

2017 ANNUAL REPORT  
OF THE  
CHIEF INFORMATION OFFICER,  
STATE OF HAWAI'I

SUBMITTED DECEMBER 28, 2017  
TO THE  
TWENTY-NINTH STATE LEGISLATURE

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**2017 Annual Report of the Chief Information Officer, State of Hawai'i**  
December 28, 2017

Pursuant to sections 27-43(a)(6) and 27-43(e), Hawai'i Revised Statutes (HRS), the Chief Information Officer (CIO) of the State of Hawai'i submits this report on the status and implementation of the State information technology (IT) 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.

**STATUTORY AUTHORITY AND PROPOSED ORGANIZATIONAL STRUCTURE**

Pursuant to Act 58, Session Laws of Hawai'i (SLH) 2016, all functions of the programs formerly associated with the ex-Office of Information Management and Technology and ex-Information and Communication Services Division are consolidated within the new Office of Enterprise Technology Services (ETS) as led by the CIO, effective July 2, 2016.

*As amended by Act 58, ETS' statutorily mandated duties include the following:*

Summary	Statutory Reference
<p>Develop, implement, and manage statewide IT governance and State IT strategic plans, as well as develop and implement statewide technology standards. Act 58 expanded the CIO authority to work with each executive branch department and agency to develop and maintain its respective multi-year IT strategic and tactical plans and roadmaps, and coordinate each executive branch department and agency's IT budget request, forecast and procurement purchase to ensure compliance with the department or agency's strategic plan and roadmap and with ETS' IT governance processes and enterprise architecture policies and standards.</p> <p>ETS also assumed functions of the former ICSD: provide centralized computer information management and processing services; coordination in the use of all information processing equipment, software, facilities, and services in the executive branch of the State; consultation and support services in the use of information processing and management technologies to improve the efficiency, effectiveness, and productivity of State government programs; and establish, coordinate, and manage a program to provide a means for public access to public information and develop and operate an information network in conjunction with overall plans for establishing a communication backbone for State government.</p>	<p>HRS section 27-43</p>
<p>Provide for periodic security audits of all executive branch departments and agencies regarding the protection of government information and data communication infrastructure.</p>	<p>HRS section 27-43.5</p>
<p>Set policies, procedures and standards for each executive branch department's reasonable efforts to make appropriate and existing electronic data sets maintained by the department electronically available to the public through the State's open data portal at data.hawaii.gov or successor website.</p>	<p>HRS section 27-44</p>

Provide services through centralized web portal and Internet presence (hawaii.gov) that allow citizens to conduct business electronically with the government, in accordance with statute (i.e., Access Hawai'i Committee).	HRS chapter 27G
Provide guidance to protect personal information that is collected and maintained by State and county government agencies (i.e., Information Privacy and Security Committee).	HRS chapter 487N

*Under the proposed organizational structure, ETS' program objectives are as follows:*

**Client Services Branch** — Provide systems development, enhancement, maintenance, technical support, and consultant services for State departments and agencies to meet their business objectives.

**Enterprise Architect Branch** — Develop, implement, and manage statewide IT governance; develop, implement, and manage the State IT strategic plans; and develop and implement statewide technology standards as part of the IT Governance Office.

**Enterprise Systems Branch** — Provide ongoing operational management support for enterprise systems (e.g., enterprise payroll and human resources systems).

**Network Branch** — Provide statewide telecommunication services (e.g., network, radio, and telephone) to the executive, legislative, and judicial branches of State government, as well as telecommunications interfaces to the county governments.

**Production Services Branch** — Schedule, execute, and monitor production jobs for State departments and agencies, as well as monitor the State networks and maintain the operation of the State data center.

**Program Management Branch** — Provide program management development support for enterprise technology programs and projects (e.g., enterprise payroll).

**Security Branch** — Manage the statewide cybersecurity program to secure and protect electronic assets and data stored on State computer systems or transported through the State's networks.

**Systems Services Branch** — Provide systems administration support of the IBM Mainframe; enterprise UNIX; enterprise backup and restore; and disaster recovery.

**Technology Support Services Branch** — Provide support, maintenance, and development of hardware, software, and infrastructure for on-premise and Cloud applications.

## TOP ACCOMPLISHMENTS OF 2017

**Client Services Branch** — Worked with the Department of Accounting and General Services (DAGS) and Department of Human Resources Development (DHRD) to collect, process, and transmit 2016 Affordable Care Act information for 16,702 employees to the Internal Revenue Service; successful completion of this federal requirement prevented the State from incurring a maximum penalty of \$3 million. Also supported the second Hawai‘i Annual Code Challenge in partnership with the Hawai‘i Technology Development Corporation, nonprofit Hawai‘i Open Data, and DevLeague. With participation exceeding its inaugural year, the event was successful in engaging the local tech community in government modernization and exposing individuals to state IT career opportunities.

**Enterprise Architect Branch** — Refined mandatory governance process to ensure success for State executive branch IT programs and projects, and initiated work with departments to establish multi-year IT “roadmaps” in accordance with new authority provided by Act 58 of 2016. This work resulted in a savings of more than \$11 million dollars. The public can access the Department Dashboard to view these IT Roadmaps at [ets.hawaii.gov](https://ets.hawaii.gov). Supported the State’s Office of Planning’s (OP) Hawai‘i Statewide Geographic Information System (GIS) Program launch of a new Geospatial Data Portal ([geoportal.hawaii.gov](https://geoportal.hawaii.gov)), which provides streamlined access to hundreds of data layers, topographic maps, imagery, and developer features. The joint ETS-OP effort established enterprise licensing and hosting agreements that encourage widespread GIS software use across all State of Hawai‘i departments while achieving savings by leveraging current cloud technologies.

**Enterprise Systems Branch** — Migrated the existing executive branch Human Resource Management System (HRMS) to primary and secondary Cloud-enabled data centers.

**Network Branch** — Added redundancy and improved topology to increase reliability of the statewide network supporting the Hawai‘i Emergency Management Agency (HI-EMA); established a dedicated connection (express route) to the Microsoft Azure Cloud; and provided a high-speed fiber optic connection to the State Judiciary. Also, established new coordinated statewide price list for Centrex Telephone and Cabling Services with the State Procurement Office, and increased network bandwidth (200-fold) for State agencies in the Kona State Office Building, the Molokai State Office Building, and on other neighbor islands.

**Production Services Branch** — Effectively managed production jobs for State departments and agencies, monitored the State networks, and maintained the operation of the State data center. In conjunction with other ETS branches launched a new paperless project to reduce the number of printed reports by 50% which will result in a reduction of 20,000 pages per day.

**Program Management Branch** — As part of DAGS Accounting Division’s Enterprise Payroll and Time & Attendance Modernization (HawaiiPay) project, accomplished successful transition for the executive branch HRMS to the Cloud-enabled services environment.

**Security Branch** — Performed proactive incident response engagement to search for signs of advanced malware not typically found by commodity anti-virus or intrusion detection system technologies. Established a Cyber Security calendar of events, as described below:

- Monthly Cyber Hygiene Scans (vulnerability scans of external assets)
- Monthly E-Mail Social Engineering Exercises (simulated phishing campaigns to hawaii.gov e-mail addresses)
- Annual Table Top Exercises (simulated incident response scenarios)

- Case-by-Case Risk Assessments (security risk assessment for departments/divisions; resulting in initiatives to include vulnerability management, centralized logging, and targeted phishing)

**Systems Services Branch** — Maintained IBM Mainframe availability at 99.908 percent, and rolled out a Production Data Sharing System. Created a “locker” of parts on island for the Tax department to ensure minimal downtime of hardware failures on the old tax system.

**Technology Support Services Branch** — Completed rollout of Microsoft Office 365 for most executive branch departments; hardened the State’s Active Directory infrastructure; researched and implemented the new web platform for the State; increased adoption of Adobe Sign (electronic signature); and developed and supported the secure infrastructure of the Office of Elections.

## EXECUTIVE SUPPLEMENTAL BUDGET REQUEST FOR FISCAL BIENNIUM (FB) 2017-2019

ETS is requesting no additional funds in the Executive Supplemental Budget Request for FB17-19. Instead, ETS is maximizing funds already appropriated and available in its operating budget to facilitate continued progress as well as operate and maintain State IT infrastructure and related services. See FY17 expenditures at end of report.

While ETS is operating as one organization in accordance with Act 58, the office maintains two budget IDs previously associated with the former programs (AGS 130 and AGS 131). To facilitate cost-transparency, ETS will continue to maintain these budget IDs, re-described in the sections that follow.

### AGS 130: Enterprise Technology Services – Governance and Innovation

*Program objectives include providing governance for executive branch IT projects to provide the essential State oversight necessary so that intended goals are achieved and positive ROI is realized for the people of Hawai‘i. The program also seeks to prioritize and advance innovative initiatives with the greatest potential to increase efficiency, reduce waste, and improve transparency and accountability in State government.*

### AGS 131: Enterprise Technology Services – Operations and Infrastructure Maintenance

*Program objectives include support of the management and operation of State agencies by providing effective, efficient, coordinated, and cost-beneficial computer and telecommunication services such that State program objectives may be efficiently achieved.*

## ACTIVITIES AND PROGRAMS

Given today’s institutional and budgetary limitations, CIO Todd Nacapuy and his executive team, with input from other departments and agencies, reassessed in 2015 the existing State IT plans and developed new IT directions and programs consistent with the Ige Administration’s results-driven strategy: to focus on targeted initiatives that stabilize the State’s IT infrastructure and systems and to improve the efficiency of government operations and services by delivering immediate benefits using available resources.

Under the current CIO, ETS’ goals are to:

- identify, prioritize, and advance programs and projects with the greatest potential to increase efficiency, reduce waste, and improve transparency and accountability in State of Hawai‘i government; and

- provide efficient, effective, and available information technology (IT) enterprise services and support in the areas of data center, cybersecurity, computing (mainframe and open systems), telecommunications, application development, and web-based services for the purpose of assisting State government agencies in fulfilling their current and future business mission and objectives.

In fulfillment of these goals, the primary objectives for the remainder of the biennium are summarized in the following sections under proposed organizational structure:

Client Services Branch — Improve the efficiency of State government by converting hard-copy paper reports to electronic documents, which will reduce storage requirements, facilitate sharing of information, and reduce paper use. Also create or participate in pilot projects and proof of concepts to gain experience in new technologies and determine potential applicability within the State.

Enterprise Architect Branch — Improve the quality of executive branch departments in the IT roadmapping process as part of development of the state’s overall IT strategic plans. Also supporting implementation of the Department of Taxation’s Tax System Modernization (TSM) program and the HawaiiPay project.

Enterprise Systems Branch — Implement successful PeopleSoft Payroll Go-Live for Group 1 (DAGS and DHRD), as part of the payroll phase of DAGS Accounting Division’s HawaiiPay project.

Network Branch — Improve the State’s telecommunications networks, including: improving network speeds; adding new network locations; replacing legacy network equipment to maintain hardware and software support and to retain security protections; maintaining aging radio facilities and infrastructure; and improving network design for availability and reliability purposes.

Production Services Branch — Maintain effective and efficient day-to-day operations of production job execution and monitoring of the State network and data center.

Program Management Branch — Complete payroll go-live deployment for Group 1 of DAGS Accounting Division’s HawaiiPay project, and promote enterprise standardization of policies, processes and functionality in support of all jurisdictions.

Security Branch — Develop, issue, and review statewide cybersecurity policies and standards, and add new cybersecurity staff.

Systems Services Branch — Conduct disaster recovery testing for the IBM Mainframe and reduce legacy equipment (non-mainframe).

Technology Support Services Branch — Implement the next phase of ETS-managed, local, private Cloud service (Hawai’i Government Private Cloud), increase adoption of the State’s new web platform, integrate artificial intelligence (AI) technology into existing and new applications, and further increase adoption of Office 365 and Adobe Sign.

## Department Dashboard

In accordance with HRS section 27-43, requiring departments to develop and maintain their respective multi-year IT strategic and tactical plans and roadmaps as part of the State’s overall IT strategic plans, ETS collected preliminary IT roadmaps from all applicable departments and is continuing their

refinement. ETS created an online Department Dashboard to view these IT Roadmaps, which is accessible at [ets.hawaii.gov](https://ets.hawaii.gov) under the “About” tab, IT Strategic Roadmap.

The IT Roadmap will be a significant part of the overall planning, budgeting, and execution process, and contains information on all significant IT activities for executive branch departments over a period of time. Activities are aligned with business lines, departments’ priorities, ETS initiatives, and ultimately the governor’s priorities. Data includes information on projects, on-going processes, budget, schedule, and status.



## IT STEERING COMMITTEE

Pursuant to [HRS section 27-43](#), the IT Steering Committee was established to advise and support the CIO by:

- Assisting the CIO in developing and implementing the State IT strategic plans;
- Assessing executive branch departments' progress in meeting the objectives defined in the State IT strategic plans and identifying best practices for shared or consolidated services;
- Ensuring technology projects are selected based on their potential impact and risk to the State, as well as their strategic value;
- Ensuring that executive branch departments maintain sufficient tools to assess the value and benefits of technology initiatives;
- Assisting the CIO in developing State IT standards and policies; and
- Clarifying the roles, responsibilities, and authority of ETS, specifically as it relates to its statewide duties.

### Committee Membership

Considerable effort was expended over the past two years to facilitate the filling of vacancies on the ITSC. As of the date of this report, all council vacancies have been filled.

#### *IT Steering Committee Membership Roster (as of December 28, 2017)*

<b>Name</b>	<b>Affiliation</b>	<b>Appointed By</b>
Todd Nacapuy (Chair)	Office of Enterprise Technology Services (CIO)	<i>Ex Officio Member</i>
Benjamin Ancheta	Ekahi Health System	Senate
Jared I. Kuroiwa	KHON2	Senate
Aryn H.K. Nakaoka	Tri-net Solutions	Senate
Michael Nishida	First Hawaiian Bank	House
Christine Sakuda	Transform Hawai'i Government	House
Kelly Taguchi	Spectrum	Senate
Kevin Thornton	Hawai'i State Judiciary	Chief Justice
Rep. Kyle Yamashita	Hawai'i State Legislature	House
Marcus Yano	SystemMetrics Corporation	House
Garret Yoshimi	University of Hawai'i	Governor

### Assessment of the CIO

For the first time, the ITSC in 2017 has evaluated the CIO based on several metrics, organized under the seven priority areas: IT Governance, IT Workforce Development, Cybersecurity, Enterprise Programs and Projects, Services-Oriented Infrastructure, Open Data, and Cost-Transparency.

The committee's intent, when approving the metrics in February 2017, was to set "stretch" metrics that are challenging. The purpose is to measure the CIO's ability to bring value to the technology program. It should be noted that the success of meeting certain metrics may not entirely be under the control of the CIO and may also depend on the availability of adequate funds and resources, as well as other factors.

On December 19, 2017, the committee met and evaluated the State CIO based on the thirty-one (31) metrics below, organized under seven priority areas stated above. Supporting data and reference materials for the metrics were provided to the committee, as well as in-person explanations and online demonstration of data.

The committee used the following scoring framework for scoring:

- A = Completed 100% on time, on budget
- B = Completed but not on time, on budget (up to 10% variance)
- C = Completed but not on time, on budget (11-20% variance)
- D = Completed but not on time, on budget (greater than 20% variance)
- F = Not at all
- I = Not scored (with justification)

The committee arrived at final scores by consensus, and average grades for each priority area were based on value judgments of each of the individual metric grades under a particular priority area.

The IT Steering Committee's assessment of the CIO follows:

**IT Governance Metrics (2017)**

No.	Metric Description	Measurement	Deadline	Status	Grade	Notes
1	Achieved full participation by executive branch departments in IT governance processes, pursuant to <a href="#">Administrative Directive (AD) No. 15-02</a> , “Program Governance Requirements for Act 119 and Enterprise Information Technology Projects”	Percentage of departments participating	07/1/17	100% of executive branch departments are participating (excluding the Department of Education and University of Hawai‘i). ETS continues to refine the IT “request to spend process” to enhance the depth and effectiveness of reviews of departmental hardware, software, telecom and service requests of \$100,000 or more. Departments submit their information to ETS via a detailed form. Initial results have yielded elimination of unnecessary items/services, improvement of the specificity of project timelines and plans, and, in some cases, renegotiation of proposed contract terms, conditions and prices in the favor of the state. ETS is currently working on streamlining the IT request to spend process.	A	ETS met requirement to publish; should address varying quality of department content
2	Achieved full participation by executive branch departments in annual budget request process, developed in partnership with the Department of Budget and Finance (B&F) in accordance with <a href="#">HRS section 27-43</a> ,	Percentage of departmental roadmaps submitted	12/1/17	ETS has collected preliminary roadmaps from all applicable departments and is continuing their refinement. ETS initiated a department by department effort to assist them in the development and refinement of their roadmaps. ETS has also	A	

No.	Metric Description	Measurement	Deadline	Status	Grade	Notes
	requiring departments to develop and maintain their respective multi-year IT strategic and tactical plans and roadmaps as part of the state's overall IT strategic plans			worked with the Department of Budget and Finance (B&F) to incorporate the roadmaps into the IT governance and budget planning purposes. If a department's spending request is not in its budget request, ETS will not approve the spending request without sound justification. In addition, B&F's budget preparation instructions provided to departments for the 2018 Legislature require that all budget requests for IT and telecommunications services require the approval of the CIO. ETS completed review of IT-related budget requests for the FY19 Supplemental Budget and provided feedback to B&F.		
3	Reduced costs of IT projects reviewed under IT governance processes (AD No. 15-02)	Percentage of reduction relative to overall IT costs; 2017 ETS goal: 5 percent	12/1/17	On track. Calculation underway. Review has been expanded to include IT and telecommunications purchases \$50,000 and above.	A	
4	Deployed citizen-facing website for state IT policies and standards; continuous deployment and maintenance of statewide policies and standards	Yes or no and overall quality of resource	12/1/17	On track. Three security policies and one set of standards will be presented at the November 2017 IT Steering Committee meeting for review.	A	Recommend periodic policy review and updates
	<b>Average Grade:</b>				A	

**IT Workforce Development Metrics (2017)**

No.	Metric Description	Measurement	Deadline	Status	Grade	Notes
5	Reduced vacancies within ETS	Percentage; 2017 goal: vacancies less than 10 percent	12/1/17	ETS currently has 22 vacancies (two of which will be filled after ETS' proposed reorganizational structure is approved, as these positions will be redescribed) and five anticipated retirements at the end of the year. ETS also anticipates filling between two and four more positions before the end of the year.	C	30 empty positions
	<i>Facilitate programs designed to establish, expand and/or promote career path opportunities within the State for IT workers:</i>					
6	1) Completed LinkedIn Pilot Project and demonstrated progress toward vacancy goal	Number of positions filled via LinkedIn; pilot project goal: 10	04/1/17	ETS was able to hire or assign start dates for 13 new employees (42% of its vacancies) during the LinkedIn pilot project (October 2016 - April 2017), compared to 6 (17%) during the same timeframe a year prior. Furthermore, four additional candidates sourced through LinkedIn during the pilot have been identified for hire but are pending final approval. ETS has since executed a year-long agreement with LinkedIn to support the office's ongoing recruitment efforts and highly recommends that other	A	

No.	Metric Description	Measurement	Deadline	Status	Grade	Notes
				departments and agencies pursue similar agreements if their budgets allow.		
7	2) Achieved employee participation in Civil Service IT Broadbanding Pilot Project	Number of ETS employees participating in program; goal: 10 percent of applicable civil service IT employees	12/1/17	9% of eligible ETS employees have participated in IT Broadbanding, applying for a Professional Growth adjustment or Internal Alignment. This has remained a steady number of participation since it was opened to employees. 5% of those who applied were awarded an IT Broadband Adjustment, a 2% increase from prior submittals. ETS has also used the salary matrix for at least two IT hires in 2017.	B	Greater than 10% variance; need to enhance participation
8	3) Continued and expanded Hawai'i Annual Code Challenge program	Held second annual event (yes or no) and quality of event compared to previous; goal: greater than 250 participants	12/1/17	ETS held the second HACC in partnership with the Hawai'i Technology Development Corporation, nonprofit Hawai'i Open Data, and DevLeague to engage the local tech community in government modernization and expose individuals within Hawai'i's IT workforce to State career opportunities. Approximately 300 attended the kickoff for the month-long competition on Aug. 26, 2017, answering the call to apply their collective creativity to improving state	A	

No.	Metric Description	Measurement	Deadline	Status	Grade	Notes
				government. This is a significant increase over 220 in 2016. In addition, a number of proofs of concept from last year's competition are in development and scheduled for launch this year. For example, the Hawai'i Agriculture & Food Products Database, unveiled at the Hawai'i Agriculture Conference in August 2017, was developed collaboratively by the Hawai'i Department of Agriculture and ETS, incorporating input from several 2016 HACC solutions as well as past Transformation Internship Program cohorts.		
	<b>Average Grade:</b>				B	Focus on hiring and filling vacancies

**Cybersecurity Metrics (2017)**

No.	Metric Description	Measurement	Deadline	Status	Grade	Notes
9	Filled all available ETS cybersecurity positions	Yes or no and/or percentage filled	12/1/17	Filled 100% of FY17 positions. Reviewing candidates for positions created or redescribed in FY18.	A	Tied to FY17 positions
10	Implemented cybersecurity response plan	Yes or no	12/1/17	In progress	I	Insufficient resources to complete in CY2017
11	Established metrics for cybersecurity response and effectiveness	Yes or no and quality of metrics	12/1/17	In progress	I	Insufficient resources to complete in CY2017
	<b>Average Grade:</b>				I	Upon achieving complete staffing, must develop and implement plans



**Enterprise Projects & Programs Metrics (2017)**

No.	Metric Description	Measurement	Deadline	Status	Grade	Notes
12	Issued RFP for State Web Portal Program	Yes or no	12/1/17	A Request for Information (RFI) for an Internet Portal Manager and Service Provider was issued on July 12, 2017. Issuance of a Request for Proposals (RFP) is pending.	I	State Procurement Office asked for changes to RFP
<i>Demonstrate successful implementation of the following enterprise initiatives:</i>						
13	1) Tax System Modernization Project, Phases 2 & 3	IV&V assessment as of date	12/1/17	In August 2017, the Tax System Modernization program completed the third of five “Rollouts,” which enhances online services for Corporate Income, Franchise, Public Service Company, and Withholding taxpayers. New features include improved web interface and added video tutorials. While the August 2017 launch requires no immediate action by tax-filers, it lays the necessary groundwork for phasing out the aforementioned tax group services from the legacy website by January 2018. ETS is also identifying any opportunities for further improvement before the project proceeds to its next major phase, Rollout 4, which will	A	

No.	Metric Description	Measurement	Deadline	Status	Grade	Notes
				begin to address individual income filing and other areas.		
14	2) Enterprise Payroll and Time & Attendance Modernization, Payroll Phase	On track, on budget	12/1/17	The HawaiiPay project is being implemented in two phases: Payroll (2016-2018), followed by Time & Attendance. As part of the Payroll Phase, the first two departments are scheduled to “go live” on the new system in second quarter 2018, with remaining departments to begin transitioning in third quarter 2018. Project team efforts are currently focused on system configuration and departmental IT readiness to ensure that the required hardware, software and network bandwidth are in place when the system goes live.	A	
15	3) Kauhale On-Line Eligibility Assistance (KOLEA), Phases 1 & 2	On track, on budget	12/1/17	In progress	F	CMS delay
	<i>Demonstrate sustainability and integration (with other ERP modules) of:</i>					
16	1) Human Resources Management System	Quality of sustainability and integration	12/1/17	In May 2017, ETS migrated the existing executive branch Human Resource Management System (HRMS), maintained and operated by DHRD, to primary and secondary Cloud-enabled data centers hosted by project partner CherryRoad Technologies.	A	

No.	Metric Description	Measurement	Deadline	Status	Grade	Notes
	<b>Average Grade:</b>				B	KOLEA delay from Federal requirements; external Federal and SPO impacts; high-risk projects require significant attention

**Services-Oriented Infrastructure Metrics (2017)**

No.	Metric Description	Measurement	Deadline	Status	Grade	Notes
17	Increased capability to provide tech support to departments as enterprise service	Job tickets received and closed	12/1/17	7229 of 7280 job tickets were closed in fiscal year 2017.	B	Recommend Service Level Agreement for 2018; noted that for open ticket count, ETS does not control department networks
	<i>Demonstrate progress and success of:</i>					
18	1) Office 365 Project	Quality of departmental participation and sustainability	07/1/17	ETS has completed migration of the executive branch to Office 365, excluding the Department of Taxation (pending its migration, which it elected to defer), Department of Education, University of Hawai‘i and Hawai‘i Health Systems Corporation. ETS has also formally identified Office 365 as the state’s platform for email, online storage and other Office applications and services, and has negotiated a new 3-year enterprise license agreement (ELA), effective June 1, 2017, that provides for the continued use of these applications and services by approximately 12,000 users, while further leveraging economies of scale in favor of the state.	B	DoTAX did not participate; equates to approximately 1.3% of total users
19	2) eSign Service	Number of transactions and	12/1/17	As of Nov. 16, 2017, there has been more than 263,410 total	D	Greater than 20% less than goal; should increase

No.	Metric Description	Measurement	Deadline	Status	Grade	Notes
		quality of departmental participation; year-end goal: 200,000 transactions		eSign transactions. The average number of eSign transactions per month is 9,931, with the record month reaching 19,310. The median time to complete a transaction is 238.2 minutes.		available personnel education and training
20	3) Government Private Cloud / Cloud Services	Migration completed (yes or no)	12/1/17	Pending	F	Not migrating because of cost; updating government equipment instead
21	4) Network Operations & Maintenance	Reliability and sustainability; goal for core Next Generation Network: 99.99% availability, excluding planned maintenance	12/1/17	Calculation underway. Added network redundancy to Hawai'i Emergency Management Agency (HI-EMA) statewide network to support both HI-EMA and O'ahu INET users, performed network topology changes to increase the reliability of the State's network, established a dedicated connection (express route) to the Microsoft Azure Cloud, and provided a high-speed fiber optic connection to the 'Ewa District Court. Also, established new statewide price list through the State Procurement Office for Centrex Telephone and Cabling Services, and consolidated and significantly increased network bandwidth (200-fold) for tenants of the Kona State Office Building	B	Less than 1% variance; external vendor

No.	Metric Description	Measurement	Deadline	Status	Grade	Notes
				and the Molokai State Office Building.		
22	5) Telecommunications	Successful 99.99% availability, excluding planned maintenance	12/1/17	Calculation underway.	B	Less than 1% variance; external vendor
	<b>Average Grade:</b>				B	Only F is a dead project – GPC migration cancelled

**Open Data Metrics (2017)**

No.	Metric Description	Measurement	Deadline	Status	Grade	Notes
23	Launched ETS Strategic Roadmap Dashboard	Yes or no	07/31/17	Yes; see <a href="#">ETS IT Strategic Roadmap</a>	A	
24	Established web accessibility standard and launched statewide training resources	Yes or no	12/1/17	Pending	F	Not issued; only one training session
25	Established policy addressing copyright of State web content	Yes or no	12/1/17	ETS published State of Hawai'i Government Website Terms of Use for official state websites that are not part of the eHawaii Internet Portal Program and/or for which the contractor-provided terms are not appropriate.	A	
26	Evaluated effectiveness of State Web Portal program and model, and issue request for proposals in line with the recommendations of the Access Hawai'i Committee	Yes or no	12/1/17	In progress. A Request for Information (RFI) for an Internet Portal Manager and Service Provider was issued on July 12, 2017. Issuance of a Request for Proposals (RFP) is pending.	I	Dependent on stalled RFP
27	Established policy for open data	Yes or no	12/1/18	Planning stage	I	2018 work in progress
	<b>Average Grade:</b>				I	Increase priority of open data projects

**Cost-Transparency Metrics (2017)**

No.	Metric Description	Measurement	Deadline	Status	Grade	Notes
28	Collected departmental IT roadmaps, under new authority provided under HRS 27-43	Quality of departmental participation	07/1/17	ETS completing the process of initial reviews with departments.	I	No metric to measure quality
29	Created ETS IT strategic roadmap, incorporating and aligning information from departmental IT roadmaps	Yes or no	07/1/17	Yes; however, incorporating/aligning with department roadmaps is ongoing as departments develop their individual roadmaps, described above.	A	
30	Published ETS IT strategic roadmap setting clear goals and benchmarks for the CIO's priority areas and priority projects/programs by the deadline to submit Executive Budget Request to the Legislature	Yes or no	07/1/17	Yes; see <a href="#">ETS IT Strategic Roadmap</a>	A	Public publish date 12/22/2017
31	Created a publically accessible online dashboard to track progress, as a companion to the roadmap	Yes or no	12/1/17	ETS is in the process of creating the dashboard, summarizing all departmental IT roadmaps.	F	Targeted publish date 12/22/2017
	<b>Average Grade:</b>				B	Improve departments' roadmap and strategic plan consistency; create standards for departments

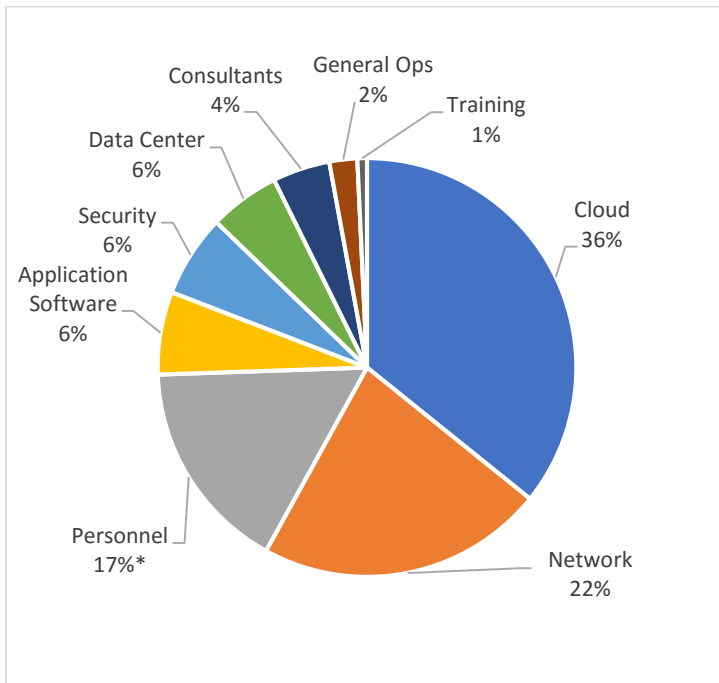


## EXPENDITURES

The following is an account of FY17 expenditures of all moneys received from all sources.

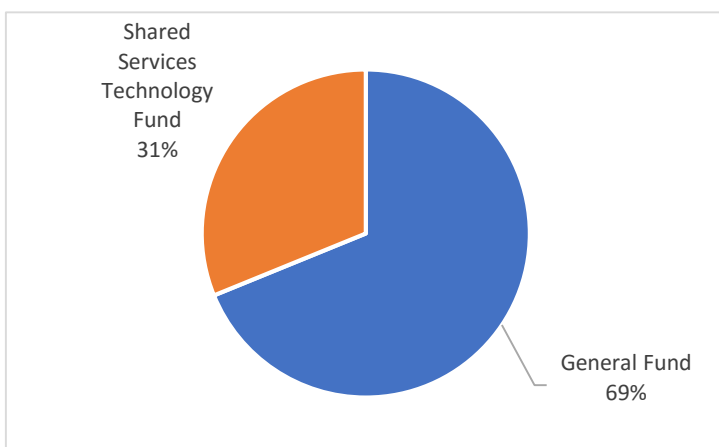
*Note: Moneys from the special funds were allocated exclusively for personnel costs in FY17AGS 130:*

### Enterprise Technology Services – Governance and Innovation: Expenditures, All Means of Financing (FY17)



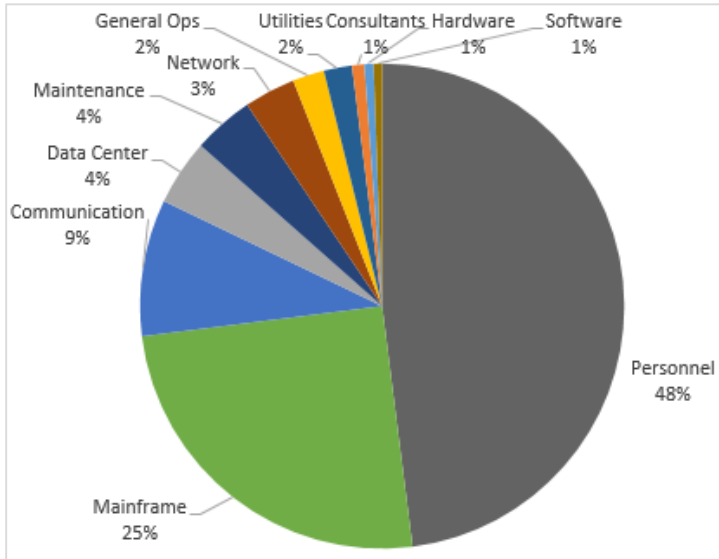
Category	Amount
Cloud (36%)	\$6,618,668
Network (22%)	\$4,109,30
Personnel (17%)	\$3,041,947
Application Software (6%)	\$1,183,169
Security (6%)	\$1,175,890
Data Center (6%)	\$1,010,964
Consultants (4%)	\$818,217
General Ops (2%)	\$398,132
Training (1%)	\$136,480
<b>Total</b>	<b>\$18,492,771.53</b>

### \*AGS 130 Personnel Expenditures, All Means of Finance (FY17)



Means of Finance	Amount
General Fund (69%)	\$2,094,037
Shared Services Technology Fund (31%)	\$947,910
<b>Total</b>	<b>\$3,041,947</b>

**AGS 131: Enterprise Technology Services – Operations and Infrastructure Maintenance:  
Expenditures, All Means of Financing (FY17)**



Category	Amount
Personnel (48%)	\$8,327,877
Mainframe (25%)	\$4,342,717
Communication (9%)	\$1,581,258
Data Center (4%)	\$762,247
Maintenance (4%)	\$705,184
Network (3%)	\$595,988
General Ops (2%)	\$366,385
Utilities (2%)	\$326,274
Consultants (1%)	\$143,027
Hardware (1%)	\$105,924
Software (1%)	\$96,840
<b>Total</b>	<b>\$17,353,721</b>