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DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES | *KA 'OIHANA LOIHELU A LAWELAWE LAULĀ*

OFFICE OF ENTERPRISE TECHNOLOGY SERVICES | *KE'ENA HO'OLANA 'ENEHANA*

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December 24, 2025

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, Hawai'i 96813

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

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

Pursuant to Act 179, (SLH 2022) and its amendment Act 173 (SLH 2024), the attached Report on a phased plan for Information Technology Consolidation is hereby submitted.

This report presents a plan that establishes a unified technology foundation for the State of Hawai'i Executive Branch, enabling departments to focus resources on mission-critical services while leveraging enterprise-wide infrastructure, security, and platforms.

In accordance with Section 93-16, Hawaii Revised Statutes, this report will be posted on the Department of Accounting and General Services website at http://ets.hawaii.gov (see "Reports").

Sincerely,

Keith A. Regan
Comptroller

Christine M. Sakuda
Chief Information Officer

Attachments (1)

Act 179 (SLH 2022) / ACT 173 (SLH 2024)

State IT Consolidation Report

for the State of Hawai'i 2026 Legislature

Version 1.0

December 24, 2025

For questions, please contact ETS@hawaii.gov

1 Executive Summary

The Information Technology (IT) Consolidation initiative under Act 179 (SLH 2022) and Act 173 (SLH 2024) is designed to improve the efficiency, security, and effectiveness of the State's operations through better coordination of IT services. Guided by the intent of the Legislature, the IT Consolidation Plan was developed collaboratively by members of the Act 179 Working Group and the Office of Enterprise Technology Services (ETS), working together in the spirit of aloha. Through open dialogue, shared problem-solving, and respect for agency missions, the group developed a practical, phased approach to consolidating IT services and staff across executive branch agencies over five years, while excluding the Department of Education, Hawai'i Health Systems Corporation, University of Hawai'i, and the Office of Hawaiian Affairs. ETS provided administrative and technical support to the Working Group throughout this process.

Challenge: Fragmented IT Undermines State Operations

Duplicated foundational services within Hawaii's government IT such as cybersecurity monitoring, cloud hosting, identity management, licensing. Rather than sharing economies of scale, this fragmentation creates four critical problems:

- Security vulnerabilities
- Inefficient spending
- Under-investment
- Talent challenges

Without coordinated action, these challenges compound annually, widening the gap between Hawa'ii and peer states while extending exposure to preventable security incidents and operational inefficiencies.

Solution: Federated Shared Services Model

This plan establishes 15 shared IT services across four categories—Infrastructure (), Solutions & Platforms, Professional Services, and End User Services. Core services such as cybersecurity, networks, cloud hosting, identity management, Microsoft 365, enterprise data, and service desk functions are coordinated through ETS, while departments continue to own and manage their mission-critical systems.

Rather than centralizing all IT at ETS, this federated model balances shared services with departmental flexibility. Foundational services are consolidated to improve consistency and security, while departmental IT teams evolve to focus more on business needs, planning, and data-driven decision-making.

- **Gradual, readiness-based adoption** – Departments migrate to shared services as they mature, not by mandate
- **Collaborative governance** – IT Coordinating Council and Communities of Practice under state CIO authority
- **Workforce evolution** – Moving work, not people; departmental IT staff transition from maintenance to strategic roles
- **Dual investment model** – Both ETS expansion and departmental budget retention are critical.

Investment Required

Implementing the federated shared services model will require targeted, phased investment. This includes 17 to 22 new ETS positions to support shared services, excluding security and network staff that are already funded. Annual recurring costs are estimated between $4.0 million and $4.9 million, excluding existing security and network operating expenses.

The plan follows a five-year roadmap from FY2027 through FY2030, moving from foundational capabilities to mature shared services. Once established, these services are expected to generate operational efficiencies that can be reinvested into cybersecurity, digital services, and mission-specific innovation.

Risks of Under-Investment

Under-investment in IT consolidation carries significant and compounding risks. Without enterprise-level security capabilities such as a Security Operations Center and endpoint protection, departments remain exposed to cyber incidents that could cost more than the entire five-year plan. Continued fragmentation also means lost opportunities for cost savings through shared licensing and infrastructure.

Delayed or insufficient funding pushes financial and operational benefits further into the future, reduces confidence in service quality, and discourages departmental adoption. Each year consolidation is postponed increases the cost, complexity, and disruption of eventual modernization while widening the gap between Hawai'i and other states.

Constrained funding creates substantial consequences:

- Extended security exposure – Without enterprise Security Operations Center and endpoint protection, departments

remain vulnerable to incidents that exceed this plan's total 5-year cost
- Lost savings – Continued fragmented licensing and infrastructure spending forfeits achievable cost reductions
- Delayed benefits – Financial sustainability and operational value realization shift from near-term to multi-year horizon
- Undermined adoption – If departments perceive reduced service quality or lost budget flexibility, voluntary adoption stalls and the federated model fails
- Widening gap – Every year of delayed investment makes eventual modernization more expensive and disruptive while Hawai'i falls further behind the 5.3% national benchmark

Legislative Action Requested

1. **Approve shared services expansion** and associated positions detailed in Section 3.1.3.1
2. **Appropriate funding** to support phased implementation beginning FY2027
3. **Preserve departmental budget flexibility** to ensure freed resources remain available for mission-specific IT innovation
4. **Authorize proposed legislation** (Chapter 6) strengthening CIO authority and modernizing IT position classifications

This plan represents strategic investment with measurable returns, not ongoing expenditure. It reflects a collaborative effort—rooted in the spirit of aloha—between the Act 179 Working Group and ETS to strengthen state government through shared responsibility and mutual respect. With sustained legislative support, IT consolidation will enhance security, improve services, and enable both ETS and departments to better serve the people of Hawai'i.

2 Overview

2.1 Purpose and Statutory Context

The Information Technology (IT) Consolidation initiative under Act 179 (SLH 2022) and Act 173 (SLH 2024) aims to improve the efficiency, security, and effectiveness of the State's operations through coordinated information technology. The Acts seek economies of scale, enhanced service delivery, and compliance with growing requirements for accessibility, data sharing, and security.

This report presents an IT consolidation plan for the State of Hawai'i Executive Branch. It identifies IT functions for statewide consolidation, describes the Office of Enterprise Technology Services (ETS) expansion, defines facility and infrastructure needs, outlines expert support delivery, and ensures service continuity during consolidation. It also recommends strategies for recruiting IT professionals and proposes enabling legislation.

The Office of Enterprise Technology Services (ETS) was established in 2016 via Hawai'i Revised Statutes §27-43, and functions as a division of the Department of Accounting and General Services. ETS provides governance for executive branch IT projects and seeks to identify, prioritize, and advance innovative initiatives with the greatest potential to increase efficiency, reduce waste, and improve transparency and accountability in state government. ETS also provides critical support to state agencies through effective, efficient, coordinated, and cost-beneficial computer and telecommunication services.

ETS is headed by the state chief information officer (CIO) to organize, manage, and oversee statewide information technology. The chief information officer is appointed by the Governor and reports directly to the Comptroller.

2.1.1 Document Organization

This report follows the structure, sequence, and terminology prescribed by Act 179 and Act 173, while organizing content thematically to demonstrate how consolidation elements interconnect:

- **Chapter 1: Executive Summary** - Provides an at-a-glance overview of the challenge, solution, investment, and risks
- **Chapter 2: Overview** - Establishes strategic context, core principles, and the integrated approach connecting all consolidation elements
- **Chapter 3: IT Consolidation Plan** - Addresses Act 179 §2(a)(1) requirements for identifying positions/functions, facility needs, expert support, governance, service continuity, and implementation timelines
- **Chapter 4: Workforce Strategies** - Responds to Act 179 §2(a)(2) mandate to attract and retain high-quality IT professionals through modernized classifications and development programs
- **Chapter 5: System Business Criticality** - Act 173 §2(b) requirement for categorizing IT systems by business impact
- **Chapter 6: Data Center Resiliency** - Addresses Act 179 §2(a)(1)(C) infrastructure and hosting facility standards
- **Chapter 7: Legislative Proposals** - Recommends statutory changes to CIO authority and IT position frameworks

2.2 An Integrated Plan

This plan addresses IT consolidation as an integrated evolution and continuous improvement, not disconnected projects. Effective consolidation requires coordinating three interdependent elements:

Modernized Shared Service Delivery: Establishing the Shared Services Catalog (Infrastructure, Platforms, Professional Services, End User Support) that provide economies of scale while preserving departmental mission focus.

Collaborative Governance: Creating a three-tiered governance structure - State Chief Information Officer (CIO), IT Coordinating Council, Communities of Practice - where departments and ETS jointly shape service roadmaps, set standards, and ensure accountability.

Workforce Evolution: Transforming IT roles rather than transferring positions. As ETS matures shared services, departmental IT staff shift from providing technical maintenance towards business partnerships, strategic planning, and vendor management - preserving institutional knowledge while building new capabilities through Communities of Practice.

These elements advance together: shared services without governance likely create confusion about decision rights. Governance without workforce development leaves practitioners unprepared to execute. Workforce transformation without service maturity creates role ambiguity.

2.3 Strategic IT Investment: Enabling Value Across Government Operations

Consolidation creates the opportunity to invest wisely in IT that amplifies the impact of the mission services rather than treating IT as a cost center to minimize. This plan recognizes that strategic IT investment is an enabler that makes every other dollar the State spends more effective.

IT represents approximately 2.5–3%[1] of the State's total budget, yet it enables most other government operations. Benchmark research (e.g., Gartner 2025) indicates that States and Local governments spend on average 5.3%[2] on IT as a percentage of operating expenses. This under-investment in states like Hawai'i can manifest as delayed critical services, inefficient manual workarounds, and increased operating costs. Strategic IT investment helps the State avoid significant costs - from ransomware incidents and data breaches to time-consuming manual processes that slow permit approvals and benefit delivery. By investing wisely in IT infrastructure, the State makes every other dollar more effective across the 97% of operations that IT enables:

- **Increased service delivery quality** – By removing manual, labor-intensive workarounds and outdated systems delay permit approvals, benefit processing, and public inquiries – efforts are focused on increasing quality of services
- **Reduced operational costs** – Enabling staff spend less time on repetitive tasks that could be automated to deliver the same services
- **Reduced security risks** – Reduction of risk of data breaches and system outages disrupt core government functions, potentially exposing sensitive citizen information and costing millions in remediation
- **Strengthened public trust** - Residents expect modern, reliable digital services comparable to what they experience in the private sector

Legislative support for this reinvestment model is critical to achieving the intended outcomes of Acts 179 and 173.

2.4 Core Principles

Instead of pure centralization (which breaks departmental mission focus) or pure decentralization (which perpetuates duplication and security gaps), this plan adopts a hybrid approach with four principles:

5. **Collaboration Over Consolidation**: ETS facilitates and orchestrates; departments remain strategic partners shaping service roadmaps and maintaining ownership of mission-critical applications
6. **Moving Work, Not People**: Consolidate foundational IT services at ETS; departmental IT staff evolve toward business partnership, strategic planning, vendor management
7. **Ensuring Service Performance and Continuity:** Robust service measurement and transition management practices.
8. **Investment in IT as an Enabler**: Efficiencies remain available to ETS and departments for strategic reinvestment in cybersecurity, digital services, and mission innovation and not redirected as general fund offsets. Success requires both ETS expansion (shared services) and departmental retention – ideally growth – for evolving IT roles and mission focus.

2.5 Strategic Commitments

This plan succeeds through mutual commitments among key stakeholder groups:

ETS

- **Deliver secure, reliable shared services**: Build and operate infrastructure, platforms, and professional services that meet departmental needs with transparent Service Level Agreements (SLA) and performance accountability
- **Facilitate collaborative governance**: Establish and maintain governance forums through the existing IT Coordinating Council (ITCC) and Communities of Practice for joint decision-making and continuous improvement

Departments

- **Commit to adopting shared services based on readiness**: Leverage ETS infrastructure and platforms when services mature, rather than building duplicative capabilities independently
- **Participate actively in governance**: Engage in ITCC strategic planning and service-specific Communities of Practice to shape roadmaps, set standards, and resolve adoption barriers
- **Redirect resources to mission priorities**: As shared services reduce foundational IT workload, departmental IT staff are refocused towards business partnership, strategic planning, data analytics, and mission-specific innovation

[1] ETS internal analysis, includes external (vendors) and internal IT staff cost estimates.

[2] Gartner IT Key Metrics Data 2025: 2025 IT spending as % of OpEx across 127 state/local organizations.

Enabling Success - Sustained investment and reinvestment flexibility: The plan's success depends on adequate funding for shared services expansion, the ability for departments to retain efficiencies for mission-specific innovation, and modernized workforce policies that support competitive recruitment, compensation, and professional development in the IT field.

3 IT Consolidation Plan

3.1 Identification of Positions and Functions to Be Transferred

This chapter responds to Act 179 §2(a)(1) by identifying the IT functions and positions recommended for consolidation. Rather than proposing a wholesale transfer of departmental IT staff to ETS, this plan establishes 15 shared services across four categories that provide economies of scale while preserving departmental autonomy for mission-critical work.

The approach emphasizes moving work, not people - consolidating foundational IT services (cybersecurity, hosting, identity management, enterprise platforms) at ETS while enabling departmental IT professionals to focus on higher-value business partnership, strategic planning, and vendor management.

3.1.1 Shared IT Services Portfolio

The ETS Shared Services Portfolio provides the technology backbone for State operations, organized into four categories designed to meet diverse agencies' needs while promoting efficiency and cost-effectiveness:

- **Infrastructure**: Essential IT services (cybersecurity, network, hosting, identity management) that underpin all other solutions and ensure secure, scalable operations statewide
- **Solutions & Platforms**: Common platforms supporting administrative capabilities across all agencies (Office 365, IT governance services, enterprise data)—includes both IT-centric platforms and Common Administrative Solutions co-governed with business functions
- **Professional Services**: Collaborative expertise (business analysis, sourcing, change management, vendor management) delivered through Communities of Practice to help agencies plan, procure, build, and operate solutions effectively
- **End User Services**: Direct IT support for employees (service desk, onsite support) with standardized workflows and clear escalation paths

Supporting all categories are Enablers—the policies, plans, standards, frameworks, and management practices that ensure the entire IT service portfolio functions cohesively and effectively. Figure 1. displays these categories.

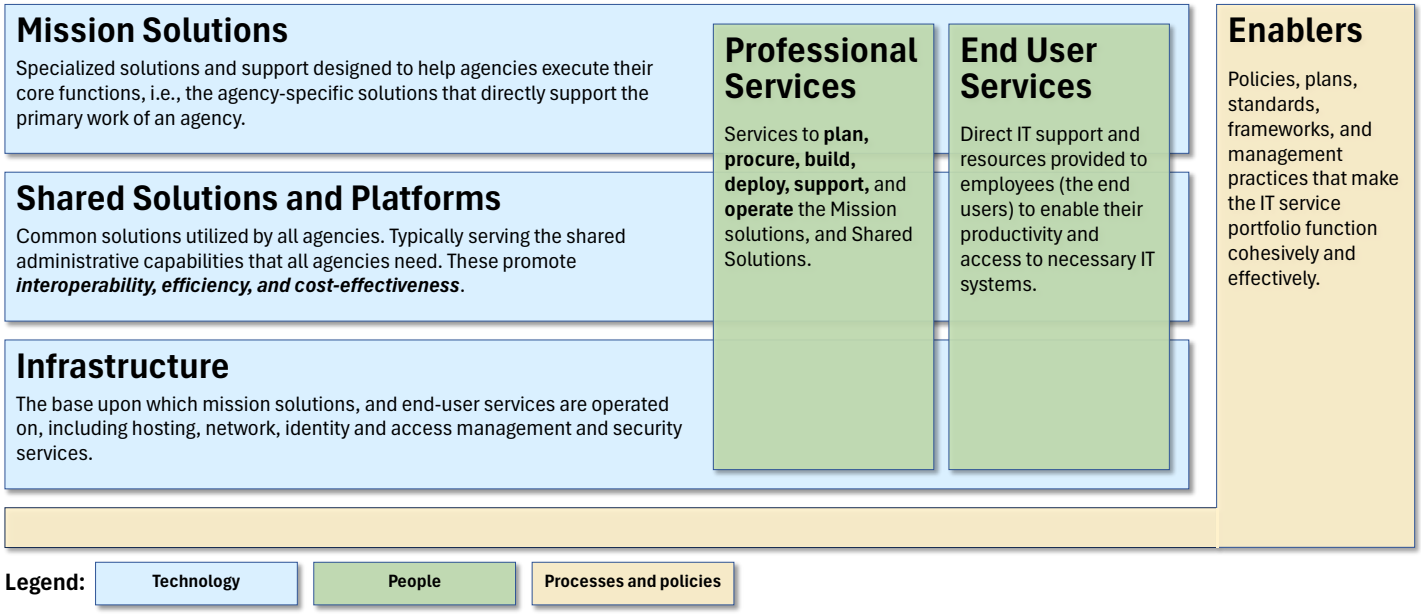

Figure 1. IT Service Categories, including the Departmental Mission Solutions that are supported and enabled by shared services

Table 1. below lists and describes all 15 shared services, organized by category. Each service reflects the plan's commitment to gradual adoption, continuous improvement, and partnership rather than one-time transformation.

Category	Service Area	Summary	Status
Infrastructure	Cybersecurity	Proactive Threat Defense: Including for example Endpoint Detection and Response (EDR), upgrade DNS, Intrusion Prevention System (IPS), Zero Trust Network Access (ZTNA), consulting services.	Extend
	Network (NGN)	Upgrade and extend State network for higher resilience and speed; modernize standards, segmentation, and policies statewide.	Extend
	Identity & Access Management (IAM)	Expand MyHawaii Single Sign-On (SSO) and centralized identity services to more apps for simpler access and stronger enterprise security.	Extend
	Hosting Infrastructure, Government Private Cloud (GPC)	Modernize and consolidate on enterprise cloud and core platforms with standardized security, Business Continuity / Disaster Recovery, and centralized operations; migrate priority apps.	Extend
Solutions & Platforms	Microsoft 365 and Adobe Capabilities	Unlock full Microsoft 365 G5 value: Teams voice, Purview data protection, analytics with Power BI/Copilot, and Artificial Intelligence (AI) governance with expanded Unified Support.	Extend
	IT Governance services	Enhance enterprise IT governance with additional capabilities, with the ability to support maturing enterprise service management.	Extend
	Enterprise Data Management	Establish an enterprise data platform - governance/catalog, Master Data Management (MDM) "golden records", and Data/AI workspace - to turn trusted data into policy and program insight.	Refine
	Geospatial Platform	Establish as a shared service - geoplatform-related user administration, end user help desk, and server and license management	Extend
	Common Administrative Solutions Governance	Facilitating governance of Common Administrative Solutions (administrative, "back-office"), that all departments have (e.g., finance, HR, procurement, grants)	Refine
Professional Services	Business Analysis and Service Architecture	Uplift partnership that standardizes business analysis and enterprise architecture to improve scoping, roadmaps, and modernization outcomes	Refine
	IT Sourcing and Acquisition	Standardize IT purchasing and contract management to maximize value, performance, and risk reduction through enterprise agreements and optimal departmental contracts.	Refine
	Change Enablement	Enterprise delivery and OCM CoP with playbook, Project Management (PM) support, Organizational Change Management (OCM) support, and Independent Verification and Validation (IV&V) coordination to improve on-time, on-budget outcomes and adoption.	Refine
	Service Operations & Vendor Management	Post-award vendor/service governance - SLAs, Quarterly Business Reviews (QBR), scorecards - to improve reliability, value realization, and multi-vendor performance.	Refine
	Data Governance & Management	Standards, stewardship CoP, and platforms to improve data quality, access, security, and AI readiness across departments.	Extend
End User Services	Service Desk and Onsite Support	Central intake hub (ITSM platform) operated by ETS for shared services, and by departments for mission-app support as spokes; delivers faster response, clear communications, and tiered escalation under standardized workflows and SLAs.	Extend

Table 1. ETS Service Catalog Overview

3.1.1.1 Common Administrative Solutions vs. IT Centric Solutions & Platforms

Solutions & Platforms includes two distinct service types requiring different governance models:

- IT-Centric Shared Platforms are owned, managed, and operated by ETS. Examples: Office 365, IT governance services, master data management
- Common Administrative Solutions are enterprise applications supporting specific business functions (e.g., Human Resources, Finance, Procurement). These are owned by the respective business functions (e.g., Department of Human Resources Development), with ETS providing architecture, orchestration, and integration support as an enabling partner

This distinction ensures appropriate governance: Common Administrative Solutions are co-governed by business leadership and ETS, with business agencies leading and ETS enabling. This collaborative framework leverages state technology standards, achieves economies of scale, and allows departments to redirect resources toward mission-focused activities. Table 2. summarizes both categories.

Aspect	IT Centric Shared Platforms	Common Administrative Solutions
What it is	IT centric (not having a specific separate functional "home" within the enterprise, beyond the IT function) services and platforms provided to all departments.	Enterprise-wide applications that support a specific business function (e.g., HR, financials) and typically are owned, management and operated by a specific function within the enterprise, such as HR or finance function.

Who Owns It?	ETS owns, orchestrates, and operates these services directly.	Respective business leadership (e.g., Department of Human Resources Development, Department of Accounting and General Services).
ETS's Role	The direct owner and provider.	An enabling partner that facilitates cross departmental discussions, supports the technology architecture, orchestration, and integration.
Examples	Office 365, IT governance services, Low/no -code development platform, master data management platform.	A statewide Human Resources system or a central financial management platform.

Table 2. Common Administrative Solutions vs. IT Centric Solutions & Platforms

Chapter 3.6: Common Administrative Solutions, provides more details on the proposed strategy and approach for state's Common Administrative Solutions.

3.1.2 Adoption Strategy: Gradual Expansion of Centrally Provided Shared IT Services

The migration of departments to the central shared service adoption is gradual, driven by departmental readiness, service maturity, and mission alignment—not mandated timelines. However, foundational (e.g., security services such as Security Operations Center (SOC) monitoring, endpoint protection, and identity management) are projected to transition to mandatory baselines as they reach operational maturities, ensuring consistent statewide service levels.

Services are categorized by implementation status:

- **Extend**: Mature, proven services ready for broad adoption (e.g., Cybersecurity, IAM, Microsoft 365, IT governance services)
- **Refine**: Established services being enhanced based on user feedback (e.g., Business Analysis, Sourcing)

Communities of Practice (CoPs) coordinate adoption. Departmental and ETS practitioners collaborate to shape roadmaps, resolve adoption barriers, and share lessons learned—ensuring services evolve based on real-world experience, not theoretical requirements.

3.1.3 Recommendation for Consolidated IT Functions and Positions

The following tables contain the recommendation for the consolidated IT functions and related positions for increased consolidation of the state's IT services.

3.1.3.1 Infrastructure

As referenced in Act 179, 'infrastructure' in encompasses the full scope of core IT services that ETS provides to support statewide operations – including traditional network and server infrastructure, as well as cybersecurity, identity management, cloud hosting, and the foundational technology capabilities that enable all State departments to operate securely and efficiently. The complete Shared IT Services Portfolio - including all 15 services across Infrastructure, Solutions & Platforms, Professional Services, and End User Services -is detailed in Table 3. below.

Category	Sub-Category	Key Services	New ETS Positions During the Roadmap Period (avg. 1-3 yrs)	Est. Annual OpEx Increase
Infrastructure	**Cybersecurity**	CoP facilitation, 24/7 SOC, ZTNA, EDR, IPS, Security Orchestration, Automation and Response (SOAR), Vulnerability Scanning	Included in SOC FTEs	$1.5M
	Network (NGN)	CoP facilitation, 24/7 NOC, Multi-path connectivity, WiFi expansion, Cloud-optimized pathways	Included in NMS FTEs	TBD $1M (implementation)
	Hosting & Cloud	CoP facilitation, Enterprise Landing Zones, Value-Added Reseller (VAR) contract management, Financial Operations (FinOps)	2 architects & 1 FinOps analyst, tooling	$1M
	Identity & Access (IAM)	CoP facilitation, myHawaii SSO, Passwordless auth, IAM, B2B federation	2 (engineer & integration specialist), tooling	$500K
Solutions and Platforms	**IT Governance Services**	CoP facilitation, enterprise IT architecture, portfolio, asset and service management	2-3 (platform administrators, analyst), tooling	$300k - $450K
	Office Productivity	CoP facilitation, Advanced Microsoft 365 (Teams Calling, Purview, Power BI, Adobe CC)	2-3 (engineer, Power BI specialist, data governance analyst), tooling	$300k - $450K
	Enterprise Data Management	CoP facilitation, Data/AI Governance Platform, MDM, Shared Data Platform with Machine Learning (ML)/AI	Already funded FY2026 (Office of Data & AI established)	No additional funding FY27–30

Category	Sub-Category	Key Services	New ETS Positions During the Roadmap Period (avg. 1-3 yrs)	Est. Annual OpEx Increase
	Geospatial Platform	CoP facilitation, Esri Enterprise Geographic Information System (GIS) Platform Administration (user access, help desk, licensing)	1 GIS platform administrator	$500K
	Common Administrative Solutions Governance	Facilitating governance and collaborative planning including procurement planning for the solutions	1 Program Manager, tooling	$200K (annual) $1 – 1.5M (planning efforts)
Professional Services	**Business Analysis & Architecture CoP**	CoP facilitation, Business case development, architecture standards, on-demand consulting	1 (architect), tooling	$200K
	IT Sourcing & Acquisition CoP	CoP facilitation, IT purchasing playbook, contract management, master agreements	1-2 (sourcing specialists), tooling	$200K - $400K
	Change Enablement CoP	CoP facilitation, Project management, OCM, IV&V coordination, delivery playbook	1-2 (project manager, change manager), tooling	$200K - $400K
	Service Operations & Vendor Mgmt. CoP	CoP facilitation, Vendor governance, SLAs, QBRs, performance scorecards	1-2 (IT service managers), tooling	$200K - $400K
	Data Governance & Management	Standards, stewardship CoP, and platforms to improve data quality, access, security, and AI readiness across departments.	Included in Data Office FTEs	No additional funding FY27–30
EUS	**Service Desk & Onsite Support**	Central ITSM hub, Tier 1 support, federated hub-and-spoke model	2 FTE (maturity-based model)	$400K
		TOTALS	**17-22 (excl security / network)**	**$4.00M - $4.90M (excl security / network)**

Table 3. Service Catalog Overview with FTE and Cost Estimates

3.1.4 Phased Implementation and Resource Optimization

The shared services portfolio outlined above represents a full mature-state vision. However, ETS can begin delivering value immediately through strategic resource optimization and phased service expansion, even with constrained appropriations.

Several high-value services require minimal or no incremental funding to initiate: IT Coordination Council (ITCC) governance can formalize immediately using existing structures; several Communities of Practice can launch using current ETS staff and departmental IT staff as co-leads; license consolidation can begin negotiations within 90 days, generating savings that offset coordination costs; and IT tooling consolidation pilots can leverage existing staff with minimal / no new positions. These initiatives collectively can demonstrate measurable value within the first fiscal year while building the foundation for broader service adoption.

Additionally, ETS can strategically leverage existing position vacancies and natural workforce transitions to support shared service expansion without requiring all new positions immediately. As legacy technology platforms (including mainframe systems) are modernized or retired, staff supporting those systems can be retrained and transitioned to support emerging shared services, though this pathway is limited by anticipated retirements in the legacy workforce. Existing vacancies within ETS and partner departments provide opportunities for strategic hiring that supports both immediate operational needs and long-term consolidation objectives. This approach allows the initiative to scale gradually based on demonstrated value and available resources, reducing fiscal risk while maintaining forward momentum.

3.1.5 Financial Sustainability and Economic Value of Shared Services

The service investments detailed above represent strategic, self-funding initiatives. Comprehensive financial analyses have been conducted for each shared service, demonstrating that statewide financial benefits - including license consolidation savings, cloud optimization, infrastructure rationalization, reduced cybersecurity risk, and operational efficiencies - will substantially outweigh the added costs and generate ongoing annual operational benefits once services reach maturity. Detailed benefit analyses and financial models have been prepared for state internal planning and are available in the service-specific appendices.

3.1.6 Workforce Strategy: Moving Work, Not People

This plan does not mandate large, fixed-date transfers of existing departmental IT staff into ETS. Instead, the IT consolidation timeline depicts when ETS will stand up new centralized IT services and expand existing services—and the new ETS positions required to operate them. As these ETS-provided shared services mature and departments adopt them, the amount of effort departments must dedicate to operating similar IT services is expected to decrease over time.

Why Centralized or De-centralized IT Models Won't Work

A purely decentralized model - allowing each department to run its own independent IT shop - leads to duplicative spending, inconsistent security standards, fragmented data, and an inability to leverage economies of scale. However, pure centralization is equally problematic. Consolidating all IT staff into one monolithic organization risks creating a bureaucratic department that is slow, disconnected from departmental missions, and unable to respond to unique business needs. It can stifle innovation and lead to a "one-size-fits-none" service portfolio.

Instead, this plan adopts a federated IT model that combines the best elements of both approaches: standardizing foundational services for efficiency while preserving business-focused IT expertise within departments.

The Federated IT Model

The IT Consolidation Plan relies on a federated approach with three key components:

- **Central IT Organization (ETS)** - Provides shared services and standards: core infrastructure, platforms, professional services, and end-user services detailed throughout this plan
- **Embedded Business-Facing IT (Departments)** - Departmental IT staff remain organizationally embedded within their departments, preserving business domain knowledge and mission context. As ETS matures shared services, departmental roles evolve from technical maintenance toward business analysis, strategic planning, coordinating service adoption, managing mission-specific applications, and piloting innovations within enterprise standards
- **Strategic Partners (Vendors)** - Vendors act as operators and technical experts for foundational services, providing hands-on operational capacity, specialized expertise, and scalable manpower

This federated IT model breaks down silos between departments by standardizing core services through ETS, while preventing the creation of a massive central silo by keeping IT expertise deeply connected to departmental missions.

Three Parallel Developments

The emphasis is on three parallel developments:

- **Creating and staffing new ETS teams** that provide secure, standardized shared services (for example, cybersecurity operations, cloud and hosting, identity and access management, and enterprise platforms)
- **Providing departments with clear on-ramps and support** so they can shift specific services to ETS when it improves their security, resiliency, and workload balance
- **Allowing departmental work effort on foundational IT to decline gradually** through natural attrition, non-backfill of some vacancies, and re-focusing staff on mission-specific applications and business outcomes

Workforce Transformation Over Relocation

- **Workforce transformation over relocation** - Departmental IT staff remain embedded in their departments, preserving institutional knowledge and mission context
- **"Uplift" role evolution** - As ETS matures shared services, departmental roles gradually evolve from technical maintenance toward business partnership, strategic planning, data analytics, and vendor management
- **Natural attrition and selective non-backfill** - Departments progressively reduce foundational IT positions through natural turnover and strategic non-backfill decisions, redirecting resources to mission-facing roles
- **Limited, voluntary, department-led transfers** - Any position transfers from departments to ETS would be limited in scope, mutually beneficial, and sequenced to avoid service disruption, occurring only after shared services mature and based on department-specific business cases.

Cross-Reference to Act 179 §2(A)(1)(A): Act 179 requires "identification of specific positions and functions to be transferred in each department." This plan rejects mass transfers in favor of service evolution and workforce transformation. No specific positions are identified for mandatory transfer. Departments retain operational control of their IT staff, who collaborate with ETS through governance bodies (IT Coordinating Council and Communities of Practice) to co-deliver shared services while maintaining mission-specific expertise.

3.1.7 Proposed Dates of Transfer of Services (Work)

Indicative milestones are as follows:

3.1.7.1 Fiscal Year 2027 (Year 1) – Foundation and Planning

ETS establishes or expands foundational shared services while building collaborative governance structures. Priority initiatives include standing up or enhancing enterprise cybersecurity (24/7 SOC, Zero Trust, EDR), network services (NGN expansion, resilience), hosting services (cloud landing zones), and identity/access management (myHawaii SSO expansion). Simultaneously, ETS establishes Communities of Practice for priority service areas, develops standardized service catalogs with clear service level agreements (SLAs), and works with departments to assess readiness and create adoption pathways. The IT Coordinating Council begins regular operations to coordinate cross-departmental priorities.

3.1.7.2 Fiscal Year 2028 (Year 2) – Adoption and Workforce Evolution

Departments progressively adopt baseline infrastructure standards and begin consuming shared platform services (enhanced IT Governance Services, Microsoft 365 capabilities) based on their readiness and mission alignment. As departments shift infrastructure responsibilities to ETS, their IT staff reduce time spent on maintaining local infrastructure and foundational platforms, redirecting effort toward business analysis, strategic planning, data analytics, and mission-specific application management. ETS expands staffing for service delivery and vendor management roles, while Communities of Practice mature into effective knowledge-sharing forums.

3.1.7.3 Fiscal Year 2029 and Beyond (Years 3-5) – Maturation and Optimization

As shared services and governance mature, departments further reduce effort on duplicative infrastructure and platforms. Workforce evolution continues through natural attrition, strategic non-backfill of foundational IT positions, and retraining/reskilling programs facilitated by Communities of Practice. Departments make staffing decisions case-by-case (reassignment, retaining with new focus, or non-backfill) based on service maturity and mission needs. Any limited, targeted transfers of specific positions from departments to ETS occur only when mutually beneficial and sequenced to avoid service disruption.

3.1.7.4 Transfer of Positions

In this federated IT model, any direct transfer of individual positions from departments to ETS is expected to be limited, collaborative, and timed to specific service transitions rather than driven by a single, large-scale reorganization. This satisfies Act 179 §2(a)(1)(B) by providing a clear horizon for when centralized services and supporting ETS positions are in place, while respecting departmental management of their own workforce.

3.2 Facility, Personnel, and Infrastructure Needs

Expanding ETS-provided on-premises hosting in the ETS data center in the Kalanimoku building by migrating existing department-hosted on-premises information systems does not serve the state's strategic IT future. Instead of moving system from one state-owned building to another, this report recommends investing in migrating the ETS-brokered Government Private Cloud (GPC) to be hosted on one of the major cloud platforms. GPC then provides a path for consolidating on-premises infrastructure hosted at the departments to a modern cloud infrastructure.

3.2.1 Overview of Shared Services Infrastructure Needs

The infrastructure and platform needs outlined in this plan support the service categories that form the foundation of the State's consolidated IT ecosystem:

- **Infrastructure Services** (Cybersecurity, Network, Hosting, Identity/Access Management) - The foundational digital utilities that provide secure connectivity, threat protection, cloud landing zones, and identity management for all departments.
- **Solutions & Platforms** (IT Governance services, Microsoft 365, Enterprise Data) - Enterprise-grade platforms that departments configure to meet mission needs, eliminating duplicative procurement and tooling.

Professional Services (covered separately in the next chapter) provide Communities of Practice for business analysis, sourcing/acquisition, change enablement, operations/vendor management, and data governance.

3.2.2 Facility Needs

3.2.2.1 Data Center Facilities

This plan does not request additional on-premises data center facilities. The strategic direction is with a cloud-first migration to Government Private Cloud (GPC) environments hosted on major cloud platforms. ETS will broker pre-configured, security-hardened Cloud Landing Zones with built-in compliance controls, enabling departments to migrate applications to cloud infrastructure without maintaining physical data centers.

3.2.2.2 Reduction in State Hosting Facility Needs

As departments progressively migrate applications to ETS-brokered cloud environments over FY27-FY30, the State's footprint in traditional on-premises hosting facilities will steadily decline. Cloud migration eliminates the need for departments to maintain local server rooms and reduces demand for rack space in centralized data centers. Industry benchmarks indicate that data center consolidation coupled with cloud adoption can reduce facilities costs by 20-50% through elimination of underutilized hardware, energy savings, and reduced physical infrastructure maintenance.

3.2.3 ETS Staff Facilities

ETS workforce planning assumes staff remain distributed across existing State office locations, with no requirement to relocate staff into the ETS offices in the Kalanimoku basement facilities or establish new centralized office space. The operating model emphasizes federated collaboration through Communities of Practice and remote-capable work arrangements, consistent with modern IT workforce practices.

3.2.4 Personnel Needs

3.2.4.1 New ETS Positions to Support Shared Services

The table 4. below summarizes the resourcing needed by ETS to deliver the proposed Shared Services Portfolio across Infrastructure, Platform, Professional Services, and End User Services. Detailed position justifications, role descriptions, and phased hiring timelines are provided in the respective appendices.

Category	Service	FY27-28	FY29-31	Summary of Justification
Infrastructure Services	Enterprise Cybersecurity Services	TBD	TBD	SOC analysts, threat hunters, security architects, compliance specialists to support 24/7 operations, ZTNA deployment, EDR enhancement, and SOAR automation
	Enterprise Network Services (NGN)	TBD	TBD	Network architects, engineers, and NOC specialists to manage multi-path resilient connectivity, 24/7 monitoring, enterprise WiFi expansion, and SLA management
	Hosting Services (GPC)	3 FTE	3 FTE (continued)	Cloud architects, FinOps analyst (aka landing zone engineers) to broker cloud services, manage VAR relationships, implement IaC templates, and support migrations
	Identity and Access Management	2 FTE	2 FTE (continued)	IAM architects, identity governance analysts, and authentication specialists for myHawaii SSO expansion, IGA automation, and fraud detection
Platform Services	IT Governance Services	2 FTE	1 FTE	Platform administrators, IT architects, and analysts to maintain enterprise applications capabilities
	Enterprise Data Management	n/a	n/a	Positions already funded for data architects, MDM administrators, and data stewards to implement enterprise data governance and integration standards
	Geospatial Platform	1 FTE	1 FTE (continued)	GIS administration, license management, user help desk
	Office Productivity Platform (M365)	2-3 FTE	2-3 FTE (continued)	M365 architects, Power BI specialists, and governance leads to drive advanced capability adoption and eliminate shadow IT
	Common Administrative Solutions Governance	1 FTE	1 FTE (continued)	Additional program management required for effective orchestration of enterprise requirements, solutions
Professional Services	Business Analysis & Service Architecture	1-2 FTE	1-2 FTE (continued)	Enterprise architects, business analysts, and technology evaluators to support CoP facilitation and departmental planning
	Change Enablement	1-2 FTE	1-2 FTE (continued)	Organizational change managers, trainers, and adoption specialists to support service transitions and project implementations
	IT Procurement	1-2 FTE	1-2 FTE	Strategic sourcing specialists and contract coordinators to manage

Category	Service	FY27-28	FY29-31	Summary of Justification
			(continued)	enterprise agreements and vendor pools
	Service Operations & Vendor Management	1-2 FTE	1-2 FTE (continued)	Vendor relationship managers and service delivery leads to oversee vendor performance and SLA compliance
End User Services	Centralized Service Desk	2 FTE	2 FTE (continued)	Service desk leads, knowledge managers, and automation specialists to evolve the hub-and-spoke support model
Workforce	Training & Pipeline Programs	1 FTE	1FTE (continued)	Program lead for IT Position Classification Modernization, IT Workforce Training & Development, and IT Workforce Pipeline initiatives

Table 4. New ETS Positions to Support Shared Services

3.2.5 The Suite of Infrastructure Services

As the state continues to increasingly rely on stable cloud-based infrastructure platforms and services, the state is facing a new reality related to governance of IT functions that are mostly operated by the state's vendor partners. In response to Act 179 §2(a)(1)(C), this report interprets "operational infrastructure needs" to encompass the full spectrum of shared services required to support consolidated state IT operations, including on-premises infrastructure, vendor-managed infrastructure, cloud platforms, and end-user support services. This plan organizes these operational needs into four established service categories:

- **1. Infrastructure Services**: Foundational digital utilities—Cybersecurity, Network, Hosting, and Identity/Access Management—that provide baseline security, connectivity, and cloud infrastructure for all departments
- **2. Solutions & Platforms**: Enterprise platforms—IT Governance Services, Office Productivity, Enterprise Data, Common Administrative Solutions, and Geospatial services—that departments configure to mission needs
- **3. Professional Services**: Communities of Practice for Business Analysis, Sourcing/Acquisition, Change Enablement, Operations/Vendor Management, and Data Governance that build statewide expertise
- **4. End-User Services**: Hub-and-spoke service desk providing "no wrong door" support across both shared services and departmental mission applications

3.3 Enabling ETS to Provide Expert Support to All State Agencies

Act 179 §2(a)(1)(D) requires recommendations to enable ETS to provide expert support to all state agencies regarding IT activities. This plan proposes **Communities of Practice (CoPs) as the primary mechanism** for developing enterprise-wide IT expertise and coordinating shared services.

3.3.1 Service Broker Philosophy

ETS functions as a **strategic service broker**—orchestrating and facilitating enterprise capabilities while departments remain empowered partners. This model clarifies three complementary roles:

- **Departments: Customer and Strategic Partner** - Shape service roadmaps through ITCC and CoPs, maintain ownership of mission-critical applications
- **ETS: Architect, Orchestrator, and Business Manager** - Manage enterprise architecture, broker vendor contracts, facilitate CoPs, ensure statewide alignment
- **Vendors: Operator and Technical Expert** - Deliver day-to-day operations under SLAs, provide specialized expertise and scalable capacity

3.3.2 Communities of Practice: Building Statewide Capability

Communities of Practice are flexible, practitioner-led collaborative networks where departmental and ETS experts co-create standards, share best practices, and shape service roadmaps. State IT operations require five interdependent service management competencies, which CoPs develop collaboratively rather than centralizing expertise at ETS:

1. **Service Strategy & Portfolio** - Enterprise architecture, shared service roadmaps, technology evaluation
2. **Sourcing & Acquisition Management** - Strategic procurement, vendor selection, contract management
3. **Service Operations & Vendor Management** - Day-to-day service delivery, performance monitoring, vendor accountability
4. **Performance & Financial Management** - KPIs, dashboards, cost optimization, investment transparency
5. **Customer Engagement & Change Management** - Adoption support, organizational change, user enablement

CoPs can exist for every shared service (on demand and needs basis):

- **Infrastructure CoPs** (Cybersecurity, Network, Hosting, Identity & Access Management) - Practitioners who manage, consume, or depend on foundational infrastructure services
- **Platform CoPs** (IT Governance Services, Microsoft 365, Enterprise Data, GIS) - Practitioners who administer, configure, or build on shared platforms
- **Professional Services CoPs** (Business Analysis, Sourcing, Change Enablement, Vendor Management, Data Governance) - Cross-cutting expertise supporting work across all services

3.3.2.1 Service-Specific CoPs (Infrastructure & Platforms)

Infrastructure and Platform CoPs bring together practitioners from across departments who share responsibility for specific services. Examples include:

- **Cybersecurity CoP** - Security officers and analysts who collaboratively shape threat response protocols, security baselines, and incident handling procedures
- **Microsoft 365 CoP** - M365 administrators who share governance approaches, Power BI templates, Teams policies, and Copilot deployment strategies

These CoPs ensure services evolve based on real departmental needs, not theoretical requirements.

3.3.2.2 Cross-Cutting Professional Services CoPs

Five Professional Services CoPs operationalize the service management competencies across Infrastructure, Platforms, and End-User Services:

Business Analysis & Service Architecture - Frameworks to translate business needs into architecturally sound technology initiatives. Supports departments planning infrastructure migrations, platform adoptions, or mission-specific solutions.

IT Sourcing & Acquisition Management - Standardized processes for sourcing technology and services. Helps navigate complex acquisitions, onboard vendors, and leverage the State's buying power.

Change Enablement - Tools and methodologies for technology-enabled changes. Focuses on project implementation, user adoption, and ensuring intended business outcomes. Includes IV&V, quality assurance, and audit services.

Service Operations & Vendor Management - Expertise to manage services and vendor performance through SLAs, business reviews, and scorecards. Maintains comprehensive IT vendor and contract catalog. Playbooks and standards leveraged by all other CoPs.

Data Governance & Management - Frameworks to manage state data as a shared, strategic asset. Ensures data quality, security, and fitness-for-purpose across solutions and platforms.

Practitioners engage when they're in that stage with actual work, creating continuous activity with demand-driven participation rather than attendance obligations.

3.3.2.3 How CoPs Translate to Practice

Departmental participation in Communities of Practice is an essential job function, not voluntary. Departments should plan for 4-8 hours monthly per practitioner engaged in service-specific CoPs.

All CoPs operate through shared responsibility:

- **Core Group** (ETS + departmental reps) provides continuity, sets agendas, stewards resources, and coordinates voluntary peer leads who take ownership of specific deliverables
- **Built for Knowledge Reuse** - Practitioners document patterns, templates, and lessons, creating assets that speed future efforts
- **Regular meeting cadences** (monthly to quarterly) prevent the "empty room problem": no obligation without relevance, no dead time, no generic advice disconnected from actual work

3.3.3 ETS Leadership and Resourcing

To provide effective expert support across all CoPs, ETS requires dedicated positions and funding as identified in Section 3.1.3.1 Each CoP needs ETS coordinators plus specialized staff, representing significant annual investment. Without adequate ETS positions and funding, departments will continue operating in isolation, perpetuating duplicative efforts and inconsistent standards.

3.4 Governance of Shared IT Services

Effective IT consolidation requires governance that balances enterprise consistency with departmental autonomy. This plan deliberately rejects one-size-fits-all governance, recognizing that different services have different stakeholders and decision speeds. The governance model is fundamentally collaborative - departments are not passive consumers but active co-owners who shape service roadmaps, set priorities, and ensure shared services meet mission needs.

3.4.1 Three-Tiered Governance Structure

Governance operates through three complementary layers:

1. **Strategic Sponsorship: State CIO and Department Business Leadership** – Provides executive leadership, aligns IT consolidation with statewide strategy, resolves escalations when consensus cannot be reached
2. **Tactical Alignment: IT Coordinating Council (ITCC)** – Departmental CIOs manage the IT-related shared services portfolio, prioritize investments, approve roadmaps, and set enterprise standards through consensus-based decision-making
3. **Operational Collaboration: Communities of Practice** – Subject Matter Expert (SME)-led forums where departmental and ETS experts co-create standards, share best practices, and provide ongoing service feedback

This structure ensures strategic direction flows downward while operational expertise flows upward - creating bi-directional accountability.

3.4.1.1 Decision Rights and Collaborative Oversight

Clear decision rights prevent confusion and ensure appropriate balance between enterprise consistency and departmental autonomy:

- **Enterprise standards** (ETS / State CIO) establish non-negotiable baselines, compliance, and governance policies
- **Collaborative decisions** (ITCC + CoPs) govern service roadmaps, enterprise standards, and technology investments
- **Departments retain control** over mission-specific applications, business processes, and operational priorities

This model directly addresses concerns about "ETS as both rule-maker and referee" - standards emerge from collaborative practitioner forums where departments have equal voice, not from ETS mandates.

When consensus cannot be reached within ITCC on enterprise standards or service priorities, the State CIO has final authority after consultation with department directors and the Comptroller.

3.4.1.2 Governance Lifecycle: Evaluate → Direct → Monitor

The governance model operates through a continuous cycle: evaluating new opportunities and priorities, directing investments and service designs, and monitoring performance against SLAs. This ensures governance is not bureaucratic oversight but active stewardship driving measurable outcomes.

3.4.2 Performance Measurement

The plan's success depends on transparency for both ETS service delivery and departmental adoption. Performance visibility will be integrated into governance processes through the IT Coordinating Council (ITCC) and Communities of Practice.

ITCC reviews shared service progress and performance against Service Level Agreements, cost avoidance and efficiency gains, and value realization outcomes. Communities of Practice similarly track service-specific improvements and user satisfaction to drive continuous enhancement.

Performance information will be made available to departmental leadership and oversight bodies, ensuring evidence-based decision-making. The IT Governance Services shared service (enterprise IT architecture, portfolio, asset and service management) provides integrated visibility across the service lifecycle, supporting consistent measurement as these capabilities mature.

Success is measured by improved security posture, reduced duplication and operational costs, enhanced digital service capabilities, and an evolved workforce focused on strategic mission priorities.

3.4.3 Special Governance for Common Administrative Solutions

Common Administrative Solutions (e.g., ERP for HR, financials, grants management) require co-governance between business leadership, ITCC, and relevant Communities of Practice. This ensures business needs drive decisions while technology standards ensure security and integration.

3.5 Ensuring that Agency Services Are Not Interrupted During Phased Consolidation

Service continuity is both a statutory requirement and a core principle of this plan. All transitions follow graduated, risk-managed approaches that prioritize uninterrupted operations over speed.

3.5.1 Service Continuity Framework

Every service transition—infrastructure migrations, platform adoptions, or operational changes—incorporates four essential protections:

1. **Dual-Operation Periods** – ETS and departmental teams operate services together during cutover windows, ensuring fallback capability until stability is confirmed
2. **Change-Freeze Windows** – Major transitions avoid critical business periods (fiscal year-end, tax season, legislative sessions)
3. **Validated Rollback Procedures** – Tested rollback plans restore previous service state within defined timeframes if issues arise
4. **Business Continuity Testing** – Disaster recovery and continuity validation occur before production cutover

Production transitions require standardized readiness assessments covering technical validation, operational preparedness, stakeholder sign-off, and documented risk mitigation. The Change Enablement Community of Practice coordinates these assessments while allowing flexibility for service-specific requirements.

3.5.2 Graduated Adoption Based on Readiness

Departments have different readiness levels, technical complexity, and risk tolerance. Rather than mandating uniform timelines, each shared service establishes graduated pathways: pilot phases, expansion based on proven stability, and maturity when good operational maturity is demonstrated.

3.5.3 Monitoring, Vendor Accountability, and Rapid Response

Service transitions leverage enterprise monitoring tools providing real-time dashboards, automated SLA violation alerts, incident escalation protocols, and quarterly business reviews. Communities of Practice serve as rapid-response forums where practitioners troubleshoot collaboratively and escalate systemic issues to ITCC.

The service broker model assigns operational execution to vendor partners under clear SLAs including:

- Maximum tolerable downtime (MTD) and recovery time objectives (RTO)
- Financial penalties for SLA violations affecting availability
- Post-incident reports with root cause analysis and corrective actions
- Quarterly business reviews tracking vendor performance

The Service Operations & Vendor Management CoP provides oversight and shares best practices for managing service continuity.

3.5.4 Mission-Critical System Protections

Systems categorized as Mission Critical (Chapter 4) receive enhanced protections: multi-region disaster recovery with automated failover, zero-tolerance for unplanned downtime during business hours, annual continuity exercises, and 24/7 ETS support during transitions. Departments may defer adoption for Mission Critical systems until continuity requirements are demonstrably met through pilot deployments with lower-criticality systems.

3.6 Common Administrative Solutions

Common Administrative Solutions are enterprise-wide applications supporting specific administrative business functions which are required throughout state government - Human Resources, Finance, Procurement, and similar administrative services are examples of these services. Unlike IT-centric platforms that ETS owns and operates directly,

Common Administrative Solutions are owned and managed by their respective business functions, with ETS providing critical technology enablement and integration support.

3.6.1 Why This Matters to IT Consolidation

The State currently operates over 200 accounting/financial systems, 40+ HR and payroll applications, and multiple procurement platforms in addition to other solutions - all with inconsistent data definitions and limited integration. This fragmentation perpetuates the silos that Acts 179 and 173 seek to eliminate. Consolidating Common Administrative Solutions onto unified enterprise platforms creates:

- **Economies of scale** through enterprise licensing and vendor negotiations
- **Consistent data** enabling cross-program analytics and informed decision-making
- **Reduced operational burden** from duplicate maintenance and manual workarounds
- **Foundation for AI-enabled insights** connecting workforce, financial, and procurement data

3.6.2 Governance Structure

Successfully consolidating Common Administrative Solutions requires a clear three-tiered governance model that balances strategic oversight, tactical coordination, and effective implementation:

- **Tier 1 – Executive Steering Committee**: Department directors and the State CIO provide strategic direction, approve major investments, and hold the program accountable for delivering measurable value. Meets quarterly
- **Tier 2 – Governance Board**: Business and IT leadership from departments collaborate with ETS to develop roadmaps, define requirements, coordinate resources, and monitor performance. ETS facilitates this board to ensure enterprise-wide alignment while respecting departmental needs. Meets monthly
- **Tier 3 – Project Execution**: Lead agencies manage implementation projects with support from the Enterprise Program Management Office (EPMO), which coordinates across projects, maintains standards, and ensures integrated outcomes

This governance model is complemented by Communities of Practice that provide forums for peer learning, knowledge sharing, and capability building across functional areas (e.g., Financial Management, HR/Payroll, Data Governance, Change Management, Technical Integration)

3.6.3 Next Steps & Funding

Implementation requires:

- **FY27-28**: Establish governance bodies, EPMO charter, develop business case for first initiative (recommend Payroll/HR), initiate collaborative planning
- **Legislative Request**: Fund collaborative planning phase ($1-$1.5M in FY27-28) and commit to multi-year strategy and phased implementation roadmap (FY27-FY30)
- **Timeline**: FY27 planning and governance establishment; FY28-FY30 phased implementation aligned with broader IT consolidation roadmap

This governance framework reflects proven practices from successful state Common Administrative Solutions programs while being tailored to Hawai'i's context and Acts 179/173 requirements.

3.7 Rise of Artificial Intelligence

Artificial Intelligence (AI) is reshaping how governments deliver services, enabling faster decision-making, enhanced security, and improved citizen experiences. The IT Consolidation Plan provides the essential foundation for Hawaii to harness AI responsibly and effectively - standardizing data, establishing security guardrails, and creating the scalable infrastructure that AI requires.

3.7.1 How Consolidation Enables AI

AI cannot be deployed effectively in a fragmented IT environment. The State's current landscape - where departments operate redundant, disconnected systems - creates three critical barriers that consolidation helps address:

Reducing Data Silos: The most significant AI barrier is data fragmentation. When each department operates disconnected, siloed and duplicative or custom-built systems, data becomes locked in incompatible formats across dozens of systems. AI requires clean, structured, interconnected data - something very difficult to achieve across fragmented departmental solutions.

By standardizing shared solutions and platforms, the State creates unified data models and native integrations between systems. Enterprise Data Management builds on this foundation, providing master data management, governance, and cross-platform analytics—but this only succeeds when underlying platforms already share common data models.

Improving Security: Deploying AI without enterprise-wide security creates significant risk. Consolidated cybersecurity services and identity management provide universal security policies, data access controls, and AI system monitoring that would be impossible to maintain across dozens of independent systems.

Scalable Infrastructure: AI requires significant infrastructure. The proposed hosting model provides scalable, on-demand computing to run AI efficiently—cost-prohibitive on aging, disparate on-premises hardware.

3.7.2 AI Embedded in Shared Services

Rather than treating AI as a separate initiative, this plan embeds AI capabilities throughout the shared services portfolio. Platform consolidation unlocks these AI capabilities by eliminating data silos and enabling native integrations:

Infrastructure Services

- **AI-Powered Cybersecurity**: Advanced threat detection, behavioral anomaly analysis, and automated incident response
- **Intelligent Identity Management**: AI detects anomalous login patterns and automates access lifecycle management across integrated platforms

Solutions & Platforms *(where platform consolidation creates the biggest AI impact)*

- **IT Governance Services**: A unified platform provides end-to-end performance and value monitoring across the entire IT value chain—from strategic planning (portfolio management) through delivery (project/change management) to operations (incident/problem/asset management). AI can analyze patterns across all IT facets and execute agentic AI.
- **Office Productivity**: Native integration across Teams, SharePoint, and Power BI means AI drafts emails from meeting notes, summarizes documents, and analyzes data—only possible on a unified platform
- **Enterprise Data Analytics**: AI-driven insights, anomaly detection, and natural language querying across unified data that fragmented systems could never reveal

Professional Services: AI assists in requirements analysis and solution recommendations based on enterprise knowledge across all Communities of Practice.

End User Services - Intelligent Service Desk: AI chatbots handle routine requests and suggest solutions from the unified knowledge base

The Multiplier Effect: AI capabilities compound when platforms integrate natively. For example: Service Deck AI detects password reset patterns → Office productivity AI identifies a phishing campaign → cybersecurity AI triggers automated response → data platform AI generates executive dashboard showing enterprise-wide impact. This cross-platform AI orchestration only works with consolidated platforms and unified data models.

3.7.3 Impact on Workforce Evolution

AI directly supports the "Uplift" workforce strategy outlined in Chapter 3. As AI handles routine technical maintenance - automated ticket resolution, predictive monitoring, intelligent documentation—IT professionals evolve from technicians to strategists, focusing on business partnership, vendor management, and innovation.

For the broader state workforce, AI serves as an augmentation tool, not replacement. Employees use AI assistants to handle repetitive administrative tasks (meeting summaries, document drafting, data queries), freeing time for creative, strategic, and interpersonal work requiring human judgment.

AI-Enhanced Recruitment and Development
AI streamlines recruitment by automating candidate screening and interview scheduling, while AI-powered skill-gap analysis and career trajectory monitoring support sustained workforce growth. These capabilities align with Act 179's mandate to attract and retain high-quality IT professionals.

3.7.4 Governance and Responsible AI Use

The collaborative governance structure (State CIO & Executive Leadership, IT Coordinating Council, Communities of Practice) ensures AI adoption balances innovation with accountability. Key safeguards include:

- **AI Ethics Standards**: The Data Governance & Management Community of Practice establishes standards for appropriate

use cases, bias detection, and transparency
- **Privacy Protection**: Enterprise-wide data governance ensures AI respects privacy requirements and data access controls
- **Human Oversight**: AI assists decision-making but doesn't replace human judgment, especially for decisions affecting citizen rights and benefits
- **Transparency**: Clear documentation of where and how AI is used in citizen-facing services

3.7.5 Strategic Alignment

AI readiness is not an optional enhancement—it's a competitive necessity for modern government. However, AI cannot be successfully deployed on fragmented infrastructure. By aligning AI adoption with IT consolidation, Hawaii creates the unified data foundation, integrated platforms, and security guardrails that make AI both effective and safe.

3.8 5-Year Consolidation Roadmap (Fiscal Years 2026–2030)

This roadmap outlines the phased implementation of the 15 shared services across four service categories: Infrastructure, Solutions & Platforms, Professional Services, and End User Services. The timeline reflects a graduated, service-maturity-driven approach rather than fixed mandates—services advance from pilot to production as they demonstrate operational stability, achieve departmental readiness, and meet defined success criteria

3.8.1 Implementation Philosophy

The 5-year roadmap is guided by three principles:

Foundation First - Ensure secure, reliable infrastructure (Cybersecurity, Network, Hosting, IAM) before expanding the services. Without stable foundations, infrastructure and platform migrations introduce unnecessary, significant risk.

Parallel Development - Infrastructure, Platform, and Professional Services mature concurrently. Communities of Practice (CoPs) launch alongside or before technical implementations to build practitioner expertise and collaborative governance.

Service Evolution Over Big-Bang Deployment - Services progress through maturity stages: Pilots (limited scope, high support), Expansions (broader adoption, proven stability), and Enterprise Production (enterprise-grade, SLA-backed).

3.8.2 Consolidated 5-Year Roadmap by Fiscal Year

The table 5. below presents the major initiatives, milestones, and expected outcomes for each fiscal year across all service categories.

Fiscal Year	Infrastructure Services	Solutions & Platforms	Professional Services CoPs	End User Services	Governance & Enablers
2026	- Cybersecurity: Deploy Endpoint Detect and Respond (EDR) solution to +17k clients and servers, Implement 24/7 Managed Detection and Response (MDR) service, Proactive Threat Hunting, Intrusion Prevention System (IPS) upgrades, Zero Trust Network Access (ZTNA) pilot - MyHawaii IAM deployed - GPC 3.0 proof-of-concept completed - Network resilience baseline	- Enterprise Notification System (ENS) deployed - Adobe eSign expansion - IT Governance Portfolio management refined - M365 G5 rollout to 14,000+ users - Planning to transition GIS platform user administration, license management, end user services from OPSD to ETS	- Data & AI Community of Practice established - Enhanced RFP development standards - Project management playbook refinements	- Service desk ITSM platform operational baseline	- State IT Strategy refresh initiated - ITCC charter refined - ETS Strategic Plan development
2027	- Cybersecurity: Expand vulnerability scanning statewide, SOAR automation, Tune EDR configuration, ZTNA small rollout, Secure Active Directory, Rollout Enterprise Security Incident and Event Management (SIEM) - Network: NGN Phase 1—multi-path connectivity, 24/7 NOC, segmentation standards - Hosting: GPC 3.0 hybrid cloud landing zones, department migration pathways, enterprise contract	- M365: Teams Calling expansion, AI governance, Purview DLP baseline, Power BI governance - Transition GIS platform user administration, license management, end user services from OPSD to ETS - IT Governance Services: Portfolio management, enterprise architecture repository further development - Enterprise Data: Office of Data & AI operational, MDM platform	- All 5 CoPs Launch: Service Architecture - IT Sourcing & Acquisition - Change Enablement - Service Operations & Vendor Mgmt - Expand Data & AI Community of Practice - Playbook development, initial templates	- Hub-and-spoke service desk model piloted with 3–5 departments - Knowledge base and self-service portal launched	- ITCC operational (monthly meetings) - Service catalog published with SLAs - Departmental readiness assessments - IT Position Classification Modernization Program launch - IT Workforce Pipeline Program launch

Fiscal Year	Infrastructure Services	Solutions & Platforms	Professional Services CoPs	End User Services	Governance & Enablers
	- IAM: myHawaii.gov SSO target expansion to 10+ applications	pilot			
2028	- Cybersecurity: Vulnerability Management, Provide secure baselines for clients and servers, ZTNA expansion, Secure Active Directory, Enterprise SIEM - Network: NGN Phase 2—enterprise WiFi expansion, cloud-optimized pathways, multi-region resilience - Hosting: Priority application migrations to GPC 3.0, FinOps dashboards operational - IAM: Passwordless authentication pilot, B2B federation for inter-agency systems	- M365: Teams Calling expansion, AI governance, advanced Purview controls - GIS platform shared service: migrate organization accounts to SSO, expand oversight of enterprise servers and solutions - IT Governance Services: Service management (ITSM) module pilot, CMDB integration - Enterprise Data: MDM golden records for key entities, shared data platform with ML/AI capabilities	- CoP Maturation: - Playbooks refined based on pilot learnings - Pre-vetted vendor pools established - Retainer model operational (zero-dollar MSAs with task orders) - Quarterly QBRs and vendor scorecards standardized	- Service desk expansion to 8–10 departments - Onsite support coordination model established - SLA compliance dashboards published	- Common Administrative Solutions: Governance Board operational, collaborative planning for Payroll/HR consolidation - IT Workforce Training & Development Program launch - CoPs publish reusable templates, standards, and lessons learned
2029	- Cybersecurity: Compliance automation (FedRAMP, NIST), ZTNA expansion - Network: NGN Phase 3—full statewide standardization, policy automation, SD-WAN integration - Hosting: Continued migrations, rationalization of legacy on-prem infrastructure, cost optimization via FinOps - IAM: Enterprise IGA automation, fraud detection integrated with SOAR	- M365: Power BI enterprise analytics, unified support model - GIS platform shared service: federate geospatial data from department sources - IT Governance Services: Full ITSM/ITAM/CMDB operational, GRC module pilot - Enterprise Data: Enterprise data catalog operational, cross-department data sharing agreements	- CoP: - Performance metrics tracked: time-to-start, time-to-value, SLA compliance, rework rate - Communities self-sustaining with peer-led working groups - Vendor management playbook includes corrective action protocols	- Service desk reaches 15+ departments - AI-powered chatbot for Tier 1 support - Automated ticket routing and escalation	- Common Administrative Solutions: Phased implementation of consolidated Payroll/HR system (if funded) - Natural attrition and selective non-backfill begin reducing departmental commodity IT positions - Workforce evolution metrics tracked
2030	- Cybersecurity: Zero Trust architecture fully implemented, AI-driven threat detection - Network: Continuous optimization, capacity planning automation - Hosting: Cloud-first fully adopted, legacy data centers decommissioned where feasible - IAM: Unified identity across all executive branch systems (SSO)	- M365: Full feature adoption, AI governance mature - IT Governance Services: Predictive analytics for service health, automated compliance reporting - Enterprise Data: AI-ready data platform, real-time analytics for policy insights	- CoPs: - Annual playbook updates - Statewide training curricula - Benchmarking against peer states - Vendor performance tied to value realization, not just activity	- Service desk model fully mature - Continuous improvement via AI-driven insights and user feedback	- Consolidated services operational at scale - Departmental IT staff fully transitioned to business partnership, strategic planning, vendor management roles - Limited, voluntary transfers where mutually beneficial

Table 5. Consolidated 5-Year Roadmap by Fiscal Year

3.8.3 Alignment with Previous Roadmaps (2023 & 2024 Reports)

This 5-year roadmap builds on and integrates recommendations from the 2023 and 2024 IT Consolidation Reports, ensuring continuity while adapting to lessons learned and evolving state priorities.

Continuity from 2023 Report (Findings and Recommendations): The 2023 report established the Hybrid – Extended Shared Services model and identified high-value consolidation opportunities across Infrastructure, Platforms, and Professional Services. The current roadmap advances those recommendations as shown in table 6 below:

2023 Recommendation	Status in 2026–2030 Roadmap
Infrastructure & Platform Consolidation - Cybersecurity (Active Directory, MFA, Vulnerability Scanning), Network (VoIP, VPN), File Management, Server Hosting	☑ Integrating - Cybersecurity, Network, Hosting, and IAM services form the infrastructure foundation (FY2027–FY2030)
Shared Applications - Office Productivity (Office 365), IT Management (Help Desk, IT Asset Management), GIS Administration	☑ Integrating - M365, IT Governance Services, and Geospatial Platform services included (FY2027–FY2030)
Professional Services - Data Governance, IT Investment Management, IT Procurement, IT Strategy & Planning, Project Support	☑ Integrating - Five Professional Services CoPs operationalize these capabilities (FY2027 launch, maturing through FY2030)
Limited Staff Transitions - Consolidate tasks/processes, not people; departments retain mission-specific expertise	☑ Adopting - "Moving Work, Not People" philosophy; workforce evolution through natural attrition, reskilling, and voluntary transfers only
Workforce Development - Training programs for Project Management, Security, Procurement, Vendor Management, Data Management, AI	☑ Formalizing— IT Workforce Training & Development Program (FY2028 launch); CoPs provide continuous learning

Table 6. Continuity from 2023 Report

Progression from 2024 Report: The 2024 report refined strategic recommendations, emphasized service-oriented operating models, and highlighted progress on M365, citizen identity, and cloud modernization. The current roadmap extends this trajectory as shown in table 7 below:

2024 Strategic Recommendation	How 2026–2030 Roadmap Advances It
Integrated IT Strategic Planning & Budgeting - Align IT spending with enterprise priorities before budgets are fixed	ITCC governs portfolio prioritization; IT Governance Services platform enables enterprise portfolio management (FY2027–FY2028)
State-wide IT Management Platform - End-to-end platform for strategic planning, service operations, vendor management	IT Governance Services expands from portfolio management to full ITSM/ITAM/CMDB/GRC (FY2027–FY2030)
Evolution of IT Workforce (Shift Left) - From service delivery to brokering/managing vendor services and enabling business transformation	Professional Services CoPs build vendor management, business analysis, and change enablement capabilities; departmental IT evolves through FY2027–FY2030
Service-Oriented Operating Model - Standardized service frameworks with consistent metrics and SLAs	Service Broker philosophy, Communities of Practice, and service catalog with SLAs established (FY2027) and matured (FY2028–FY2030)
Continual Infrastructure/Platform Modernization - GPC, Network (NGN), Cybersecurity, IAM enhancements	Infrastructure Services roadmap provides phased implementation across FY2027–FY2030
Enterprise Shared Applications (ERP Extensions) - Careful planning for administrative system modernization	Common Administrative Solutions governance (FY2028), collaborative planning for Payroll/HR consolidation (FY2028–FY2030)

Table 7. Progression from 2024 Report

3.8.4 Key Differences and Adaptations

While maintaining strategic continuity, the 2026–2030 roadmap refines the approach based on operational realities:

1. **From Committee Structure to Service Taxonomy** - The 2023 report used working group committees (HR, Governance, Facilities, etc.). The current roadmap organizes around service categories (Infrastructure, Platforms, Professional Services, End User Services) with Communities of Practice as the primary collaboration mechanism.
2. **Explicit Governance Model** - The 2024 report recommended governance improvements. The 2026 roadmap formalizes a three-tiered governance structure (State CIO → ITCC → CoPs) with clear decision rights and operational cadence.
3. **Workforce Evolution Over Staff Consolidation** - Earlier reports noted limited staff transitions. The 2026 roadmap makes this explicit: no mandatory position transfers; instead, workforce transformation through role evolution, reskilling, and natural attrition.
4. **Service Maturity Stages** - The 2026 roadmap introduces Extend/Refine/New service status and Pilot/Expansion/Production maturity trajectories, providing clearer adoption pathways than previous reports.
5. **Common Administrative Solutions Governance** - The 2026 roadmap establishes a dedicated governance framework (Chapter 3.6) for HR/Finance/Procurement consolidation, reflecting lessons learned from complex enterprise system implementations.

3.8.5 Dependencies and Risk Mitigation

Several cross-cutting dependencies shape the roadmap's success:

Legislative Funding - Infrastructure modernization (GPC 3.0, NG N, Cybersecurity SOC) and ETS staffing expansion require sustained multi-year appropriations. Funding delays will slow service maturity and departmental adoption.

Departmental Readiness - Adoption timelines assume departments have sufficient staffing and leadership commitment to participate in CoPs, conduct readiness assessments, and manage service transitions. Under-resourced departments may require extended timelines.

Vendor Performance - The service broker model depends on vendor-operated infrastructure and platforms. SLA violations, vendor financial instability, or contract disputes will require fallback plans and alternative sourcing.

Workforce Development - Role evolution from technical maintenance to business partnership requires training, reskilling, and change management. The IT Workforce Training & Development Program (FY2028 launch) must be funded and operational to support this transition.

Common Administrative Solutions Complexity - Consolidating HR/Payroll/Finance systems involves intricate business process reengineering, data migration, and organizational change. The roadmap assumes collaborative governance and phased implementation; accelerated timelines increase risk.

3.8.6 Monitoring and Continuous Adjustment

The roadmap is adaptive, not fixed. Quarterly ITCC reviews assess:

- **Service maturity progress** - Are pilots achieving stability? Are SLAs being met?
- **Departmental adoption rates** - Which services are succeeding? Where are adoption barriers?
- **Resource availability** - Are ETS positions filled? Are vendor contracts performing?
- **Emerging priorities** - Do new technologies (e.g., AI) or regulatory requirements necessitate adjustments?

Annual updates to the roadmap will be published, ensuring transparency and alignment with the State IT Strategy and departmental IT plans.

3.9 Implementation Contingencies and Scalability

This plan is designed for adaptive implementation that can scale based on available appropriations while maintaining service quality and forward progress. However, funding below recommended levels jeopardizes the plan's viability: extending critical cybersecurity vulnerabilities, deferring economic benefits, undermining departmental adoption incentives, and ultimately costing more through reactive emergency investments. The portfolio and structures can be deployed incrementally, prioritizing highest-value, though each funding scenario carries distinct trade-offs.

3.9.1 Full Implementation (Critical for Success)

The funding level detailed in Section 3.1.3.1 is crucially important to achieve the plan's intended outcomes: comprehensive service delivery across all 15 shared services, financial sustainability with ongoing operational benefits, minimized departmental duplication, clear adoption pathways for all agencies, immediate cybersecurity risk mitigation, federal compliance, and proactive infrastructure modernization before legacy system failures force emergency investments at significantly higher cost.

Critically, the plan's success depends on both ETS expansion and departmental budget flexibility for strategic IT growth. ETS represents approximately 10% of statewide IT spending - its growth alone cannot move Hawaii from 2.5% towards the 5.3% national average for states IT investment. As departments adopt shared services and reduce commodity IT overhead, freed resources should remain available to departments for mission-specific innovation rather than being redirected as general fund offsets. Departments need budget capacity for data analytics, digital service delivery, mission-specific applications, and evolved IT roles focused on business partnership.

3.9.2 Constrained Funding Scenario and Associated Risks

If appropriations are significantly constrained, ETS will seek to deliver initial consolidation progress through a minimum viable approach focusing on three priorities: (1) Governance activation – establish ITCC and Communities of Practice using existing staff at zero incremental cost; (2) High-ROI quick wins – execute license consolidation, cloud contract negotiations, and procurement standardization using minimal staffing augmentation; and (3) Critical security baselines – deploy foundational cybersecurity improvements using existing contracts and selective position backfills.

This minimum approach would defer platform expansion and limit infrastructure modernization to planning phases only. While reducing immediate fiscal commitment, it extends timelines for realizing full economic value, delays comprehensive risk mitigation, perpetuates departmental duplication where shared services remain unavailable, and extends exposure to cybersecurity vulnerabilities. Constrained funding would undermine the collaborative adoption model itself - if departments perceive reduced service quality or lose budget flexibility, voluntary adoption stalls.

3.9.3 Phased Scaling and Cost of Inaction

Between full and constrained funding scenarios, ETS would seek to scale service delivery proportionally to appropriated resources. Partial funding enables prioritization of highest-ROI services (cybersecurity, cloud hosting, Microsoft 365 optimization, service desk) while deferring specialized platforms and advanced professional services. This flexibility ensures any level of investment delivers measurable value while preserving options to accelerate as additional resources become available based on demonstrated outcomes.

However, deferring IT consolidation does not preserve the status quo - it extends vulnerabilities, delays economic benefits, and compounds future costs. Continued fragmented departmental spending perpetuates duplication. Every year of delayed investment widens the gap between Hawai'i's 2.5% IT spending and the 5.3% national average, making eventual modernization more expensive and disruptive. The question is not really whether to invest, but whether to invest strategically now or reactively later at substantially higher cost and risk.

4 Attracting High-Quality Information Technology Professionals

Acts 179 and 173 require recommendations to attract high-quality IT professionals to the State, including use of internships, partnerships with education providers, and assessment of exempt positions. This chapter proposes three formal workforce programs to modernize IT talent acquisition and development, addressing persistent challenges in recruiting, retaining, and evolving IT staff.

4.1 Current Workforce Challenges

Hawaiʻi's government IT workforce faces structural barriers that limit the State's ability to compete for talent:

- **Outdated position classifications** - Job titles, position descriptions, and qualifications don't align with modern IT roles or labor market expectations
- **Uncompetitive compensation** - IT salaries lag behind both Hawaiʻi's private sector and national benchmarks across nearly all positions and career levels
- **Limited pipeline** - Hawaiʻi's small, isolated population creates gaps in available IT talent, requiring proactive education partnerships

These barriers suppress applicant pools, reduce offer acceptance rates, and contribute to retention challenges—undermining the State's ability to deliver modern, secure digital services.

4.2 Three Workforce Modernization Programs

To address these systemic challenges, this plan proposes establishing three dedicated programs, each led by a funded program manager who will drive initial planning activities including identifying key participants and their roles in the effort, establishing program governance, determining additional resourcing needs, and developing multi-year roadmaps to guide program execution.

4.2.1 IT Position Classification Modernization

Goal: Align State IT positions with current technology roles and labor markets by updating job titles, position descriptions, qualifications, and career progression paths.

Why It Matters: Modern, uniform position descriptions across departments would attract larger qualified applicant pools, clarify advancement pathways, enable job rotations and mobility, and support retention.

Note: Pursuant to the provisions of Act 180, SLH 2025, Department of Human Resources Development (DHRD) is initiating a Classification and Compensation Study, currently in the procurement phase, with the intent to review all civil service positions across the Executive Branch including but not limited to IT roles. However, considering the IT consolidation mandate and the unique challenges associated with IT recruiting and retention, it may be advisable to establish a separate and immediate effort that focuses specifically on revitalizing IT positions and pay. A separate project of this nature could potentially be initiated under HRS 78-3.5, Experimental Modernization Projects. In any case, efforts to modernize IT position classifications will require close collaboration across DHRD, ETS, departments, and unions to promote alignment, identify critical business requirements, obtain input from subject matter experts, and ensure compliance with applicable rules and standards.

4.2.2 IT Workforce Training and Development

Goals: Support IT workforce evolution from technical maintenance roles toward business partnership, strategic planning, and vendor management through formal training and development pathways. Additionally, upskill State staff (IT and non-IT) on areas of emerging criticality like cybersecurity, data management, responsible AI use.

Why It Matters: Formal training demonstrates the State's commitment to employee growth - a key factor in both attracting and retaining high-quality IT professionals. It also enables the "shift left" role evolution essential to this consolidation plan.

4.2.3 IT Workforce Pipeline

Goal: Grow Hawaiʻi's IT talent pool through collaboration with education institutions and community organizations, building pathways from student populations into State IT careers.

Why It Matters: Hawaiʻi's small, isolated population requires proactive cultivation of local talent. Education partnerships grow the overall IT workforce pipeline while shaping curriculum toward State-specific skill needs.

4.3 Complementary Strategies

Pay and Benefits Modernization

If the IT Position Classification Modernization Program is appropriately resourced and implemented, many recruitment challenges would be alleviated. However, salary gaps persist. A Pay and Benefits Modernization Program would analyze IT salaries across Hawai'i's labor market, establish competitive salary bands, explore flexible benefits (portable pension funds, remote work policies), adopt performance-based compensation, and develop retention incentives within approved frameworks.

As noted above, DHRD is initiating a Classification and Compensation Study, currently in the procurement phase. Further discussion is required to determine whether that effort is best suited to address the unique context of IT or if a separate program may be advisable. In any case, efforts to modernize pay and benefits require close collaboration across multiple stakeholder groups.

Exempt Positions for Departmental IT

The 2023 and 2024 Reports on the Consolidation of Information Technology Services describe the significant difficulties that departments face in recruiting for civil service IT positions, and in comparison, how ETS has more positive recruiting experiences because its enabling legislation (HRS §27-43) allows ETS to create positions and hire employees that are exempt from civil service and collective bargaining rules. As such, ETS has considerably more flexibility to set job titles, duties and responsibilities, required skills and qualifications, and compensation. These are all favorable factors when competing for technology talent, and to that end, the past reports recommend expanding the exempt staffing model which has proven successful.

If the proposed IT Position Classification Modernization Program and Pay and Benefits Modernization Program are appropriately resourced and implemented, then many of the challenges that departments face in recruiting for civil service IT positions would be alleviated. However, the proposed programs are multi-year efforts, and in the meantime civil service IT positions and compensation ranges remain out of step with departmental needs and labor markets. Therefore, it is recommended that the State pursue legislation at this time to expand the exempt staffing model for IT to all departments.

Alignment with Statewide Workforce Initiatives

These IT workforce strategies actively align with and leverage broader State initiatives:

- **Hawaii State Workforce Development Unified Plan (2024-2027)** – Speaks to collaborating with the education community, as well as community workforce development and job placement programs administered by Department of Labor and Industrial Relations (DLIR) and other partners, that could be leveraged to help build IT workforce pipeline
- **DHRD Recruitment Modernization (Act 57 Report)** - Speaks to modernizing job descriptions and pay scales, as well as a successful internship program that could be expanded upon

4.4 Resourcing Requirements

Each of the three programs requires:

- **Dedicated program lead:** (1 FTE per program) to drive planning, establish governance, coordinate stakeholders, and execute multi-year roadmaps
- **Estimated annual investment:** $200K+ per program for staffing, vendor partnerships, training platforms, and incentive programs
- **Cross-stakeholder coordination:** DHRD, collective bargaining agents, departments, ETS, education institutions, unions

Without dedicated program leadership and sustained funding, these efforts will not achieve the systemic change needed to attract and retain high-quality IT professionals.

5 Inventory and Categorization of System Business Criticality

5.1 Definitions

5.1.1 Major Information Technology System

Since 2019, ETS portfolio management practice and the CIO Annual Report have categorized the largest information systems of the state as "Major Information Systems". Since 2021, ETS has listed these Major Information Systems as part of the abridged statewide IT portfolio as open data at https://ets.hawaii.gov/state-of-hawaii-it-portfolio-management/.

While major information systems are typically mission critical or business critical, what defines major systems at the state currently is their large scope, cost, complexity, or impact on an agency's operations. Key Aspects of the state's 'Major information Systems' are:

- Classification Criteria: Based on size, scope, and investment level
- Scope: Large-scale regardless of criticality
- Risk Focus: Project management and investment risk
- Management Approach: Focus on program management and oversight controls

5.1.2 Major Data Set

Each major system is associated with a transactional database and in some cases a separate data warehouse. The business criticality rating of these data sets matches that of the major information systems they support.

5.2 Business Criticality Attributes

ETS has established criteria for determining the business criticality of the state's major systems. Table 8. presents the attributes for determining the business criticality levels of information systems.

Attribute	Description
Impact on Essential Services	The extent to which a system supports essential government services – systems that directly support the state's key responsibilities to citizens and are foundational to public safety, health, economic stability, and governance.
Business Continuity	This measures a system's importance in maintaining uninterrupted government services and its tolerance for downtime. It evaluates how disruptive a failure would be and the urgency with which a system must recover.
Legal/Regulatory Compliance	A system's role in ensuring compliance with laws and regulations. This attribute looks at whether a system supports legal requirements, such as data protection laws or critical governance mandates.
Financial Impact	A system's role in government financial processes, including budgeting, revenue generation, and financial risk. It also assesses the financial loss or disruption that would result if the system were to fail.
Data Sensitivity/Security	This attribute assesses the sensitivity of the data processed by a system and the security measures required to protect it. It evaluates whether the system handles sensitive or classified information and criticality of that.
Dependency by Other Systems	The degree to which other systems rely on this system to function properly. A system that supports multiple other critical services is more crucial, especially if its failure would lead to cascading effects on other systems.
User Base/Transaction Volume	This evaluates the number of users, and the volume of transactions processed by the system. Systems with a high volume of transactions or a large user base, especially if public-facing, tend to be more critical.
Replacement Cost/Complexity	This attribute measures how difficult and costly it would be to replace the system. Systems that are expensive to replace or involve complex migration efforts (e.g., legacy systems) are generally more critical, especially if alternatives are limited.

Table 8. System Business Criticality Attributes

Since 2019, ETS portfolio management practice has adopted the following criticality levels for the state's information systems:

- Mission Critical
- Business Critical
- Business Operational
- Administrative

5.3 Business Criticality of Major State Information Systems

In the State of Hawai'i Executive Branch application portfolio of current information systems, systems ranking high with a mix of business criticality attributes are considered major information systems. All major information systems of the state have been categorized as either Mission Critical or Business Critical. Table 9. displays the criticality rating of all

State of Hawaii Executive Branch current major information systems, excluding those for the Office of Hawaiian Affairs, the Department of Education and University of Hawaii.

Department	System	Criticality
Accounting & General Services	DAGS - Statewide Payroll	Mission Critical
	DAGS - FAMIS	Mission Critical
	DAGS - Time and Leave Management	Business Critical
Attorney General	ATG-CPJAD Juvenile Justice information System (JJIS)	Mission Critical
	ATG-CSEA KEIKI Child Support Enforcement System (MFaaS)	Mission Critical
	ATG-HCJDC Criminal Justice Information System (CJIS)	Mission Critical
Business, Economic Dev & Tourism	Hawaii Statewide GIS Esri ArcGIS Online - Main Platform	Mission Critical
Budget & Finance	BUF - ERS - Financial Management (Cloud)	Mission Critical
	BUF - ERS - Pension Administration System (Cloud)	Mission Critical
	BUF - EUTF - Health Benefits Administration System (BAS) (Modernized)	Business Critical
Commerce & Consumer Affairs	PVL-HO`ALA License Mgmt. System	Mission Critical
	DCCA - PUC - Case & Document Management System (CDMS)	Business Critical
	DCR-Corrections Offendertrak	Mission Critical
Defense	DOD - WebEOC	Mission Critical
Enterprise Technology Services	ETS - Adobe eSign	Mission Critical
	ETS-Microsoft 365	Mission Critical
Health	DOH Legacy Hawaii Immunization Registry (HIR)	Mission Critical
	DOH Women, Infant Child (WIC) Food vouchering system (HiWIC)	Mission Critical
	DOH Electronic Disease Surveillance System	Business Critical
	DOH-BHA Adult Mental Health Division - Electronic Medical Record (EMR)	Business Critical
	DOH-BHA Alcohol Drug Abuse Division - Management Information System	Business Critical
	DOH-BHA INSPIRE Case Management Solution for CAMHD & DDD	Business Critical
Human Resources Development	DAGS - PeopleSoft HRMS	Mission Critical
Human Services	DHS-BESSD HAWI (Hawaii Automated Welfare Information)	Mission Critical
	DHS-MQD AHCCCS HPMMIS	Mission Critical
	DHS-MQD Medicaid Application Portal	Mission Critical
	DHS-BESSD HANA (Hawaii Automated Network for Assistance Application)	Mission Critical
	DHS-MQD KOLEA (Kauhale On-Line Eligibility Assistance)	Mission Critical
	DHS-SSD CPSS (Child Protective Services System)	Mission Critical
	DHS-VRD Akamai (Vocational Rehabilitation Program core system)	Mission Critical
Labor and Industrial Relations	DLIR-DCD eCMS	Mission Critical
	DLIR-UI Legacy UI Management System	Mission Critical
Law Enforcement	LAW - Records Management System (RMS)	Business Critical
	LAW - Computer-Aided Dispatch (CAD)	Business Critical
Taxation	TAX - GenTax Integrated Tax Processing Application	Mission Critical
Transportation	DOT-HAR - Port Hawaii Information Management System (PHIMS)	Mission Critical
	DOT-HWY Legacy Financial System	Mission Critical
	DOT-AIR - AIRFMIS	Business Critical

Table 9. Business Criticality of Major State Information Systems

6 Data Center and Hosting Facility Resiliency Requirements

All consolidated state IT data must reside in facilities or cloud environments that meet the resiliency requirements established in Act 173.

6.1 Preference for Major Cloud Platforms

Starting from the 2012 state of Hawaii IT Strategic Plan, the state has expressed a strategic preference for cloud computing. One of the nine IT Strategies in the 2012 IT Strategic Plan was called "Migrate Services and Data to the Cloud" with the following specific objectives:

- All state services and data are available from anywhere via the Web
- Common cloud infrastructure simplifies maintenance
- Cloud infrastructure enables sharing of data and services

The state's IT Strategic Plan from 2019 to 2024 (established in 2019, minor update in 2021), continued the preference for cloud platforms with one of the seven stated Strategic Priorities being "Implement Dynamic and Sustainable IT Operations". This strategic priority was often described as a preference for "evergreen computing" – thus emphasizing the preference for cloud platforms that evolve and upgrade their services (for security, computing, storage etc.) independently from the applications hosted within these platforms. In this way the state's systems hosted on these "evergreen" platforms have a promise of longevity, scalability, business continuity, ease of maintenance, and up-to-date security – all with minimal changes and effort by the state's workforce or the state's implementation and maintenance vendors.

The state's long-term strategic preference for cloud computing is supported by industry standards, guidelines, and alliances such as:

- ISO/IEC 17789 (Cloud Computing Reference Architecture)
- ISO/IEC TR 22678:2019 Information technology — Cloud computing — Guidance for policy development
- NIST Special Publication 800-37 Revision 2: Risk Management Framework for Information Systems and Organizations
- Cloud Native Computing Foundation (CNCF)

6.2 Key Requirements for Hosting Services

The criteria in Table 10. have been defined as key requirements for hosting services for the state's Mission Critical and Business Critical major information systems.

Feature	Requirements
Global Availability	Ensuring that systems remain accessible during disruptions or failures by providing redundancy and failover capabilities across geographic locations.
Elasticity and Scalability	Capability for allowing systems to adjust resource levels dynamically or as planned, handling fluctuations in demand while maintaining performance.
Cost Structure	Optimization of resource costs based on usage patterns, balancing financial efficiency with performance needs, especially during peak and non-peak times.
Scope of Integrated Services	Breadth and capability of seamless and highly self-configurable services. For example, services for data analytics and ML/AI, supporting real-time or batch data processing to enhance decision-making.
Security and Compliance	Protection of data and systems through readily available cyber-security services. Certification for key cyber-security standards such as FedRAMP.
Automation and DevOps	Configurable services that streamline deployment, monitoring, and error management through automated processes, thus reducing manual work and minimizing system downtime.
Disaster Recovery and Redundancy	Services for backup, replication, and recovery mechanisms to quickly restore systems and minimize data loss in case of disruptions.
Management and Monitoring Tools	Services providing real-time or periodic tracking of system health and performance, enabling timely alerts and intervention for maintaining operational stability.

Table 10. Key Requirements for Hosting Services

6.3 Hosting Service Requirements Based on Criticality

Table 11. provides the state's guideline for assessing hosting environment features based on business criticality.

Feature	Mission Critical Systems	Business Critical Systems
Global Availability	Multi-region, automatic failover across regions. Zero tolerance for downtime, ensuring continuous operation.	Regional availability with automatic or manual failover. Minimal planned downtime is acceptable with fast recovery.
Elasticity and Scalability	Immediate real-time scaling to meet demand spikes without human intervention. Zero degradation tolerated.	Proactive scaling with potential short delays in provisioning is acceptable. Minor performance degradation possible.
Cost Structure	Cost secondary to performance and availability. Reserved or dedicated infrastructure is often used.	Balanced cost and performance model with pay-as-you-go options to optimize cost efficiency during non-peak times.
Scope of Integrated Services	Require immediate, low-latency access to a full suite of advanced integrated services, including real-time data analytics, AI, and automation, with high reliability and redundancy to support critical, complex tasks.	Need highly available, reliable access to key integrated services such as near-real-time data processing, periodic analytics, and essential automation, supporting core functions with tolerance for delays in non-peak periods.
Security and Compliance	Maximum security with real-time threat detection and comprehensive encryption, multi-factor authentication (MFA), and strict regulatory compliance.	Strong security is needed, but security checks and compliance with industry certifications are acceptable.

Feature	Mission Critical Systems	Business Critical Systems
Automation and DevOps	Fully automated infrastructure management with zero-downtime continuous deployment pipelines. Systems are self-healing with automated rollback for errors.	Automated DevOps processes with proactive monitoring and scheduled updates. Occasional manual intervention is acceptable.
Disaster Recovery and Redundancy	Multi-region disaster recovery with short Recovery Time Objective (RTO) and Recovery Point Objective (RPO), manual or automated failover.	
Management and Monitoring Tools	Proactive monitoring with automated alerts. Some manual intervention for incidents. SLAs are typically at 99.9% uptime.	

Table 11. Hosting Service Requirements Based on Criticality

6.4 Inventory of Consolidated Data

Consolidated Data is defined as: Data contained or used by the state's shared/consolidated information systems, provided by the Department of Accounting and General Services and the Office of Enterprise Services.

Table 12. identifies the state's consolidated data sets, where they are housed, and whether they are housed in appropriate data centers.

Department	Name	Production Hosting	Hosting Criteria (Ch. 8.2.2)
Accounting & General Services	DAGS - DataMart	Mainframe as a Service (Omaha)	Meets criteria
Accounting & General Services	DAGS - FAMIS	Mainframe as a Service (Omaha)	Meets criteria
Accounting & General Services	DAGS - Hawaii Information Portal	Local Commercial Data Center	Meets criteria
Accounting & General Services	DAGS - Statewide Payroll	Local Commercial Data Center	Meets criteria
Accounting & General Services	DAGS - Time and Leave Management	Local Commercial Data Center	Meets criteria
Accounting & General Services	DAGS - OIP - State Calendar	Major Cloud Platform	Meets criteria
Accounting & General Services	DAGS - SPO - HANDS - Hawaii Awards & Notices Distribution System	Major Cloud Platform	Meets criteria
Accounting & General Services	DAGS - SPO - Hawaii Compliance Express	Major Cloud Platform	Meets criteria
Accounting & General Services	DAGS - SPO - HIePRO (eProcurement)	Major Cloud Platform	Meets criteria
Accounting & General Services	DAGS - SPO - Public Auction	Major Cloud Platform	Meets criteria
Accounting & General Services	DAGS - SPO - WP - spo.hawaii.gov	Major Cloud Platform	Meets criteria
Defense	DOD - WebEOC	SaaS / Major Cloud Platform	Meets criteria
Business, Economic Dev & Tourism	Hawaii Statewide GIS Esri ArcGIS Online	SaaS / Major Cloud Platform	Meets criteria
Enterprise Technology Services	ETS - Adobe CC and Document Cloud	SaaS / Major Cloud Platform	Meets criteria
Enterprise Technology Services	ETS - Adobe eSign	SaaS / Major Cloud Platform	Meets criteria
Enterprise Technology Services	ETS - Azure Active Directory	SaaS / Major Cloud Platform	Meets criteria
Enterprise Technology Services	ETS - Enterprise Notification System (ENS)	SaaS / Major Cloud Platform	Meets criteria
Enterprise Technology Services	ETS - esign.hawaii.gov	SaaS / Major Cloud Platform	Meets criteria
Enterprise Technology Services	ETS - HawaiiPay Help Desk	SaaS / Major Cloud Platform	Meets criteria
Enterprise Technology Services	ETS - Laser Printer Forms	Mainframe as a Cloud (Omaha)	Meets criteria
Enterprise Technology Services	ETS - LeanIX	SaaS / Major Cloud Platform	Meets criteria
Enterprise Technology Services	ETS - Network Monitoring System	Local Commercial Data Center	Meets criteria
Enterprise Technology Services	ETS - portal.ehawaii.gov (HIC)	Major Cloud Platform	Meets criteria
Enterprise Technology Services	ETS - SiteImprove	SaaS / Major Cloud Platform	Meets criteria
Enterprise Technology Services	ETS - SSB - ITRS Helpdesk	Local Commercial Data Center	Meets criteria
Enterprise Technology Services	ETS - CSB - KOMAND Financial Mgtm.	Mainframe as a Service (Omaha)	Meets criteria
Enterprise Technology Services	ETS - TSSB - ETS WordPress Sites	Major Cloud Platform	Meets criteria
Enterprise Technology Services	ETS - TSSB - OpenGov	SaaS / Major Cloud Platform	Meets criteria
Enterprise Technology Services	ETS-Azure AD B2C	SaaS / Major Cloud Platform	Meets criteria
Enterprise Technology Services	ETS-Microsoft 365	SaaS / Major Cloud Platform	Meets criteria
Enterprise Technology Services	ETS-PingOne Advanced Identity Cloud	SaaS / Major Cloud Platform	Meets criteria
Enterprise Technology Services	HIC - App - Kala Payment Module	Major Cloud Platform	Meets criteria
Human Resources Development	DAGS - PeopleSoft HRMS	Local Commercial Data Center	Meets criteria

Table 12. Inventory of Consolidated Data

7 Proposals for New Legislation

7.1 Strengthening CIO Authority

Legislation clarifying and expanding State CIO responsibilities in organizing, managing, and overseeing statewide information technology governance (see HRS §27-43) to also include working with executive branch department and agencies to use applicable and established shared services will ensure the outcomes of the IT Consolidation Plan will be achieved, including the following:

- **Operational and Fiscal Effectiveness:** Elimination of redundant software, services and infrastructure. Full use of shared services leverages consolidated buying power to secure economies of scale.
- **Unified Security and Risk Mitigation:** Centralized governance allows for a uniform, visible security posture, ensuring that critical patches and zero-trust protocols are applied universally and immediately, rather than relying on departmental compliance.
- **Enhanced Decision-Making:** Emerging systems and technologies require unified business processes and data to function effectively. Consolidation breaks down organization and data silos, creating the interoperability required for modern, data-driven decision-making.

7.2 Exempt IT Positions for Departments

In support of attracting high-quality IT professionals to the state, departments should be provided with the option to implement a hybrid workforce strategy that supplements the stability of the civil service system with the agility of exempt positions. This approach fortifies the IT workforce, ensuring essential continuity and institutional knowledge are maintained, while enhancing the ability to respond to rapid technological changes and business requirements.

Appendix A. Terminology

Term	Description
AI	Artificial Intelligence
Act 173	Act 173 (Session Laws of Hawaii 2024)
Act 179	Act 179 (Session Laws of Hawaii 2022)
CIO	Chief Information Officer
CoP	Communities of Practice
DAGS	Department of Accounting and General Services
DevOps	Bridging of Development and IT Operations
DHRD	Department of Human Resources Development
DLIR	Department of Labor and Industrial Relations
EDR	Endpoint Detection and Response
EPMO	Enterprise Program Management Office
ERP	Enterprise Resource Planning (ERP) solutions are integrated software platforms that standardize and automate core administrative functions—such as budgeting, accounting, payroll, procurement, and human resources—across agencies to improve efficiency, transparency, and data-driven decision-making.
ETS	Enterprise Technology Services (Office of Enterprise Technology Services)
FedRAMP	U.S. federal government-wide program that standardizes how cloud services are security-assessed, authorized, and continuously monitored
FinOps	Financial Operations
FTE	Full-Time Equivalent
Microsoft 365 G5	Microsoft 365 AI-powered productivity apps with security, compliance, and analytics capabilities for government
GIS	Geographic Information System
GPC	Government Private Cloud – State of Hawaii cloud infrastructure brokered by ETS
HRS	Hawaii Revised Statutes
IAM	Identity & Access Management
IPS	Intrusion Prevention System
IT	Information Technology
ITCC	IT Coordinating Council
IV&V	Independent Verification and Validation
M365, Microsoft 365	Microsoft 365 (productivity platform)
MDM	Master Data Management
ML	Machine Learning
NGN	Next Generation Network
NIST	National Institute of Standards and Technology
OCM	Organizational Change Management
PM	Project Management
Power BI	Microsoft Power BI (analytics/business intelligence)
Purview	Microsoft Purview (data protection/governance)
QBR	Quarterly Business Review
RPO	Recovery Point Objective
RTO	Recovery Time Objective
SaaS	Software as a Service
SLA	Service Level Agreement

Term	Description
SLH	Session Laws of Hawaii
SOAR	Security Orchestration, Automation and Response
SOC	Security Operations Center
SSO	Single Sign-On
Teams	Microsoft Teams
VAR	Value-Added Reseller
WiFi	Wireless networking
ZTNA	Zero Trust Network Access