceed. The Enterprise Financial System (EFS) project is sponsored by the Department of Accounting and General Services and the Department of Budget and Finance and supported by the Office of Enterprise Technology Services. The State has invested in a modern accounting system, EFS, to address the need to modernize and standardize government accounting processes. EFS will provide the State with an integrated and consistent financial platform where data is accessible among the executive and legislative branches in a reasonable period and accountability is ensured.

Other benefits from the EFS adoption include:

- Standardize and unify accounting systems and practices.
- Standardize internal controls and delegation processes.



- Decrease operating expenses by eliminating or consolidating departmental secondary accounting systems into on State system.

PARTNER FOR SUCCESSFUL OUTCOMES

STATEWIDE FINANCIAL SYSTEM REPLACEMENT (CONTINUED)

- Decrease manual efforts and physical resources to prepare the annual financial reporting.
- Increase the State's ability to implement and respond quicker to mandated accounting and disclosure standards (e.g., GASB 87 Lease Accounting).
- Increase the State's ability to consolidate and analyze data, enabling data-driven policy decisions regarding the use of State funds.
- Increase accounting capacity for the State through standardized processes and documentation by enabling employee portability and mobility.
- Standardize accounting processes and documentation that enable the central financial agencies to manage and monitor the use of State funds.
- Easier implementation of the Uniform Chart of Accounts which will form the basis of the core of EFS.

The project involves the departments and agencies of the executive branch and will implement the Uniform Chart of Accounts and modernize the business processes and functionality to a modern finance application.

The departments of the executive branch will be engaged to understand any of their unique needs and requirements before determining the best path forward to achieve a successful systems integration. If it is determined the department's requirements are too disruptive to the operations of this department, alternative conversion plans must be identified. If converting any department to the new EFS platform is not in the best interest of the State, the Comptroller's approval for an exemption should be obtained.



PARTNER FOR SUCCESSFUL OUTCOMES

TIME AND LEAVE SUPPORT

The implementation project for the Time and Leave (T&L) system features to automate the rules previously administered manually were completed in October 2021 and are now used by over 14,000 users of participating State departments in the State's Executive Branch, Legislature and Office of Hawaiian Affairs.

The user administration of Time and leave processes are driven by many complex rules and situations. It is only natural that the Time and Leave project endeavor brought forth significant changes that affected the department time and leave keeping user community and how they do their work. The focus of the past year was to work with the department user community to stabilize and optimize how users use the system and how the system can work for the users. System support personnel worked continuously to align the established rules with the system capabilities and offer improvements where needed. This was achieved through significant testing and release of improved features and creation and sharing of detailed user documents. The knowledge transfer of concepts, processes and system logic to other State personnel continues ongoing to bring them up to speed and familiarize them with the T&L System and continue the longevity of support for State of Hawai'i users.

Over 2,000 tickets related to Time and leave were responded to in the past year in a coordinated effort among DAGS, ETS, and consultant group CherryRoad Technologies (CRT). Efforts to resolve the tickets consisted of researching simple to complex issues while identifying and implementing improvements to the T&L System and processes to resolve system issues, develop enhancements to improve functionality or accommodate new/updated policies, procedures, HRS and user requirements. Prior to release of new features, testing scenarios were executed to ensure efficient run time performance and ensuring users had appropriate access to system screens, files, reports, able to enter/process transactions, and confirm integrity of data. End-to-end User Acceptance Testing (UAT) was utilized where necessary to validate data and confirm updates and or customizations were working correctly.

The dedication of the Time and Leave support team resulted in the following accomplishments:

- Improvements to system logic to leverage system automation for the purposes of determining how much sick or vacation leave to grant per month:
 - Finetune the accuracy of how Leave without Pay (LWOP) hours affect the work hour used for determining the sick and vacation hours to grant each month.
 - Improve the customized processes that cause the system to evaluate when to appropriately grant sick and vacation hours to employees per pre-established rules.
- Customized logic for what the system considers as the holiday for the employee who have schedules that are outside of the standard Monday-Friday 8 hours. This customization provides greater accuracy of when employee's leave hours should be applied and to not apply on employee holidays.



PARTNER FOR SUCCESSFUL OUTCOMES

TIME AND LEAVE SUPPORT (CONTINUED)

- A page used to review amounts due to LWOP was released. Due to occasions of LWOP not being reported timely, the page help to identify if there is an unresolved amount that is due to the State and requires recovery efforts or if there is an unresolved amount that is due back to the employee requiring payment reimbursement.

Name: [Redacted] Department Set ID: STATE
 Empl ID: [Redacted] Department: [Redacted]
 Empl Record: 0 Description: [Redacted]

Total Hours	Total Due To State	Total Manual Adjustments	Total Pymnts to EE	Total Addl Recovered	Addl Pay Amount	Goal Amount	Current Goal Balance	Unresolved Difference
8.000000	\$255.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$255.45

The above Unresolved Difference indicates that this employee's Additional Pay may not cover the current outstanding LWOP balance. Please review and take action if appropriate.

Employee ID	Empl Record	Name	DUR / Date	Sequence Number	TRC / ERNCD	Quantity	LWOP Rate	Amount Overpaid	Amount Recovered	Current Due To State	Source ID	Comment
1		[Redacted]	10/29/2021	1						\$255.45	Manual Adjustment	
2		[Redacted]	08/01/2021	440079545004081	LWO	8.000000	\$31.931250	\$255.450000		\$255.45	Payable Time	

- A page to assist payroll administrators at each department to understand how an employee's overtime rate was calculated per compliance with the Federal Labor Standards Act (FLSA). This page and other supplemental materials provided empowers users at the department level to answer questions for their own department's employee population.

Empl ID 00C Name [Redacted]
 Company SOH FLSA End Date 12/04/2021

Earnings

Pay Group ATF Pay Period End 11/30/2021 Page 1431 Line 8
 Empl Record 0 Addl Line Nbr 9 Reason Not Specified
 Paycheck Status Confirmed Issue Date 12/20/2021 Check Nbr [Redacted]
 Paycheck Option Advice Paysheet Source Regular Paysheet Off Cycle
 Begin Date 11/28/2021 End Date 11/30/2021 Separate Check
 FLSA Hours Used Fixed Salaried Hours

Salaried		Hourly		Overtime	
Hours	Rate	Hours	Rate	Hours	Rate
29.475000					
Earnings	Rate Code	Earnings	Rate Code	Earnings	Rate Code

State HI Locality
 Rate Used Hourly Rate Shift Not Applicable Shift Rate

Other Earnings

Code	Description	Rate Used	Other Hours	Comp Rate Used	Earnings	Effect on FLSA
N10	Night Diff	Hrly Rt.	44.00	1.000000	44.00	Amts Only



PARTNER FOR SUCCESSFUL OUTCOMES

TIME AND LEAVE SUPPORT (CONTINUED)

- HIP System Upgrade that released an updated look of the HIP system, new features, and improved technical performance capacity behind the scenes. Key features include easy to toggle between pages within the system and access to a Time Summary page to view time or leave reported.

< Time
Time Summary
⋮
🔍

*View By Period ▾ ◀ 1 January - 15 January 2022 ▶

Reported 88.00

Reported Time

Payable Time

View Legend

Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
<div style="background-color: #e0f0ff; padding: 5px; border: 1px solid #0056b3;"> 1 Scheduled Night Shift - 8 Hours Quantity: 8 Hours </div>	<div style="padding: 5px;"> 2 Off Day Quantity: 0 Hours </div>	<div style="padding: 5px;"> 3 Off Day Quantity: 0 Hours </div>	<div style="padding: 5px;"> 4 Scheduled Night Shift - 8 Hours Quantity: 8 Hours </div>	<div style="padding: 5px;"> 5 Scheduled Night Shift - 8 Hours Quantity: 8 Hours </div>	<div style="padding: 5px;"> 6 Scheduled Night Shift - 8 Hours Quantity: 8 Hours </div>	<div style="padding: 5px;"> 7 Scheduled Night Shift - 8 Hours Quantity: 8 Hours </div>
<div style="padding: 5px;"> 8 Scheduled Night Shift - 8 Hours Quantity: 8 Hours </div>	<div style="padding: 5px;"> 9 Off Day Quantity: 0 Hours </div>	<div style="padding: 5px;"> 10 Off Day Quantity: 0 Hours </div>	<div style="padding: 5px;"> 11 Scheduled Night Shift - 8 Hours Quantity: 8 Hours </div>	<div style="padding: 5px;"> 12 Scheduled Night Shift - 8 Hours Quantity: 8 Hours </div>	<div style="padding: 5px;"> 13 Scheduled Night Shift - 8 Hours Quantity: 8 Hours </div>	<div style="padding: 5px;"> 14 Scheduled Night Shift - 8 Hours Quantity: 8 Hours </div>
<div style="padding: 5px;"> 15 Scheduled Night Shift - 8 Hours </div>						

JANUARY

1

Saturday

Quantity: 8 Hours

Time Reporting Code: Scheduled Night Shift - 8 Hours

Payable Status: Taken by Payroll



PARTNER FOR SUCCESSFUL OUTCOMES

TIME AND LEAVE SUPPORT (CONTINUED)

- A refreshed information website for users of the system to find articles or FAQs related to questions they have. The refreshed website includes updated job aids, videos, and informational graphics to ensure up-to-date information is available and easily accessible to users.

FREQUENTLY ASKED QUESTIONS (FAQ)

Below is a list of FAQ intended to complement existing HIP training and knowledge articles for employees. Click on the categories and questions to expand them to view their answers, then click on them again to collapse them. If you don't see your question or answer here, please contact your Time or Leave Keeper for further assistance.

Click [here](#) to find your Time or Leave Keeper.

Absence Balances and Entitlements (5)

Direct Deposit (2)

Pay Statements (4)

Payroll Beneficiaries (2)

Submitting Leave (3)

Submitting Time (11)

System Access (7)

Tax Withholdings (W-4/HW-4) (2)

Wage and Tax Statement (W-2/W-2c) (3)

- Development of refresher training materials based on user feedback collected via survey. This consisted of additional user guides, example illustrations, and presentations to further cement the understanding of how to use the system effectively as users continue to transition from a paper-based manual workflow to a more online, electronic based workflow.



PARTNER FOR SUCCESSFUL OUTCOMES

OFFICE OF PROGRAM TRANSFORMATION



ETS established the Office of Program Transformation (OPT) in FY23 with the addition of five new positions. Once fully staffed, OPT will be comprised of experienced project management professionals who have demonstrated project leadership. OPT is being designed to provide centralized consulting services to assist State of Hawaii executive branch departments and attached agencies with their department-led IT projects. The scope of services OPT will offer

depends on customer needs and may include self-service project management tools and *a la carte* consulting services. The team will work with department staff to determine project needs during the planning or execution phases of a project and engages with departments of Independent Verification and Validation services.

Since establishing OPT in FY23, ETS has been performing some of the foundational work necessary for OPT to begin providing services.

Strategic Planning:

- Outlining new project management standards for executive branch
- Starting a document library for project management templates and tools
- Cataloging best practices in project management
- Investigating root causes for prior State project failures or issues
- Starting a collection of project management position descriptions

A note from the Office of Program Transformation

This learning center is a testament to our commitment to professional growth, life-long learning and improvement of State of Hawaii government services and personnel. Whether you are looking to learn how to run large or small projects, or just need help with best practices, we have opportunities for everyone to learn and grow. Browse our materials and become invested in your future!

Find resources quickly

- Accessibility
- Browse our Library of Documents
- Find courses
- Connect with a peer project
- Get help from a staff member
- Submit a best practice
- Find best practices



PARTNER FOR SUCCESSFUL OUTCOMES

OFFICE OF PROGRAM TRANSFORMATION (CONTINUED)

One of the major components OPT's services will be training. OPT is developing a series of progressive certification courses in project management to prepare project teams to take on projects of various sizes and complexity.

A training hub was created on-line, and the training catalog will include several certification pathways in the following disciplines:

- Project Management
- Organizational Change Management
- Quality Assurance
- Testing
- Training
- Lean Six Sigma Business Process Improvement

One of the first certification series to launch in FY23 was the Lean Six Sigma (LSS) program. LSS is a team-focused managerial approach that seeks to improve performance by eliminating waste and reducing defects. It is a structured and effective process improvement methodology that focuses on operational excellence. It's progressive in nature, culminating in a black-belt certification that requires a high degree of proficiency in statistical analysis.

The next White Belt Class is on 10/27/22, in

01 21 18 46
days hrs min sec

Attend an introduction to Lean Six Sigma class, learn more about how you can use this powerful toolbox to your next project or process!

LSS CORNER- Lean Six Sigma Contest!

We have a Department challenge! Students that have completed a Lean Six Sigma class have 1 year to submit a write-up of applying any of the tools learned to their work area for a chance to win. At the end of each month, one random winner is pulled for a cool prize!

By 1 month after class = 2 entries
Within a year = 1 entry

Note: at the end of each month, entries will be discarded.

[Entry Form](#)

Through its consultation and training services, the mission of OPT will be to help departments achieve their anticipated project goals and increase the likelihood of successful business outcomes for State government.



PARTNER FOR SUCCESSFUL OUTCOMES

DIGITAL GOVERNMENT SERVICES



NIC Hawaii is the contracted State of Hawai'i Portal Program manager and has successfully partnered with 90+ state agencies and across jurisdictions to provide more than 150 services for the State of Hawai'i and counties. The number increased from 148 this year.

In 2022, NIC HI worked on five no cost projects. The Judicial Judge Evaluation for District and Circuit Courts no longer using paper surveys, which require consolidation by hand, online surveys made easier to submit so that more will participate and provide feedback. Thirteen (13) District Court judges and nine (9) Circuit Court judges were evaluated. The other project provided at no cost is the eHawaii.gov Online Subscriber Form. This allows users to complete the eHawaii.gov Subscriber Account Agreement form online to expedite the process and reduce clerical errors from paper form submissions. NIC HI also upgraded a user interface to the Unclaimed Property Search application. It was redesigned to be responsive, accessible and easy to navigate. And NIC HI added ability for recurring payments using the Payment Platform.

The screenshot shows the 'Unclaimed Property Search' page for the State of Hawaii. At the top, there is a navigation bar with links for 'Unclaimed Property Search', 'Claim Filing Instructions', 'FAQs (PDF)', 'Contact Us', and 'Feedback'. Below the navigation bar, a heading reads 'Unclaimed Property Search'. A sub-heading states: 'The information in this database is provided as a method for individuals or businesses to locate unclaimed property.' A bullet point indicates: 'Conduct a State of Hawaii Unclaimed Property name search with a Last Name and First Name or a Business Name.' The form includes three input fields: 'Last Name', 'First Name', and 'or Business Name'. Below these fields is a reCAPTCHA widget with the text 'I'm not a robot' and a 'Begin Search' button.

ETS and NIC HI collaborated on a few different projects outside of the typical services that NIC HI provides. NIC HI has been a proud sponsor of the ETS hosted Hawai'i Annual Code Challenge (HACC) event for the past few years and has also sponsored a challenge project at this event for the past four years. Two high school HACC participants from the 2021 event remain as quality assurance interns at NIC HI and are now college students.



PARTNER FOR SUCCESSFUL OUTCOMES

Access Hawai'i Committee & Portal Program Manager

In 2000, the Governor enacted Act 292, which establishes the Access Hawai'i Committee (AHC). AHC manages the state digital government portal with the assistance of ETS. The CIO is the Chair of the AHC.

ETS has a Portal Program Manager who provides guidance to the AHC relating to strategies for online payment and processing, internet initiatives, electronic document filing, paperless initiatives, and web application development. The Portal Program Manager also monitors the portal provider's activities to ensure compliance with terms and conditions of the portal provider contract, reviews the portal provider's financial reports, evaluates new and existing Statements of Work, fee agreements, priorities, and Service Level Agreements being negotiated between government agencies and the portal provider. The Portal Program Manager collaborates with the portal provider and government agencies to promote e-government and to increase on-line services that can be easily, conveniently, and securely accessed by the public.

EHAWAII.GOV RECOGNIZED

The State portal program earned the following awards:

Hawaii.gov
State of Hawaii

- Platinum - Global Excellence Award
- Silver – W3 Award
- Best in Class Award – Interactive Media Awards

Honolulu Fire Department
Website

City and County of Honolulu,
Honolulu Fire Department

- Best in Class – Interactive Media Awards
- Government Standard of Excellence – Web Marketing Association
- Gold Winner – Davey Awards
- Outstanding Mobile Website – MobileWebAward
- Gold Winner – dotCOMM Award

Honolulu Records Collection
Website

City and County of Honolulu

- Outstanding Achievement Award – Interactive Media Awards
- Government Experience Award – Center for Digital Government



PARTNER FOR SUCCESSFUL OUTCOMES

INITIATIVES

- **AMAZON WEB SERVICES (AWS) MIGRATION.** NIC HI collaborated with ETS on the AWS architecture and migration plan in starting in 2021. The migration of over 120 NIC HI services was completed successfully in March 2022. This was a major endeavor that now provides a much more robust infrastructure, which can be easily scaled to meet customer needs.
- **HAWAI'I CITIZEN SINGLE SIGN-ON PROGRAM.** The eHawaii.gov Single Sign-On (SSO) service is used by over 70 online portal services. The State of Hawai'i made the decision to universally use Microsoft Azure SSO for online services/portals (Hawai'i Citizen Access Program). In August 2022, ETS and NIC HI expanded their work on discovery and migrating citizen authentication to NIC HI supported platform eHawaii.gov over to the Hawai'i Citizen Access Program in Azure AD B2C. Both continue to support and maintain Department of Commerce and Consumer Affairs - Professional and Vocational Licenses Renewal system and Department of Health Medical Provider Portal.
- **ENTERPRISE CHATBOT.** A Chatbot service was implemented over a 13-month period for 63 services and completed in May 2022. This was a significant undertaking done at no cost to the state that improved the ability to provide customer service to the public. It was in support of the goals to move inquiries towards chat and away from phone and email, and to lower the number of inquiries overall. The proportion of calls to customer support fell from almost one-third of contacts to below thirty percent in 2022. Chat allows faster, more complete responses to users by providing answers to frequently asked questions. Customer service can more actively assist the users and users can also provide feedback instantly at the end of the chat.
- **DYNAMICS FRAUD PROTECTION.** In August 2021, ETS started working with the Department of Human Services (DHS) to architect and implement Dynamics Fraud Protection to provide more robust authentication security and identity proofing for Business-to-Consumer (B2C) access to public-facing applications. In May 2022, ETS completed work on integrating Dynamics Fraud Protection into its baseline Azure AD B2C offering supporting production workloads for both the Department of Human Services Grant Assistance Program and Department of Labor and Industrial Relations affiliated Career Acceleration Navigator system. Efforts continue forward to support Department of Education and DLIR with modernizing their Unemployment Insurance application.



PARTNERSHIP AND GOVERNANCE OF MAJOR SYSTEMS

As part of Partnering for Successful Outcomes and IT Governance, ETS monitors progress on a state-wide portfolio of major systems from ideation to recently operational to help departments ensure that systems are properly engineered and ready to meet business requirements. Below is the list of major systems ETS is monitoring and assisting with as of the October of 2022:

COMPLETED - Operational	Department
Tax Modernization	Tax
KOLEA Medicaid System	DHS
HiMod Human Resources & Payroll	DAGS/DHRD
HiMod Time & Leave Management	DAGS-Statewide
ERS Financials	B&F-ERS
ERS Benefits Replacement	B&F-ERS
OHA Financials	OHA
PVL Ho`ala License Management System	DCCA
Health Benefits Administration System (IV&V)	B&F-EUTF
Behavioral Health Inspire	DOH
DOE Financial Management System	DOE
Harbor Master Information System	DOT-HAR
IN PROGRESS – Developing	Department
Statewide Enterprise Financial System (IV&V)	DAGS-Statewide
Benefits Eligibility System (IV&V)	DHS
Disability Compensation (IV&V)	DLIR
DOT-HWY Financial Management System (IV&V)	DOT-HWY
Case & Document Management System (CDMS) (IV&V)	DCCA-PUC
BRIMS Business Registration Modernization (IV&V)	DCCA
STARTING 2022	Department
Corrections Management (pending funding)	PSD
Unemployment Insurance Re-procurement (IV&V)	DLIR
Vital Records Management Information System	DOH
E-Procurement System	DAGS-SPO
STARTING 2023	Department
Child & Adult Welfare	DHS
KEIKI Child Support Enforcement Re-platform	ATG
Other Major Modernizations Completed Since 2015	
Microsoft Office365 - Including Office, SharePoint, OneNote, Teams	ETS, Executive Branch Wide
Adobe eSign	ETS, Executive Branch Wide
Microsoft Azure Active Directory	ETS, Executive Branch Wide
MainFrame as a Service (MFaaS)	ETS, DLIR, DHS, DAGS, DOT, DAGS
Access Hawaii Committee Portal Infrastructure	ETS, Executive Branch Wide
Cybersecurity Endpoint Detection and Response	ETS, Executive Branch Wide



EXPAND STATEWIDE CYBER SECURITY STRATEGY

Expand the statewide cyber security strategy to protect the State's IT infrastructure and constituent data through adoption of cyber security industry best practices across the State's IT systems.

MISSION: *Protect and safeguard data passing through and stored on state government technology infrastructure.*

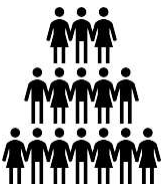
THREAT: *The state cyber infrastructure is under constant attack.*



TEAM:



- Chief Information Security Officer



- Seven full-time ETS Cyber Security Staff
- Other State Staff: approximately part time 20 employees on state teams maintaining data communication networks, enterprise software platforms, and cloud computing services



- External Support: Multi-State Information Sharing and Analysis Center provides remote monitoring with 365/7/24 alerts and advisories of state network and Internet activities



EXPAND STATEWIDE CYBER SECURITY STRATEGY

CYBER SECURITY PROGRAMS

Cyber Response Plans. ETS and the Office of Homeland Security collaborated to establish the State's first Cyber Incident and Cyber Disruption Response Plans. This allows for stronger coordination of response activities between state and local agencies.

Cyber Security Reviews. ETS instituted quarterly reviews with departments. With the number of cybersecurity related initiatives, shifting away from ad-hoc reviews based on specific initiatives to a broader, more coordinated schedule allowed for ETS and the departments to maintain focus on the higher priority initiatives.

Tabletop Exercises. ETS began incorporating short tabletop exercises that cover high level communication and coordination to incident handling procedures.

Vulnerability scanning. ETS migrated to a new vulnerability management platform. The old system was able to scan our systems, but reporting was difficult to share and summarize with the departments. The new platform allows for more flexibility and allows for integration from departments that are large enough to support their own system.

Positions. ETS filled all the vacant cybersecurity positions open in 2021 by end of the 2022 fiscal year. We received approval the addition of 8 new positions under the Security Branch during the last legislative session to further support the enterprise security initiatives and additionally drive support adoption and implementation of cybersecurity safeguards within the departments.

Advanced Endpoint Protection. ETS increased license coverage to 18,000 devices. This provides considerable capabilities to ETS and the departments to detect and respond to evolving cybersecurity related threats.

Dot GOV. ETS coordinated with communications managers for the state departments to highlight the importance of maintaining the branding and protections by using hawaii.gov for e-mail and web communications.



EXPAND STATEWIDE CYBER SECURITY STRATEGY



PHISHING AWARENESS CAMPAIGN

ETS provides recurring cyber security awareness campaigns through simulated phishing emails. Educating and empowering employees to be safe and secure when using computers not only benefits the State but also our employees' homes.

In the most recent 2022 campaign, a test message was delivered to 12,912 mailboxes, with 978 (7.6%) users clicked on the phishing e-mail. During the campaign, 228 (9.8%) users reported a suspicious e-mail. The first report was received 1 minute upon receipt.

ELECTION SYSTEM

The Department of Homeland Security has designated elections



systems as a critical infrastructure. ETS provides the cybersecurity monitoring, network management, and virtual server support to facilitate statewide elections.

ETS provides the computing, communication network infrastructure, and many layers of cyber security protections for the State Office of Elections digital assets.

- As the processes and systems that collect and count votes are not exposed to the Internet at any time, voters can be confident that election counting results are accurate and safe.
- The State of Hawai'i was awarded more than \$3M under the Federal government's 2018 Help America Vote Act.



EXPAND STATEWIDE CYBER SECURITY STRATEGY



Proclamation

WHEREAS, the State of Hawaii recognizes that it has a vital role in identifying and responding to cybersecurity threats and protecting citizens from phishing, viruses, malware, and loss of sensitive data that may have significant impact on our privacy, financial services, health care, emergency response systems, communications, utilities, transportation, and economy; and

WHEREAS, the State of Hawaii continues its cyber security initiatives, such as improving coordination of county, city, state and federal government cyber security activities working with private sector partners to improve their cyber security posture, developing a skilled cyber workforce by working with the lower and higher education community, and enhancing the cyber security of critical infrastructure providers; and

WHEREAS, cybersecurity education and awareness are crucial for everyone, including large corporations, small businesses, financial institutions, schools, government agencies, the home user, and anyone who connects to the internet; and

WHEREAS, the National Institute of Standards and Technology Cybersecurity Workforce Framework is a free resource to help all organizations improve their cybersecurity practices through a practical approach to addressing the ever-evolving cybersecurity threats and challenges; and

WHEREAS, the STOP. THINK. CONNECT.™ Campaign serves as the national cybersecurity public awareness campaign implemented through a coalition of private companies, nonprofit and government organizations, and academic institutions working together to increase the public's understanding of cyber threats and empowering Americans to be safer and more secure online; and

WHEREAS, all citizens are encouraged to monitor their accounts, keep computer software up to date, create unique passwords and change them regularly, install anti-virus programs and firewalls, use mobile device safety, and learn more about cybersecurity at these websites: Hawai'i Office of Enterprise Technology Services (<https://otc.hawaii.gov/>), Hawai'i Department of Defense (<https://dod.hawaii.gov/otc/>), U.S. Department of Homeland Security and Infrastructure Security Agency (<https://www.dhs.gov/>), Multi State Information Sharing and Analysis Center (<https://www.isis.gov/isis-haw/>), National Association of State Chief Information Officers (<https://www.nascio.org/>), National Cyber Security Alliance (<https://www.ncsa.org/>), Stop, Think, Connect, Campaign (<https://www.stopthinkconnect.org/>).

THEREFORE I, DAVID Y. IGE, Governor of the State of Hawaii, do hereby proclaim October 2020 as

"CYBER SECURITY AWARENESS MONTH"

in Hawai'i and encourage the citizens of the Aloha State to join us in recognizing the importance of cyber hygiene, cyber education and awareness, and to remember that maintaining the security of cyberspace is a shared responsibility in which each of us has a critical role.

Done at the State Capitol in the Executive Chambers, Honolulu, State of Hawaii, this twenty-first day of September 2020.


DAVID Y. IGE
Governor, State of Hawaii

CYBER SECURITY MONTH

Gov. David Ige proclaimed October Cybersecurity Awareness Month in Hawai'i, in recognition of the state's role in identifying, protecting its citizens from and responding to cyber threats.



ENHANCE THE VALUE OF STATE DATA

Maximize the value of State data by designing, implementing and governing State systems for data stewardship, sharing and public use.

Pursuant to HRS sections 27-43 and 27-44, Open Data, an IT Strategic Plan priority area, includes building on established data and transparency platforms to facilitate open data.

CHIEF DATA OFFICER AND DATA TASK FORCE

- 2022 Legislative Session passed a law (HB1885) to establish a chief data officer and data task force within the office of enterprise technology services to develop, implement, and manage statewide data policies, procedures, and standards and to facilitate data sharing across state agencies.
- ETS has started coordinating the establishment of the task force, which is expected to start convening late 2022 or early part of 2023.
- Task force will have an interim chair, before the new chief data officer assumes office in 2023.

DATA WORKING GROUP

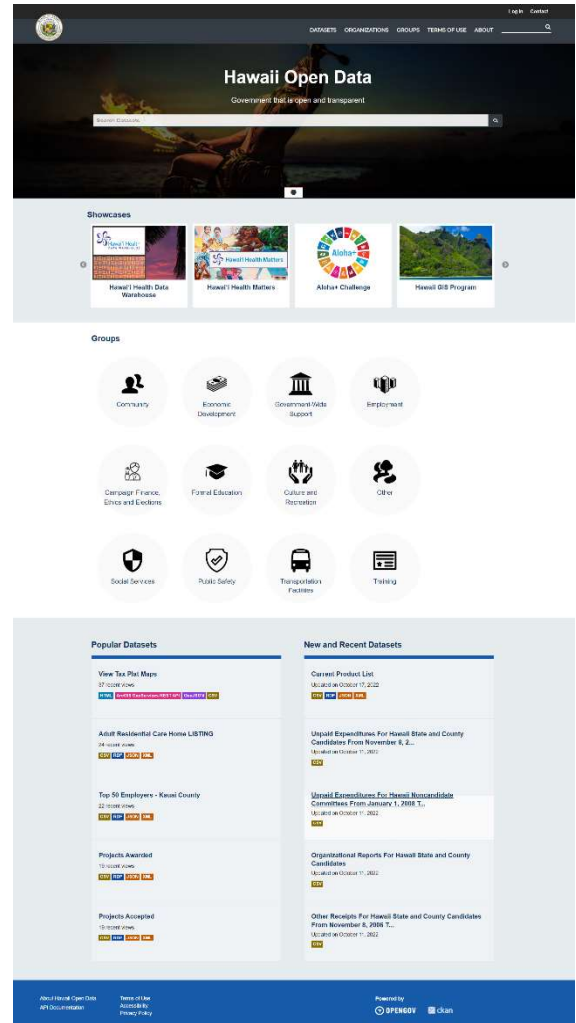
- ETS continues to lead a data working group, which seeks to share awareness of best practices between data management initiatives across the departments.
- The working group has active members from several departments, representing major data domains such as human services and health.
- The working group has started implementing a data management maturity assessment, meant to cover the entire state in 2023. This analysis provides further knowledge of the critical issues with data sharing and management and about the high value data sharing use cases.
- Working group is conducting a broad scan of data governance and management platforms. This analysis provides the departments with valuable information about the available tools and potentially lays foundation for a shared data governance platform for the entire state, provided by ETS.
- Working group has also started drafting statewide data policies, procedures and standards, leveraging existing, actively used ones.



ENHANCE THE VALUE OF STATE DATA

OPEN DATA PORTAL

- Visitors to the state Open Data Portal will find datasets organized by six major topics: culture and recreation, economic development, employment, environmental protection, formal education, and government-wide support.
- ETS continues to finalize our financial transparency data to provide up-to-date State budget and expenditure information to our constituents and civic entities.



- ETS facilitates executive branch departments' efforts to make appropriate and existing electronic data sets electronically available to the public through opendata.hawaii.gov, which now offers charting libraries and mapping tools for the creation of dynamic visualizations.
- More than 1000 data sets are publicly available through the portal, providing residents, analysts, and civic developers with self-service access to state data
- Last year, there were nearly 100K browser page views.



ENHANCE THE VALUE OF STATE DATA

- ETS partnered with the Department of Health to showcase two additional state data portals:
 - Hawai'i Health Data Warehouse - The Hawai'i Health Data Warehouse (HHDW) is a long-standing partnership between the Hawai'i State Department of Health (DOH) and the University of Hawai'i, Office of Public Health Studies. HHDW maintains DOH vital statistics and surveillance system data and is a centralized and reliable source of data and information about public health in Hawai'i. HHDW provides consistent, timely, accurate, and accessible information on health trends, Hawai'i-specific race/ethnicities and geographies (including community and school complex level data). Users can search the collection of data by health topic, by community or by data source on the HHDW website.
 - Hawai'i Health Matters (HHM) - HHM was established by Hawai'i Health Data Warehouse and the Hawai'i State Department of Health to provide essential Hawai'i community health data for researchers, planners, policy makers, community members, and students. This site combines Hawai'i data from national and local sources into an innovative website that integrates health trackers, detailed indicator reports, reporting tools, and local resources.

ALOHA+ CHALLENGE DASHBOARD

- The Office of Enterprise Technology Services supports the Aloha+ Challenge Dashboard through a State partnership with Hawai'i Green Growth by providing website hosting services and ESRI license.



- The Aloha+ Dashboard was recently rebranded and now leverages ESRI as a platform. The online open data platform tracks progress, provides accountability, and ensures transparency on the Aloha+ Challenge.
- The Aloha+ Challenge Dashboard is designed for decision makers, practitioners, and the public to inform policy, data driven decision making, and inspire action on Hawai'i's statewide 2030 sustainability goals.



OPTIMIZE ENTERPRISE SYSTEMS

Optimize ETS enterprise systems to leverage the State's investment in centralized IT services.

The following programs align with the strategic focus area of Optimize Enterprise Systems and also the area of Implement Dynamic and Sustainable IT Operations.

Enterprise Programs and Projects consist of initiatives identified as enterprise in scope, leveraging economies of scale and setting standard platforms for IT systems to maximizing adoption and positive return on investment.

SHARED SERVICES (LEGACY)

ETS manages legacy enterprise shared services centrally to leverage economies of scale (e.g., mainframe, data center, and high-speed printing).

- **Shared Data Center** – ETS has three data centers: DR Fortress, University of Hawai'i, and the Kalanimoku Building, for use by the departments.
- **Mainframe Services** – ETS completed the migration of the production and disaster recovery mainframe systems from Hawai'i to the mainland US, ETS continues to seek ways to reduce paper printing on the large high-speed printers associated with the mainframe
- **Mainframe Application Services** – ETS provides application services ranging from COBOL, ADABAS, Linux, and more, in support of various Mainframe applications.





OPTIMIZE ENTERPRISE SYSTEMS

- **Service Desk** - From responding to requests to unlock passwords to providing support for websites and applications, ETS' service desk provides executive branch departments with assistance.
- **High Speed Printing** – ETS maintains 2 redundant high-speed printers to provide for printing of state checks, accounting and financial records, forms and letters to beneficiaries of state and federal programs.

Paper printing, pre-pandemic (prior to March 2020), had stabilized at a lower level after the first phase of the paper reduction project. And, in fact, there was a slight downward trend in paper printing in calendar year 2019.

The 2020 pandemic, which caused a large increase in Unemployment Insurance (UI) claims, caused a large increase in printing claimant letters related to eligibility and payment as well as letters to employers. Overall printing increased 44% in 2020 (compared to 2019).

At the time of this writing, ETS has paper printing data through September 2021. Comparing the 9-month periods of January through September for 2019, 2020, and 2021, there was a 42% increase in 2020 compared to 2019 and a 34% increase in 2021 (again compared to 2019).

Number of cases of paper printed by Year/Month

1 case = 5000 pages

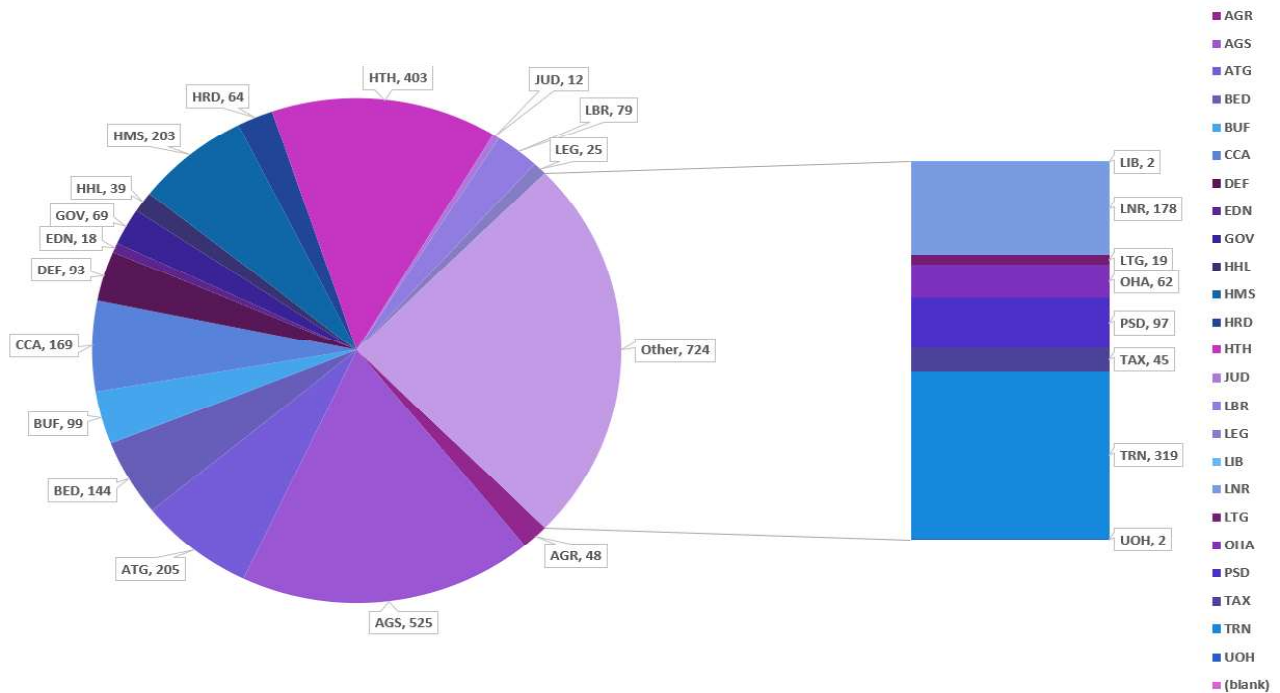
Month	2019	2020	2021	2022
January	153	105	102	84
February	60	75	136	54
March	109	88	147	68
April	81	205	119	56
May	80	133	99	58
June	77	104	105	68
July	94	173	105	63
August	71	94	85	58
September	53	128	145	56
October	101	108	16	0
November	67	120	69	0
December	62	119	66	0



OPTIMIZE ENTERPRISE SYSTEMS

ETS responded to over 3,000 service requests in 2022. From responding to requests to unlock passwords to providing support for websites and applications, ETS' service desk provides executive branch departments with assistance.

Service Desk Requests by Department



Service Desk Requests by Category





EXTEND IT PORTFOLIO GOVERNANCE

Extend the State IT Governance Model to better align the state's functions with resources and ensure the State follows industry best practices and garners the full benefits of its investments.

The following programs align with the strategic priority to Extend IT Portfolio Governance from the Hawai'i Information Technology Strategic Plan. Success with this strategic priority necessitates excellent cooperation between ETS and the executive branch departments and agencies.

IT PROJECT GOVERNANCE

ETS provides IT governance (ITG) for Executive Branch projects under Administrative Directive No. 18-03 Program Governance and IV&V Requirements for Enterprise IT Projects.

Information technology governance consists of processes and standards guiding the management and oversight of the State of Hawai'i's IT and information resource investments, acquisitions and projects, seeking efficiencies and cost-savings through economies of scale, leveraging of shared assets, reduction of waste, and alignment with statewide IT strategies and industry best practices. This includes the implementation of governance and monitoring procedures across enterprise programs and projects to ensure successful outcomes and positive return on investment (ROI) are achieved, to the extent possible, and the efficient management of the statewide portfolio to ensure projects are prioritized appropriately and resources are sufficiently managed.

The following improvement on IT Governance were accomplished during 2022:

- Initiated a program for structuring the statutory requirement for all departments to establish their multi-year information technology strategic and tactical plans. Started IT planning effort with some of the departments.
- Continued refinement of the statewide IT portfolio data model by enhancing the data model for budget programs, business capabilities, data objects, and IT projects. Continued data collection for the statewide IT portfolio in the monthly IT roadmap meetings.
- Acquired a module for the state IT portfolio management tool for business transformation - and started the effort of modeling the statewide digital transformation.



EXTEND IT PORTFOLIO GOVERNANCE

- Established a guidance matrix for the state's executive branch enterprise IT projects, structured by readiness reviews by each phase in this process.
- Established specific guidance for large IT procurement solicitations in the form an IT RFP checklist.
- Provided solution architecture and technical architecture guidance for multiple departments in their large-scale IT procurements. AS part of this wide technology consultation particular emphasis was put on the state's IT strategic priority for implementing dynamic and sustainable IT operations.
- Continued refining the state's IT portfolio strategy refinement by coordinating the activities of the IT Portfolio Working Group.
- Continued refining the state's IT portfolio strategy refinement by coordinating the activities of the Data Governance Working Group.

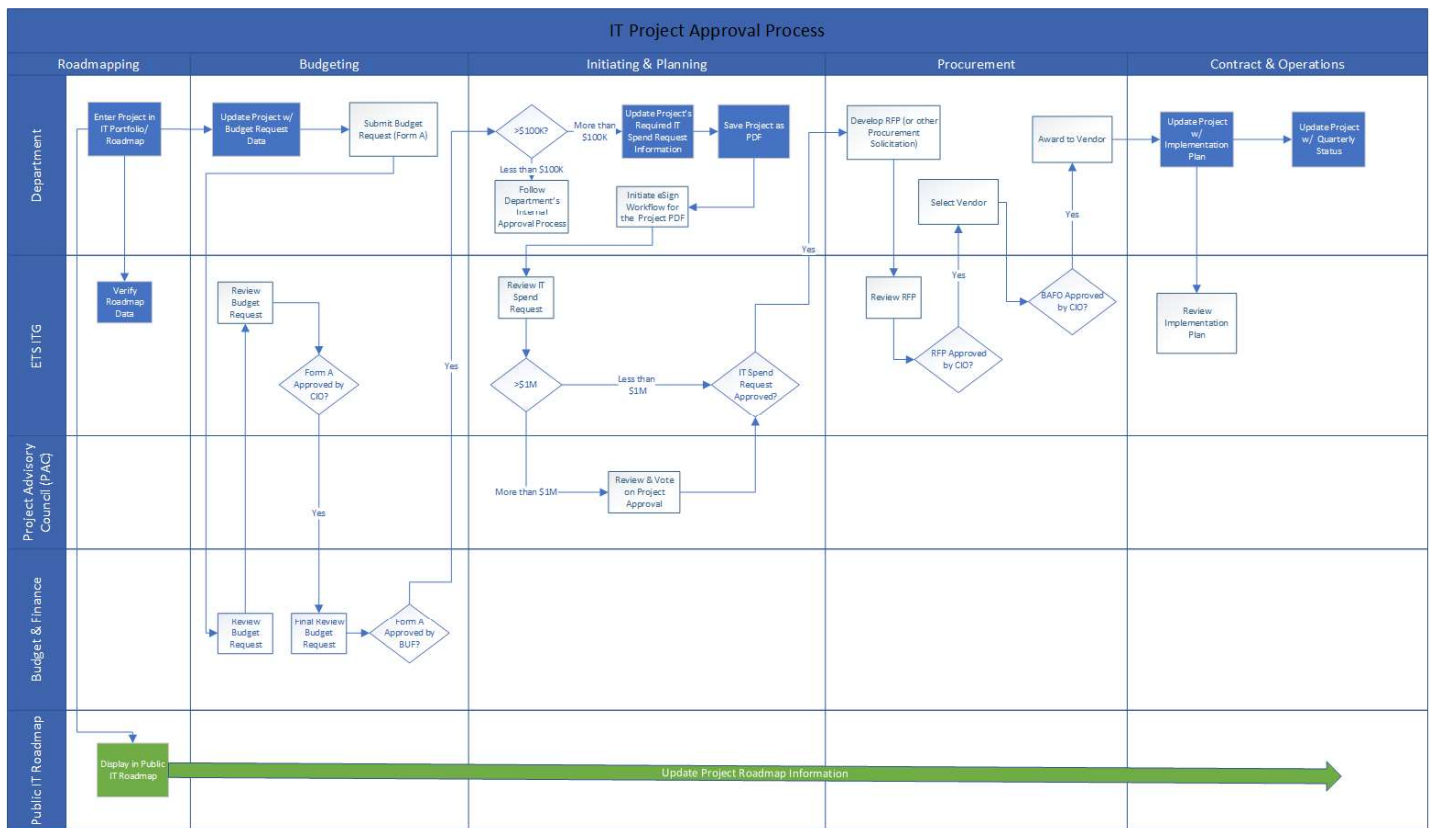


Figure 2 - Revised IT Investment Approval Framework



EXTEND IT PORTFOLIO GOVERNANCE

Phase	Activity	Guiding Documents	Deliverables	Approvals
Departmental IT Planning	<ul style="list-style-type: none"> Create & maintain the departmental IT plan Review any changes to the departmental IT Plan with ITG 	<ul style="list-style-type: none"> BA and IT Planning Guide (in progress, check with ETS ITG) IT plan checklist (in progress, check with ETS ITG) 	<ul style="list-style-type: none"> Department's multi-year information technology strategic and tactical plan 	
IT Roadmapping	<ul style="list-style-type: none"> Review the project's business value and risks Enter a Project fact sheet in LeanIX portfolio management system 	<ul style="list-style-type: none"> Roadmap requirements Detailed LeanIX roadmapping tutorial 	<ul style="list-style-type: none"> LeanIX Project fact sheet satisfying roadmap requirements 	
Budgeting	<ul style="list-style-type: none"> Complete and submit Form A (business case) to Budget & Finance 	<ul style="list-style-type: none"> Form A guide 	<ul style="list-style-type: none"> Budget & Finance Form A 	<ul style="list-style-type: none"> Form A approval by Budget & Finance Form A approval by CIO Budget approval by Legislature
Initiating	<ul style="list-style-type: none"> Update Project fact sheet in LeanIX to satisfy IT Spend Request requirements 	<ul style="list-style-type: none"> IT Spend Request checklist 	<ul style="list-style-type: none"> Project Charter / IT Spend Request (LeanIX Project fact sheet) 	<ul style="list-style-type: none"> IT Spend Request approval by CIO (Note: IT Spend Requests submitted by Monday EOB will be reviewed in the Spend Request meeting that Wednesday, anything submitted after Monday EOB will be reviewed in the following week's Spend Request meeting)
Planning (for projects over \$1 million)	<ul style="list-style-type: none"> Prepare PAC presentation 	<ul style="list-style-type: none"> PAC Preparation Guideline PAC Presentation Template 	<ul style="list-style-type: none"> PAC presentation 	<ul style="list-style-type: none"> IT Spend Request approval by PAC
Procurement	<ul style="list-style-type: none"> Prepare RFP or other procurement vehicle Schedule RFP checklist review with ITG 	<ul style="list-style-type: none"> RFP checklist Technical Architecture Planning Guide (in progress, check with ETS ITG) 	<ul style="list-style-type: none"> RFP - including IT-specific content 	<ul style="list-style-type: none"> RFP approval by CIO BAFO approval by CIO
Contract and Operations	<ul style="list-style-type: none"> Prepare project plan schedule Validate scope of work with vendor 	<ul style="list-style-type: none"> Requirements checklist (in progress, check with ETS ITG) 	<ul style="list-style-type: none"> Project implementation schedules plan and supporting documentation Quarterly status updates 	

Figure 3 - IT Governance Guidance Matrix

- 1. Departmental IT Planning Phase:** ETS works with each executive branch department and agency to develop and maintain its respective multi-year information technology strategic and tactical plans and road maps that are part of the State's overall information technology strategic plans, road maps, and directions
- 2. IT Roadmapping Phase:** Departments must develop and maintain their multiyear IT Roadmaps, which identify all existing and planned expenditures for IT projects, operations and maintenance, hardware, software, infrastructure, and services in support of Department and Administration priorities. Departments will meet with the CIO and ETS' IT Governance staff on a monthly basis to review and validate their IT Roadmaps.
- 3. Budgeting Phase:** As part of the State's Executive Branch annual budget preparation process, the Department of Budget and Finance (B&F) will send ETS all Department IT budget requests for review. ETS' IT Governance staff will review and analyze the requests, validating each against the Department IT Roadmaps. The CIO will then recommend to BUF which requests merit consideration for inclusion into the proposed budget.

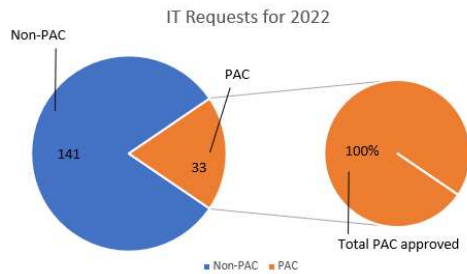


EXTEND IT PORTFOLIO GOVERNANCE

4. **Initiating Phase:** All requested funds for the project or initiative must be secured by and available to the Department prior to starting this phase. Departments must submit notification of project or investment initiation requests via the ETS205 request to spend form with supporting documentation. ETS' IT Governance staff will analyze the request and meet with the CIO to review and recommend whether the request can proceed to the Planning phase.
5. **Planning Phase:** The Project Advisory Council (PAC) will review and approve the project before it proceeds to the Procurement phase. Departments will present their requests to the PAC, which generally meets once a month. The PAC voting members are the CIO, the Department of Accounting and General Services (DAGS) Comptroller, the Director of Finance (B&F), and the Director of Human Resources Development (DHRD). Information to be presented includes (but is not limited to) return on investment, alternatives considered, total estimated costs, business justification, project requirements, phases, deliverables, funding mechanism, personnel impact, procurement method, contract management approach, and schedule.
6. **Procurement Phase:** Requests for proposals, quotes, or bids and the corresponding statements of work must be reviewed and approved by the CIO before being released as final. After a vendor has been selected, best and final contract versions must be reviewed and approved by the CIO before final execution. This is to ensure solicitation and contract documents are appropriately aligned with the project objectives for project success, and appropriate safeguards are in place to protect state interests.
7. **Contract and Operations Phase:** Within 30 days of the notice to proceed date, project implementation schedules and supporting documentation must be reviewed by the ETS IT Governance staff. Thereafter, departments shall submit quarterly status updates to ETS to monitor progress and ensure production readiness.



EXTEND IT PORTFOLIO GOVERNANCE



STATEWIDE IT PORTFOLIO MANAGEMENT

The departmental IT roadmap and portfolio management effort continues to inform the statewide IT spending prioritization and architectural modernization. During the monthly roadmap meetings between department IT staff and ETS, and with the help of the LeanIX portfolio management tool, ETS worked together with the departments to assess capabilities, criticality and both business and technical fit of the state's existing IT applications. This assessment yields a summary roadmap disposition called TIME for each IT application. TIME translates to whether to Tolerate, Invest in, Migrate or Eliminate each application.

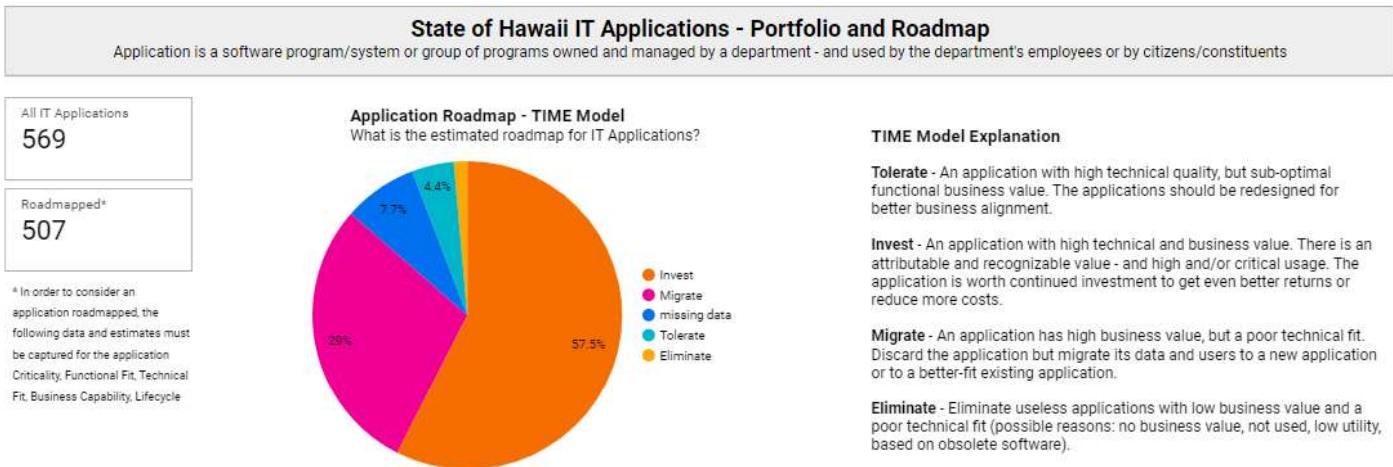


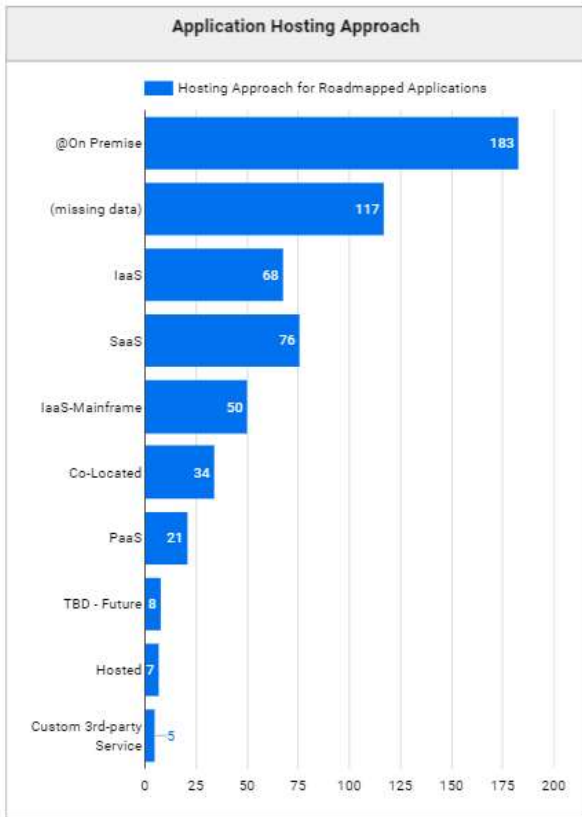
Figure 4 - Public IT Roadmap, TIME Model



EXTEND IT PORTFOLIO GOVERNANCE

HAWAI'I PUBLIC IT ROADMAP DASHBOARD

ETS continues to provide public transparency of the departmental IT roadmap and portfolio management STATE OF HAWAI'I IT PORTFOLIO AND ROADMAP, available to the public on the ETS website at <https://ets.hawaii.gov/state-of-hawaii-it-portfolio-management/>.



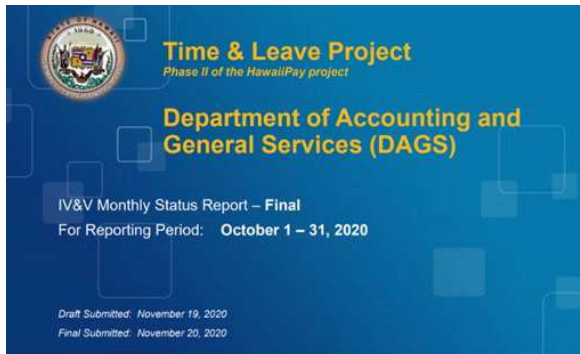
Business Capability	Applications Serving This Capability
Core Capabilities / Individual Rights / Business Practices Enforcement	27
Support Capabilities / Financial Management / Accounting	23
Core Capabilities / Constituent Benefits / Case Management	23
Core Capabilities / Transportation / Transportation Delivery	20
Core Capabilities / Economic Development	17
Support Capabilities / IT / Data Management / Document Management	16
Core Capabilities / Transportation / Transportation Operations	16
Core Capabilities / Individual Rights / Licensing/Permitting	14
Core Capabilities / Health / Environmental Management and Health Services	13
Support Capabilities / IT / Operations / Security	12
Support Capabilities / Financial Management / Financial Reporting	12
Support Capabilities / Human Resources	11
Support Capabilities / Property & Facilities	11
Support Capabilities / IT / Applications / Enterprise Applications	11
Core Capabilities / Public Safety	10
Support Capabilities / Financial Management / Budgeting	10
Support Capabilities / Financial Management / Financing	9
Support Capabilities / IT / Applications / Tools & Utilities	9
Core Capabilities / Transportation	9
Support Capabilities / Business Support / Case Management	8
Support Capabilities / Policy Development	8
Support Capabilities / Customer/Citizen Relationships / Constituent Outreach	8

Figure 5 - Public IT Roadmap, Hosting and Capabilities



EXTEND IT PORTFOLIO GOVERNANCE

INDEPENDENT VERIFICATION AND VALIDATION REPORTS



Pursuant to section 27.43.6, HRS, and section 93-16, HRS, Independent Verification and Validation (IV&V) Reports for certain major systems are to be submitted to the legislature and posted on the ETS website.

IV&V provides a rigorous independent process that evaluates the correctness and quality of the business product of the project to ensure that the product is being developed in accordance with customer requirements and is well-engineered.

In 2022, ETS provided IV&V oversight over the following projects:

- Department of Health's Behavioral Health Administration Integrated Case Management System
- Public Utilities Commission's Case & Document Management System
- Department of Human Services' Systems Modernization Project
- Department of Human Services Med-Quest Health Analytics Program
- Department of Labor and Industrial Relations, Disability Compensation Division's Modernization Project
- Department of Labor and Industrial Relations, Unemployment Insurance Modernization Project
- Employer-Union Health Benefits Trust Fund's Benefits Administration System
- Department of Transportation's Financial Management Systems Project
- Department of Commerce and Consumer Affairs Business Registration Modernization Project
- State of Hawai'i's Enterprise Financial System Modernization Project



IMPLEMENT DYNAMIC AND SUSTAINABLE IT OPERATIONS

(Also known as **EVERGREEN OPERATIONS**)

Implement dynamic and sustainable IT operations to ensure business systems are up-to-date and ready to support the current and future needs of business users and citizens at all times.

The following programs align with the key focus area of Dynamic and Sustainable IT Operations, which is one of the strategic priorities of the Hawai'i Information Technology Strategic Plan.

SHARED SERVICES

ETS manages enterprise shared services centrally to leverage economies of scale (e.g., network, data management, unified communications, data center, and various cloud services).

- **Office 365** – Activated 13,079 Office 365 licenses that are now being utilized by branch department users. Benefits include fortified security, greater disaster recovery capability, expanded applications and services, added tools for collaboration, and long-term budget sustainability. A dramatic increase of Microsoft SharePoint storage was driven in response to the pandemic and increase in telework: 1.8TB (terabytes) of SharePoint storage was in use shortly before widespread awareness of COVID-19 in March 2020. By the end of October, 12.99TB of SharePoint storage was in use – a more than seven-fold increase in less than a year. In 2022, we are now consuming 36.6TB of storage as more users shift their workloads into the cloud.
- **eSign Service** – Departments statewide increased government efficiency within the executive branch through the use of eSign. Nearly 500,000 transactions were processed through the Adobe eSign service this year. The COVID-19 pandemic coerced the digitalization of many services and had accelerated the use of electronic signatures. In March 2021, ETS leveraged our eSign service in an integration with the State of Hawai'i SafeTravels application for the digital signing of the Order for Self-Quarantine. In the first month of the integration, our number of eSign transactions increased by 55%.



EVERGREEN OPERATIONS

SHARED SERVICES (CONTINUED)

- **Government Private Cloud** – ETS is a VMware Service Provider and provides Hyper Converged Infrastructure and services to various departments.
- **Public Cloud Services** – ETS provides Amazon Web Services (AWS), Microsoft Azure, and Google Cloud services to various applications, and services.
- **Open Data Infrastructure** – The State's Open Data Infrastructure is managed and maintained by ETS.
- **Public Facing Website Infrastructure** – Various department and agency websites are housed and managed by ETS in AWS.
- **Network Services** – ETS has designed and maintains the largest computer network in the State of Hawai'i that spans multiple islands.
- **HIWIN Radio System** – The Hawai'i Wireless Interoperability Network is the State's Radio infrastructure, which is used by first responders, departments, counties, and other various agencies.
- **Executive Legislative Tracker (ELT)** – Using Sharepoint, SQL Server and PowerApps, ETS designed a way for departments to search for and track measures during the Legislative Session. Departments collaborate and discuss proposed measures using this tool. Technical aspects of the application read the information on the capitol.hawaii.gov site and updates the tracker in near real time, store documents that are associated with a specific measure and has functions to send email from the application. The ELT has been in use for six years with additional functionality added every year. For the 2022 Legislative Session, the application garnered 468 users.
- **Executive Testimony Tracker (ETT)** – Using Sharepoint, ETT provides the executive branch departments a tool to submit and collaborate on testimonies during the Legislative Session. Submitting the testimony is automated through an email with an attachment. The system also organizes the testimonies for the executive department. For the 2022 legislative session, 9137 testimonies were submitted

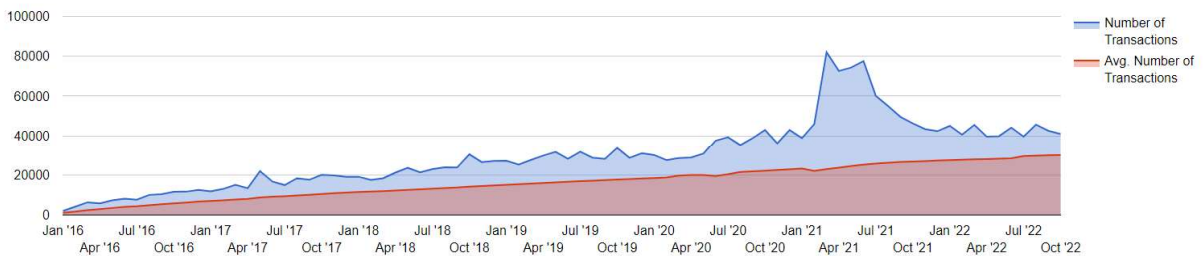


EVERGREEN OPERATIONS

- Legislative Bill Enrollment - To increase the efficiency and organization of the legislative bill enrollment process, the ETS team developed the Bill Enrollment system for the Office of the Governor in April 2021. The system streamlines the gathering of comments and recommendations from the Departments/Attached Agencies, and handles the communications and transfer of documents between the parties. For the 2022 Legislative Session, 243 bills were processed for comments and recommendations to the executive branches.

eSIGN

Six years after eSign was officially launched, over 2 million eSign transactions have occurred. From onboarding new employees, to signing documents, 19 state departments are using eSign.



The application creates efficiency within state government through digitizing paper-based processes and reduces the environmental impact to our world.

		
290130000 Gallons of Water Saved	15998000 Pounds of waste saved	101145000 Pounds of wood saved



EVERGREEN OPERATIONS

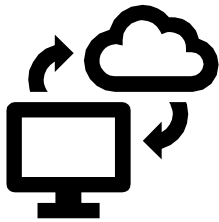
OFFICE 365



ETS manages 14,538 Office 365 licenses that are now being utilized by executive branch department users.

- Licenses include applications: Microsoft Teams, One Drive, Skype, and SharePoint
- Activated benefits include fortified security, greater disaster recovery capability, expanded applications and services, added tools for collaboration, and long-term budget sustainability.

WEB SERVICES



- ETS manages the infrastructure that hosts the State's public facing websites, which includes 559 sites (department websites and its subsites) and provides other cloud hosting options.



SALESFORCE



- ETS supports the application, which HiMod's payroll call center, Hawai'i Information Portal (HIP), uses as its customer relationship manager.
- An average of 4,500 employees use the HIP call center.



EVERGREEN OPERATIONS



HAWAI'I WIRELESS INTEROPERABILITY NETWORK(HiWIN)

ETS manages the State's radio system, which is used by first responders, federal, state and county other agencies. It is a system architected in such a way that if any portion of the system is isolated, it will continue to operate with the full functionality of the system at-large. Backed by the State of Hawai'i microwave network of links, the system joins sites that are designed to survive a category 4 hurricane.

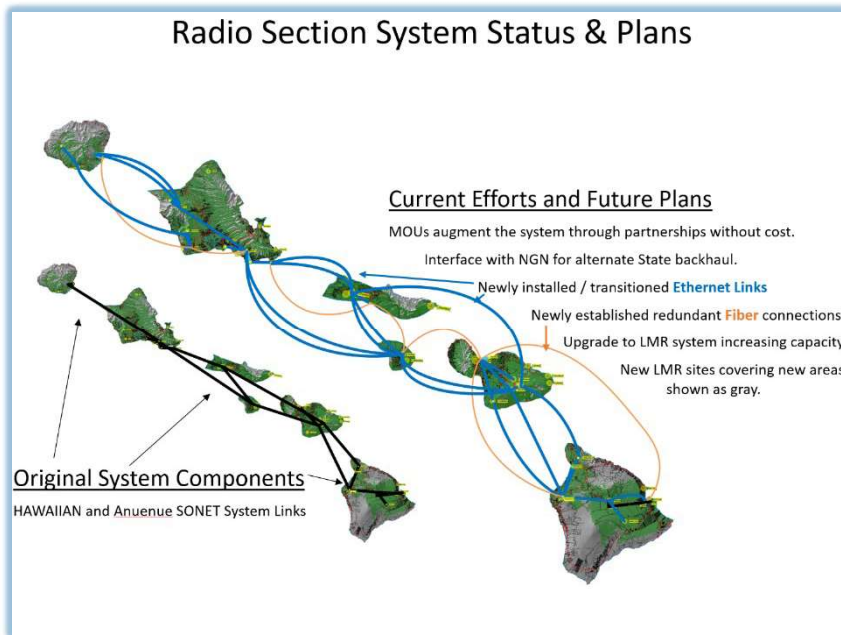
HiWIN By The Numbers

- 44 radio sites serve various federal agencies, County of Kauai, Kauai Island Utility Cooperative, City & County of Honolulu, Hawai'i Emergency Management Agency, University of Hawai'i, U.S. Coast Guard, County of Maui, County of Hawai'i, U.S. Army Pacific Land Mobile Radio, and national parks.
- 26 of the 46 radio sites are managed by ETS.
- 20 of the 46 radio sites are managed by ETS Partners including City and County of Honolulu, County of Maui, County of Hawai'i, and U.S. Coast Guard.
- Serves the communication needs of all airports statewide.

Roughly 31 agencies statewide use HiWIN, with more than 4300 users.

EVERGREEN OPERATIONS

ANUENUE Interisland Digital Microwave Partnership



The State maintains a vast network of resilient radio sites that are linked by microwave connections. The network consists of State sites as well as USCG sites, designed to meet the unique topography and climate challenges of the Hawaiian Islands, Anuenue's backhaul infrastructure can withstand the 155 mph winds of a Category 4

hurricane, run for one to two weeks on generators without commercial power, and survive in earthquake Zone 4-rated facilities built far away from tsunami inundation zones.

The partnership between the State with the USCG, known as Anuenue, provides resilient and survivable communication throughout Hawai'i. It is similar to other partnerships penned by ETS to share sites with counties thereby advancing connectivity without the cost of a new site build.

While the partnerships and overall network of microwave sites and links have also been designed to support all State Office Buildings to provide connectivity and continuity of government functions, if terrestrial connections such as fiber optic cables are cut or damaged, the foremost important role is to support the HIWIN network (discussed above) for First Responders and those supporting them serving in the broader public safety arena.



EVERGREEN OPERATIONS



The ANUENUE Network infrastructure of high-capacity microwave links, radio towers, and ground facilities support systems used by Hawai'i's first responders, search and rescue, law enforcement, emergency services, and critical government services during both routine operations and during natural disasters like hurricanes and tsunamis. The ANUENUE's 12 "high sites", located on remote mountain tops, connect with eight sites located at state office buildings and USCG properties across the islands.

State users of the ANUENUE include ETS, with the Hawai'i Wireless Interoperability Network (HIWIN); Maritime Wireless Network System; Hawai'i Emergency Management Agency; the Departments of Public Safety, Transportation, Health, and Land and Natural Resources; and the County of Maui Police Department and other agencies of all counties. The Coast Guard's primary use of the ANUENUE is its Rescue 21 maritime distress radio system, providing significantly improved coverage and location capabilities to locate mariners in distress. USCG-sponsored federal users include the U.S. Army Pacific Land Mobile Radio System, National Oceanic and Atmospheric Administration Emergency Weather Broadcast System, U.S. Customs and Border Protection, and United States Geological Service.



EVERGREEN OPERATIONS

ANUENUE Interisland Digital Microwave Partnership (Continued)

ETS has recently partnered with DOT Airports to apply the vast technical capabilities of the HIWIN system connected by the microwave network to offer interoperable communication platform for all agencies likely to respond to an emergency at any airport statewide. This includes county, state, and federal agencies representing law enforcement as well as Fire, EMS, and other public safety functions. All harbors statewide use HIWIN and are connected over the microwave system, enabling instant statewide communications for almost any emergency.



Enterprise Notification System (ENS) using Alert Media



ETS procured 10,000 licenses of the Alert Media services to create an Enterprise Notification System (ENS) for participating Executive Branch

Agencies' staff. The ENS gives the State mass notification capabilities using voice call, text message, email, or mobile app push notification. Outgoing notifications can target by organizational entities, specific geographic locations, as well as other kinds of categorizations. It is also possible for individuals to issue a request for assistance. The ENS is functionally deployed by three agencies now with twelve other agencies in various states of deployment.



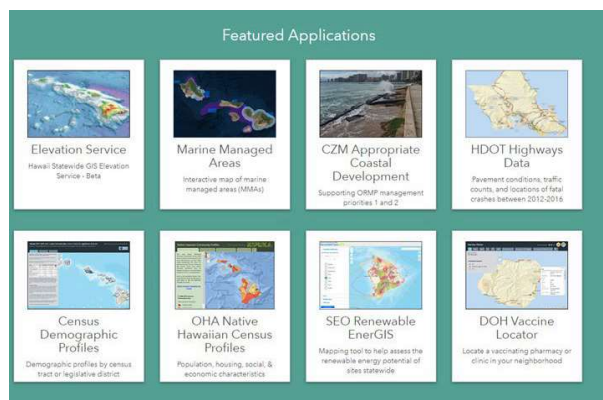
EVERGREEN OPERATIONS

WEB ACCESSIBILITY

Web accessibility is measured using the globally recognized Web Content Accessibility Guidelines (WCAG) 2.0 level AA standards, which defines how to make web content more accessible for people with disabilities. Roughly 300K pages across 125 websites are being actively scanned and monitored.

In response to Act 172, relating to electronic information technology accessibility for persons with disabilities, ETS, in conjunction with the Disability and Communication Access Board (DCAB), has begun development of the “Hawai’i Electronic Information Technology Disability Access Standards.” This publication will detail electronic information technology accessibility standards to be implemented by all state entities to require that all electronic information technology, developed, purchased, or used by a state entity must be made accessible to persons with disabilities.

GEOGRAPHIC INFORMATION SYSTEM PROGRAM



- The GIS Program is an Office of Enterprise Technology Services and Office of Planning joint effort.
- Approximately 1,000 active users in State's primary Cloud mapping organization.
- Established enterprise licensing agreements and cloud-based hosting services that encourages broad GIS adoption across all State of Hawai'i departments.
- Reduces redundant local databases, standardizes information analyzed by decision makers.
- Collects and distributes up-to-date authoritative GIS data to more than 400 state GIS data and system users state departments that develop and maintain a wide variety of data, maps and ERP applications — many of which are available to the public and/or relied upon by state personnel.

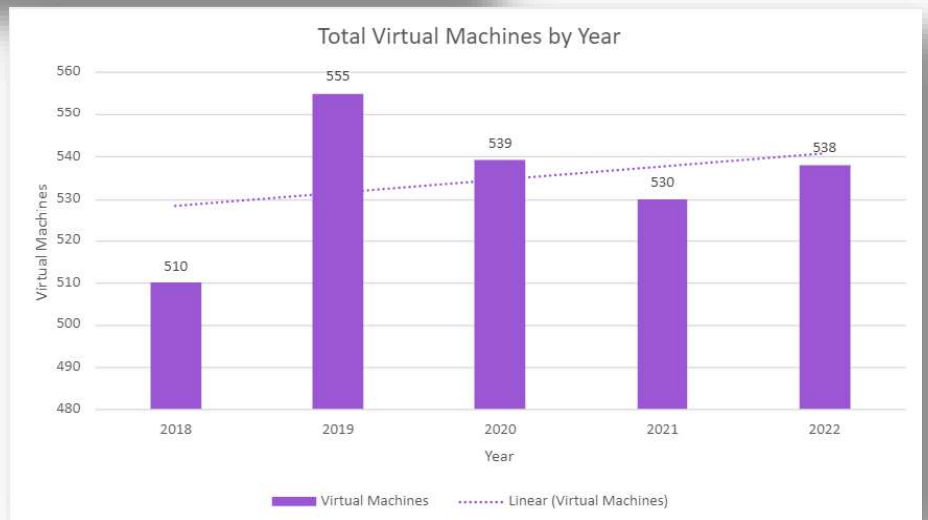
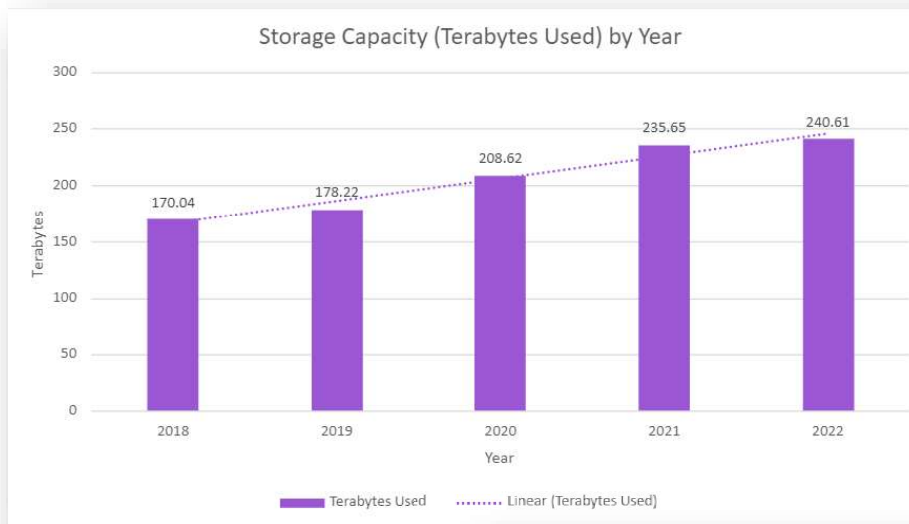


- Maintains a public-facing geospatial open data portal with access to most of the GIS data and imagery layers.
- Is used by agencies to develop and maintain a wide variety of data, maps, and ERP applications — many of which are available to the public and/or relied upon by state personnel.

EVERGREEN OPERATIONS

GOVERNMENT PRIVATE CLOUD

ETS is a VMware Service Provider and provides Hyper Converged Infrastructure and services to various departments.



PUBLIC CLOUD SERVICES

ETS provides Amazon Web Services (AWS), Microsoft Azure, and Google Cloud services as infrastructure to host various applications, and services.



DIGITAL WORKFORCE DEVELOPMENT

Establish a continuous learning culture and growth mindset to modernize how we work and enable the state to develop and sustain the digital workforce needed in a constantly evolving IT world.

PROFESSIONAL DEVELOPMENT

ETS provides employees with linear learning (learning a complete process, programming language, or system from A to Z) and flow learning (learning about a narrow topic to solve a work-related problem or improve knowledge in a specific area).

InfoTech Academy



InfoTech Academy has a series of 45 online courses designed to help the IT leadership team master the core IT processes from the IT Management & Governance framework. Completion of a set of courses in any of the 9 major areas leads to a certificate.

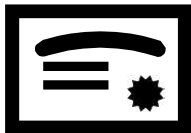
In 2022, ETS staff continued to participate in guided Implementations and virtual Workshops covering various subjects.



DIGITAL WORKFORCE DEVELOPMENT

Vendor Sponsored Training. ETS uses vendors to provide training on technologies used by the state. The training usually is a hands-on workshop on how to use a technology. Statewide trainings were offered on topics like productivity and collaboration, messaging and communications, web meetings, electronic signatures, accessibility, and telework. Statewide and focused trainings were offered by Microsoft, Adobe, OpenGov, and AlertMedia on topics like productivity and collaboration, messaging and communications, web meetings, electronic signatures, accessibility, open data, and telework.

CERTIFICATIONS



- Employees are encouraged to earn their certifications in the area of their profession.
- Provides an opportunity for our employees to submit for a salary increase because of their professional growth.
- If an employee passes their exam, they are reimbursed for the cost.

CAREER PATHS



- Many opportunities on a day-to-day basis for employees to grow, such as mentoring or shadowing opportunities, stretch assignments, and other learning opportunities throughout the organization.
- ETS has leveraged the Department of Labor Workforce Development Division's Student Internship Program (SIP) to provide paid internship opportunities for students approaching graduation or have recently graduated from college. Interns have the opportunity to gain valuable experience towards their future careers in the IT field. Our goals for the internship are to provide an environment for interns to apply knowledge learned from school curriculums, develop hands-on work experience, and become better prepared to enter the information technology and cyber security workforce.



DIGITAL WORKFORCE DEVELOPMENT

DIGITAL GOVERNMENT SUMMIT



The 2022 Hawai'i Digital Government Summit, organized by Government Technology Magazine, is a collaborative forum to share information technology best practices, to hear about emerging technology trends, and to reflect on our future challenges.

After two years of virtual events, attendees this year connected in person with peers from the government and industry sectors to share ideas, best practices, and technology trends that have never been more important than they are now.

Recognized national speakers, Hawai'i IT leaders, and colleagues from other states shared their collective experiences and proven problem-solving strategies. Topics included Effective Data Governance, Next-Level Cloud Transformation, The Rise of Analytics, Digital Equity, Automation Changing the Game, the Evolving Cyber Threat Landscape, IT Consolidation, and more. ETS, state departments, and other partners provided summit programming content.

This professional development and learning event drew more than 250 participants from all levels of government in Hawai'i.



DIGITAL WORKFORCE DEVELOPMENT

HAWAI'I ANNUAL CODE CHALLENGE (HACC)

Traditionally In-Person Event Pivots to Virtual Event In Response to COVID for the 3rd Year



Gov. David Ige's vision for the Hawai'i Annual Code Challenge when it began in 2015 included providing an opportunity for civic engagement with the local technology community in modernizing state functions and

services for a more effective, efficient and open government.

The HACC provides an expanded three-week timeframe meant to encourage interaction between community teams and state department personnel, ultimately resulting in sustainable solutions that are appropriately matched with technologies and platforms in use or being considered by the state. This event promotes the state as an innovative hub for future innovators.

For this year's HACC, prizes were expanded to include a category for best low code/no code submissions. This is in response to the evolution of the tech industry that includes low code/no code applications as solutions.

Also new this year is the mentoring program. The teams signed-up for a mentor and is matched with a professional in the industry. As volunteers of the HACC, the mentor guides, answer questions, and supports the team without doing the actual work and solution for the team. This unique mentoring opportunity provided the teams with chance to meet and talk with people who are working in the industry today.

Workshops were held before the HACC Kick Off to provide students an early start with building their "tool box" for the competition. Workshops on *No Code/No Code with Salesforce, Microsoft Power Apps – No Code/Low Code, Microsoft GitHub, and How Modern Tech Companies use No Code Solutions to Provide Quick & Reusable Enterprise Scale Solutions with eWorld Enterprise Solutions, Inc.* were held.

HACC 2022 included a total of five challenges, each from the Hawai'i Department of Education – *Modernizing Legislative Tracker*, Office of Planning & Sustainable Development – *Transit Oriented Development Data Collection and Update Form*, Office of Enterprise Technology Services – *URL Compressor*, University of Hawai'i – *All About Broadband*, and NIC Hawaii – *Online Data Visualization*.



DIGITAL WORKFORCE DEVELOPMENT

2022 HACC BY THE NUMBERS

- **193 PARTICIPANTS**
- **56 HIGH SCHOOL STUDENTS**
- **44 TEAMS CREATED**
- **27 TEAMS SUBMITTED SOLUTIONS FOR JUDGING**
- **21 CODE BASED SOLUTIONS & 6 NO/LOW CODE SOLUTIONS**
- **17 FINALIST TEAMS ON JUDGING DAY**

HACC CHALLENGES BY TEAMS

Hawai'i Department of Education <i>(Modernizing Legislative Tracker)</i>	7
Office of Planning & Sustainable Development <i>(Transit Oriented Development Data Collection and Update Form)</i>	4
Office of Enterprise Technology Services <i>(URL Compressor)</i>	19
University of Hawai'i <i>(All About Broadband)</i>	5
NIC Hawaii <i>(Online Data Visualization)</i>	9



DIGITAL WORKFORCE DEVELOPMENT



1st Place No Code/Low Code Solutions
1st Place High School (University Laboratory School & Punahou School)
Team T777



Joshua Li



Brix Kozuki

T777, a team composed of students from University Laboratory School and Punahou School, took home first place for the No Code/Low Code Solutions and first place High School categories at the Hawai'i Annual Code Challenge's (HACC) Judging and Presentation Day, which was held over the weekend. In total, the team took home \$5,500, along with IT application certification classes at Pacific Center for Advanced Technology Training (PCATT), located at Honolulu Community College.

T777 developed a proof-of-concept app to modernize the Department of Education's Legislative Tracker, which is used to track bills and testimonies during the legislative session.



DIGITAL WORKFORCE DEVELOPMENT

HACC 2022 WINNERS HAWAII ANNUAL CODE CHALLENGE

1st Place Coded Solutions

Team bruh2023 (University of Hawaii)



Vincent Chan



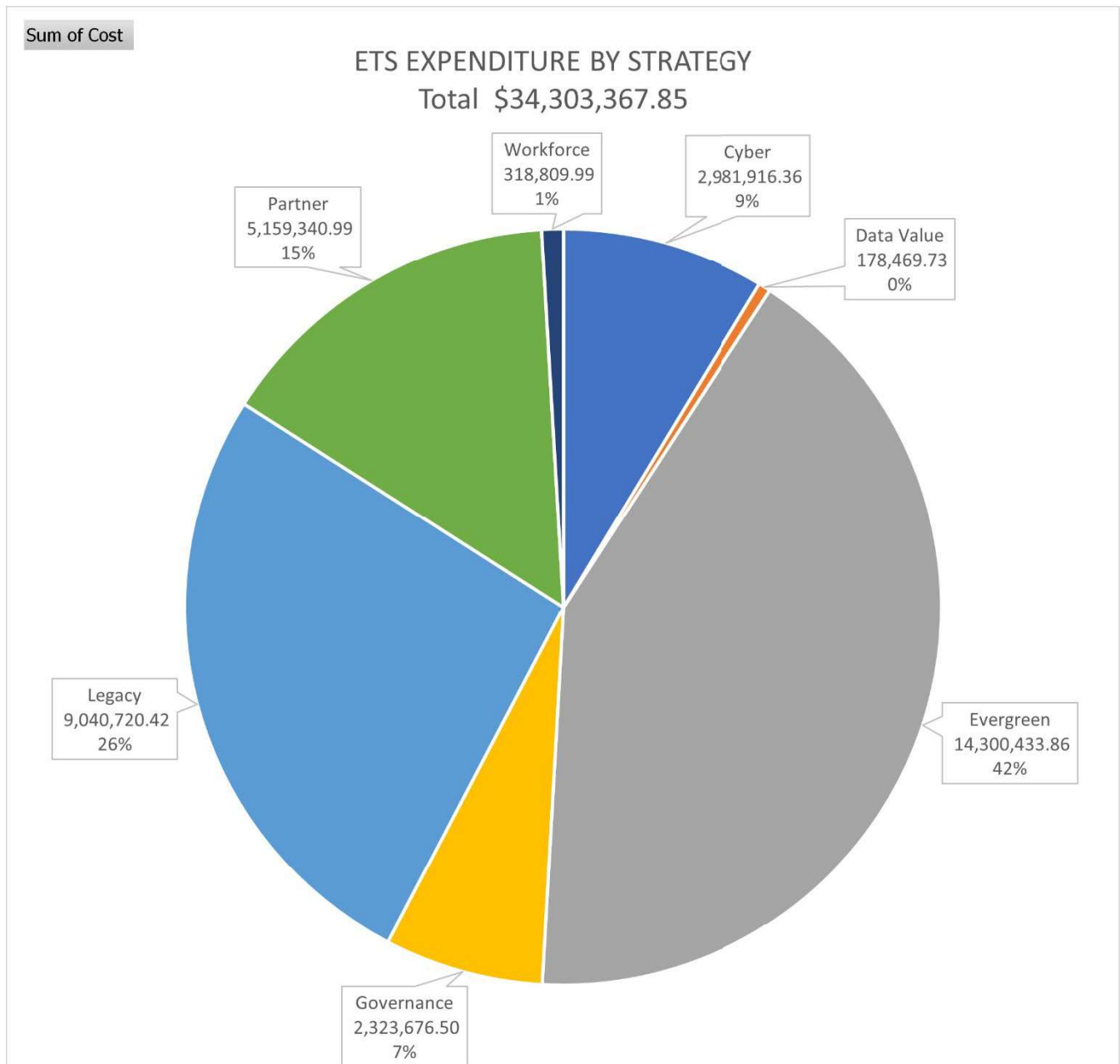
Ethan Chung

A team of students from the University of Hawai'i-Manoa, bruh2023, took home first place for the Coded Solutions category and \$4,000. Bruh2023 created a solution to the Office of Enterprise Technology Services' challenge of creating a URL shorter that could be used as trusted short links in external and internal communications by State employees.



ANALYSIS OF FY2022 EXPENDITURES

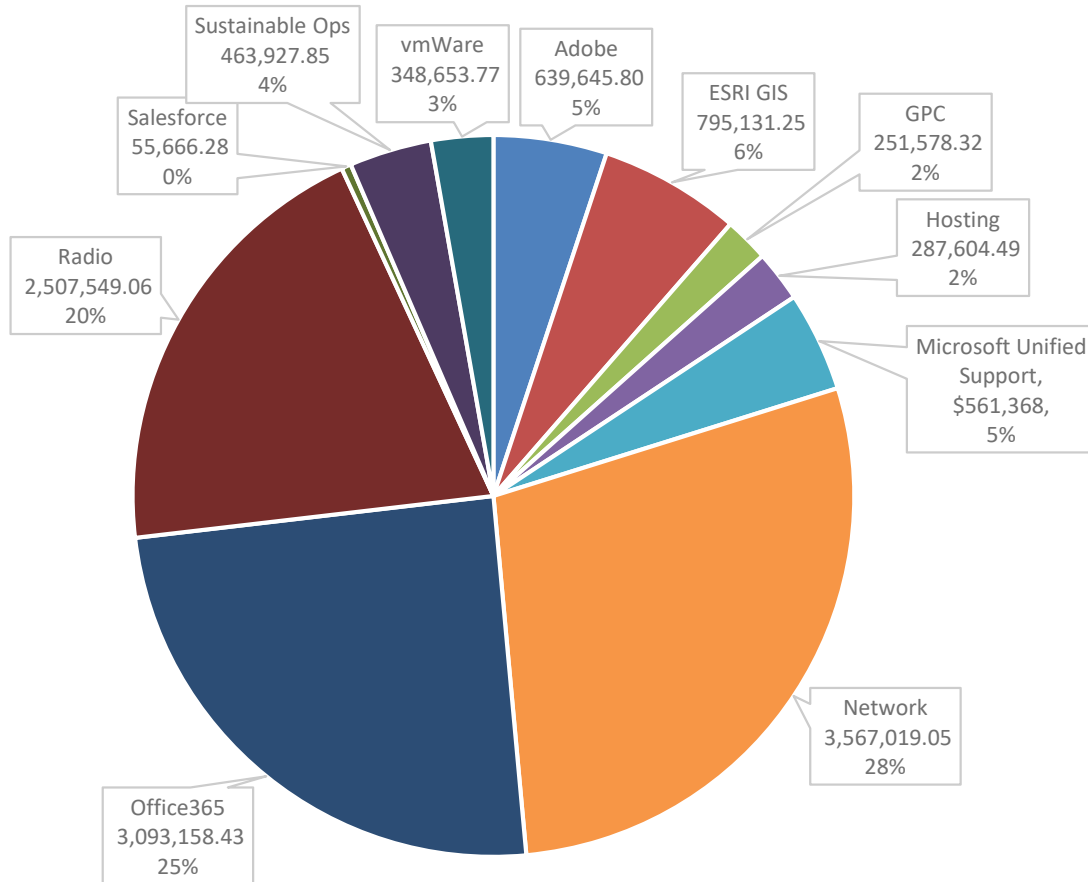
This section analyzes ETS's expenditures by strategic priorities.





ANALYSIS OF FY2022 EXPENDITURES

Breakout of Evergreen Operations
Strategy: Implement Dynamic and Sustainable IT Operations
(Personnel Costs not included)





ANALYSIS OF FY2022 EXPENDITURES

PERSONNEL

