

DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
ANNUAL REPORT ON GOALS, OBJECTIVES AND POLICIES

January 2021

Program ID/Title: AGS-130 / Enterprise Technology Services – Governance and Innovation*

AGS-131 / Enterprise Technology Services – Operations and Infrastructure Maintenance*

**Pursuant to HRS 27-43, all functions of the programs formerly associated with AGS-130 (ex-Office of Information Management and Technology) and AGS-131 (ex-Information and Communication Services Division) are consolidated within the new Office of Enterprise Technology Services as led by the Chief Information Officer, effective July 2, 2016.*

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I. Goals

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.

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.

II. Objectives and Policies

Program objectives are arranged by branch under proposed organizational structure:

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.

Systems Services Branch — Provides operating systems programming, third-party software maintenance, storage management, database management and host systems operational support for the Enterprise Mainframe System (z) computing platform. Provides operating systems programming, storage management, and host systems operational support for the Enterprise Unix/AIX Power System computing platform as well as the Enterprise Spectrum Protect Backup and

Restore System. Provides mainframe user access management, managed file transfer and disaster recovery services. Provides operational support to existing charge back system as well as maintain compliance to audit standards set by IRS, SSA and State Auditor.

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

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

Enterprise Systems Branch — Provide ongoing operational maintenance and management support for enterprise systems (e.g., enterprise payroll and human resources systems). Assist with implementation of statewide Time and Leave applications.

Network Branch — Provide statewide telecommunication services (e.g., data network, radio network, and telephone systems) for daily business operations of the State of Hawaii's executive, legislative, and judicial branches, including telecommunications interfaces to federal and county governments; provide land mobile radio communications for public safety entities and radio microwave network connection interfaces to other county and federal agencies for first responder and emergency communications; provide technical support on voice and telephone systems to State government entities.

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.

Enterprise Architect Branch — Develop and implement statewide technology policies, guidance, and standards; provide Departmental guidance for Business and IT decisions that supports the State's strategic plan and investments and improves the ability to deliver responsive, cost-effective government functions and services.

Program Management Branch — Provide management, business consulting services, and business applications support to agencies to effectively develop and maintain new technology applications and improve service delivery through effective integration of technology solutions; provide program management

development support for enterprise technology programs and projects (e.g., enterprise payroll, time and leave and finance).

III. Action Plan with Timetable

Past Year Accomplishments

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.

Systems Services Branch — Maintained high availability of the Enterprise Mainframe System (z) computing platform, Enterprise Unix/AIX Power System computing platform and the Enterprise Spectrum Protect Backup and Restore System. The Customer Information Control System (CICS) on the mainframe system that provides online transaction management and connectivity for applications was upgraded to the current version. For disaster recovery, updated the software codes and configuration of the DASD and Tape Systems and maintained the consistency of data replication to the Disaster Recovery Site. Upgraded the zVM virtual server management. Administered maintenance subscriptions and update of all Mainframe Third-Party Software. Maintained hosting and user account management for Mainframe System Access and Managed File Transfer (MFT-Axway) services. Updated the documentation for the mainframe hardware and network systems. Upgraded the software for the Managed File Transfer System (Axway). Implemented RACF Security for all Adabas/Natural transactions. Conducted training for the RACF and Adabas/Natural backup administrators. Worked with IRS, SSA and State Auditors and remained generally compliant to audit standards.

Technology Support Services Branch — Completed the migration of Department of Taxation to Office 365 which completes migration for the entire Executive branch. Decommissioned legacy Lotus Notes & Active Directory environments. Implemented a centralized identity manager to integrate between the Payroll system and the State's Active Directory infrastructure. Released a new Open Data platform and provided user training through the migration. Moved TSSB hosted websites behind Cloudflare security services and secured external access with cloud identity and access management services. Purchased and deployed an enterprise mass notification system for statewide employee alerts. Purchased and installed hardware for a new backup solution for the ETS-managed local private cloud service (Government Private Cloud). Provided support, training, and guidance for the secured use of remote work technologies. Continued to increase adoption of O365 amongst departments, particularly Teams trainings to be used as a critical communication and collaboration tool for telework. Furthermore,

implemented Teams outbound calling for various departments. Purchased and configured a virtual desktop solution to allow secured remote access to critical internal state systems. Provided tooling, support and training for virtual Sunshine Law meetings. Supported the deployment of the State's Safe Travels and Quarantine Exemption web applications. Provided support in securing the elections' infrastructure for the 2020 Elections.

Client Service Branch — The branch assisted the Department of Labor and Industrial Relations (DLIR), Unemployment Insurance (UI) Division by automating processes related to expanded benefits provided under the Coronavirus Aid, Relief, and Economic Security (CARES) Act. These processes included the 1) \$600+ payments of Federal Pandemic Unemployment Compensation (FPUC), 2) 13-week extension of Pandemic Extended Unemployment Compensation (PEUC), 3) assisting with expanded coverage to self-employed individuals under Pandemic Unemployment Assistance (PUA), 4) \$300 additional benefits for Lost Wages Assistance (LWA), 5) implementation of the Hawaii Extended Benefits (EB) program and 6) aided with replication of databases residing on the State's mainframe for use on the UI web application portal. The branch also completed a full rewrite of the Candidate Filing System, Candidate Filing Public System and (mass) email system for the Campaign Spending Commission (CSC). In addition, the branch assisted the Department of Commerce and Consumer Affairs (DCCA), Professional and Vocational Licenses (PVL) Division to work with Pacific Point Consulting to replace the current Applicant/Licensee Integrated Automated system (ALIAS) running on an Oracle Forms product with a modern web-based Salesforce platform.

Enterprise Systems Branch — Ongoing maintenance and support of the Enterprise Human Resources Management System (HRMS) and Payroll systems, also known as Hawaii Information Portal (HIP). Built, maintained, and supported interfaces to all agency HR and Payroll data sources. Actively implementing statewide Time and Leave applications.

Network Branch — Added 5 new sites into the State's Institutional Network (INET) providing high-speed connectivity to sites and the Internet. Replaced equipment at key locations with greater capacity while requiring less space and power. Maintained a public cloud exchange for connectivity between the State network and public clouds i.e. Microsoft Azure. Provided assistance with establishing redundant connectivity between the State and county networks. Increased the reliability of the State's radio systems by performing network topology changes. Added Hawaii Wireless Interoperability Network (HIWIN) Land Mobile Radio (LMR) coverage/connectivity to Kona Judiciary. Project doubling HIWIN LMR system capacity nearly complete. Executed Memorandum of Agreement (MOA) with DOT Airports to serve their radio communication

needs using the HIWIN system. Maintained radio facilities and infrastructure. Upgraded radio microwave backhaul to Ethernet standard format which will facilitate increased connectivity and redundant routes. Adapted network infrastructure to support telework needs as the COVID-19 pandemic dramatically changed in-person workplace environments.

Security Branch — Aligned priorities to address mitigations with most frequent cybersecurity attacks. Performed enterprise-wide compromise assessments and emphasized cyber hygiene concerns. Exercised detection and response capabilities. Executed periodic simulated phishing exercises to educate end users on how to spot real phishing attacks and to gauge effectiveness of current security awareness programs. Implemented new security protections against email and end point threats improving the State's security posture. Deployed IT asset management tools enterprise-wide to assess asset health and provide mechanisms to keep assets up to date. Worked with agencies to conduct assessments and implement best practices.

Enterprise Architect Branch — Published new IT enterprise applications portfolio using LeanIX. Maintained and managed statewide IT enterprise applications portfolio and roadmaps; demonstrated effectiveness of IT planning, review, approval, procurement, and implementation processes. Provided enterprise architecture assistance to Departmental initiatives such as the DHS technology modernization, AGS KEIKI modernization, and other similar projects for DLIR, DAGS, EUTF, and DOH. Executed two-year extension of existing the Statewide Internet portal contract, and continued planning and strategy refinement for procurement of new contract for the Statewide Internet Portal provider.

Program Management Branch — Established Executive Governance Committee (EGC) and Change Management Board (CMB) across the state to govern and evaluate policies, procedures and practices to be modernized through system enhancements or business process improvements. As part of DAGS Accounting Division's Enterprise Payroll and Time & Attendance Modernization (HawaiiPay) project, launched Phase II Time & Leave and completed first group go-live in May 2020 for Governor's Office, Lieutenant Governor's Office and DAGS. Subsequent modernization projects are now managed under the Hawaii Modernization (HiMod) Office

One Year

Production Services Branch — Maintain effective and efficient day-to-day operations of production job execution and monitoring of the State network and data center. Work on the replacement of the two Uninterruptible Power Supply (UPS) units and design of electrical upgrades within the data center. This

includes new electrical panels or Power Distribution Units (PDU) and wiring to the equipment.

Systems Services Branch — Continue to provide high availability of the Enterprise Mainframe System (z) computing platform, Enterprise Unix/AIX Power System computing platform and the Enterprise Spectrum Protect Backup and Restore System. Upgrade the operating system and middleware to remain compliant with audit standards. Address the risk of upcoming hardware end-of-support life (EOSL) and mitigate the deficient business disaster recovery process of the mainframe system. Optimize current hardware infrastructure platforms, i.e., Enterprise Mainframe System (z) by hosting the physical hardware to a Managed Hosting Services using the Mainframe as a Service (MFaaS) as a model of service and acquire an on-premise Enterprise Power and Spectrum Protect Infrastructure.

Technology Support Services Branch — Research hybrid cloud options and research replacement hardware for ETS-managed local private cloud service (Government Private Cloud). Complete the replacement of the backup solution for the Government Private Cloud. Research and implement an identity management solution for Business-to-Customer identities. Maintain and further enhance the State's Active Directory infrastructure. Assist executive branch departments in maximizing and securing O365 and other Microsoft products used across the state. Increase adoption of the State's electronic signature platform. Research and test the possibility of a managed web infrastructure for hosted websites. Implement full HTTPS for all hosted sites and complete a website redesign. Continue adoption for the State's enterprise mass notification system. Continue support for remote work tools, systems and platforms. Continue support for the State's Safe Travels web application and related initiatives.

Client Services Branch — Continue to support the DLIR-UI with the automation of processes related to the CARES act, as well as, the evaluation and implementation of a full replacement for the existing UI mainframe systems. A full rewrite of the CSC Non-Candidate Filing System and Non-Candidate Public System. Assist with the implementation of the new DCCA/PVL ALIAS application using the Salesforce platform. Implement Treasury-related input application for the Department of Budget and Finance (DBF). Create or participate in pilot projects and proof of concepts to gain experience in new technologies and determine potential applicability within the State.

Enterprise Systems Branch — Maintain and support the Enterprise HR and Payroll systems including interfaces, reporting, security, and transaction processing. Improve on current processes while working towards the new implementation of Time and Leave applications.

Network Branch — Increase the number of sites with broadband connectivity, provide network redundancy between agencies and the State’s network, assist with the deployment of enterprise WiFi, and expand the use of the public cloud exchange. Expand radio microwave and LMR networks by adding new sites at no additional site development costs through the use of MOAs. Maintain radio facilities and infrastructure.

Security Branch — Improve visibility and measures on State assets to ensure secure configuration and operation. Disseminating standards, guidance, and security awareness training to increase department capabilities to be more resilient against cybersecurity attacks. Partnering to mitigate cybersecurity issues within Departments.

Enterprise Architect Branch — Expand IT enterprise applications portfolio using LeanIX. Maintain and manage statewide IT enterprise applications portfolio and roadmaps; demonstrate effectiveness of IT planning, review, approval, procurement, and implementation processes. Provide enterprise architecture assistance to Departmental initiatives such as the DHS technology modernization, AGS KEIKI modernization, and other similar projects for DLIR, DAGS, EUTF, and DOH. Continued planning and strategy refinement for procurement of new contract for the Statewide Internet Portal provider.

Program Management Branch — Complete Time & Leave Go-Live deployments for remaining groups. Release the finance system Request for Proposal and select a vendor/system integrator to launch the statewide finance modernization initiative. Expand and mature statewide governance efforts under the Enterprise Change Management Board (CMB) and Executive Governance Committee (EGC). Continue to identify opportunities for statewide enterprise licensing and shared products and services.

Two Years

Production Services Branch — Maintain effective and efficient day-to-day operations of production job execution and monitoring of the State network. Replace the two UPSs and do electrical upgrades within the data center.

Systems Services Branch — Establish a fully operational disaster recovery process that will include documentation and periodic departmental testing. Work with major mainframe users such as DAGS, DHS, DLIR and AG-CSEA to create a roadmap to modernize Mainframe-based applications and improve internal processes of supporting the Enterprise Mainframe System z.

Technology Support Services Branch — Implement the next phase including the standing up of a hybrid cloud environment and research upgrade hardware for ETS-managed local private cloud service (Government Private Cloud). Research multi-cloud management tools for public cloud environments. Continue implementation of a statewide identity management system for Business-to-Consumer identities. Maintain and further enhance the State's Active Directory infrastructure, assist executive branch departments in maximizing and securing O365 and other Microsoft products used across the state (with a focus on remote work tools, security and access management), increase adoption of the State's electronic signature platform, and further implement the new web platform for the State.

Client Services Branch — Expedite the development of quality application systems by utilizing new/improved application development platforms and tools.

Enterprise Systems Branch — Ongoing updates for post go-live deployment of HIP Payroll for all departments and agencies and initiate the Time & Attendance Phase of DAGS Accounting Division's HawaiiPay project.

Network Branch — Continue to increase the number of sites with broadband connectivity, increase network redundancy between agencies and the State's network, continue with assisting with the deployment of enterprise WiFi. For the radio microwave and LMR networks, revise existing partnership agreements or develop new partnerships for mutual benefit with entities such as the County of Hawaii, County of Maui, University of Hawaii, and the U.S. Marine Corps. Transition DOT Highways onto HIWIN to provide their first responders with improved response times during natural disasters utilizing HIWIN's ubiquitous coverage on Oahu and interoperable communications between various first responder agencies. Establish microwave radio data connectivity to State Office Buildings to utilize during emergency situations when terrestrial connections or other communication links may become inoperable.

Security Branch — Continuing to expand the risk program across the Enterprise to address new threats that arise. Increase collaboration with federal and local infrastructure partners to provide whole of community approach to cybersecurity.

Enterprise Architect Branch — Expand IT enterprise applications portfolio using LeanIX. Maintain and manage statewide IT enterprise applications portfolio and roadmaps; demonstrate effectiveness of IT planning, review, approval, procurement, and implementation processes. Provide enterprise architecture assistance to Departmental initiatives such as the DHS technology modernization, AGS KEIKI modernization, and other similar projects for DLIR, DAGS, EUTF, and DOH. Manage new contract for the Statewide Internet Portal provider.

Program Management Branch — Complete Phase II time and attendance deployment and continue to work on operational procedures and practices to stabilize enterprise support for the newly-modernized enterprise resource planning (ERP) systems. Leverage opportunities for data governance across the enterprise systems and other department-owned systems that share common data elements and uses. Implement statewide licensing agreements and require procurement and adoption of shared products and services.

Five Years

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

Systems Services Branch — Sustain the operation of the Enterprise Mainframe System z and Enterprise Unix Power System to improve the services rendered to all departments. Work and collaborate with all the departments and continue with Mainframe Application Modernization either using the “rip and replace” or redirection technique.

Technology Support Services Branch — Assist executive branch departments in maximizing Office 365, the State’s electronic signature platform, and the new State web platform, and maintain and further enhance the State’s Active Directory infrastructure. Continue implementing enhancements to the ETS-managed local private cloud service (Government Private Cloud).

Client Services Branch — Evaluate and refine technologies, processes, and services.

Enterprise Systems Branch — Ongoing updates for post go-live deployment of HIP Enterprise Human Resources and Payroll applications for all departments and agencies. Implement successful systems in support of phase two deployment of DAGS Accounting Division’s HawaiiPay project.

Network Branch — Improve the State’s telecommunications networks through the addition of high-speed connectivity and network redundancy. Migration to software defined wide area networks. For radio microwave and LMR networks, enact projects to affordably provide the entire State with interoperable radio coverage.

Security Branch — Develop pipeline to onboard workforce earlier in their career and expand expertise of in-house cybersecurity team.

Enterprise Architect Branch — Refine statewide IT enterprise architecture framework. Maintain statewide IT roadmaps and demonstrate effectiveness of IT review and approval process. Provide enterprise architecture assistance to Departmental initiatives such as the DHS technology modernization and AGS KEIKI modernization. Provide oversight and management over the new contract for the Statewide Internet Portal provider.

Program Management Branch — Formalize enterprise support operations for enterprise systems to include the statewide finance system. Further mature governance models for data standardization, data sharing and business process re-engineering and alignment. Continue to identify other opportunities for enterprise application support for the Departments; initiate program management support for such opportunities. Continue to implement statewide licensing agreements and require procurement and adoption of shared products and services.

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

Systems Services Branch — Sustain the operation of the Enterprise Mainframe System z and Enterprise Unix Power System to improve the services rendered to all departments. Work and collaborate with all the departments and continue with Mainframe Application Modernization either using the “rip and replace” or redirection technique.

Technology Support Services Branch — Assist executive branch departments in maximizing Office 365, the State’s electronic signature platform, and the new State web platform, and maintain and further enhance the State’s Active Directory infrastructure. Continue implementing enhancements to the ETS-managed local private cloud service (Government Private Cloud).

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Enterprise Architect Branch — Refine statewide IT enterprise architecture framework. Maintain statewide IT roadmaps and demonstrate effectiveness of IT review and approval process. Provide enterprise architecture assistance to Departmental initiatives. Provide oversight and management over the new contract for the Statewide Internet Portal provider.

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IV. Performance Measures

Customer Satisfaction measure (if applicable)

Production jobs executing as scheduled.

Number of new and/or improved application services implemented, adopted and used.

Number of requests completed within timeframe.

Time to respond to help desk and assistance center inquiries.

Average incident response time for system and network outages.

Average time to review and approve IT spending request.

Program Standard measure

Timely reporting of network outages to the appropriate staff, ensuring the State data center is operational.

Ease of use and delivery of modern flexibility.

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Number of connections completed and number of sites supported by enterprise Wi-Fi.

Collection of IT roadmaps from all applicable departments and continuous refinement.

Cost Effectiveness measure

Return on value and total cost of ownership.

Alignment to IT roadmap and Operational Expenditure Plan.

Cost-efficiencies achieved through IT governance and road mapping processes.