Information Technology Steering Committee (ITSC) Meeting
January 14, 2025, 12:30 p.m. to 2:00 p.m.
1151 Punchbowl Street, Conference Room 410, Honolulu, Hawaii 96813

This meeting will be conducted remotely. Members of the public may participate via interactive conference technology (ICT) or in person at the physical meeting location indicated above.

Click here to join the meeting
Meeting ID: 236 211 623 766
Passcode: Ao2ew6hR

Or call in (audio only) +1 808-829-4853, 50450373#
Phone Conference ID: 504 503 73#

AGENDA

I.   Call to Order; Roll Call

II.   Public Testimony

       Individuals may provide oral testimony at the meeting or submit written testimony in advance, via e-mail to ets@hawaii.gov, Subject: *ITSC Testimony*, or deliver to 1151 Punchbowl Street, B10, Honolulu, HI, 96813. Oral testimony will be limited to three minutes per person or organization per agenda item.

III.   Legislative Updates

       a. An update of the Office of Enterprise Technology Services budget informational briefings.
       b. An update of the CIO Annual Report and State IT Strategic Plan presented to the legislature.

IV.   Enterprise Financial System Modernization (EFS)

       a. Provide an overview of the EFS Request for Proposal (RFP) process.

V.   Data and AI Strategy Update

       a. An update of the Hawaii Data & AI Strategy to drive trust, transparency, citizen satisfaction, and innovation through responsible use of data and AI in public services. Including an update on guideline documents from the Data Task Force.

VI.   Hawaii Annual Code Challenge (HACC) Completion Update

       a. Provide highlights of the Ninth Annual HACC with winners.

VII.   Good of the Order

      a. Announcements
      b. Next Meeting: To be Determined

VIII.   Adjournment

This interactive conference technology meeting will allow closed caption transcription to be activated by participants.

The ITSC meeting packet will be available at https://ets.hawaii.gov/it-steering-committee/.

<u>Auxiliary Aid or Accommodation Due to a Disability</u>
If you require an auxiliary aid/service or other accommodation due to a disability, contact Joanna Lee at (808) 586-6000 or email ets@hawaii.gov as soon as possible. Requests made as early as possible have a greater likelihood of being fulfilled. Upon request, this notice is available in alternate/accessible formats.
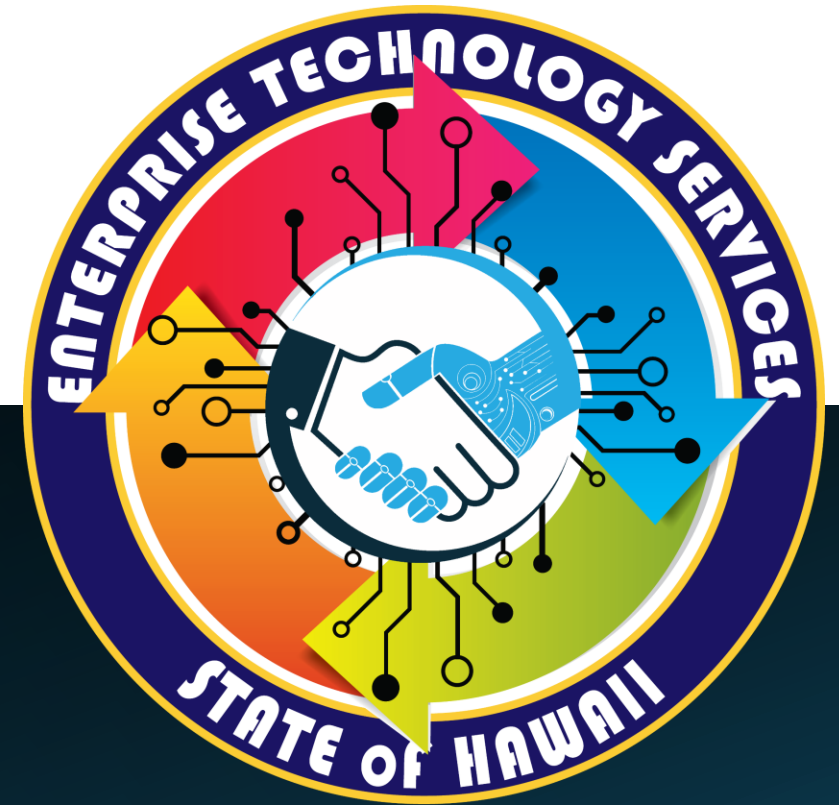
Add Funds for Microsoft Enterprise Agreement Subscription

1. Request: fund years 2-5 of the Microsoft G5 license

2. Value: Upgrade MS license from G3 to G5 base license, centralize exec. branch licensing into ETS. Roughly 14,500 licenses.
   1. Teams Phone / Teams Phone
   2. Cyber security / Defender
   3. AI readiness / Purview
   4. Data Analytics / Power BI

3. Impacts if not funded:
   1. Regress back to G3 licensing level after a year of G5
   2. Limited Teams calling
   3. Limited security and compliance features for data management in the MS Cloud

4. FY26=$2,330,000

Microsoft

Office
365
GCC (G5)

Add Funds for Cybersecurity Risk Mitigation

1. Value from funding
   1. Improve resilience of government services
   2. Address known critical technology gaps
   3. Meet federal requirements to receive data and funding
2. Risk impact without funding
   1. Lowered bond rating due to financial material loss
   2. Increased cyber liability insurance costs
   3. Reputational damage
3. FY26=$1,600,000

KILLNET PRODUCTION

Hawaii Airport Websites Join List of Those Impacted by Hackers

The Hawaii Office of Homeland Security and the Office of Enterprise Technology Services are responding to a hacking incident on the websites of Hawaii airports that is "possibly linked to similar incidents across the country."

USA OFFLINE

Cyberattack on state's electronic death registry affected about 3,400 records

Add Funds for HIWIN Telecommunications System Maintenance and Warranty

Essential for HIWIN Maintenance

- Supports critical public safety and emergency response.

Risks Without Funding

- Increased chance of system outages and failures.

- Potential delays in life-saving responses, compromising public safety.

Recent Example: Maui Wildfires

- Demonstrated the urgent need for reliable communication systems.

- Insufficient funding leaves Hawaii vulnerable to future disasters

FY26=$630,000
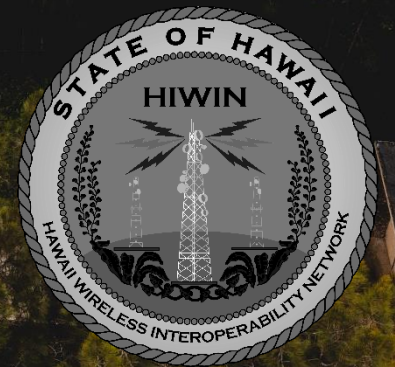
Add Funds for Adobe Enterprise Term Licenses

The Request:
$150,000 to fund a 3-year renewal of the unified Adobe ETLA contract

The Value:

- ETS oversees the statewide Adobe platform (executive branch including the DOE, legislative and Judicial) and administers Adobe software licenses including Adobe Sign, Acrobat Pro and various Creative Cloud applications. Since 2015 the state has utilized Adobe Sign for electronic signatures, building extensive administrative layers and workflows int the platform. The e-sign component of the ETLA is a shared service centrally managed and funded through the ETS budget.

Potential Impacts if Unfunded:

- Inability to renew the Adobe license

- Loss or limited access to the Adobe software described would result in a disruption in workforce productivity across all state agencies.

- Departments are to expect a roughly 35% price increase for the license costs under their responsibility.

Add Funds for Advisory Services

The Request:

To secure expert advisory services essential for modernizing Hawaii's IT infrastructure, aligning with HRS §27-43, and ensuring compliance with strategic planning requirements.

The Value:

- Keeps the IT strategic plan up to date with industry trends and best practices.
- Enhances ETS's capacity for proactive, informed decision-making.
- Guides Organizational Change Management to engage and prepare the workforce.
- Prevents costly mistakes and inefficiencies.

Potential Impacts if Unfunded:

- **Compliance Challenges**: Difficulty updating the IT strategic plan as required by HRS §27-43.
- **Higher Risks:** Increased likelihood of costly errors and inefficiencies.
- **Delayed Modernization**: Slower adoption of emerging technologies and infrastructure optimization.
- **Workforce Readiness Issues**: Unprepared staff, leading to ineffective organizational change management.
- **Weakened Decision-Making:** Reduced ability to make informed, strategic choices for long-term success.

FY26 = $280,000

"Empowering Hawaii's Digital Future with Informed, Strategic Decisions."

Add Funds for Datacenter Decommission and Migration Services ($1.6M)

1. Value from funding

    1. The Kalanimoku Data Center has many deficiencies and single points of failure, including end of life electrical infrastructure and aging cooling and fire suppression systems and water leaks.

    2. Some of the state's most critical citizen and business applications run on old infrastructure located in the basement of a state building

2. Risk impact without funding

    1. Migration out of the datacenter will slow or stop

    2. Extended outages,

    3. Inability to create paychecks

    4. Loss of core accounting system

    5. Inability to process unemployment claims

    6. Inability to support the Child Support System, and other critical services

    7. Lowered bond rating due to financial material loss

    8. Increased cyber liability insurance costs

    9. Reputational damage

3. FY26=$1,600,000 Funding enables the migration of critical applications out of the data center to provide continuity of service
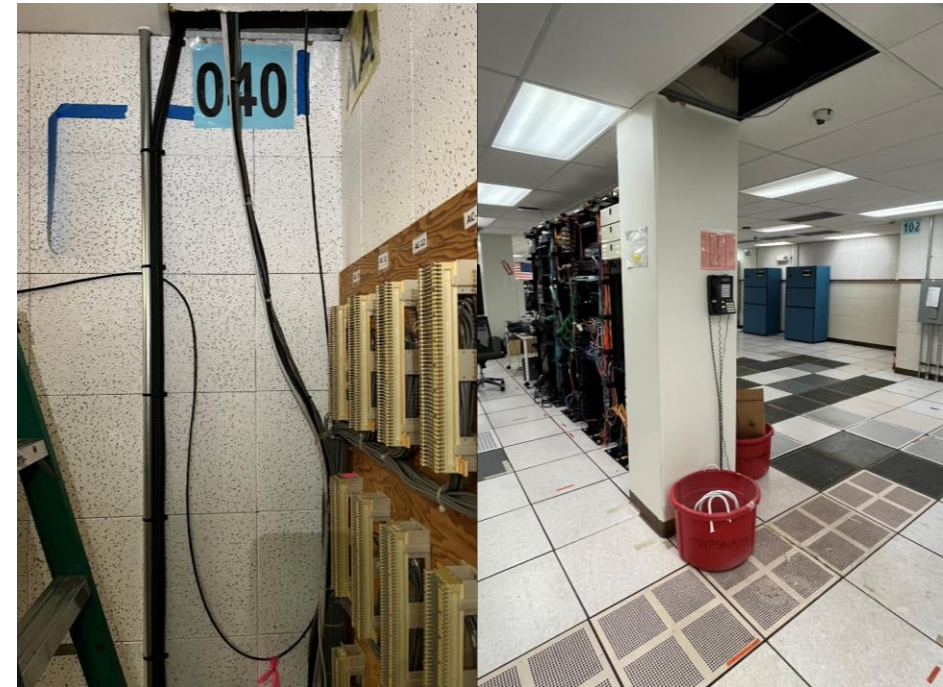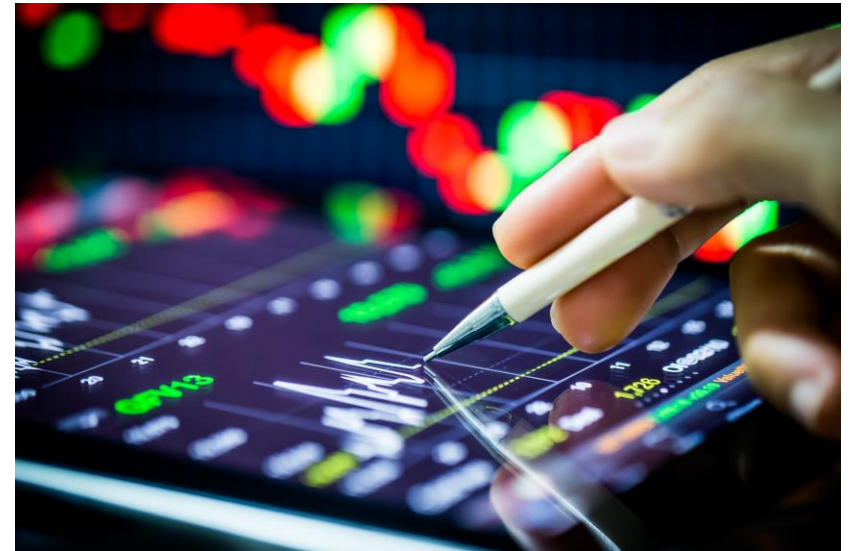
Add Funds for IV&V

The Request: Independent Verification & Validation (IV&V) of modernization projects offers third party oversight to:

- Conduct independent evaluation of deliverables and processes
- Identify and mitigate risks before they become significant issues
- Ensure the project remains aligned with its scope, budget and timeline
- Validate compliance wit applicable stat and federal regulations.

The Value: Helps insure large, complex IT projects stay on track.

Potential Impacts if Unfunded: Without additional funding, the EFS project may face heightened risks of delays, cost overruns, and operational issues which could significantly impede the state's broader financial modernization efforts.
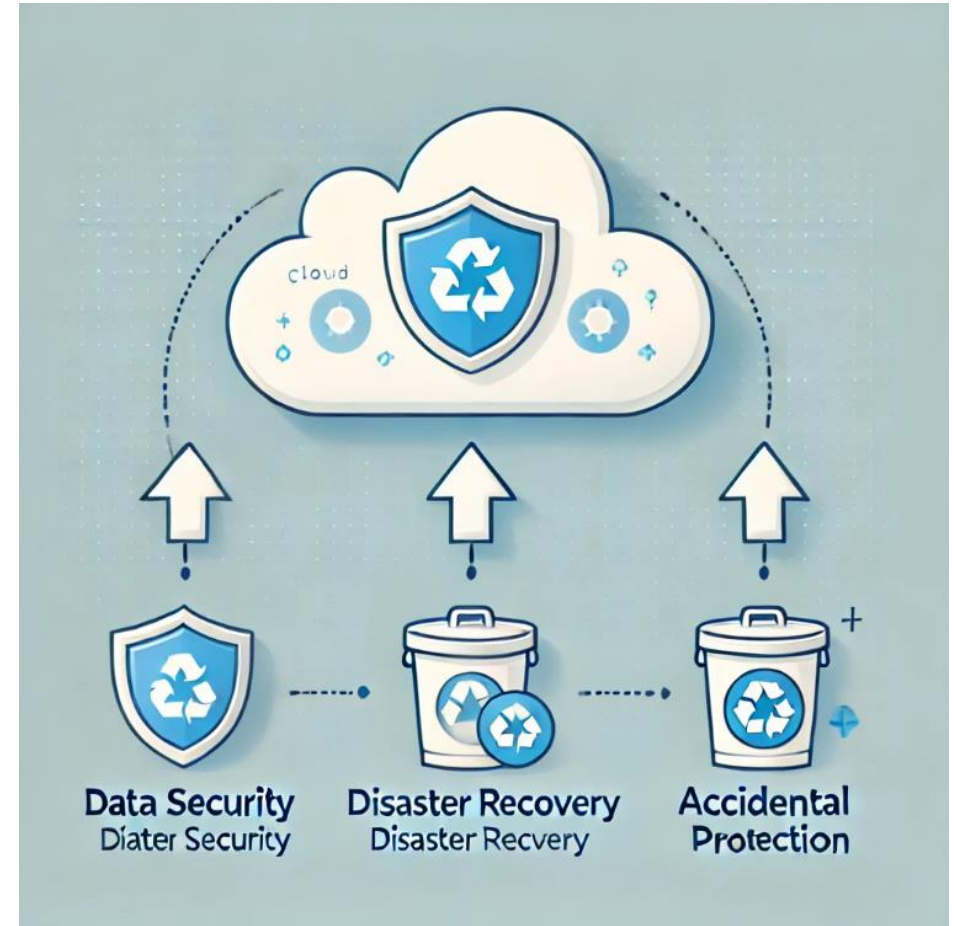
FY26 = $300K

Add Funds for Microsoft Cloud Data Backup and Disaster Recovery Solution

Value: Ensures business continuity and data integrity of state data in the Microsoft cloud.
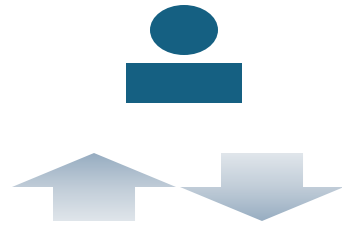
Impact: If not funded, the state must continue risk acceptance of the above data loss scenarios and may impact cyber liability insurance premiums the state pays.

FY26 = $310,000

Add Funds to Establish Data/AI Office and AI Risk Management Tools & Geospatial License Renewal

One Front Door to citizens

Statewide data/AI platforms & staff for:
- **Governance for trust**
- **Citizen 360 view**
- **Geospatial relevance**
- **ML/AI capabilities**
- **Evidence-based decisions**

Statewide data/AI platforms

Data silos in departments

The request:
$1,613,000 to establish a central state Data/AI team with tools to break down data silos for inter-operability, improve data/AI quality for trust & accuracy, protect data for compliance, create central citizen view for disaster readiness, enable map data for emergency response, and ensure responsible use of AI for efficiency.

The value:
Every tool is critical to support top governor initiatives such as housing, disaster readiness, wellness, sustainability, and homelessness by enabling real time evidence-based decisions. All four tools are needed to 'facilitate data sharing', 'improve inter-departmental and intra-departmental decision-making' as required by ACT167 of 2022.

The impacts if not funded:
1. Loss of trust from constituents with no controlled use of data or AI.
2. Poor decision and policy making without quality data available.
3. Poor efficiency with more data silos.
4. Poor citizen satisfaction with lack of citizen-centric services due to no statewide data sharing.
5. High cost managing data in silos versus a statewide cost-effective approach.
6. Not ready for next disaster without enough geospatial data services and licenses.
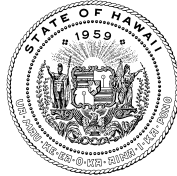
Top use cases supporting:

1. Office of Recovery & Resilience (Luke Meyers, Craig Clouet) – Disaster Readiness Data/AI Platform for fast and accurate decisions in case of emergency. Current Proof Of Concept with support of DHS (Trista Speer, Mark Choi), HI-EMA (Darrick Ching), including data from FEMA and Red Cross

2. Office of Wellness & Resilience (Tia Hartsock, Trina Orimoto) – Citizen 360 to understand citizen needs using Maui survivor data from UH Maui WES project (Ruben Juarez, Alika Maunakea) as an example and support from DOH (Derek Vale), with AI chat to best equip case manager to best serve citizens' needs. Free Proof Of Concept is under discussions with Google.

3. Office of Housing (Scott Glenn) – Explore using AI to collect high quality data for more frequent and accurate data analysis for Governor on housing. Still in exploration stage now.

10

Add Funds for Digitalization of Control and Client Services Binders

1. Request: $150,000 to scan and digitize hard copy documentation and source code binders needed to support the production jobs on the mainframe in the event of a disaster.

   1. DLIR Unemployment Insurance Benefits System, AG Child Support Enforcement Agency KEIKI System, DHS Hawaii Automated Welfare Information System, and DAGS Financial Accounting and Management Information System. The (CSB) program listings include the Unemployment Insurance Benefits System and the Financial Accounting and Management Information System.

2. Value: have a secondary source of the job documentation and source code of programs in a digital form in case of a disaster at the Kalanimoku Building.

3. Impact: risks if digitization of source information does not occur:

   1. Production jobs cannot be scheduled and processed.
   2. Output for the agencies will not be printed.
   3. Delay in check printing (I.e. Unemployment Benefit, Child Support, Welfare, Tax Refunds, Vendor Payments, etc.).
   4. Modifications to programs cannot be done without the source code.

JOSH GREEN, M.D.
GOVERNOR
KE KIAʻĀINA

KEITH A. REGAN
COMPTROLLER
KA LUNA HOʻOMALU HANA LAULĀ

CHRISTINE M. SAKUDA
CHIEF INFORMATION OFFICER
LUNA ʻENEHANA

STATE OF HAWAIʻI | *KA MOKUʻĀINA O HAWAIʻI*
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES | *KA ʻOIHANA LOIHELU A LAWELAWE LAULĀ*

OFFICE OF ENTERPRISE TECHNOLOGY SERVICES | *KEʻENA HOʻOLANA ʻENEHANA*
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

December 26, 2024

The Honorable Governor Josh Green, M.D.

The Honorable Ronald D. Kouchi
President of the Senate
and Members of the Senate
Thirty-Third State Legislature
State Capitol, Room 409
Honolulu, Hawaiʻi 96813

The Honorable Nadine K. Nakamura
Speaker and Members of the
House of Representatives
Thirty-Third State Legislature
State Capitol, Room 431
Honolulu, Hawaiʻi 96813

Aloha Governor Green, Senate President Kouchi, Speaker Nakamura, and Members of the Legislature:

Pursuant to sections 27-43(a)(6) and 27-43(e), Hawaiʻi 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.
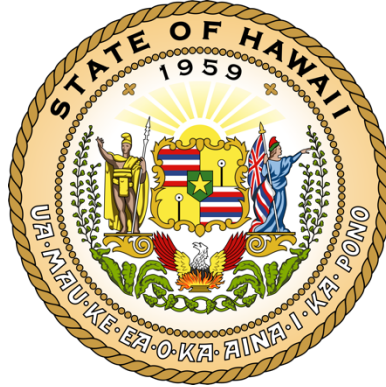
In accordance with HRS section 93-16, this report may be viewed electronically at http://ets.hawaii.gov (see "Reports").

Sincerely,

Keith A. Regan
Comptroller

Christine M. Sakuda
Chief Information Officer

Attachment (1)

State of Hawaiʻi

Enterprise Technology Services

Keʻena Hoʻolana ʻEnehana

2024 Annual Report

TABLE OF CONTENTS

1. CIO'S MESSAGE

Aloha Governor Green, State Senators and Representatives!

I am honored to have been appointed by Governor Josh Green as the state's Chief Information Officer (CIO) in August 2024, and to serve as the administrator of the Office of Enterprise Technology Services, a division of the Department of Accounting and General Services. Pending Senate confirmation in the 2025 legislative session, I look forward to collaborating with the Legislature to provide exemplary technology leadership for the state.

With this Annual Report, I am thrilled to share the successes we have achieved this year and to look forward to the exciting opportunities that lie ahead in 2025.

This year has been marked by significant accomplishments, thanks to the dedication and hard work of our ETS team. Our staff has consistently demonstrated excellence, earning numerous state and national awards, including an A- grade in the Digital State Survey for our use of technology to improve service delivery, increase capacity, streamline operations, and achieve state priorities. This recognition underscores our achievements in IT modernization and resilience, particularly in our response to the Maui wildfires tragedy.

We have made substantial progress in several key areas, including updates to the State IT Strategic Plan and the IT Consolidation Report, both submitted to the legislature in December 2024. Our efforts in IT consolidation have resulted in significant operational cost savings and improved system reliability. Additional progress was made in drafting of a new Public Digital Service Vision, and the advancement of state-wide service taxonomy and catalog implementation. We have also successfully implemented data classification standards across 80% of state agencies and reduced security incidents by 35%.

Our progress would not have been possible without the invaluable input and collaboration from various stakeholders to ensure we move technology forward together with well-informed decisions. I extend my heartfelt gratitude to the Governor, Comptroller, Legislature, the Department of Accounting and General Services, and all executive departments for their unwavering support and cooperation.

Looking ahead to 2025, we are excited to continue our journey of technological advancement. Despite the challenges we face with IT resource constraints, we remain committed to developing a more unified approach to IT resource management throughout the state. Our alignment with the Comptroller and the

Department of Accounting and General Services will enable us to make well-informed decisions that move technology forward.

With transparency and accountability as our guiding principles, we are committed to working closely with the Legislature to enhance the lives of all Hawai'i residents through innovative and efficient technology solutions. The future holds immense potential, and I am confident that, together, we can overcome any challenges and achieve our goals.

Mahalo,

Christine Maii Sakuda

Chief Information Officer

The Kalanimoku Building in the Capitol District

2. ABOUT ETS

2.1. Background

2.1.1. Story

Keʻena Hoʻolana ʻEnehana is a Hawaiian phrase used to describe the role of Enterprise Technology Services (ETS). A rough translation of this phrase might be "Technical Support Office," but the symbolism of the words evoke much more.

Lana means buoyant. *Lanalana* means one kind of lashing, especially tying the *ʻama* (floater) to the *ʻiako* (booms) of a canoe. *Hoʻolana* relates to the concepts of buoyancy, and in particular lashing parts of the canoe together—figuratively, offering a point of launch or inspiration. Taken together, these concepts evoke how ETS uses technology to connect and uplift the government and the people of Hawaiʻi through digital transformation and innovation.

2.1.2. Vision

Our vision is for a state government that effectively serves the people of Hawaiʻi through efficient business processes and technology innovation, while embracing the spirit of ALOHA.

2.1.3. Mission

With the spirit of ALOHA, our mission is to advance operational excellence of government through trusted partnerships, shared resources, and technology leadership:

- Ensuring critical IT infrastructure and services are reliable and secure and
- Promoting innovative use of technology and data across the executive branch.

2.1.4. Values

Aligning with HRS §5-7.5, ETS embraces the ALOHA Spirit:

- A is for *Akahai*, meaning kindness to be expressed with tenderness
- L is for *Lokahi*, meaning unity, to be expressed with harmony
- O is for *Oluolu*, meaning agreeable, to be expressed with pleasantness
- H is for *Haahaa*, meaning humility, to be expressed with modesty
- A is for *Ahonui,* meaning patience, to be expressed with perseverance

In 1970, the definition of the "Aloha Spirit" was articulated by poet and philosopher Pilahi Paki at a Governor's Conference attended by Hawaiian elders and non-Hawaiian civic leaders to address issues in Hawaiʻi. Pilahi Paki described the Aloha Spirit as the alignment of mind and heart within individuals, embodying traits of charm, warmth, and sincerity found among Hawaiʻi's residents. This definition was officially included in Hawaiʻi State law in 1986. It is believed that to genuinely practice any of the principles of the Aloha Spirit, one must practice all of them collectively. Therefore, living ALOHA means adhering to all of these principles.

2.1.5. History and Mandate

In 2016, ETS was established via Hawai'i Revised Statutes §27-43, which effectively brought together two existing departments related to information technology (IT) – one focused on core IT infrastructure and operations for the State (ICSD), and the other focused on enterprise IT strategy and governance (OIMT). Today, ETS maintains those dual responsibilities, while evolving to provide additional services that enable continuous transformation for the departments that ETS serves.

ETS is composed of nine branches: Production Services, System Services, Technology Support Services, Client Services, Enterprise Systems, Network, Security, Enterprise Architecture, and Program Management. Collectively, these branches provide governance for executive branch IT projects and seek to identify, prioritize, and advance innovative initiatives with the greatest potential to increase efficiency, reduce waste, and improve transparency and accountability in state government. The branches also provide critical support to state agencies through effective, efficient, coordinated, and cost-beneficial computer and telecommunication services.

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 the statute was amended in 2024 via Act 140 to have the CIO report directly to the Comptroller.

In June, Governor Josh Green, M.D., appointed Christine M. Sakuda as State of Hawai'i Chief Information Officer, replacing Doug Murdock who retired the previous month. Sakuda, a graduate of 'Iolani School, received her Bachelor of Science degree from Santa Clara University in 1991 and later received her MBA from the University of Hawai'i Mānoa College of Business Administration in 1997. She has nearly 20 years of experience leading IT transformation initiatives in healthcare and government, on top of 15 years of experience leading nonprofit organizations. For the past seven years, she has been the Executive Director of Transform Hawai'i Government (THG), a nonprofit organization established to catalyze the transformation of digital government services through people, process and technology to help Hawai'i thrive. She is the State's first female CIO of Native Hawaiian ancestry.

2.2. Executive Summary

This 2024 Annual Report provides updated information about the programs and services provided by ETS. The Annual Report also summarizes several reports that are crucial to understanding our current levels of technology investment and data collection, with links to the full reports provided in the appendix.

In 2024, ETS held two IT-related summits: one on the importance of data and artificial intelligence, and one on digital government. Three summits are planned for 2025. By holding IT-related summits, ETS is a primary contributor to the collaboration between all the executive departments, along with the counties and the private sector, to work together to understand and build technology programs while planning for the future.

This year, ETS led a full update of the State's Information Technology Strategic Plan, the first full update since 2021. The plan articulates the vision, mission, strategies, goals, and major initiatives that will guide IT priorities and activities not only for ETS, but also across executive branch departments.

ETS is also updating the Consolidation of Information Technology Services report with a review of accomplishments in calendar year 2024 and recommendations looking forward to the final report in

2025. The working group overseeing consolidation emphasizes centralized service improvement and modernization while maintaining departmental autonomy in business operations.

This report includes some of the great IT work done by the executive departments to modernize and improve their services. Government working together to make technology better and safer for our residents.

Cybersecurity and protecting the state's IT infrastructure is critical part of what ETS does and we update some of the work being done to secure our technology systems and protect personal information.

One of the largest and possibly most important projects to ever come out of ETS is the comprehensive remaking of the state's Enterprise Financial System. Following a tremendous amount of research and coordination by the EFS Evaluation Committee, a Request for Proposals has been developed and will be published early in 2025.

The work to evaluate technology companies and tools is never ending at ETS and we document our progress on several fronts including Microsoft Office 365 and Adobe Acrobat.

The value of good data cannot be overemphasized. Data is critical in accurate decision making and our Chief Data Officer details our mission, vision and strategy in this report.

ETS supports job retention with specific IT training and job sector growth with our annual code challenge that inspires young people to consider a career in technology.

You can also read about the awards and recognition by our team for the IT work they performed in service to the executive departments. These awards and recognition are a clear testament to the dedication and overall commitment to excellence embodied by our team.

Much is happening at ETS, and we are proud to share the work we have done in 2024 and what we aim to accomplish in 2025 through the support of the legislature and Governor.

2.3.   Expenditures and Staffing

Pursuant to HRS sections 27-43(e), the Annual Report shall provide information regarding the expenditures of all moneys received from all sources and deposited into the IT Trust Account and the Shared Services Technology Special Fund. These key financial figures for FY 2024 are as follows:
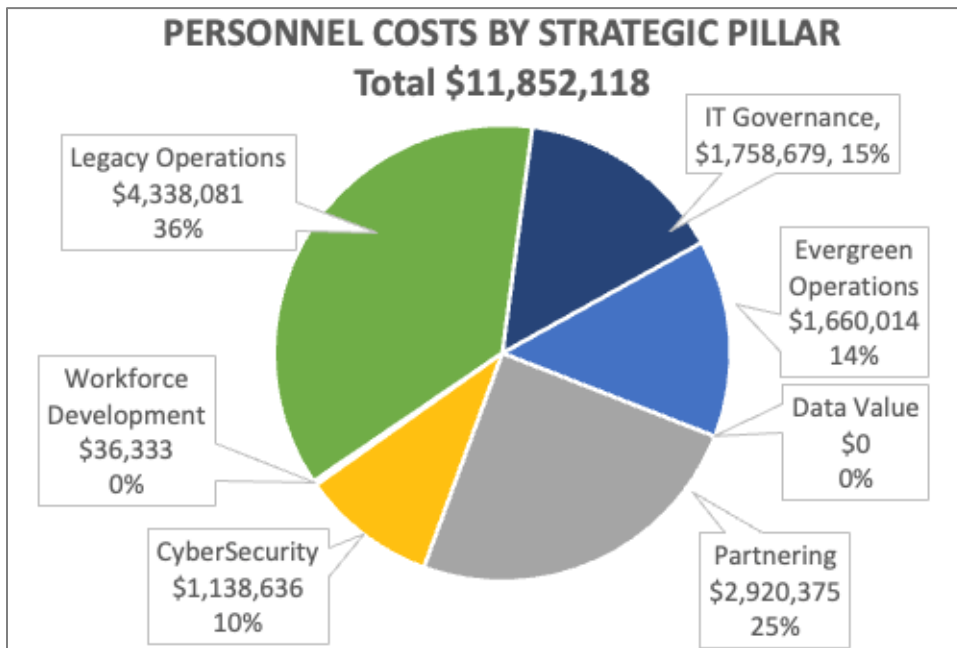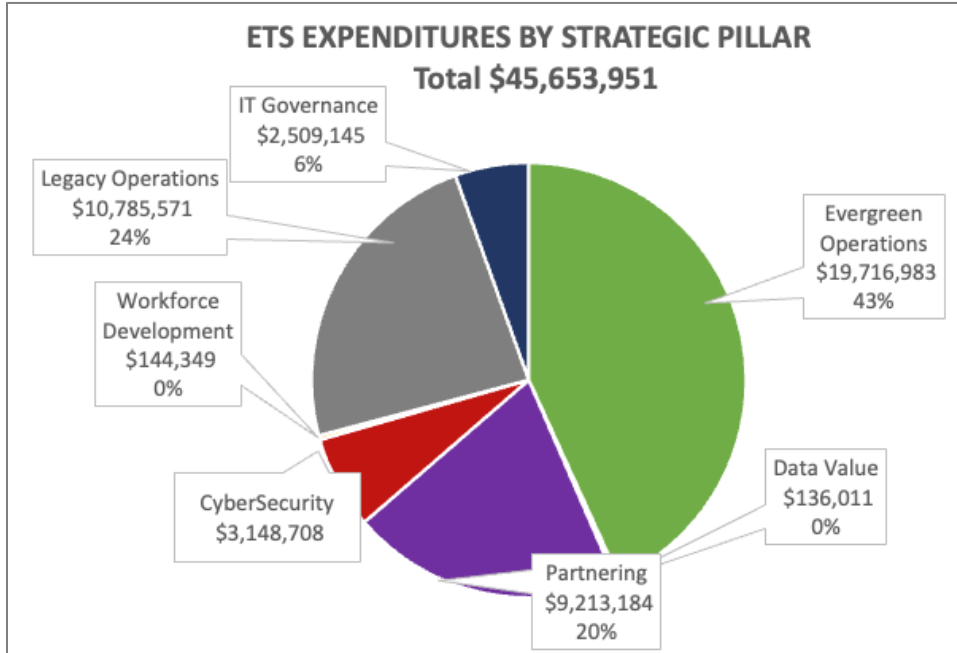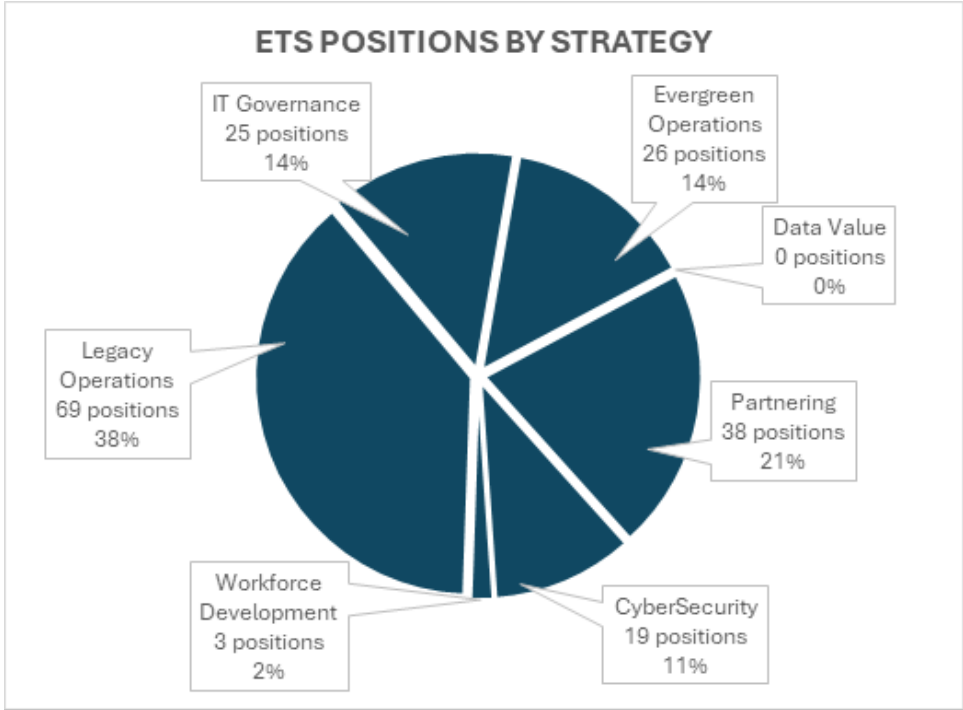
The Access Hawaii Committee Special Fund (S-24-388)

- Expenditures: $133,566.73
- Revenues: $122,736.86
- Cash Transfer: $182,814.75
- Ending Cash: $171,984.88

The Shared Services Technology Special Funds (S-24-333)

- Expenditures: $1,956,672.97
- Revenues: $1,473,296.84
- Cash Transfer: $1,965,672.97
- Ending Cash: $3,325,721

In addition to the required information provided above, the following charts are also provided to show ETS expenditures and ETS staffing by strategic pillar. The strategic pillars are described further in Section 3 of this report.

ETS EXPENDITURES BY STRATEGIC PILLAR
Total $45,653,951

- IT Governance $2,509,145 — 6%
- Legacy Operations $10,785,571 — 24%
- Workforce Development $144,349 — 0%
- CyberSecurity $3,148,708
- Partnering $9,213,184 — 20%
- Data Value $136,011 — 0%
- Evergreen Operations $19,716,983 — 43%

PERSONNEL COSTS BY STRATEGIC PILLAR
Total $11,852,118

- Legacy Operations $4,338,081 — 36%
- Workforce Development $36,333 — 0%
- CyberSecurity $1,138,636 — 10%
- Partnering $2,920,375 — 25%
- Data Value $0 — 0%
- Evergreen Operations $1,660,014 — 14%
- IT Governance, $1,758,679, 15%

2.4. CIO Committees

HRS §27-43 established 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 held six meetings in 2024.

IT Steering Committee Members

Name	Affiliation	Appointed By
Christine Sakuda (Chair)	Office of Enterprise Technology Services, State of Hawai'i	*Ex Officio Member and Chair*
Garret Yoshimi (Vice Chair *)	University of Hawai'i	UH President
Benson Choo	Finance Factors	Senate President
Eugene Chang	IEEE Computer Society – Hawai'i Chapter	Senate President
Sharon Moriwaki	Hawai'i State Senate	Senate President
Arnold Kishi	Center for Internet Security, MS-ISAC	Governor
Joel Kumabe	Ohana Pacific Health	Senate President
Michael Nishida	First Hawaiian Bank	House Speaker
Michael Otsuji	Hawai'i State Department of Education	DOE Superintendent
Mai Nguyen Van	Hawai'i State Judiciary	Chief Justice
Kyle Yamashita	House of Representatives	House Speaker
Marcus Yano	CBTS Hawaiian Telcom	House Speaker

* Garret Yoshimi became Vice Chair as of 12/19/2024; previously the position was vacant.

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

- Access Hawaiʻi Committee (ex officio Chair)
- Information Privacy and Security Council (ex officio Chair)
- Enhanced 911 Board (ex officio)
- 21st Century Data Governance Task Force (ex officio)
- Broadband Assistance Advisory Council (appointed)
- IT Consolidation Working Group (ex officio Chair)

Deputy Comptroller Meoh-Leng Silliman (from left), CIO Christine Sakuda, Comptroller Keith Regan, and Brooke Wilson, Chief of Staff for Governor Josh Green, M.D. at the DAGS 2023 Incentive and Services Awards Ceremony.

3. GOALS AND ACCOMPLISHMENTS

3.1. Introduction to Strategic Priorities

The State of Hawaiʻi's current IT Strategic Plan, initially adopted in 2019, sets forth seven strategic priorities:

- Partner for Successful Outcomes
- Expand Statewide Cybersecurity Strategy
- Enhance the Value of State Data
- Optimize Enterprise Systems
- Extend IT Portfolio Governance
- Implement Dynamic and Sustainable IT Operations
- Digital Workforce Development

Each of these strategic priorities is discussed in more detail in this report, along with updates on key initiatives that serve to advance the strategic pillars.

3.2. Partner for Successful Outcomes

This strategic priority focuses on shaping the partnership between government lines of business and IT by creating a standard framework to ensure successful outcomes. Target outcomes include successful business process implementation; IT systems that are well-engineered and appropriately designed for their intended use; effective partnerships between IT and business; procurement efficiency and cost savings; and ensuring that standard governance, business process re-engineering, program management, organizational change management and procurement systems are followed.

3.2.1. IT Consolidation

IT Consolidation under Act 179 (SLH 2022) and its amendment Act 173 (SLH 2024) represents a critical initiative to improve efficiency, security, and effectiveness of the State's IT operations. The consolidation aims to gain economies of scale, enhance service delivery, and ensure compliance with growing regulatory requirements for accessibility, information storage, data sharing, and security.

This initiative directly supports the State IT Strategic Plan's goals of optimizing IT resources, standardizing processes, and improving service delivery while reducing costs. The effort focuses on phased consolidation of selected executive branch IT services under ETS to create a more coordinated and efficient IT environment.

In 2024, progress was made across several areas including:

- Completed State IT Strategy refresh
- Drafted new Public Digital Service Vision
- Advanced state-wide service taxonomy and catalog implementation
- Made progress on selected departments' IT strategies development
- Established the State Data Task Force and adopted a state data governance framework
- Advanced IV&V vendor governance including standardized reporting, and vendor evaluation and procurement
- Further refined polices and guidance for key IT processes, such as large-scale enterprise systems procurement
- Progressed on shared services implementation (e.g. IT security services) and infrastructure consolidation (e.g. procurement of a new state cloud hosting environment)
- Conducted in-depth evaluation of integrated enterprise IT governance and management tools for ETS and for the departments to share, in anticipation of piloting and wider implementation at the state level

The IT consolidation effort continues to evolve with emerging technologies and changing needs. The recent addition of Act 173 requirements has expanded the scope to include critical systems analysis and data center resiliency. New funding will be analyzed in 2025 to support essential infrastructure modernization, enhancement of citizen-facing digital services, implementation of robust security measures, and development of our IT workforce. These investments aim to generate substantial annual savings when fully implemented, while reducing the need for increasing state IT employee headcount.

BY THE NUMBERS

- Successfully consolidated IT infrastructure for three executive departments

- Improved system reliability from 98.2% to 99.5% uptime
- Handled over 45,000 support requests with 87% satisfaction rate
- Increased online transaction capability by 40%
- Reduced average digital service response time from 12 to 4 minutes
- Achieved 65% mobile accessibility for government services
- Reduced security incidents by 35%
- Implemented data classification standards across 80% of state agencies

The IT Consolidation Report is available online at https://ets.hawaii.gov/reports/.

3.2.2. Hawai'i Career Acceleration Navigator (HI CAN)

The Hawai'i Department of Labor & Industrial Relations (DLIR) has fully implemented its Hawai'i Career Acceleration Navigator (HI CAN), a digital hub connecting unemployment insurance (UI) claimants and jobseekers to high-impact career pathways.

Powered by the Amazon Web Services (AWS) cloud and in partnership with Geographic Solutions, HI CAN uses a combination of Machine Learning (ML), Artificial Intelligence (AI), state administrative data, and cloud computing to generate custom recommendations and job matches.

By combining technology with a human-centered approach, HI CAN provides jobseekers personalized, data-driven job and training recommendations while also connecting them with supportive services they may need while exploring a new career.

A Benefits Finder tool connects users to healthcare coverage, food support, bill paying support, and childcare services that they may be eligible for without sifting through dozens of government links that can lead to confusion and frustration.

The HI CAN platform for job seekers is the product of a partnership with national tech for social impact non-profit Research Improving People's Lives (RIPL), the National Governor's Association-Workforce Innovation Network, and the State.

Through NGA and Cognizant U.S. Foundation grant funding, HI CAN assembled a multi-disciplinary, multi-department team of Department of Labor and Industrial Relations, Department of Human Services and ETS to create this accessible, data-driven, and full-service government platform for job seekers.

3.2.3. DHS System Modernization

During and following the coronavirus pandemic, Hawai'i's Department of Human Services (DHS) faced a critical challenge: surging demand for its vital support programs had created bottlenecks in applications and communications. Long wait times and processing delays threatened their mission to support individuals, families, and communities.

To bridge this gap, DHS implemented Google Cloud Contact Center AI (CCAIP). CCAIP's intelligent call routing system efficiently directed inquiries to the appropriate agents, reducing wait times. Tiered support ensured complex issues reached the correct specialists. Integration with ServiceNow CRM offered a centralized platform for recording and managing all customer interactions, facilitating personalized service.

The impact of CCAIP was undeniable. DHS saw a dramatic increase in efficiency, with faster response times and streamlined processes. Real-time access to information and comprehensive tracking of interactions empowered agents to provide exceptional service.

Looking ahead, CCAIP's potential for even greater customer experiences lies in its advanced features: intelligent routing, virtual agents, self-service options, sentiment analysis, and real-time information provision.

By embracing AI, DHS not only transformed their support services but also strengthened their commitment to serving the community effectively.

3.2.4. Online Services for Constituents

The state legislature established the Access Hawai'i Committee (AHC) in 2000 to manage the state digital government portal with the assistance of ETS. ETS contracted Tyler Hawaii as the Portal Program Manager to provide 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, online at eHawaii.gov, provides information and online services to state citizens. Today, the portal includes 159 online services for more than 90 state and county agencies.

Tyler also monitors the agency activities to ensure compliance with terms and conditions of their contracts, review their financial reports, evaluate new and existing Statements of Work, fee agreements, priorities, and Service Level Agreements.

ACTIVITIES AND ACCOMPLISHMENTS

The portal program launched eleven (11) new services and major upgrades in Fiscal Year 2024. These services include:

- Tax Credit Hub – Department of Business, Economic Development and Tourism
- Reservation and Access Management System - Department of Land and Natural Resources
- Tree Seedling Payments - Department of Land and Natural Resources
- PhonePay Interactive Voice Response – Tyler Hawaii
- Judicial Circuit Court Judge Evaluation – Judiciary
- Family Court Judge Evaluation – Judiciary
- Hawaii Technology Development Corporation Website Redesign – Department of Business, Economic Development and Tourism
- eBench Warrants Web Interface – City and County of Honolulu
- Tax Credit Hub Phase II - Department of Business, Economic Development and Tourism
- HIePro – State Procurement Office
- Name Change Application – Office of the Lieutenant Governor

In 2024, Tyler Hawaii worked on three (3) no-cost projects. The PhonePay Interactive Voice Response system which allows citizens to make payments over-the-phone for government services. The Judicial Circuit Court Judge Evaluation and Family Court Judge Evaluation which provides attorneys with a convenient and easy method to complete the evaluation of ten (10) circuit court judges and nine (9) family court judges.

The State portal program earned two awards this year:

- Honolulu Emergency Services Department Website– City and County of Honolulu- Honolulu Emergency Services Department
    - W3 Award – Silver Award
    - DotComm Award – Honorable Mention

ETS is working with Tyler Hawaii to integrate our eHawaii.gov single sign on (SSO) service to make it easier for citizens and government agencies to interact in a secure, safe environment. Over half of the 80+ services have been completed in the test environment, and it is anticipated that all services will be migrated to the production environment by February 2025.

BY THE NUMBERS

The eHawaii.gov portal program provides 159 online services. In FY 2024, there were more than 1.7 million transactions on portal services averaging 4,648 a day. The portal collected $594,692,594 and disbursed $582,820,681 (98% of funds) to the state and county agencies. Portal revenue was $11,871,912 and expenses were $9,753,879, resulting in an operating income of $2,118,033.

3.3. Expand Statewide Cybersecurity Strategy

This strategic pillar focuses on expanding the statewide cybersecurity strategy to protect the State's IT infrastructure and constituent data through adoption of cybersecurity industry best practices across the State's IT systems. Target outcomes include safeguarding state and constituent information, reducing vulnerability to external threats, immediate system-wide threat response, security efficiency through use of AI/Machine Learning, and minimizing the storage of sensitive data.

3.3.1. Citizen Identity

The State of Hawai'i is advancing its digital transformation efforts through the modernization of its citizen identity services that allow residents to access multiple government online services using a single account. A part of this modernization initiative, currently being referred to as the Citizen Identity solution, aims to streamline interactions between citizens and the state agencies by offering a unified login experience that is both convenient and secure. By eliminating the need for multiple accounts and passwords, the Citizen Identity solution significantly simplifies access to essential government services.

A key goal of the project is to enhance security for both users and government systems. The platform will integrate advanced features like multifactor authentication and real-time fraud detection to protect sensitive information and ensure only legitimate access. Future plans to implement identity verification processes will provide critical benefits for services requiting a high level of identity proofing, reducing the risk of fraud, identity theft, and unauthorized access to citizen and state systems and data. This initiative also fosters operational efficiency by consolidating identity management processes across agencies, reducing redundancies.

The Citizen Identity solution service represents the state's commitment to innovation and excellence in public service delivery. By creating a secure, efficient, and accessible digital identity solution, the state enhances its ability to serve its citizens while safeguarding public resources and fostering trust.

In 2023, ETS, in collaboration with the state's portal vendor, Tyler Hawaii, successfully developed a prototype integrating one eHawaii.gov application with the identity management platform managed

by ETS at the time. This milestone demonstrated the potential for modernizing and unifying identity management across state services.

In 2024, ETS transitioned to a more advanced and robust identity management platform to better meet the evolving needs of the state. Development efforts were rechanneled to align with the new system, reflecting ETS's commitment to providing a secure and scalable solution. ETS continued its partnership with Tyler Hawaii to migrate more than 80 eHawaii.gov agency portals to the upgraded platform, with the full launch anticipated in early 2025.

For a listing of the applications to be integrated with Citizen Identity login services, please refer to Table 1 in the appendix.

BY THE NUMBERS

Number of citizen accounts being migrated: Roughly 1,000,000 user accounts

Number of government portals/applications being integrated with the Citizen Identity solution: Roughly 80 apps.

CHALLENGES

In 2020, the team initially selected Azure B2C to serve as the citizen identity management platform. However, as the team worked deeper with the platform, we were faced with several challenges and limitations with Azure B2C that prompted the recommendation to transition to ForgeRock Identity Cloud. Now rebranded as PingOne Advanced Identity Cloud, the ForgeRock Identity Cloud, after careful evaluation, had been selected as the citizen identity management platform moving forward. The ETS team had to make a weighted decision and worked with the Tyler Hawaii team to mitigate the impact to the Citizen Identity solution project.

In 2025, ETS plans to complete the integration and launch of all Tyler Hawaii managed citizen portals with the ETS Citizen Identity solution for single sign-on. ETS will continue to work with the departments to expand the Citizen Identity solution and evaluate fraud protection and identity proofing services.

3.3.2. Cybersecurity Month

In October, Governor Josh Green, M.D. proclaimed Cybersecurity Awareness Month in Hawai'i, in recognition of the state's important role in identifying cyber threats, protecting our citizens from any attacks and responding quickly when threats occur.

The proclamation supports the state's continuing work on several cybersecurity initiatives such as promoting educational opportunities like CyberStart America and developing a skilled cyber workforce by working within lower- and higher-education communities.

Cybersecurity Awareness Month in Hawai'i coincides with the national observance recognized by the U.S. Department of Homeland Security, the Multi-State Information Sharing and Analysis Center, and industry partners, which collectively encourage all citizens to learn about cybersecurity to put that knowledge into practice in their homes, schools, workplaces and businesses.

ETS held a series of meeting in October for all executive branch employees to support the state's cybersecurity defense. Topics included cybersecurity basics such as safe digital habits for daily use, the importance of strong passwords, and strategies for secure password management to help guard against unauthorized access.

We also covered identifying threat actors, safeguarding yourself and your family, and finding valuable local resources for cybersecurity support. Another meeting addressed essential strategies for data protection, online and physical security, and phishing awareness.

ETS continues working to enhance the cybersecurity of critical infrastructure and improve coordination between the counties, state and federal government.

3.3.3. Elections

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 cybersecurity 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.

Of 860,868 registrants in the 2024 general election, 483,078 voted by mail and 39,158 in voted in person for a total of 522,236 voters.

3.4. Optimize Enterprise Systems

This strategic pillar focuses on optimizing enterprise systems to leverage the state's investment in centralized IT services. Target outcomes include decreased IT costs and redundancy; role clarity and increased employee retention; streamlined, more effective communication; accelerated execution, including procurement and SDLC; and enterprise systems that are well-engineered and appropriately designed for their intended use.

3.4.1. Enterprise Financial System (EFS) Replacement

The state's existing financial management system (FMS), which has been in use for more than 50-years, needs modernization to keep pace with the evolving demands of state governance and public accountability. In addition to a modernized financial management system, the state will be investing significant resources into reengineering its business processes in order to improve efficiency and reduce waste. As part of this project, the state is conducting a comprehensive solicitation process to procure an offeror capable of delivering a robust, cloud-first Enterprise Financial System (EFS) that will support the state's complex financial operations, improve the efficiency of financial processes, and enable data-driven decision-making across all departments.

The successful EFS solution will:

- Standardize Financial Practices
- Leverage Modern, Cloud-First Technology
- Enhance Transparency and Accountability
- Support Strategic Objectives
- Ensure Compliance and Risk Management

The state's initiative to replace its existing FMS is strategically aligned with a broader vision of improving operational efficiency, enhancing service delivery, and ensuring robust financial governance.

The goals of this modernization effort include:

- Modernized Business Practices
- Optimized Financial Operations
- Enhanced Accuracy in Financial Reporting
- Improved Regulatory Compliance
- Increased Operational Transparency
- Advanced Analytics and Forecasting
- User-Friendly Interface
- Scalable and Flexible System
- Cost-Effectiveness and Value
- Enhanced Stakeholder Service
- Proactive Financial Risk Management
- Uniform Chart of Accounts (UCOA) Implementation
- Preparation of the Annual Comprehensive Financial Report (ACFR)

With the support of the Office of Enterprise Technology Services (ETS), the Department of Accounting and General Services (DAGS) developed a comprehensive new Request for Proposals (RFP) for the EFS.

The state hired the consulting firm Gartner to assist in the development of this new RFP. Spire Hawaii LLC was also engaged to ensure the requirements gathering and development specifically related to contemporary accounting practices were documented and incorporated into the solicitation.

Taking a more functionally led approach, the team held more than 125 meetings with various departments and agencies within the executive branch to ensure that the range of organizational business needs would be addressed by the new financial system. This outreach and involvement of functional leads in the development of an enterprise-wide system was unprecedented and the feedback from participants has been overwhelmingly positive.

In addition to these functional meetings, the updated RFP underwent vetting by more than 120 state employees with direct knowledge of our accounting and financial business requirements.

At the time of writing this report, the RFP has been submitted to the Attorney General for review. Upon approval, it will be published for vendors to submit proposals.

As part of the RFP process, over 150 subject matter experts from various departments and agencies were identified and invited to join the EFS Evaluation Committee. While 129 individuals initially expressed interest in serving on the committee, 86 ultimately committed to the time and responsibilities required of committee members.

Overall, the EFS team worked closely with 69 state departments, divisions, and attached agencies to ensure understanding of the State's diverse business operations and financial processes.

In 2024 the ETS team conducted the following:

- **EFS Update Meeting:** Approximately 150 EFS Project team members, stakeholders, and project partners gathered at the Hawai'i Convention Center for the EFS Update Meeting on March 13, 2024. This half-day meeting signaled a fresh start for the EFS Project, offering attendees insight into the collaborative efforts to modernize the State's financial accounting system.
- **EFS Change Leaders Workshop:** More than 60 "EFS Change Leaders" from various state departments attended the first EFS Change Leaders Workshop, where they received specialized training in organizational change management.
- **Getting Ready for Leading Change Workshop:** About 20 Administrative Services Officers and other mid-level supervisory staff from various departments participated in workshop activities geared to help them lead their respective teams through the potential changes resulting from the EFS.

The RFP will be issued and made available for the vendor community to analyze and develop their proposals during the first quarter of 2025. Upon receipt of the proposals, they will be evaluated, and the most responsive vendors will be invited to present in person to demonstrate how their software and their teams will best meet the requirements specified within the RFP.

After the written proposals and in-person demonstrations have been evaluated, the award will be made to the responsible offeror whose proposal is determined to be the most advantageous to the State.

These efforts are anticipated to conclude by mid to late 2025.

3.4.2. Providing Technical Support for ERP Systems

ETS provides both technical and functional support for the Hawai'i Information Portal (HIP) Enterprise System which includes support for Central Payroll (CP), Human Resources (DHRD and all non-executive branches), and Time & Leave applications (T&L).

ETS also provides data application security support for all department users and applications within HIP which includes department level security, custom security maintenance, and single sign on support linking multiple Active Directory environments.

3.4.3. Enterprise Agreement with Microsoft for Productivity and Collaboration Tools

ETS manages the Microsoft Office 365 Enterprise Agreement Subscription (EAS) and provides its features and functions to Executive Branch departments. The ETS-managed contract for state government provides access to a suite of cloud-based productivity and collaboration tools. This includes Microsoft Office components, Outlook Email, Microsoft Teams, SharePoint, the Power Platform, and other mission critical functions.

In September 2024, the state executed year one of the Microsoft G5 licensing implementation. The G5 license level is Microsoft's most enhanced product offering, providing enterprise-level tooling for Data Compliance Management, Cyber Security, Telephony, and Data Analytics.

The state's investment in the Microsoft G5 licenses supports the State IT Strategic plan in the following areas:

- **Optimize Enterprise Systems.** G5 includes Microsoft Teams Phone, enabling a comprehensive telephony solution that can either replace or integrate with existing

communication systems. Teams Phone, also referred to as Teams Calling, provides digital telephony services and basic call center capabilities. Its flexible calling capabilities support emergency communications and business continuity, remote and hybrid work, and provides potential cost savings upwards of 50% per user.

With G5, agencies gain access to Power BI, a robust business intelligence tool that allows for the creation of real-time dashboards and deep data insights. This capability supports data-driven decision-making, which ultimately enhances the effectiveness of public services.

- **Implement Dynamic and Sustainable IT Operations.** Leveraging Microsoft 365 provides our organization with a modern, flexible platform that ensures our business systems are always up to date, secure, and capable of meeting both current and future needs. With regular automatic updates, we benefit from the latest productivity tools, enhanced security features, and improved functionalities with little disruption to our services. This approach enables our systems to remain aligned with the evolving technology standards and allows staff to focus on core business objectives rather than maintenance tasks.

  The suite's cloud-based architecture supports seamless collaboration and access across devices, allowing business users and remote employees to connect, share, and collaborate in real-time – enhancing productivity and responsiveness. Features like Microsoft Teams, SharePoint, and OneDrive for Business facilitate team collaboration and information sharing, fostering a more connected and agile workforce

  The much-anticipated release of Microsoft 365 Copilot set for late 2024 will generate a surge of use of the various Copilot products. Microsoft G5 gives the state enhanced capabilities to govern and manage Artificial Intelligence (AI) services and to protect and secure the state's data.

  Microsoft 365 helps us deliver better digital services by maintaining secure, reliable, and user-friendly systems. Robust compliance capabilities ensure we meet regulatory requirements for handling sensitive information, and scalable resources enable us to expand services as citizen needs grow. By integrating Microsoft 365 into our operations, we create a foundation that supports innovation and flexibility, preparing us to adapt to the needs of both our employees and our community now and in the future.

- **Expand Statewide Cybersecurity Strategy.** With Microsoft 365 G5, we can now better protect citizen data and critical government information, ensuring compliance with local, state, and federal regulations. These enhanced tools allow us to mitigate risks, maintain a strong cybersecurity posture, and uphold the public's trust in our ability to secure their data.

  o Transitioned more than 13,700 state users from the Microsoft O365 G3 licensing level to the M365 G5 licensing level.

  o Assisted multiple agencies on their transition from traditional phone systems to the cloud-based telephony solution using Microsoft Teams Calling.

  o Made available an enterprise solution for mobile device management of company cell phones, which will help enforce company policies and protect sensitive data.

  o Assisted additional departments with the migration of their traditional network file servers to cloud-based storage solutions.

  o Released statewide guidance and tooling for implementing a passwordless login solution for endpoints, leveraging Windows Hello for Business.

- o Hosted the following Microsoft training workshops - Microsoft Azure Security Best Practices, M365 Copilot and Azure Copilot, and Microsoft AI Governance Fundamentals.

Challenges: The state's Microsoft Enterprise Agreement Subscription (EAS) contract was due for renewal on July 1, 2024. However, due to the lobbying efforts of Microsoft with the State Legislature to secure a budget for the upgrade to G5, ETS received funding in fiscal year 2025 to execute the transition. This impacted the timely renewal of the EAS and ETS entered a 90-day grace period on July 1 to update the contract with the enhanced G5 functionality. Furthermore, due to budget constraints, the Governor reduced the G5 budget line item by half. In order to avoid mass disruption or possible loss of access to the Microsoft services, ETS leveraged funding across other ETS programs to cover the cost of the Microsoft license renewal in fiscal year 2025 quarter one as the state entered into the 90-day grace period to complete negotiations and executed the revised annual renewal before September 30, 2024.

3.4.4. Enterprise Agreement with Adobe for Electronic Signature and Digital Document Workflow

ETS provides management and administration of a statewide electronic signature (eSign) software using the Adobe Acrobat Sign platform. The eSign service is available to the vast majority of state employees across the executive, legislative, and judicial branches of government. ETS manages the Adobe Enterprise Term License Agreement (ETLA), which includes the eSign platform as well as software licensing for Adobe Acrobat, the Adobe Document Cloud, and all Creative Cloud software.

Adobe Sign enables increased government efficiency and enhances productivity for employees and constituents by transforming traditional paper-based workflows into fast and efficient digital processes. Teams can quickly send, sign, and manage documents electronically, eliminating the time-consuming steps of printing, scanning, and physically handling paperwork.

The state's investment in the Adobe electronic signature platform supports the State IT Strategic plan in the following areas:

- **Optimize Enterprise Systems.** ETS continues to invest efforts in assisting departments with the further digitalization of processes requiring signatures.

- **Implement Dynamic and Sustainable IT Operations.** Keeping government functions operational in hybrid work environments or during a disaster or emergency is a key objective of the State of Hawai'i preparedness plan. Technology services that enable employees to work remotely and through the web is critically important during these situations. Cloud computing and hosted applications or Software as a Service (SaaS) allow workers to remotely access the software and data they need from outside of the office.

Adobe Sign allows workers to facilitate the signing of documents securely and legally through the web. Workers can continue to process documents that require signatures without the need to print, manually route, or wet sign, keeping essential business processes timely and flowing. Workers have access to the Adobe Sign service from any web browser with an internet connection whether they are working in or away from the office.

- Performed an upgrade and migration of the Legislature and Department of Education Adobe Sign accounts from a legacy Adobe Sign platform to an updated version.

- Implemented a reimbursement system for ETS to recoup costs from departments utilizing the various Adobe software licenses available through the ETS Adobe ETLA.
- Continued to enhance the functionality of the eSign platform, enabling additional features and providing training to users and IT staff across the departments.

Challenges: Due to the restructure and price increase enforced by Adobe on the renewal of the state's multi-year Adobe ETLA in 2022, ETS could no longer afford to cover all costs centrally. Out of necessity, ETS implemented cost reimbursements with each department and departments were required to cover the cost for their individual Acrobat and Creative Cloud licenses. With the budget ETS had to work with, ETS could continue covering the cost of the Adobe Sign platform and a portion of the department Acrobat usage as a centrally cost-covered shared service.

3.4.5. Enterprise Agreement with ESRI for Geographic Information System (GIS)

ETS manages and oversees the ESRI Enterprise Agreement (EA) for GIS software and applications. GIS software usage has evolved to become incorporated into core business function for the State. GIS has also become a key aspect of how data is organized and shared, as more and more state departments realize the benefits and value of managing their data through configurations of our software. During the span of the last EA, we have seen continued growth in the adoption of ArcGIS Desktop and Enterprise deployments, in addition to state agencies needing access to ArcGIS Online named users and other Software-as-a-Service (SaaS) offerings.

Currently, over 20 departments, agencies, and divisions use the EA to access ESRI 'sArcGIS platform products, including:

- Hundreds of cloud applications and software use cases, both internal and public facing
- 300+ specific instances of desktop software installed
- 20+ specific instance of enterprise server software installed
- Deployment of critical citizen services apps for emergency management, health and housing, and data dashboards for HIEMA, DOH, Office of the Governor, and HCDA.

There has been growth in user adoption and organizational use of the EA throughout the Executive Branch every year since its inception.

We anticipate this growth to continue as departments such as DOT Harbors and Highways, DLE, DOH, and DBEDT turn to ESRI technology in order to streamline business functions, share critical data, and collaborate with other users both internal and external to their organizations.

During the pandemic, ESRI technology enabled state staff to be agile, respond, and adapt. As the state is faced with continued environmental and economic challenges, the many capabilities included in this offer will continue to support state planning, decision making, and response efforts. Lessons learned following the fires on Maui have called for establishing methods for agencies to get access to critical data and share information more effectively with the public. Agencies like HIEMA and MEMA are making bigger investments in GIS to help predict, better respond to, and mitigate future hazards and disasters.

Providing residents with affordable housing options is another significant challenge that the state is currently facing, and state leaders are turning to ArcGIS Solutions in order to tackle Governor Green's priorities. These are complex problems that will require unique ways to process and visualize data, key metrics, and demographic information. The Governor's Office and HCDA are looking to

expand their use of GIS and develop solutions which utilize 3D building model data layers that were developed by the City and County of Honolulu.

By leveraging SaaS capabilities that are available in the EA, the State continues to collaborate around data in unprecedented ways, opening up state-hosted platforms using Esri technology to enable public/private partnerships, and sustainability priorities such as the Aloha+ Challenge, which have become a model of technology adoption for sub-national Sustainability Development Goals. Additionally, the Office of Homeland Security has established a robust data sharing environment around critical infrastructure data. This system will support data sharing between state, county, private, and public entities, to help plan and protect against hazards and threats. The Office of Planning GIS Program facilitates the hosting and management of data for state agencies which are required to share geographic information with the public. Open data services provide access to data for countless projects and initiatives, which have benefits that are economic, educational, policy focused, and help to make Hawai'i relevant to the rest of the world.

The state EA has also helped to facilitate access to software which has become central to agency operations. DOT Highways, Harbors, and Airports all use GIS to manage assets, report, and perform inspections. The State Historic Preservation Division provides access to historic and cultural data and records using an interactive GIS Portal. DOFAW manages and approves collections permit requests from the public, in addition to coordinating with volunteers for forest reserve conservation efforts, while DOA uses GIS to monitor and inspect traps preventing Brown Tree Snakes and the Coconut Rhinoceros Beetle from invading our islands. DOCARE uses GIS to collect critical data in the field and to execute their mission of protecting Hawai'i's precious resources. GIS is even the foundational element to help manage geoprocessing of addresses for state Online Voter Registration, and the development of a future NextGen 911 system.

Challenges: To continually keep pace with growing GIS software and applications demand, how to properly fund and manage at an enterprise level, and how to equitably apportion licenses for the entire executive branch.

3.5.   Implement Dynamic & Sustainable IT Operations

This strategic pillar, also referred to as "Evergreen Operations," focuses on implementing 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. Target outcomes include IT systems that can be quickly configured to meet business needs; systems that are healthy, stable and upgradeable; systems that are well-engineered and appropriately designed for their intended use; decommissioning legacy systems; and ensuring that the state is positioned to quickly benefit from new technology.

3.5.1. Kalanimoku Data Center Migration Efforts

ETS has been working with executive branch departments over the past several years to incrementally transition computer systems and services from the State Data Center in the basement of the Kalanimoku Building to commercial data centers to achieve a higher level of security, electricity cost savings, and more reliable and flexible services.

In 2022, legacy mainframe computer applications transferred from physical equipment to a cloud-based "Mainframe as a Service" provider using state-of-the-art data centers in Omaha, Nebraska. With that change, the state no longer owns mainframe computer hardware.

Concerns in the aging data center include power failures, cooling equipment, and flooding in the basement location. The few remaining computer systems, communication networks, and high-volume printing services will similarly migrate out of the Kalanimoku data center with complete decommissioning expected by 2026.

An assessment of the major services found three critical systems remain: The IBM AIX servers, the NCIC room housing servers and circuits for CJIS, and the mass printing services we provide to the state in printing checks and reports.

Two departments, DCCA and ATG, continue to use the IBM AIX Power system and we are working on retiring the leased equipment in the near future. The NCIC room continues to house critical connections to law enforcement agencies. The Attorney General's IT department expects to complete upgrading of the server by the end of 2025, and the network connection to the FBI near the end of 2027.

For the printers, ETS is working to migrate the print services to a non-flood location.

See Table 2 in the appendix to see the declining amount of paper used for print services.

3.5.2. Proof of Concept (POC) to Build Out AWS Landing Zone (Public Cloud)

The Government Private Cloud (GPC) provides virtual servers for hosting departmental applications in a secure, government-owned and maintained private cloud environment, supporting both Windows and Linux environments. Currently, the GPC is hosted across three strategic sites across on Oahu: the Kalanimoku Building, the University of Hawai'i, and DRFortress.

As part of our strategic vision, ETS continues to expand the GPC by transitioning from state-maintained physical hardware to a public cloud infrastructure. This initiative addresses the end-of-support for the existing hardware and eliminates the need for costly hardware refreshes. Instead, ETS is committed to leveraging cloud-based infrastructure-as-a-service (IaaS) subscriptions, ensuring a modern, flexible, and efficient platform to meet the state's evolving needs.

To sustain this critical migration, ongoing funding will be required to transition servers and workloads seamlessly from physical hardware to the cloud-based datacenter. The future GPC will no longer rely on physical infrastructure, instead integrating on-island capabilities with public cloud resources to achieve a scalable and resilient hybrid cloud environment.

This transition will enable ETS to further develop its hybrid cloud capabilities, delivering the following key benefits:

- Enhanced Disaster Recovery: Establishing off-island disaster recovery (DR) capabilities for core and critical virtual servers ensures operational continuity during emergencies, safeguarding vital systems hosted on-island.

- Reduced Physical Footprint: By migrating production and test virtual servers to a mainland-linked public cloud, ETS can significantly reduce the reliance on on-island physical servers while leveraging managed server solutions.

- Rapid Scalability: The public cloud environment allows for quick scaling to accommodate additional workloads or shifting workloads as organizational needs evolve.

- Seamless Workload Mobility: With the flexibility to move virtual servers effortlessly across cloud and on-premises environments, ETS can respond efficiently to DR events and optimize performance or cost metrics.

- Enhanced Compliance and Certification: The hybrid model facilitates onboarding of mission-critical and regulated application workloads. It supports data center certifications such as FedRAMP authorization, IRS 1075, CJIS, and CMS, expanding the GPC's capabilities for sensitive applications.

Additionally, the transition creates opportunities to upskill state IT staff, enabling them to focus on higher-value activities like automation, compliance, disaster recovery, and service-level agreement (SLA) management for critical workloads, while reducing the burden of administrating facilities, hardware, and operating systems. These advancements ensure that the GPC remains a cutting-edge, scalable, and efficient solution for Hawai'i's IT infrastructure.

This expanded vision for the GPC represents a transformative shift, ensuring that Hawai'i remains at the forefront of innovation, resilience, and operational efficiency in its IT infrastructure. By embracing this modernized hybrid approach, ETS positions itself to meet current demands while laying the groundwork for future technological advancements.

In 2024, ETS worked with a cloud partner to perform an assessment of the current GPC infrastructure and server environment. The goal was to optimize resource allocation, identify suitable cloud products and services, and develop a data-driven business case for cloud migration. This involved a detailed analysis of the existing infrastructure, right-sizing recommendations, cost savings identification, and licensing guidance, culminated into a final report and presentation of findings to the ETS cloud team.

ETS piloted a Proof of Concept (POC) with a cloud partner for the design, implementation, and migration of a few selected applications and workloads to a public cloud environment. The objective of the project was to determine whether the proposed public cloud environment would be able to sufficiently support the requirements of the state applications that are hosted in the current GPC infrastructure.

The project also looked to ensure that the target public cloud environment was scalable, secure, and compliant with necessary regulations. The project started with discovery and high-level planning, followed by migration design and facility build, detailed planning and event preparation, migration execution and testing, and concluded with support and handover to the ETS cloud team.

Additional phases of the POC were identified as a result of this project and further testing is still to be done to fully ensure that the environment will be production ready to host mission critical IT infrastructure and business critical department applications.

BY THE NUMBERS

The GPC assessment analyzed 525 total server instances in the current on-premises cloud environment.

The transition to re-architect the Government Private Cloud (GPC) introduced significant changes across multiple dimensions, including the underlying platform and technology, the structure of shared service offerings for departments, budgetary considerations, and the skillsets required to support the evolving solution. This ambitious initiative demanded extensive planning and adaptability from staff, who were stretched thin as they balanced the demands of this transformative project with the ongoing maintenance and support of the existing cloud infrastructure.

To tackle these challenges, ETS collaborated with a cloud integrator to provide strategic and technical guidance throughout the transition. The ETS cloud team committed to quickly learn the new technologies, actively participating in numerous cloud training opportunities to expand their expertise

and support the initiative effectively. Significant work remains as this project continues to evolve and take form.

In 2025, ETS will continue its collaboration with a cloud partner to further refine and strengthen the new GPC cloud environment. Additional integration phases will focus on advancing the design and development of the infrastructure, ensuring the solution delivers robust resiliency, optimal performance, enhanced security, and comprehensive governance. The migration of critical workloads will undergo rigorous user acceptance and environmental testing to ensure the new environment meets performance and reliability standards before full implementation.

3.5.3. Hawai'i Wireless Interoperability Network (HiWIN)

ETS manages the Hawai'i Wireless Interoperability Network (HIWIN) supporting more than 6,000 radios and operates across 44 Land Mobile Radio (LMR) sites, with an additional eight sites dedicated to microwave backhaul, totaling 52 locations statewide. HIWIN is a critical communication network utilized by state agencies, federal partners, county responders, EMS, and all major airports. It ensures seamless coordination and interoperability for police, fire, EMS, lifeguards, and other first responders throughout Hawai'i.

HIWIN's primary focus is to enable seamless, reliable, and secure communications across various government and emergency response agencies, fostering rapid coordination in both daily operations and times of crisis. With Hawai'i's geographical isolation and unique vulnerability to natural disasters—such as hurricanes, tsunamis, and volcanic activity—effective and robust communication systems are indispensable.

For ETS, HIWIN aligns with the commitment to modernize Hawai'i's IT infrastructure and ensure continuity in government operations through technology-enabled solutions.

Primary Goals, Objectives, and Key Outcomes:

- Ensure Communication Resilience: Establish resilient, secure, and interoperable communication systems that support mission-critical functions across state, county and federal public safety agencies.

- Enhance Interagency Coordination: Provide a shared platform for efficient communication between agencies such as law enforcement, fire, EMS, and other first responders, optimizing response times and enhancing public safety outcomes.

- Support Technological Advancement: Integrate emerging technologies to increase coverage, reliability, and ease of access for users, ensuring HIWIN remains adaptable to future needs.

- Alignment with the State IT Strategic Plan: HIWIN aligns closely with the State IT Strategic Plan by advancing the goals of infrastructure modernization, interoperability, and resilience. By facilitating a secure, unified communication network, HIWIN supports statewide initiatives that drive digital transformation in public safety and government operations, ensuring that Hawai'i's IT systems are both sustainable and prepared to meet the demands of modern public service.

  In 2024, HIWIN achieved major upgrades to increase capacity and resilience, including transitioning 10 sites from legacy Frequency Division Multiple Access (FDMA) to Time Division Multiple Access (TDMA) to better serve Hawai'i's public safety needs.

In 2024, significant advancements were made in upgrading and modernizing HIWIN to ensure its readiness for modern communication demands and its resilience in critical situations.

Multiple layers of redundancy were added to HIWIN to fortify the network's reliability. This included implementing both cellular and Starlink connectivity options across several sites, providing failover capabilities that ensure continuity even if primary communication pathways are disrupted.

Several HIWIN sites received upgraded IP data routers to enhance connectivity and integration with state IT systems.

3.5.4. Next Generation Network

Next Generation Network (NGN) began in the early 2000's to support the use of multimedia agency applications, like video, by state agencies. Today, NGN is a fully connected and integrated statewide network.

NGN provides communications capacity to state agencies enabling them to deliver services to the public and on-demand communication between state agencies.

The key factor that enabled NGN to be implemented statewide is the Institutional Network (INET) provision division of the Department of Commerce and Consumer Affairs. Through the INET provision the State has been able to procure fiber optic connections from cable TV companies, at their cost, to create the desired bandwidth with state-provided communication (network) equipment at the ends of the fiber optic cabling and manage the bandwidth through state network management systems.

NGN is a necessary asset for ongoing state operations and can be thought of as the State's "cloud."

ETS has the responsibility of ensuring that the communication (network) equipment is updated and compliant with the manufacturers' requirements. Much of the NGN's communication (network) equipment is reaching "end of life (EOL)" status. Once the equipment reached EOL status, the manufacturer drops support of it.

Accordingly, much of ETS's activities related to NGN in 2024 has centered around the replacement of equipment that have reached EOL or soon will. Some replacements are done for upgrades to newer models with more capability.

Each replacement effort is a project in itself that requires considerable work and staff resources. Preparation of the replacement equipment includes configuration programming and testing. Equipment replacement often requires downtime for a portion of the network so scheduling with the staff where the equipment is located, and all other State agency offices that will be impacted by the downtime is critical. Often, replacement work is scheduled after hours, or on the weekend to minimize the impact.

3.5.5. Enterprise Notification System using Alert Media

ETS renewed the 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 10 agencies now with 11 other agencies in various states of deployment. There has been continued growth of usage and cross training within the departments to ensure messages are sent and in a timely manner.

The Alert Media system is growing in popularity as the other departments hear about its services. It does take training and initial configuration and documentation to get agencies onboard.

3.5.6. Emergency Operations

ETS has continues to provide 24/7 IT and 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.

3.5.7. Shared Services Help Desk

The ETS Service Desk serves as the central hub for IT support of ETS shared services across all executive branch departments. The Service Desk plays a critical role in streamlining IT administration across the state and provides comprehensive technical assistance to state agencies and users, ensuring efficient resolution of IT issues, continuity of operations, and improved governmental access to information systems.

The Service Desk provides support, service request fulfillment, and escalation for ETS shared services in the categories of Accounts and Access, Business Applications, Cyber Security Services, Data Management, Desktop and Mobile Devices, Document and File Management, Enterprise Applications, Network and Connectivity, Productivity and Collaboration, Service Hosting and Storage, and Website Services.

Its primary goals include improving customer satisfaction, reducing ticket resolution times, and expanding communication and awareness of available services.

The Service Desk is a critical component of IT service management, playing a key role in tracking incidents, managing problems, and ensuring the smooth operation of shared IT services.

In December 2023, ETS upgraded from a homegrown service desk system to a cloud-based, commercially available IT Service Management platform. The previous system faced performance limitations that impacted the productivity and efficiency of the ETS Service Desk staff, and it lacked the scalability required to meet the increasing demands of the Service Desk's service management processes. The new system has significant enhancements in usability, design, and performance, providing the necessary improvements to better support the Service Desk's operations.

By the end of 2024, ETS will have completed its first full year using the new IT Service Management platform. Since the migration, ETS has handled approximately 6,000 service tickets, demonstrating the system's capacity to efficiently manage the increasing volume of requests. The transition has provided notable benefits, including faster ticket resolution times, improved user satisfaction, and greater scalability to meet future needs.

Optimizing IT Support for Government: Increased Service Desk Positions

As the state assessed its IT consolidation plan under Act 179, ETS recognized the need to increase staffing within its Service Desk to support and manage the expanding areas of service management and end-user IT support.

The ETS Service Desk plays a vital role in supporting all executive branch customers, primarily assisting IT Coordinators across departments, and delivering shared services to approximately 12,000 state employees statewide. However, the Service Desk has been staffed by only two full-time employees and is supervised by a section manager who also oversees the Public Information Access

Section, which is primarily responsible for managing the state's public websites and other web services. This structure highlighted the need for a dedicated manager to focus specifically on IT Service Management and customer support. The addition of this role will improve operational efficiency, enhance service delivery, and ensure more effective management of the growing demands for IT support.

During the 2024 Legislative Session, ETS successfully secured approval for two additional Service Desk positions, which will greatly enhance its ability to support state operations and improve IT service delivery. A new Service Desk Manager role was created to oversee staff and operations, with a focus on strengthening IT Service Management capabilities and advancing ETS's role as a provider of shared IT services. Additionally, a new Help Desk Specialist position was established to address the growing volume of service tickets and provide specialized expertise in managing endpoint and mobile device services across the state. These strategic additions will improve service efficiency, reduce ticket resolution times, and support the continued expansion of shared IT services. ETS anticipates filling these positions in 2025, which will further enhance the department's ability to meet the increasing demands of state employees and agencies.

Optimizing IT Support for Government: Improved Service Desk Processes

In 2024, the ETS Service Desk implemented several key advancements to improve the delivery of IT support. Automated workflows were developed within the new IT ticketing system, allowing tickets to be routed efficiently to the appropriate teams across the organization. Additionally, ETS began building a technical service catalog to enhance customer interactions with shared services, increase awareness of ETS-provided services, and make access to these resources more intuitive and searchable. The Service Desk is also standardizing customer and internal documentation, creating a centralized knowledge base within the new IT Service Management (ITSM) platform to support consistency and efficiency.

The ETS Service Desk continues to expand its adoption of IT Service Management (ITSM) and IT Operations Management (ITOM) practices to deliver reliable, efficient, and proactive IT support. These efforts include streamlining incident management, service requests, and change control processes through ITSM, as well as developing automated monitoring and alerts to track the performance and availability of shared services. Together, these initiatives are enhancing service quality, improving system reliability, and strengthening the overall IT support framework for the State of Hawai'i.

In 2025, ETS will focus on enhancing the Service Desk ticketing platform by expanding the Service Catalog to include additional services and streamline the service request process. Efforts will also prioritize refining service level descriptions to clearly define offerings, exclusions, and shared responsibilities. Additional knowledge and solution articles will be developed and published to improve documentation, making information more accessible and searchable for customers. ETS will continue to automate and integrate other IT systems with the Service Desk platform, optimizing alerting and triaging processes for IT infrastructure issues. Lastly, ETS will develop a comprehensive onboarding and offboarding process and workflow for employees, seamlessly managed through the Service Desk platform.

3.6. Extend IT Portfolio Governance

This strategic pillar focuses on extending the state's 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. Target outcomes include proactive and transparent portfolio planning and management though system life cycle; transparency into cost, schedule and performance and re-baselining of projects; sharing and reuse of existing hardware and software; and IT systems that are well-engineered and appropriately designed for their intended use.

3.6.1. Portfolio Management with LeanIX

LeanIX serves as the State Executive Branch overall IT portfolio management tool. LeanIX enables a proactive, strategic approach to IT portfolio management, helping state government increase efficiency, reduce costs, and enhance service delivery across the board.

All significant information systems are inventoried in the LeanIX Application Portfolio, enabling enhanced visibility and transparency into the technical soundness of the state's systems – and identification of the most urgent systems for replacement, modernization, and migration.

Every department must enter all IT Spend Requests over $100,000 in the LeanIX IT Demand Portfolio, thus enabling rationalization and centralization of IT demand and project prioritization, alignment of IT spending to strategic goals, more transparency across agencies, and an enhanced level of IT project risk management.

In 2024, ETS Information Technology Governance (ITG) continued the ongoing data collection into LeanIX on the state's Executive Branch overall IT portfolio by establishing standard data collection views for both departmental Application portfolios and departmental Project/Spend Request portfolios.

ETS ITG extended the data model of LeanIX to accommodate service design and planning. Starting with ETS services, service fact sheets can be connected to service customers service providers, information systems supporting the service, and IT spending related to the service.

ETS ITG developed a custom extension to LeanIX for expressing departmental IT Strategic Plans that can be related to rest of the LeanIX managed executive branch IT portfolio data – Business Goals, Business Capabilities, IT Goals, Applications, and Projects (IT Spend Requests).

ETS ITG developed a custom extension to LeanIX for streamlined IT Spend Requests.

To view year-over-year IT portfolio governance metrics, refer to Table 3 in the appendix.

3.6.2. Independent Verification and Validation Reports (IV&V)

Pursuant to section 27.43.6, HRS, and section 93-16, HRS, Independent Verification and Validation (IV&V) Reports for certain major systems are 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.

The reports are submitted monthly.

In 2024, ETS provided IV&V oversight over the following projects:

- Department of the Attorney General Child Support Enforcement Agency's KEIKI Replatform Off Mainframe Project

- Department of Health's Behavioral Health Administration Integrated Case Management System
- Department of Human Services' Systems Modernization Project
- Department of Human Services Med-Quest Health Analytics Program
- Department of Labor and Industrial Relations, Unemployment Insurance Division's Modernization Project
- Department of Transportation's Financial Management Systems Project
- Department of Commerce and Consumer Affairs Business Registration Modernization Project

3.7. Enhance Value of State Data

This strategic pillar focuses on maximizing the value of state data by designing, implementing and governing state systems for data stewardship, sharing, and public use. Target outcomes include making state data more valuable for economic and public purposes; improving transparency and accessibility by ensuring that appropriate state-stored/managed data is available to the public and to other state departments, agencies, and users; and increasing awareness so that all stakeholders know what data is accessible and why certain data should not be accessible.

3.7.1. Data & AI Mission, Vision, and Strategy

In October 2023, the Green Administration and ETS named Rebecca Cai as the state's first Chief Data Officer (CDO). One of Cai's first priorities as CDO was to work with the State Data Task Force to create and publish a vision, mission, and strategy for data and AI. The vision, mission, and strategy are intended to drive trust, transparency, citizen satisfaction, and innovation by improving security, quality, accessibility, and accountability with regard to data and AI. The strategy is published online at https://data.hawaii.gov/#dataStrategy and will be reviewed annually going forward.

3.7.2. Data & AI Policies, Standards, and Guidelines

Beyond the foundational vision, mission, and strategy for data and AI, statewide policies, standards, and guidelines are necessary to consistently manage and use data and AI technologies. In September 2024, Hawai'i published its first standards document, addressing the topic of data quality. Five additional standards documents have been approved and are expected to be published in December 2024, addressing the topics of data classification, data privacy, data cataloging, data retention, and open data. Additionally, a GenAI Assistance Technology Usage Guide is drafted and being reviewed in December. To develop these standards and guidelines for Hawai'i, extensive research was done to understand policies at the federal level and in other states, and the State Data Task Force was involved in reviewing and approving the Hawai'i standards and guidelines. Additional policies, standards, and guidelines are planned for development in 2025, including data equity guidelines following the Federal requirement on ethnicity disaggregation published in March 2024. Implementation and enforcement of such guidelines would require additional tools and resources.

3.7.3. Data Governance Framework

One of the first steps toward breaking down data silos within the state and promoting data sharing is to establish a shared understanding of who owns what data and what access controls need to be in place to ensure data protection and compliance. These goals are accomplished through a data

governance framework, an effort which includes identifying what data each department has, who is the business owner of each data set, what access controls are required, and what the quality of the data is. In 2024, a statewide data governance framework was created with approval from the State Data Task Force, and a data governance working group was established with a designated data lead from each department. In 2025, the working group is expected to identify data owners and start to establish access control for sharing by use case. Current information related to this effort is available at https://data.hawaii.gov/#governance

3.7.4. Data & AI Statewide Platform

Another step toward breaking down data silos within the state and across departments is to implement a data sharing platform. In 2024, ETS began to collaborate with departments on this concept. This shared data platform would not replace any departmental data systems; instead, it would provide capabilities to secure and govern data, enable data owners to appropriately manage data access, ensure that all data follow the same standards and can easily be merged, and provide AI/ML capabilities for simulations and decision support. One department has participated in this effort already, and additional departments are expected to participate in 2025. Additional data and AI tools and resources would be needed to implement this platform.

3.7.5. Data and AI Literacy Training and Certification

Because data is embedded in the daily activities of all state workers, it is critical that all staff understand how to handle data properly. This includes topics like data privacy, data quality, and how to evaluate whether data is trustworthy. To support staff education, a data literacy framework was developed in 2024, encompassing 9 different topics. These were developed into nine published lessons, an effort which included researching contents for each topic, obtaining approval for the contents to use, developing assessment questions, developing the website to host the materials, and creating digital certificates. Three levels of certification are currently available: bronze, silver, and gold. Plans for 2025 include promoting the lessons among state employees, improving the training contents, and tracking progress and participation. In 2025, ETS will also publish AI literacy training to help state workers effectively and safety leverage AI tools to improve operational efficiency. Materials related to this effort are available online at https://data.hawaii.gov/data-literacy.

3.7.6. Data & AI to Enable Governor's Priorities

Following the 2023 wildfires on Maui, conversations began to take place regarding how data can be leveraged to better support disaster preparedness. Data availability, timeliness, and quality are all critical to disaster preparedness, and challenges related to how to securely share data and maintain compliance need to be addressed as well. In 2024, ETS supported data sharing discussions with the Office of Recovery and Resilience, the Office of Wellness and Resilience, and HI-EMA regarding what data to bring together for disaster readiness. A proof of concept to support disaster readiness through data and AI will begin in 2025.

3.7.7. Data & AI Summit

In April of 2024, Hawai'i hosted the first ever State Data & AI Summit in the nation. This summit brought together data-focused public sector professionals with leading industry partners to connect on innovative approaches to managing, governing, and using data empowered by AI to make tough decisions. Summit attendees had the opportunity to learn about leading trends, share success stories

and lessons learned, participate in cross-departmental discussions, and help position the state better utilize data and AI to make decisions and serve constituents. Attendance exceeded the originally expected capacity by 75%, ultimately reaching over 175 participants, with many more being turned down due to space limitations. Building on this success, a second Data & AI Summit will be held in 2025. Additional information about the inaugural State Data & AI Summit can be found at https://events.govtech.com/Hawaii-Data-Summit.

3.7.8. Hawaii.gov Mobile Application

The CIO, with the help of ITSC, is working to enhance and promote usage of the Hawaii.gov mobile application as required by Act 82, SB 2287. A working committee will recommend improvements and secure resources to update the existing app on the Apple Store and expand apps to other mobile devices. Currently, all state websites are configured to be browser readable on all platforms, including cell phones.

3.8. Digital Workforce Development

This strategic pillar focuses on establishing 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. Target outcomes include consistently attracting high quality candidates for all IT job openings; developing a culture and work environment that promotes/encourages remote work and flexibility; and a re-branding of the government IT workforce as an Innovation Center with a culture that embraces digital tools and technology.

3.8.1. Digital Government Summit

The 2024 Hawaiʻi Digital Government Summit, organized by Government Technology Magazine, was held on December 4 and is a collaborative forum to share information technology best practices, to hear about emerging technology trends, and to reflect on our future challenges.

Attendees connected with peers from the government and industry sectors to share ideas, best practices, and technology trends.

Governor Josh Green, M.D. welcomed the attendees followed by CIO Christine Sakuda, keynote speaker Anton Gunn on Leading with Vision, and Teri Takai, the senior vice president of the Center for Digital Government.

Working sessions topics included Balancing Innovation and Trust Through AI Governance; Essential Cybersecurity Resources; The IT Workforce Evolution; Driving Transformation: Modernizing Hawaiʻi's Enterprise Systems; Powered by Purpose: Hawaiʻi's Digital Front Door; Those Who Collaborate Win; Roadmap to the Cloud: and The Evolving Role of Technology: Driving Civic Innovation.

This professional development and learning event drew more than 300 participants from all levels of government in Hawaiʻi.

3.8.2. Hawai'i Annual Code Challenge (HACC)

Nine technology-focused teams comprised of high school students, college students, and young professionals took home $18,000 in awards during the ninth Hawai'i Annual Code Challenge (HACC) on Nov. 16 at the University of Hawai'i West O'ahu.

The HACC is an annual educational event that solicits challenges from state departments and community groups and asks student, amateur and professional coders to develop technology applications to help solve specific problems. This year's challenges ranged from improving the state's open data portal, to better energy efficiency, to creating a game to help identify bird species in Hawai'i.

About 120 people including friends, family and supporters watched as 17 finalist teams presented their solutions to six different challenges before a panel of judges. Prizes were $3,000 for first place, $2,000 for second place, and $1,000 for third place in three categories (high/middle school, college and professional). Table 4 in the appendix shows the first, second, and third place winners for each category.

The HACC was created to encourage engagement between Hawai'i residents and the local technology community to modernize state functions and services for a more effective, efficient, and open government. Another objective of the hackathon is to strengthen the pipeline of the IT workforce and expand the tech industry in our state.

By the Numbers:

- 158 participants
- 47 high school students
- 41 teams created
- 27 projects submitted
- 17 team finalists

Challenges:

- University of Hawai'i – Digital Navigator
- Tyler Hawai'i – Hawai'i AI Concierge Bot
- Enterprise Technology Services – Citizen Portal on Open Data
- Hawai'i Broadband Digital Equity Office – Digital Equity Dashboard
- Hui Manu O Ku – Aloha Birds Game
- Hawai'i Keiki Museum – Energy Usage Display

The HACC would not be possible without the financial and in-kind support from the University of Hawai'i and local and national technology businesses and educational and non-profit partners.

Sponsors: Microsoft, Verizon, Google for Government, Transform Hawai'i Government, Hawaiian Airlines, Salesforce, Tyler Technologies, eWorld Enterprise Solutions, Hawai'i Data Collaborative, AT&T, AWS, Hawaiian Electric, and DRFortress.

Partners: IMAG Foundation, the Hawai'i Department of Education Computer Science Team, UH Mānoa Information & Computer Sciences, Hawai'i Pacific University, Pi'ikū Co., and the Chamber of Commerce Hawai'i.

Teams ready to give their presentations at the 2024 HACC.

3.8.3. Continuous Learning

A team at ETS was tasked by the CIO to find a low-cost effective solution for continuous learning and upskilling training of technology staff. The team researched several online and live training technology companies and reached out to Department of Human Resources Development (DHRD) to discuss training providers.

DHRD recommend a training provider that was already integrated with their systems. The ETS team negotiated cost and flexibility with the provider TOTI Training at $750 per person per year.

ETS sought a training platform to cover multiple technology knowledge areas to:

- Promote continuous learning for ETS employees
- Keep ETS employees current with ever changing technology
- Upskill/reskill ETS employees to promote employment mobility and provide professional growth

A total of 100 annual licenses were procured. Training features both live/interactive training and web-based training for 24-7 access with 111 learning topics including Artificial Intelligence, Cybersecurity, Cloud Solutions, Data Science, Server Administration, Database Operations, and Project Management.

3.8.4. Recruiting

It is a priority for ETS to recruit and retain employees to ensure continuity of operations and to be able to provide support and services for Executive Branch departments to operate effectively and efficiently.

ETS staff have participated in the quarterly job fairs at the Neal Blaisdell Center and the University of Hawai'i. In addition, ETS staff held on site job interviews at the Hawaii Technology Development Corporation Holiday Tech Job Fair in December.

ETS also organized the 9th Hawai'i Annual Code Challenge (HACC) to promote interest with high school and college students in working for the state in IT.

To retain employees and upgrade skills, $75,000 was spent on licenses to a wide range of fields to develop IT staff's knowledge and abilities.

A challenge to hiring in 2024 was that ETS had vacancies in its two HR positions, the HR Manager and the HR Assistant. The positions have since been filled.

ETS is continually assessing the organizational structure and types of job requirements and classifications to align with the state IT strategic plan and looking at work schedules and telework to entice new applicants.

State Department Teams were named winners in the Hawai'i Technology-Enhanced Business Capability Awards Program.

4. AWARDS AND RECOGNITION

In 2024, ETS and other executive branch departments were recognized both locally and nationally for their IT projects to improve state services.

4.1. National Technology Recognitions

4.1.1. Digital States Survey Grade of A-

For the second consecutive time, the state of Hawai'i has been ranked among the top states nationwide for IT practices receiving an overall grade of A- in the Center for Digital Government's (CDG) 2024 Digital States Survey.

The 2024 Digital States Survey evaluates states' use of technology to improve service delivery and constituent engagement, increase capacity, streamline operations, and achieve other state priorities—assigning a letter grade based on quantifiable results.

The CDG said that Hawai'i maintains its A- grade in this year's survey in part due to a commitment to the fundamentals of IT modernization as well as resilience in the face of adversity, including the technological support response to the deadly Maui wildfires in 2023. CDG further recognized Hawaii

for Outstanding Achievement for processes and plans to address the need for a skilled IT workforce today and into the future.

The biennial survey awards were presented during the Center for Digital Government Awards Program in September.

A national listing of all 50 states' grades is available at https://www.govtech.com/digital-states-survey-2024-results-announced

4.1.2. Center for Digital Government GovX Finalist

Hawai'i was named a finalist in the Overall State Government Experience category at the during the GovX Summit and eight annual Government Experience Awards in September.

Presented by The Center for Digital Government (CDG), the awards recognize the achievements of states, cities, and counties that have raised the bar on the experience of government services to create a better engaged constituency and a more responsive government.

4.1.3. NASCIO Awards

Three Hawai'i state departments were given National Association of State Chief Information Officers (NASCIO) 2024 State IT Recognition Awards in New Orleans on October 1 for their technology project entries. NASCIO received more than 120 submissions from its member states and territories which showcase the use of information technology to address critical business problems, more easily connect citizens to their government, improve business processes, and create new opportunities that improve the lives of citizens.

- **Geospatial Decision Support System:** The Hawai'i State Energy Office's (HSEO) "Geospatial Decision Support System" (GDSS) tool was recognized by NASCIO as the National Award Recipient, its highest distinction for technology excellence in state government, in the Emerging & Innovative Technologies category.

   The tool was developed with a Federal Emergency Management Agency Hazard Mitigation Grant in partnership with the Hawai'i Emergency Management Agency, the Office of Homeland Security, Statewide GIS Program, technology company ICF, and various energy businesses including Hawaiian Electric Company, PAR Hawai'i, Island Energy Systems, Aloha Petroleum, Hawai'i Gas, and Hawai'i Fueling Facilities Corporation.

   The GDSS is a web-based mapping and data exploration tool that was built to provide end users the ability to explore, query, and understand critical energy infrastructure, community lifeline key customers, and hazard data compiled throughout the development of the energy hazard mitigation project.

- **AI-Powered Statewide Branch Services Desk:** The state Department of Human Services (DHS) was selected as an Award Finalist in the Business Process Innovations category for its entry "AI-Powered Statewide Branch Services Desk" (SBSD).

   The SBSD is focused on custom technical solutions built on an AI-driven platform, balanced with people-centered attention, to integrate advanced technology into service delivery, which paves the way for streamlining several processes and maximizing efficiencies for both DHS and its clients. Having a virtual agent available 24-hours a day, 7-days a week, allows clients to easily access information.

- **Hawaiʻi's Career Acceleration Navigator:** Selected as an Award Finalist in the Cross-Boundary Collaboration & Partnerships category was the "Hawaiʻi's Career Acceleration Navigator" (HI CAN) which was developed by a cross-agency team of the Department of Labor and Industrial Relations, the Department of Human Services, and ETS.

  Working with the National Governors Association Workforce Innovation Network, the team developed a comprehensive and user-friendly online service delivery hub in partnership with Research Improving People's Lives (RIPL). HI CAN is a virtual, one-stop website that leverages cloud technology to provide job seekers not only with customized pathways to employment, but also to connect them to other services provided by the state of Hawaiʼi that can help support them and their families while looking for work.

To see the NASCIO award submissions, visit: https://www.nascio.org/awards/

4.2.   State of Hawaii Technology Award Program (Local)

ETS launched the inaugural State of Hawaiʻi Technology-Enhanced Business Capability Awards Program in 2024 to recognize efforts in the executive branch departments to modernize state services through the utilization of technology. Winning project from six state departments were recognized during the Hawaiʻi Digital Government Summit on December 4.

The winning projects are:

- The Hawaiʻi State Energy Office for its Geospatial Decision Support System in the Emerging and Innovative Technologies category.
- The Department of Human Services for its AI-Powered Statewide Branch Services Desk in the Business Process Innovations category.
- The Department of Labor and Industrial Relations, Department of Human Service, and ETS team for the Hawaiʻi's Career Acceleration Navigation (HiCAN) in the Cross-Boundary Collaboration and Partnerships category.
- The Hawaiʻi State Energy Office for its Energy Data Portal in the Data Management, Analytics, and Visualization category.
- The Hawaiʻi Housing Finance and Development Corporation for its Hawaiʻi Fire Relief Housing Program in the Digital Services: Government to Citizen category.
- The Office of Enterprise Technology Services for its Emergency Communications Response in the Information Communications Technology Innovations category.

4.3.   Employee Service and Incentive Awards

ETS staffers were recognized during the Department of Accounting and General Services (DAGS) 2023 Incentive and Services Awards Ceremony at Washington Place on July 29 for their efforts to improve state government.

4.3.1.   Team of the Year Award: Enterprise Technology Services IT Consolidation Team

This DAGS award recognizes a team that works together to perform a specific function. Through the pooling of skills, talents, energy, and knowledge, they have accomplished a common goal that supports the organization's mission.

In June 2022, Governor Ige signed Act 179 which called for the development of a plan for the consolidation of information technology services and staff within the executive branch agencies. Although all executive departments were included in this project, the team members from ETS not only took the lead and oversaw the project but also served as facilitators and note takers/timekeepers on the 12 committees that made up the larger group.

Act 179 ETS Core Team included the following ETS employees: Rachel Faitau, Brian Frey, Bryce Fujii, Jennifer Halaszyn, Vince Hoang, Juha Kauhanen, Sonny Kekipi,Arnold Kishi, Dexter Lee, Sheryl Miyagawa, Kyle Muranaka, Michelle Muraoka, Doug Murdock, Kathleen O'Brien, Sheila Oliveira, Todd Omura, Jussi Sipola, Patrick Stuart.

4.3.2. Employee of the Year Award: Michael "Mikey" Kleckner, ETS

This DAGS award is the highest departmental award that recognizes an employee for outstanding performance and/or achievements.

As Time and Attendance Analyst, Michael "Mikey" Kleckner has played a crucial role in the continued process of transitioning departments into the Hawai'i Information Portal (HIP). He also provides crucial help to Central Payroll, assisting with payroll processing when they are short-handed, ensuring that we are all paid on time. Kleckner took the initiative to compile payroll processing and year-end procedures into a document that serves as a manual for Central Payroll. This manual ensures timely and accurate processing of payroll and annual W-2 forms.

5. LOOKING AHEAD TO 2025

5.1. Strategic Plan Refresh

Updating the State of Hawai'i IT Strategic Plan is a statutory requirement every four years – with an update due before the beginning of the 2025 Legislative Session.

An up-to-date IT Strategic Plan provides a clear, forward-looking roadmap to align IT investments and initiatives with the state's priorities. It ensures efficient resource allocation, enhances cybersecurity, supports modernization efforts, and improves service delivery to the public.

By setting measurable goals and adapting to emerging technologies, the strategic plan maximizes operational efficiency, fosters innovation, and prepares the state to meet future demands effectively.

Starting in March 2024, a project charter and project plan were established to update the state's IT Strategic Plan. ETS ITG then conducted an analysis of the success of the state's existing IT Strategic Plan, which was established in 2019 and went through a minor update in 2021. This analysis was used in subsequent meetings and workshops to formulate a new IT Strategic Plan. ETS partnered with research vendor Info-Tech to conduct separate IT strategic planning interviews and workshops with both the state's business leaders and the state's IT leaders.

In 2025, ETS will continue to work with the executive branch departments to establish the departmental IT Strategic and Operational Plans, in alignment with the State IT Strategic Plan.

The new State IT Strategic Plan is available online at https://ets.hawaii.gov/reports/.

ETS and departmental staff collaborated to develop the State's IT Strategic Plan,

6. APPENDICES

The IT Consolidation Report and the State IT Strategic Plan are available online at https://ets.hawaii.gov/reports/.

Table 1: Applications To Be Integrated with Citizen Identity Login Services

HIC - App - Lala (eHawaii.gov User Management System)
HIC - App - Notification Center
CCHNL - Office of the City Clerk - Legislative Document Access
AG - HCJDC - Covered Offender Registry
AG - HCJDC - Bulk Covered Offender Registry
AG - HCJDC - Sex Offender Information Management System
AG - HCJDC - eCrim
DLIR - HIOSH - Inspection and Permitting System
Kauai - Finance - Real Property Tax Payments
DAGS - OIP - State Calendar System
DLIR - R&S - Green LMI
DOH - DCAB - Placard Application and Registry
DOH - TBB - Tuberculosis Control Program
DOH - TBB - Televisit
DOH - WWB - Wastewater IWS Filing
HIC - App - Gamify
HIC - App - RSS Alerts
AG - HCJDC - HIJIS Federated Query System
DBEDT - CID - Open and Accessible Film Permit
DBEDT - FTZ9 - Invoicing & Payment System
DCCA - OCP - Mortgage Foreclosure Dispute Resolution (MFDR)
DCCA - OCP - Public Sale Notice
DCCA - REB - AOAO Condominium Association Registrations
DLNR - APO - Civil Resource Violations System (CRVS)
DLNR - DAR - Freshwater Game Fishing License
DLNR - DOFAW - Commercial Vessel Permits
DLNR - DOFAW - Hunt Lottery Drawing System
DLNR - DOFAW - Hunt Lottery Registration / Hunt Application System
DLNR - Hunter Ed - Online Course Registration System
DLNR - DOFAW - Hunting Licenses
DLNR - DOFAW - Na Ala Hele Trail & Access System
DLNR - Land Div - Wiki Permits
DBEDT - Aloha Stadium Online Store
DOE - Commerce Platform
Judiciary - General - Mobile App
Judiciary - General - eBench Warrants (eBW)

Judiciary - VIPS - Volunteer in Public Services
AG - CRD - Notary Application
AG - Tax & Charities - Charity Registration Retrieval System
AG - Tax & Charities - Charity Registry
AG - Tax & Charities - Solicitor Registration
AG - Tax & Charities - Special Invoice Payment System HIC - App - Invoice System
B&F - ERS - Self-Service Benefits Portal
B&F - Unclaimed Property - Unclaimed Property Search
DAGS - SPO - HANDS - Hawai‘i Awards & Notices Data System
DAGS - SPO - Hawai‘i Compliance Express (HCE)
DAGS - SPO - HIePRO (eProcurement System)
DBEDT - BDSD - Enterprise Zone Forms
DOH - OMCCR - Medical Cannabis Registry
DOH - OHSM - Vital Records Ordering and Tracking System
DPS - NED - Controlled Substance Registration System
LG - General - Name Change
Appointment Service (Notary, Road Test, etc)
DBEDT - CID - Tax Credit Hub
DLNR - DOFAW - Trails Day Use Permits DLNR - DSP - Statewide Camping Reservation System Hawai‘i - Parks & Recreation - Big Island Camping Permits
DOE - McKinley Community School for Adults (MCSA) Online Payments
DOE - Waipahu Community School for Adults (WCSA) Registration and Payment System
DOH - DCAB - Facility Access Plan Submission and Review System
ETS - App - eRecording
HIC - App - Payment Platform AG Collections Payments (Payment Platform) DLIR - HIOSH Payments (Payment Platform) DLNR - BOC - BOC Payment Platform Hawai‘i - Liquor Control - Gross Liquor Sales Percentage Fee Kauai - Liquor Control - Gross Sales Payments (Payment Platform) DLNR - DOFAW - Tree Seedlings
Location Service (Comm Vess)
DCCA - BREG - Agent Search
DCCA - BREG - Annual Business Filings
DCCA - BREG - Business Entity List Builder
DCCA - BREG - Document Search and Ordering
DCCA - BREG - Hawai‘i Business Express (HBE)
B&F - EUTF - Payment Processing
CCHNL - HPD - eBW Web Service Hawai‘i - HCPD - eBW Web Service Kauai - KPD - eBW Web Service
CCHNL - Office of the City Clerk - Online Ballot Request System

DBEDT - CID - Standard Film Permit (NOT LIVE YET)
DBEDT - Energy - Solar Water Heater Variance
DLIR - HMOAB - Online Certification
DLNR - DSP - Special Use Permitting System (SUPS)
DOH - ADAD - Clean and Sober Homes Registry
Hawai'i - Liquor Control - Licensing & Permitting Application
Hawai'i - Parks & Recreation - Mauna Kea Group Application
Hawai'i - VRL - Road Test Scheduler
HIC - App - Kala Payment Module (Stored payments)
HIC - App - Subscriber Agreement Form
HIC - App - Access Hawai'i Committee Document Repository System
Kauai - Liquor Control - Licensing and Permitting
Maui - Liquor Control - Licensing and Permitting
DAGS - Surplus - Public Auction
DOT - Airports - HNL Surplus Auction

Table 2: Cases of Paper Used for Legacy Print Services

Month	2019	2020	2021	2022	2023	2024
January	153	105	102	84	63	62
February	60	75	136	54	48	50
March	109	88	147	68	55	50
April	81	205	119	56	57	27
May	80	133	99	58	40	69
June	77	104	105	68	49	48
July	94	173	105	63	55	60
August	71	94	85	58	64	67
September	53	128	145	56	51	36
October	101	108	16	52	53	51
November	67	120	69	69	57	37
December	62	119	66	81	53	

Table 3: IT Portfolio Governance Metrics

Desired Outcomes	Objectives	Key IT Portfolio governance metric	7/23/2020	10/22/2020	10/28/2021	11/1/2024
Proactive and transparent portfolio planning and management through	Engage IT Coordinators	# of applications inventoried (also track per department)	498	497	520	742
		% of applications roadmapped (also track per department)	59.0%	87.0%	86.9%	94.6%

system life cycle		# of planned or active projects inventoried (also track per department)	784 *	274	299	630
		% of projects roadmapped (also track per department)	15.9% *	25.1%	55.5%	80.8%
		% of active LeanIX users logged in during the past 3 months	39.5%	34.0%	48.2%	50.0%
Transparency into cost, schedule and performance and re-baselining of projects	Manage IT project costs & cost overruns	% of active LeanIX projects with Capex and/or Opex $ values	92.8% *	83.5%	64.9%	94.2%
	Manage IT project schedule	% of active projects with at projected completion established	NA	NA	50.3%	72.3%
		% of active LeanIX projects with RAG status	14.0% *	10.2%	12.4%	14.2%
	Provide public transparency into IT projects	% of active IT projects (& project stage) visible to the public	NA	100.0%	100.0%	100.0%
IT systems are well-engineered and appropriately designed for their intended use	Advance cloud-computing	% of applications with hosting data entered	NA	NA	81.3%	94.3%
		# of cloud (IaaS, PaaS, SaaS) applications	39	72	99	360
		% of cloud applications (IaaS, PaaS, SaaS) from those with hosting data entered	NA	22.0%	23.4%	46.1%

Table 4: Hawai'i Annual Code Challenge Winners

Results	Challenge(s)	Team Name	Captain	Affiliation	Advisor
Middle/High School					
1	HMoK - Aloha Birds	Freshy	Khaen Dumbrique	Waipahu	Cindy Takara
2	Tyler - AI Concierge	Jammy	Carl James Dumbrique	Waipahu	Emily Haines-Swatek
3	HBDEO - Digital Equity	Innovate	Chelsey Miguel	King Kekaulike (Maui)	Cindy Takara
College					
1	HKM - Energy Usage	Kilowatt	Gabrielle Dang	UH Manoa	N/A

2	ETS - Portal	HEX	Jarell Ballesteros	UH Manoa	N/A
3	Tyler - AI Concierge	CGA	Grant Garrison	HPU	N/A
Professional					
1	HMoK - Aloha Birds	Code With Aloha	Michael Avendano	N/A	N/A
2	Tyler - AI Concierge	Married With Children	John Johnson	N/A	N/A
3	HMoK - Aloha Birds	Snake Snacks	Chase Lee	N/A	N/A

JOSH GREEN, M.D.
GOVERNOR
KE KIAʻĀINA

KEITH A. REGAN
COMPTROLLER
KA LUNA HOʻOMALU HANA LAULĀ

CHRISTINE M. SAKUDA
CHIEF INFORMATION OFFICER
LUNA ʻENEHANA

STATE OF HAWAIʻI | *KA MOKUʻĀINA O HAWAIʻI*
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES | *KA ʻOIHANA LOIHELU A LAWELAWE LAULĀ*

OFFICE OF ENTERPRISE TECHNOLOGY SERVICES | *KEʻENA HOʻOLANA ʻENEHANA*

P.O. BOX 119, HONOLULU, HAWAII 96810-0119

December 26, 2024

The Honorable Governor Josh Green, M.D.

The Honorable Ronald D. Kouchi
President of the Senate
and Members of the Senate
Thirty-Third State Legislature
State Capitol, Room 409
Honolulu, Hawaiʻi 96813

The Honorable Nadine K. Nakamura
Speaker and Members of the
House of Representatives
Thirty-Third State Legislature
State Capitol, Room 431
Honolulu, Hawaiʻi 96813

Aloha Governor Green, Senate President Kouchi, Speaker Nakamura, and Members of the Legislature:

Pursuant to HRS section 27-43, we respectfully submit the Hawaiʻi Information Technology Strategic Plan.

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

Sincerely,

Keith A. Regan
Comptroller

Christine M. Sakuda
Chief Information Officer

Attachments (1)

STATE OF HAWAI'I INFORMATION TECHNOLOGY STRATEGIC PLAN

Contents

BACKGROUND, PURPOSE, METHODOLOGY

BACKGROUND

The Office of Enterprise Technology Services (ETS) was established by Hawaiʻi Revised Statutes §27-43 (HRS §27-43) and is a division of the Department of Accounting and General Services (DAGS). 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, serves on the Cabinet and reports directly to the Comptroller in DAGS. A key responsibility of the CIO is to develop, implement and manage the state information technology strategic plan (the IT Strategic Plan).

The first Hawaiʻi Information Technology Strategic Plan was developed in 2012 with input from diverse stakeholders including the ETS staff, leaders from departmental business and IT staff, and members of the community in accordance with HRS §27-43. HRS §27-43, requires the Strategic Plan to be updated once every four years and submitted to the Governor and legislature. The Plan was subsequently updated in 2019 and 2021 - with an update due in January 2025.

We would like to thank Governor Josh Green, M.D. for his support in guiding our state's technology efforts.

PURPOSE

The purpose of this Strategic Plan is to:

- Clearly articulate the State Information Technology future vision, mission, strategies, and specific IT-related goals to achieve those strategies.
- Establish a framework for implementation of the plan over the 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 Hawaiʻi Revised Statutes §27-43.

METHODOLOGY

An IT Strategy starts with understanding the business context. Alignment with state and department goals and priorities is a key success factor.

The State CIO sponsored a Business Context Discovery Workshop that was facilitated by Info-Tech Research Group. This took place from November 4th to November 8th 2024.

Interview sessions were held with 16 department leaders and staff to gather facts and information about their business priorities in the context of department missions. Through candid and open discussion, leaders shared their focus areas and challenges for the next 4-year planning horizon.

Several key business priorities emerged from these discussions:

Key Shared Business Priorities	Description
Deliver State Priorities & Department Services	While the respective missions of State of Hawai'i Executive Branch departments vary substantially, there is a shared focus on providing efficient and effective services to customers. Commonly, there is an intention to expand and expedite service delivery using automation and digital delivery channels. Departmental initiatives and goals are tied directly to articulated state goals such as emergency response, sustainable growth, environmental responsibility, community resilience, and public safety.
Improve Internal Department Efficiency	Departmental leadership is universally focused on streamlining internal processes and workflows to free up resources and bridge the staffing gaps to enhance and expand services and increase efficiency.
Manage Department Technology Strategically	Departmental leadership acknowledged the critical role that information technology plays in meeting their goals. There is a strong desire to collaborate on strategic technology investments to facilitate information sharing, reduce risk presented by legacy systems, and achieve economies of scale through shared services and contract management.
Make Data-Driven Decisions	Data is central to making informed decisions that lead to positive outcomes. There are interdependencies between the data that departments collect and its use in delivering holistic services. Departments are committed to

Key Shared Business Priorities	Description
	investing in technology platforms that enable appropriate data sharing for improved service delivery and adherence to regulatory requirements - while maintaining appropriate levels of data privacy and security.
Explore & Leverage AI Capabilities	State leadership recognizes the strategic potential of AI to empower employees and automate information and service delivery. Department leaders consistently express advocacy for unified governance of AI to ensure its potential is responsibly realized across the state government.
Leverage Enterprise Shared Services	Departments are eager to take advantage of the expertise and economies of scale that can be accomplished through coordinated investment in key technologies that are commonly desired or used by departments. Leadership identified cybersecurity as a service, software contract negotiation and licensing management, and data-as-a-service (data hub) as top near-term opportunities for shared services. In addition, governance for establishing and deploying AI policy, cybersecurity policy, data sharing agreements, standard technology contract terms and conditions, and IT job role classifications are highly desired.

Leveraging the *manaʻo* (meaning knowledge, belief) of department directors, the State CIO sponsored an IT Strategy workshop, held December 3rd to 6th 2024 and facilitated by Info-Tech, which brought IT leadership across the state together to reflect on Governor Green's priorities, the insights provided by departmental leadership, and the state's collective accomplishments toward achieving its current IT strategic plan. IT leadership worked together to identify new priorities and actions to advance the effective use of technology statewide in achieving its goals.

The result is the following updated IT Strategic Plan 2025, which outlines our core vision, mission and values for the State of Hawai'i information technology and our next actions for accomplishing these critical goals.

VISION, MISSION, CORE VALUES

VISION STATEMENT

Transformative information and technology-enriched government that serves all the people of Hawai'i and the 'āina[1]

MISSION

Enable technology-enhanced, streamlined business processes, and decisions empowering the state's workforce to serve excellent outcomes for the people of Hawai'i and the 'āina.

EMBODYING THE SPIRIT OF ALOHA

We strive to guide the Strategic Plan through the Aloha Spirit. In 1970, the definition of the "Aloha Spirit" was created by renowned poet, philosopher and treasured kupuna, Pilahi Paki at a Governor's Conference that included Hawaiian elders and non-Hawaiian civic leaders from across the state to grapple with issues facing Hawai'i at the time. Pilahi Paki described the Aloha Spirit as the coordination between mind and heart within each person and are traits that express the charm, warmth and sincerity of Hawai'i's people. Pilahi Paki's definition of the Aloha Spirit was encoded into Hawai'i State law in 1986[2]. It is said that a person cannot do one of the principles without truly doing all and if you are not doing one, you are not doing any. So, to be "living ALOHA" is to live all of the principles.

Acronym	Word	Description
A	Akahai	To feel and to think with kindness
L	Lōkahi	To stand firmly in unity and harmony
O	Olu'olu	To balance your thinking as well as your feelings
H	Ha'aha'a	To be humble; humility expressed with modesty
A	Ahonui	To persevere; learn to apply patience; to be patient you learn to stand along

[1] 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 present in the culture that makes Hawai'i Hawai'i.

[2] Source of Aloha Spirit Hawai'i Revised Statutes HRS 0005-0007: capitol.hawaii.gov/hrscurrent/Vol01_Ch0001-0042F/HRS0005/HRS_0005-0007_0005.htm

GUIDING PRINCIPLES

The Strategic Plan is guided by a set of principles that guide and support the operationalization of the Strategic Plan. The principles guide not only what the CIO, ETS and the Strategic Plan stakeholders choose to do, but also what they choose not to do.

Principle	Description
Customer First	We deliver the best experiences to our internal customers and external constituents with our services and products.
Enterprise value & collaboration focus	We aim to provide maximum long-term benefits to the enterprise as a whole while optimizing total costs of ownership and risks.
Fit for purpose	We maintain capability levels and create solutions that are fit for purpose without over engineering them.
Scalable & sustainable	We maximize reuse of existing assets. If we can't reuse, we procure externally. As a last resort, we build custom solutions.
Evidence-based decision making	We empower evidence decision making through the effective use of data and AI in compliance with our data and AI governance policy.
Controlled technical diversity	We control the variety of technology platforms we use.
Managed security	We manage security enterprise-wide in compliance with our security governance policy.
Compliance with laws & regulations	We operate in compliance with all applicable laws and regulations.
Seek innovation & simplicity	We challenge ourselves to use innovative technology to reduce complexity and take the benefit of emerging technologies. We choose the simplest solutions and aim to reduce operational complexity of the enterprise.

IT STRATEGIES

Our strategic IT Goals reflect the seven Strategies necessary to take full advantage of the state's investments and attain long-term success. To view these strategic IT Goals in the context of the entire IT Strategic Plan, please see the "Strategy on a Page" on page 9.

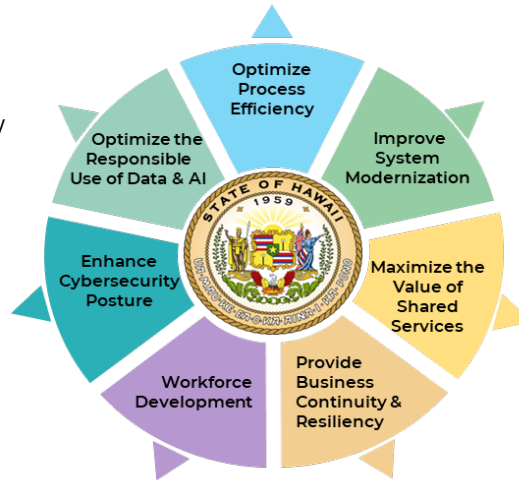| IT Strategies	IT Goals
Optimize Process Efficiency	• Enable and optimize digital services for constituents • Integrate departmental IT planning & IT budgeting • Invest in business process improvement • Digitize towards paperless processes
Improve System Modernization	• Improve IT service lifecycle management • Manage IT architecture in each department • Improve IT vendor delivery • Define architecture & technology standards
Maximize the Value of Shared Services	• Establish a collaborative statewide shared service strategy • Develop a cost-sharing approach for shared IT services • Manage the statewide IT service catalog • Enable an optimized ERP system to deliver business capabilities
Provide Business Continuity & Resiliency	Identify & mitigate: • Risks to end-of-life legacy applications • Continuity risks to paper/non-digital processes • Resiliency risks related to Internet connectivity • Risks to recovery efforts
Build a Modern IT Workforce	• Improve HR process & talent acquisition • Develop training, upskilling, & career pathing opportunities • Modernize IT job classifications & pay scales • Develop long-term workforce planning
Enhance Cybersecurity Protection	• Protect critical infrastructure & data • Promote inter-departmental collaboration & alignment • Provide cybersecurity training & upskilling opportunities • Define and implement minimum security standards
Optimize the Responsible Use of Data & AI	• Protect privacy, ensure security & compliance • Improve quality, accuracy & reliability • Promote accessibility, transparency & inter-operability • Ensure equity & ethically responsible use of data & AI

State of Hawaii IT Strategic Plan 2025
Strategies and Goals

Vision
Transformative information and technology enriched government that serves all the people of Hawaiʻi and the ʻāina

Mission
Enable technology-enhanced, streamlined business processes, and decisions empowering the state's workforce to serve excellent outcomes for the constituents and the ʻāina

Optimize Process Efficiency
- Enable and optimize digital services for constituents
- Integrate departmental IT planning & IT budgeting
- Invest in business process improvement
- Digitize to achieve paperless processes

Optimize the Responsible Use of Data & AI
- Protect privacy, ensure security & compliance
- Improve quality, accuracy & reliability
- Promote accessibility, transparency & inter-operability
- Ensure equity & ethically responsible use of data & AI

Improve System Modernization
- Improve IT service lifecycle management
- Manage IT architecture in each department
- Improve IT vendor delivery
- Define architecture & technology standards

Enhance Cybersecurity Posture
- Protect critical infrastructure & data
- Promote inter-departmental collaboration & alignment
- Provide cybersecurity training & upskilling opportunities
- Define & implement minimum security standards

Maximize the Value of Shared Services
- Establish a collaborative statewide shared service strategy
- Develop cost-sharing approach for shared IT services
- Manage the statewide IT service catalog
- Enable an optimized ERP system to deliver business capabilities

Guiding Principles
- *Customer first*
- *Enterprise value & collaboration focus*
- *Fit for purpose*
- *Scalable & sustainable*
- *Evidence-based decision making*
- *Controlled technical diversity*
- *Managed security*
- *Compliance with laws & regulations*
- *Seek innovation & simplicity*

Build a Modern IT Workforce
- Improve HR process & talent acquisition
- Develop training, upskilling, & career pathing opportunities
- Modernize IT job classifications & pay scales
- Develop long-term workforce planning

Provide Business Continuity & Resiliency
Identify & mitigate:
- Risks to end-of-life legacy applications
- Continuity risks to paper/non-digital processes
- Resiliency risks related to Internet connectivity
- Risks to recovery efforts

Strategic IT Drivers
- *Maximize the use of responsible AI*
- *Prioritize outcomes over features*
- *Streamline online & mobile citizen experience*
- *Zero-trust cybersecurity*

BUSINESS-TO-IT ALIGNMENT

The state's IT Strategies are designed to support the key shared statewide business priorities:

Business Priorities Supported	IT Strategies
• *Deliver State Priorities & Department Services* • *Improve Internal Department Efficiency* • *Manage Department Technology Strategically*	**Optimize Process Efficiency**
• *Deliver State Priorities & Department Services* • *Manage Department Technology Strategically*	**Improve System Modernization**
• *Manage Department Technology Strategically* • *Leverage Enterprise Shared Services*	**Maximize the Value of Shared Services**
• *Deliver State Priorities & Department Services* • *Improve Internal Department Efficiency*	**Provide Business Continuity & Resiliency**
• *Deliver State Priorities & Department Services* • *Improve Internal Department Efficiency* • *Explore & Leverage AI Capabilities*	**Build a Modern IT Workforce**
• *Deliver State Priorities & Department Services* • *Improve Internal Department Efficiency* • *Manage Department Technology Strategically* • *Explore & Leverage AI Capabilities* • *Leverage Enterprise Shared Services*	**Enhance Cybersecurity Protection**
• *Make Data-Driven Decisions* • *Explore & Leverage AI Capabilities*	**Optimize the Responsible Use of Data & AI**

STRATEGY 1: Optimize Process Efficiency

GOAL 1.1: Enable and optimize digital services for constituents

- Increase both the coverage and the quality of the state's services offered with digital means.
- Provide both web and mobile applications, as appropriate, for accessing the state's services.

GOAL 1.2: Integrate departmental IT planning & IT budgeting

- Establish and maintain departmental IT strategic plans and roadmaps.
- Ensure that all IT expenditures are closely aligned with the departmental strategic IT goals to maximize expected benefits.
- Rank and select IT initiatives based on transparent expected benefits – as well as risks related to legacy technologies.
- Establish and enforce project portfolio management and benefits realization best practices.

GOAL 1.3: Invest in business process improvement

- Budget for establishing business process metrics and identification of sub-optimal processes for both constituent services and the state's internal support processes.
- Identify high-value processes as targets for process improvement and automation.
- Develop technology reference architectures for optimizing the state's internal processes and workflows.

GOAL 1.4: Digitize to achieve paperless processes

- Continue moving the state towards paperless operations.
- Integrate electronic signature approvals when appropriate.

STRATEGY 2: Improve System Modernization

GOAL 2.1: Improve IT service lifecycle management
- Implement standardized IT service lifecycle frameworks.
- Invest in service lifecycle management tooling.

GOAL 2.2: Manage IT architecture in each department
- Prioritize IT architecture management.
- Establish a resource plan for documenting current IT architecture as well as for planning and managing target state IT architecture.

GOAL 2.3: Improve IT vendor delivery
- Enhance project outcomes by standardizing risk management across IT projects, improving vendor delivery quality, and prioritizing critical project management skills.
- Develop policy and guidelines for utilization of contract management and vendor performance management services.
- Streamline policy and practice for utilization of Independent Validation and Verification vendor contracts.

GOAL 2.4: Define architecture & technology standards
- Establish technology reference architecture blueprints for the state's cloud-based IT modernization solutions.
- Establish policy and guidance for the use of reference architectures in IT budgeting and procurement.

STRATEGY 3: Maximize the Value of Shared Services

GOAL 3.1: Establish a collaborative statewide shared service strategy

- Establish a working group and a plan for a statewide shared service strategy.

GOAL 3.2: Develop a cost-sharing approach to shared IT services

- Design a transparent and equitable cost allocation framework that determines how expenses for shared IT services will be distributed among participating departments.

GOAL 3.3: Manage the statewide IT service catalog

- Collaborate statewide to establish a centralized service catalog that clearly defines available shared IT services.
- Invest in appropriate service management tooling.
- Develop a process for continuously evaluating and improving service offerings.

GOAL: 3.4 Enable an optimized ERP system to deliver business capabilities

- Invest in modernizing and optimizing the state's shared ERP system.
- Focus on integration, user accessibility, and scalability to meet evolving state needs.

STRATEGY 4: Provide Business Continuity & Resilience

GOAL 4.1: Identify & mitigate risks to end-of-life legacy applications

- Improve the data quality and completeness of departmental application portfolios.
- Prioritize end-of-life applications for replacement or modernization based on their impact on critical services and associated risks.

GOAL 4.2: Identify & mitigate continuity risks to paper/non-digital processes

- Prioritize analyzing dependencies on paper-based processes.
- Develop strategies to digitize and automate critical workflows, ensuring operational continuity during disasters or disruptions.

GOAL 4.3: Identify & mitigate resilience risks related to Internet connectivity

- Robust internet connectivity is essential to ensuring uninterrupted operations, maintaining interoperable communications platforms, and sustaining emergency support functions.

GOAL 4.4: Identify & mitigate risks to recovery efforts

- Invest in developing a robust disaster recovery plan for all critical information systems.

STRATEGY 5: Build a Modern IT Workforce

GOAL 5.1: Improve HR process & talent acquisition

- Optimize HR processes to attract top IT talent.
- Enhance recruitment strategies to fill critical skill gaps in the IT workforce.

GOAL 5.2: Develop training, upskilling, & career pathing opportunities

- Improve the state's IT training and re-skilling to address current and emerging IT skills needs.
- Create career pathing opportunities to support employee growth and retention.

GOAL 5.3: Modernize IT job classifications & pay scales

- Upgrade IT job classifications and pay scales to reflect market competitiveness and to attract high-caliber professionals.

GOAL 5.4: Develop long-term workforce planning

- Create a long-term IT workforce strategy that anticipates future needs.
- Recognize the continuing shift towards Software as a Service and managed services – and plan for optimal state roles and skills needed.

STRATEGY 6: Enhance Cybersecurity Protection

GOAL 6.1: Protect critical infrastructure & data

- Implement safeguards to protect assets, data, and systems required by department operations to mitigate risks.
- Integrate cybersecurity as a core component of a resilience strategy to prevent, withstand, and recover from cybersecurity incidents, system failures, and natural disasters.

GOAL 6.2: Promote inter-departmental collaboration & alignment

- Develop a culture of shared responsibility to collaborate across all departments and align cybersecurity initiatives with business objectives so that measures are an enabler and not barrier to department goals.

GOAL 6.3: Provide cybersecurity training & upskilling opportunities

- Train employees to recognize and respond to cybersecurity threats, equipping them with knowledge to adopt modern practices, and to stay current with emerging threats and technologies.

GOAL 6.4: Define & implement minimum security standards

- Create a clear and enforceable set of security baselines to appropriately address needs of each department, measure the adoption of prescribed measures, and support remediation efforts to meet or exceed the baselines.

STRATEGY 7: Optimize the Responsible Use of Data & AI

GOAL 7.1: Protect privacy, ensure security & compliance

- Create data classification and masking standards for all data and AI use. Protect data privacy according to Federal and State laws & regulations.

GOAL 7.2: Improve quality, accuracy & reliability

- Establish standards, procedures and tools to manage and improve data quality.
- Define data and AI governance according to data quality to promote trust.

GOAL 7.3: Promote accessibility, transparency & inter-operability

- Catalog state data and integrate master data to enable citizen-centric solutions.
- Establish data sharing standards and recommend tools to improve inter-operability.
- Identify owners of data sets and AI use cases with clearly defined responsibilities.
- Update open data standards to ensure governance & transparency in data & AI use.

GOAL 7.4: Ensure equity & ethically responsible use of data & AI

- Build data and AI governance framework to ensure equity throughout their lifecycle.
- Create an auditing mechanism to ensure equitable and ethical use in data and AI.

IMPLEMENTATION APPROACH

The statewide IT Strategy reflects the collective goals and initiatives of all departments toward a holistic approach to technology investment and management that delivers effective and efficient operations and services. The execution of the plan will occur through a combination of statewide IT governance and continuous collaboration as well as individual departmental actions.

DEPARTMENTAL IT PLANS

A key aspect of the implementation of the state's overall IT strategy is stated in Section (4) of the Hawaiʻi Revised Statutes §27-43,

> *"The chief information officer shall work 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."*

It is essential to align the state's overall IT plan with each department's strategic and operational IT plans. With CIO's leadership, ETS and departments will work together to achieve this alignment – and establish living IT plans for all departments, and if deemed necessary, divisions and attached agencies as well.

IT STRATEGY WORKING GROUPS

Each of the seven IT Strategies shall have a Working Group to advance both the statewide governance of each IT Strategy and the implementation of the goals of each strategy within departmental IT plans.

CONCLUSION

The technology leadership of Hawai'i is committed to driving technological excellence and innovation. Our Strategic Plan outlines a clear path forward, focusing on enhancing foundational technologies, transforming legacy applications, delivering new business solutions, driving innovation, and investing in our employees.

Our proactive approach to innovation and close collaboration with our partner departments ensure that we are not only meeting current needs but also anticipating future challenges and opportunities. Through our commitment to operational readiness, resiliency and collaboration, we will continue to adapt to the evolving technology landscape and deliver high-quality digital services and business capabilities to our community.

MAHALO NUI LOA

We would like to extend a very special thanks to everyone who participated in our strategic planning process:

Name	Department	Name	Department
Keith Regan	Department of Accounting and General Services	Kenneth Fink	Department of Health
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Anne Lopez	Department of the Attorney General	Brian Furuto	
Matthew Dvonch		Kyungin Kim	
Brenden Kinoshita		Ryan Yamane	Department of Human Services
Garret Murayama		Mark Choi	
Jian Zhu		Phan Sirivattha	
Stuart Okumura		Ryan Shimamura	
Wayne Kouchi		Jade Butay	Department of Labor and Industrial Relations
Luis Salaveria	Department of Budget and Finance	William Kunstman	
Keith Miyamoto		Bennett Yap	
Reid Moriyama		Ryan Buillard	
Sabrina Nasir		Ryan Kanaka`ole	Department of Land and Natural Resources
Todd Nishida		Lila Loos	
Tracy Ban		Jordan Lowe	Department of Law Enforcement
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Dane Wicker		Jared Redulla	
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Nadine Ando	Department of Commerce and Consumer Affairs	Pamela Sturz	
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Bryan Kodama		Gary Suganuma	Department of Taxation
David Shak		Corey Higa	
David Takashima		Edwin Sniffen	Department of Transportation
Antonio Querubin	Department of Defense	Darren Cantrill	
Allen Kansaki		Garret Yoshimi	University of Hawaii
Keith Hayashi	Department of Education	Christine Sakuda	Office of Enterprise Technology Services
Michael Otsuji		Alfredo Bonilla	
Kali Watson	Department of Hawaiian Home Lands	Arnold Kishi	
Katie Lambert		Brian Frey	
Jerry Alambatin		Bryce Fujii	

Name	Department	Name	Department
Catherine Arellano-Alcotas	Office of Enterprise Technology Services	Bill Kumagai	Transform Hawaii Government
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Kelli Wang		Howard Feng	
Lenora Fisher		Aundria Giusti	
Rebecca Cai		Howard Feng	
Sonny Kekipi			
Todd Omura			
Tom Ku			
Vince Hoang			

Enterprise Financial System RFP Process Overview

Presented by:

Greg Dalin,
Program Manager

State of Hawai'i
Office of Enterprise Technology Services – Ke'ena Ho'olana 'Enehana

1

EFS Project Vision

Enterprise Financial System (EFS) is a **business transformation project** that replaces and improves upon FAMIS, the State's 55- year-old finance system.

The new system will be supported by modernized technology and the latest in cybersecurity best practices.

It will accurately record and report financial transactions for the State of Hawaii and will unify traditionally separate IT systems and processes into an integrated financial management system used across State government.

2

RFP Process Breakdown

Develop RFP	Vendor Demos + Re-Scoring	Request Best and Final Offer (BAFO), if needed
Post Solicitation	Evaluate Proposals	Develop Award Determination
Pre-Proposal Conference	Receive Questions and Issue Answers/Addenda	Issue Notice of Award & Post Award
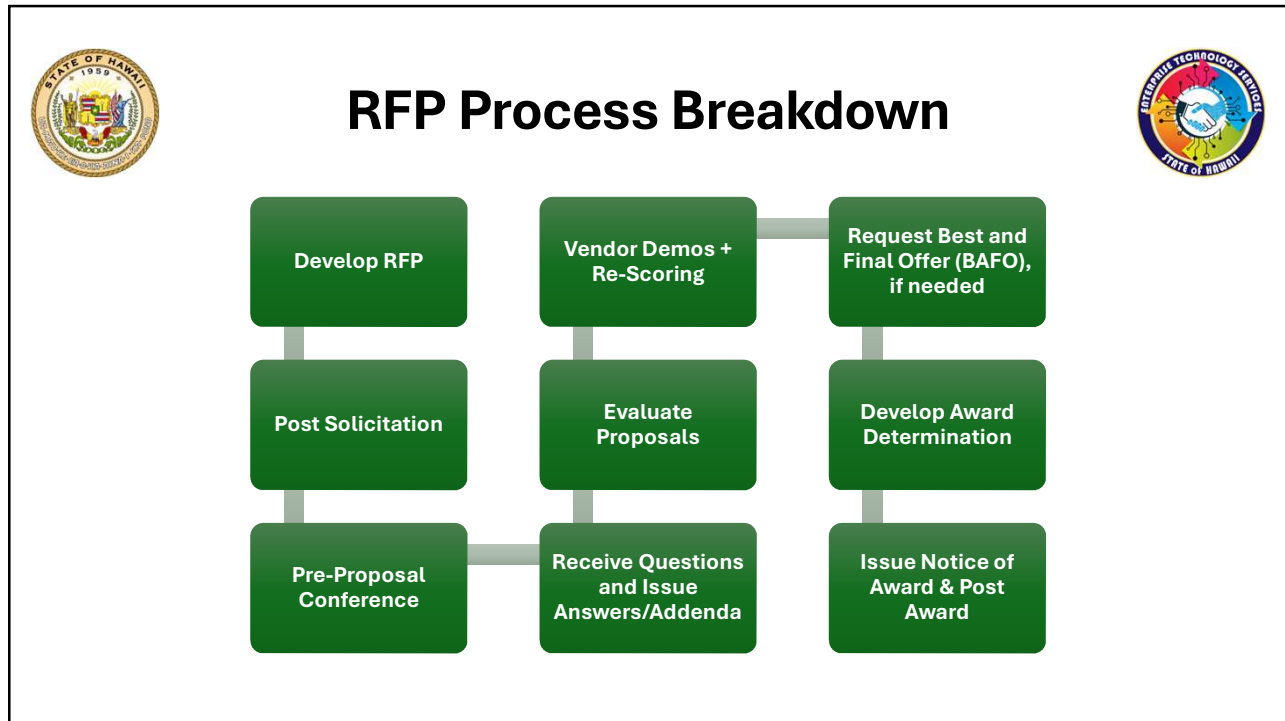
3

Phase 1 - Development & Solicitation

Develop the RFP to outline project goals, requirements, and evaluation criteria clearly.

Post solicitation via HIePRO to invite vendors.

Conduct a pre-proposal conference.

4

Phase 2 - Question & Answer Period

Vendors can submit questions for clarification.

Issues answers or addenda to ensure all vendors have the same information.

5

Phase 3 - Proposal Submission and Evaluation

Receive and evaluate proposals based on documented criteria (e.g., experience, cost, technical approach)

Attend in-person vendor demonstrations for priority-listed vendors to validate capabilities and clarify solutions

Update proposal evaluations based on insights gained from vendor demonstrations

6

Phase 4 - Best and Final Offer (BAFO)

Request BAFO for vendors to refine proposals and clarify terms

Evaluate BAFO submissions to finalize vendor selection

7

Phase 5 – Award and Post-Award

Develop award determination to ensure vendor alignment with project goals

Issue Notice of Award and proceed with post-award process

8

4

Why This Process Matters

Promotes transparency and fairness

Ensures selection of the most qualified vendor

Aligns vendors capabilities with EFS Project Requirements

9

Mahalo

10

In 2024, we have conducted Data & AI activities from strategic planning, policy development, to use case identification, tool evaluation and architecture design

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
• Data & AI guiding principles	• Data& AI governance framework	• Data management landscape	• Data literacy training curriculum	• Data glossary Terms	• AI literacy training contents	• Data governance tool evaluation	• State departmental data leads identification	• Data governance work group	• Geospatial data leads identification	• Geospatial Data Governance Work Group
• Data & AI vision, mission, & strategy	• Data & AI approach	• Policies development roadmap	• Data & AI Summit	• Data quality guidelines	• Action plan for SR69	• Data analytic tool evaluation	• Master data management tool evaluation	• Open data guidelines	• Open data decision tree	• AI assistant technologies Guidelines
				• Data privacy guidelines	• Data catalog guidelines	• Data classification guidelines	• Data retention guidelines	• Data quality guidelines Published		• AI literacy training

Hawaii's Data and AI Strategy: drive trust, transparency, citizen satisfaction, and innovation through responsible use of data and AI in public services

| Vision	Mission
To drive **trust, transparency**, **citizen satisfaction, and innovation** by improving security, quality, accessibility, accountability of data and AI.	Cultivate a data-driven, impact-focused, and citizen-centric culture to promote data sharing and integration, privacy protection, evidence-based policy making, and responsible use of data and AI.

Goals	Objectives
1 Protect privacy, ensure security and compliance	• Create data classification and masking standards for all data and AI use. • Protect data privacy according to Federal and State laws & regulations.
2 Improve quality, accuracy and reliability	• Establish standards, procedures and tools to manage and improve data quality. • Define data and AI governance according to data quality to promote trust.
3 Promote accessibility and inter-operability	• Catalog all state data and integrate master data to enable citizen-centric solutions. • Establish data sharing standards and recommend tools to improve inter-operability.
4 Drive accountability and transparency	• Identify owners of data set and AI use cases with clearly defined responsibilities. • Update open data standards to ensure governance & transparency in data & AI use.
5 Ensure equity and ethical responsible use of data & AI	• Build data and AI governance framework to ensure equity throughout their lifecycle. • Create auditing mechanism to ensure equitable and ethical use in data and AI.

https://data.hawaii.gov/

To support the 5 data and AI strategic goals, we focused on 14 deliverables, with 10 completed in 2024 and 4 to be completed in 2025
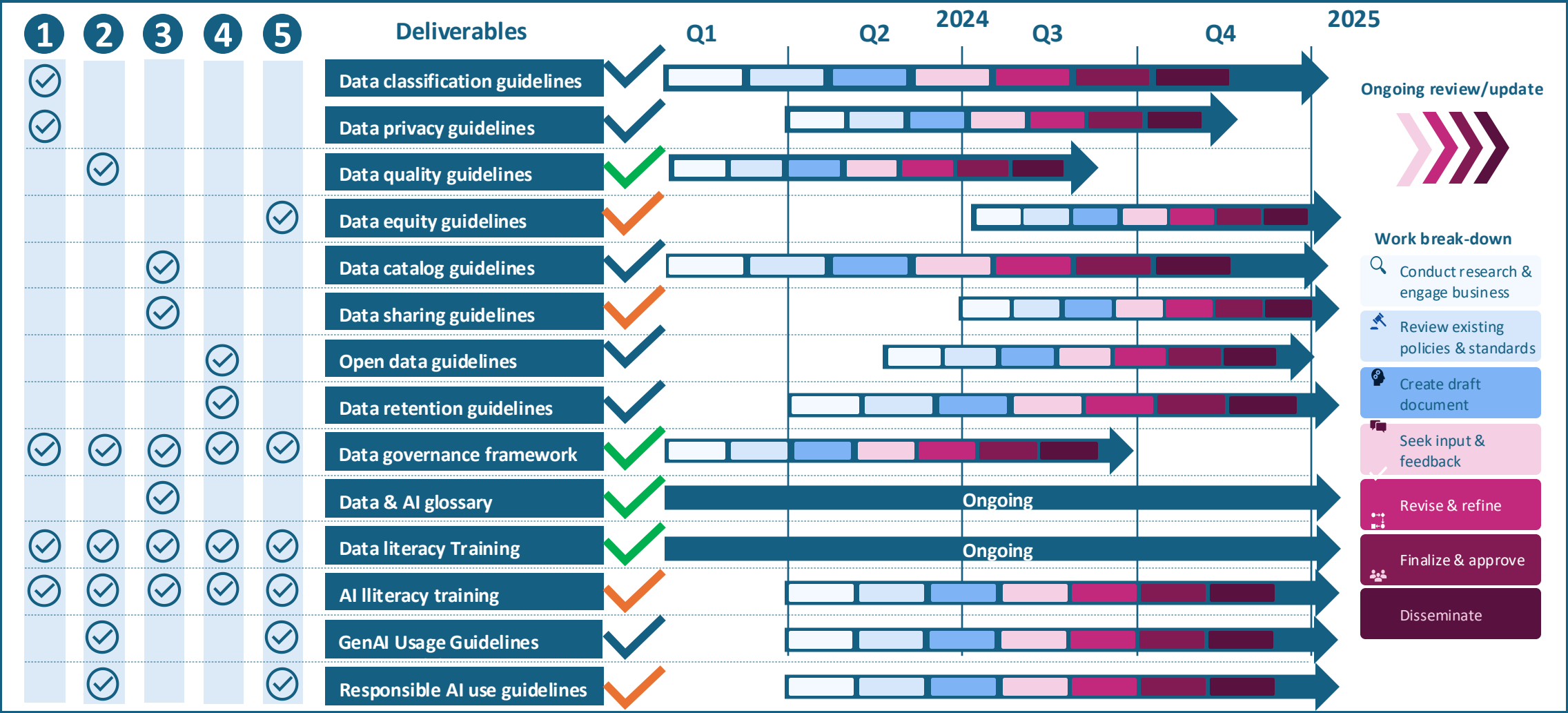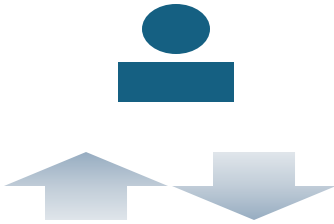
To support our data and AI strategy, we need a set of statewide data and AI tools to responsibly use data and AI and enable secured data sharing for inter-operability and efficiency

One Front Door to citizens

Statewide data/AI platforms & staff for:
- **Governance for trust**
- **Citizen 360 view**
- **Geospatial relevance**
- **ML/AI capabilities**
- **Evidence-based decisions**

Statewide data/AI platforms

The need:
To establish state Data/AI team with tools to break down data silos for inter-operability, improve data/AI quality for trust & accuracy, protect data for compliance, create central citizen view for disaster readiness, and enable map data for emergency response, and ensure responsible use of AI for efficiency.

The value:
Every tool is critical to support top stater initiatives such as housing, disaster readiness, wellness, sustainability, and homelessness by enabling real time evidence-based decisions. All four tools are needed to 'facilitate data sharing', 'improve inter-departmental and intra-departmental decision-making' as required by ACT167 of 2022.

The impacts without it:
1. Loss of trust from constituents with no controlled use of data or AI.
2. Poor decision and policy making without quality data available.
3. Poor efficiency with more data silos.
4. Poor citizen satisfaction with lack of citizen-centric services due to no statewide data sharing.
5. High cost managing data in silos versus a statewide cost-effective approach.
6. Not ready for next disaster without enough geospatial data services and licenses.

Data silos in departments
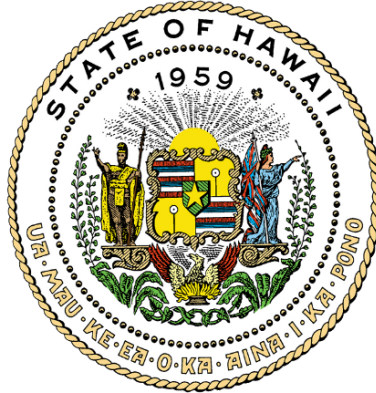
STATE OF HAWAI'I
KA MOKU 'ĀINA O HAWAI'I

DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
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CHRISTINE M. SAKUDA
CHIEF INFORMATION OFFICER
LUNA 'ENEHANA

WINNERS DEMONSTRATE TECHNOLOGY SKILLS AT NINTH ANNUAL HAWAI'I CODE CHALLENGE
High School, College, Professional Teams Compete in IT-Focused Event

FOR IMMEDIATE RELEASE
November 22, 2024

HONOLULU — Nine technology-focused teams comprised of high school students, college students, and young professionals took home $18,000 in awards during the ninth Hawai'i Annual Code Challenge (HACC) on Nov. 16 at the University of Hawai'i West O'ahu.

The HACC is an annual event that solicits challenges from state departments and

community groups and asks student, amateur and professional coders to develop technology applications to help solve specific problems. This year's challenges ranged from improving the state's open data portal, to better energy efficiency, to creating a game to help identify bird species in Hawai'i.

About 120 people including friends, family and supporters watched as 17 finalist teams presented their solutions to six different challenges before a panel of judges. Prizes were $3,000 for first place, $2,000 for second place, and $1,000 for third place in three categories (high/middle school, college and professional).

"I am so proud of the teams' ability to solve these challenges, under the hackathon time constraint, in innovative ways," said Hawai'i Chief Information Officer Christine M. Sakuda. "They had fun while using their technology, problem solving, and public presentation skills to create the best possible solutions."

UH President David Lassner told the competitors that the HACC is an opportunity to develop and share both their technical and soft skills.

"As the former VP for Information Technology and now President, I have spent a lot of time trying to help Hawai'i develop a stronger tech sector to diversify our economy," Lassner said. "The HACC is a way we bring together those who want to develop technology solutions with public service providers who have challenges to address. This event shows off both your development skills as well as everything else you need to thrive in any workplace including communication, collaboration, initiative, and grit."

The HACC was created to encourage engagement between Hawai'i residents and the local technology community to modernize state functions and services for a more effective, efficient, and open government. Another objective of the hackathon is to strengthen the pipeline of the IT workforce and expand the tech industry in our state.

The HACC would not be possible without the financial and in-kind support of local and national technology businesses and educational and non-profit partners.

"Microsoft is incredibly proud to support the Hawaii Annual Code Challenge," said Azure Director of State & Local Government West Rick Joyer. "This event is a fantastic opportunity to showcase the exceptional problem-solving skills and innovative talent of local students and residents across the State of Hawai'i. We are committed to fostering a vibrant tech community and empowering the next generation of developers right here in Hawai'i."

By the Numbers

- 158 participants
- 47 high school students
- 41 teams created
- 27 projects submitted
- 17 team finalists

Challenges
- University of Hawai'i – Digital Navigator
- Tyler Hawai'i – Hawaii AI Concierge Bot
- Enterprise Technology Services – Citizen Portal on Open Data
- Hawai'i Broadband Digital Equity Office – Digital Equity Dashboard
- Hui Manu O Ku – Aloha Birds Game
- Hawai'i Keiki Museum – Energy Usage Display

Results	Challenge(s)	Team Name	Captain	Affiliation	Category	Advisor
1	HMoK - Aloha Birds	**Freshy**	Khaen Dumbrique	Waipahu	H/M School	Cindy Takara
2	Tyler - AI Concierge	**Jammy**	Carl James Dumbrique	Waipahu	H/M School	Emily Haines-Swatek
3	HBDEO - Digital Equity	**Innovate**	Chelsey Miguel	King Kekaulike (Maui)	H/M School	Cindy Takara
1	HKM - Energy Usage	**Kilowatt**	Gabrielle Dang	UH Manoa	College	
2	ETS - Portal	**HEX**	Jarell Ballesteros	UH Manoa	College	
3	Tyler - AI Concierge	**CGA**	Grant Garrison	HPU	College	
1	HMoK - Aloha Birds	**Code With Aloha**	Michael Avendano		Professional	
2	Tyler - AI Concierge	**Married With Children**	John Johnson		Professional	
3	HMoK - Aloha Birds	**Snake Snacks**	Chase Lee		Professional	

Sponsors
Microsoft, Verizon, Google for Government, Transform Hawai'i Government, Hawaiian Airlines, Salesforce, Tyler Technologies, eWorld Enterprise Solutions, Hawai'i Data Collaborative, AT&T, AWS, Hawaiian Electric, and DRFortress.

Partners
IMAG Foundation, the Hawai'i Department of Education Computer Science Team, UH Mānoa Information & Computer Sciences, Hawai'i Pacific University, Pi'ikū

Co., and the Chamber of Commerce Hawaiʻi.

For more information, visit https://hacc.hawaii.gov/

# # #

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