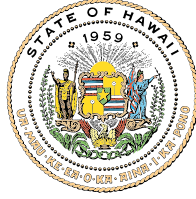


JOSH GREEN, M.D.
GOVERNOR



KEITH T. HAYASHI
SUPERINTENDENT

**STATE OF HAWAII
DEPARTMENT OF EDUCATION
KA 'OIHANA HO'ONA'AUAO
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OFFICE OF THE DEPUTY SUPERINTENDENT OF OPERATIONS

November 13, 2025

TO: The Honorable Ken Kuraya
Chairperson, Finance and Infrastructure Committee

FROM: Jesse Souki 
Deputy Superintendent of Operations

SUBJECT: Department of Education Technology Plan

1. EXECUTIVE SUMMARY

The Hawai'i State Department of Education (Department) Strategic Plan for Technology (2025-2029) outlines a comprehensive vision to modernize technology infrastructure and services and directly supports the broader Department Strategic Plan's priorities of

- High-Quality Learning for All;
- High-Quality Educator Workforce; and
- Effective and Efficient Operations.

The plan articulates seven strategic focus areas and associated technology initiatives that build on existing strengths, address key weaknesses, mitigate critical threats, and capitalize on key opportunities.

The Department Strategic Plan for Technology has two main priorities:

- to invest in updating, upgrading, and securing the Department's technologies; and
- to set the Office of Information Technology Services on a path to becoming a more effective partner with technology teams across the Department by offering clearer guidelines, better tools, and more timely and actionable advice.

AN EQUAL OPPORTUNITY EMPLOYER

2. DESCRIPTION

Refer to the attached informational briefing on the Department Strategic Plan for Technology (2025-2029).

3. UPDATE

The attached presentation provides an overview of the Department Strategic Plan for Technology (2025-2029). This includes:

- background information on technology in the context of a K-12 organization;
- a review of the Department's current state;
- an analysis of the Department's strengths, weaknesses, opportunities, and threats;
- the introduction of the Department's seven strategic focus areas; and
- key details on the implementation plan.

JS:ap
Attachments

c: Assistant Superintendent, Office of Information Technology Services



HAWAII STATE **Department of Education**

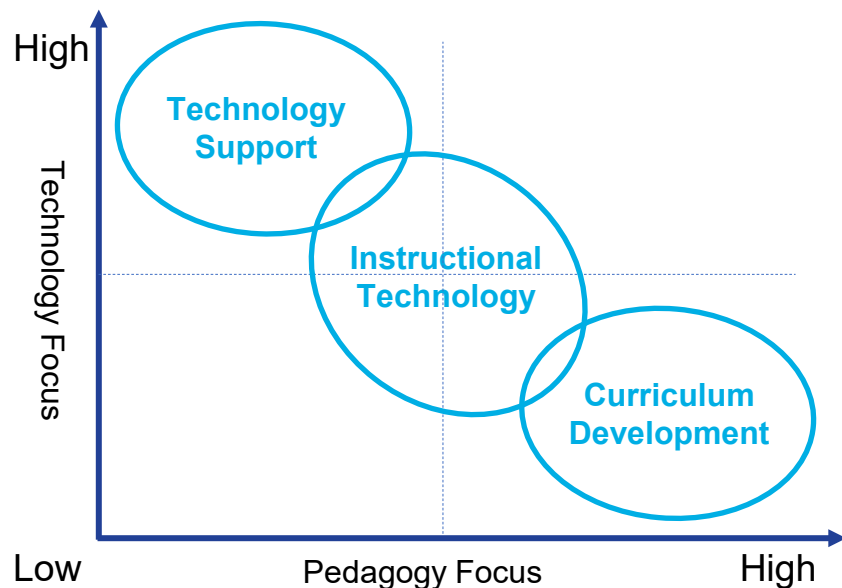
Agenda Item III: Department of Education Technology Plan

Hawaii State Board of Education
Finance and Infrastructure Committee
November 13, 2025

Amy Peckinpaugh, *Assistant Superintendent, Office of Information
Technology Services & Chief Information Officer*

Technology in a K-12 Context

Successful use of technology in the classroom depends on overlapping support functions



- **Technology Support** ensures the functional reliability of technology for users
- **Instructional Technology** supports the use of technology to enhance the learning and teaching process
- **Curriculum Development** defines the content of education – what learners should know and be able to do



Current State Overview

IT management and operations responsibilities are split between schools and state offices

Legend:

Responsibility for management and operations of technology at HDOE:

-  Primarily the responsibility of the Office of Information Technology Services (OITS)
-  More evenly shared between OITS and other office/school teams
-  Primarily the responsibility of other office/school teams

School/Office Technology	 Educational Software	 Computing Devices	 Printers & Scanners	 Audio-Visual Equipment	
School/Office Infrastructure	 Network	 Public Address & Bells Paging	 Unified Communications	 Video Surveillance	 Fire Alarms
Enterprise Systems	 Public Websites	 Productivity & Collaboration Systems	 Enterprise Applications	 Data & Analytics Systems	
Enterprise Infrastructure	 Data Center Infrastructure	 Identity & Access Management	 Cybersecurity		

Strengths and Opportunities

The Department has some advantages to drive us forward



Strengths

- Secure and high-bandwidth internet access
- Pockets of excellence in technology management across the tri-level organization
- Employees who are deeply committed and mission-driven

Opportunities

- Artificial intelligence driven process optimization, task automation, and predictive analytics

Weaknesses and Threats

The Department will face some challenges on the journey ahead



Weaknesses

- Cybersecurity gaps
- Aging infrastructure
- Inconsistent funding
- Fragmented systems
- Immature IT service management practices
- Workforce challenges
- Decentralized IT organization

Threats

- Increasing cybersecurity attacks against K-12
- Artificial intelligence enhanced cybersecurity risks



Strategic Focus Areas

1 Cybersecurity

Build “defense-in-depth” by layering practical investments that strengthen the organization’s cybersecurity posture.

2 Infrastructure Refresh

Stabilize technology infrastructure by making smart, systematic, and timely investments in system upgrades and lifecycle refreshes.

3 Cloud Adoption

Leverage cloud technologies responsibly by systematically assessing and incrementally migrating resources to the cloud when appropriate.

4 Application Modernization

Optimize the application portfolio by shifting toward commercial solutions, while retaining ability to build in-house where needed.

5 IT Service Management

Build a culture of continual improvement and professionalize IT operations by shifting toward a service management approach.

6 IT Workforce Development

Develop and empower a highly skilled and adaptable IT workforce by pursuing multiple interrelated strategies.

7 Partnerships

Foster a more open-minded and collaborative culture by seeking new partnerships and creative solutions to challenges.

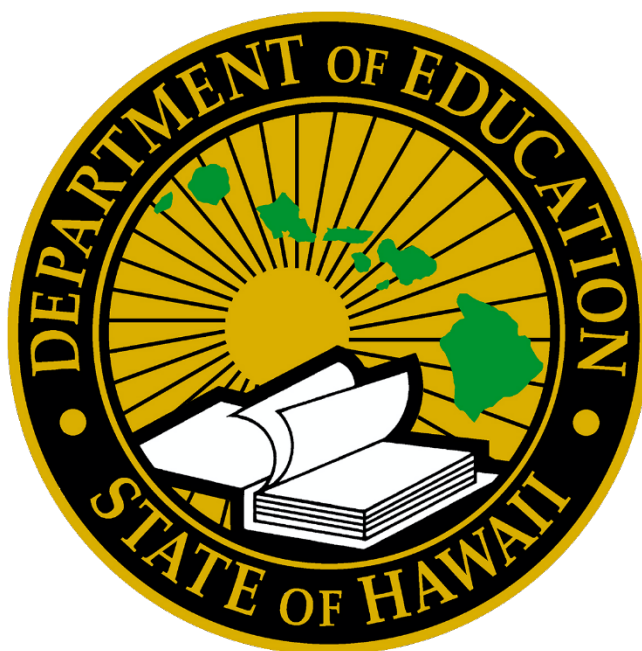


Implementation Plan

	In Flight	Upcoming
<i>Key Initiatives</i>	- Managing a large portfolio of data center and school infrastructure refresh projects - Developing a more transparent infrastructure lifecycle refresh planning process - Establishing a new primary cloud hosting site - Managing a large portfolio of application modernization initiatives - Conducting an assessment and developing plans for maturing IT service management	- Expand efforts to update, upgrade, and secure technologies - Implement modern human resources application suite - Build out a security awareness training program - Evaluate opportunities to increase collaboration on technology planning and procurement - Develop a comprehensive IT training program
<i>Legislative Budget Requests</i>	- Limited supplemental request for general funds - Expanded request for CIP funds	Larger biennium request focused on critical needs

Hawai'i State Department of Education

Strategic Plan for Technology (2025-2029)



Connecting Classrooms, Supporting Educators & Empowering Students

Version: November 2025

Contact:

Amy Peckinpaugh, Assistant Superintendent & Chief Information Officer
Office of Information Technology Services
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Message from the Chief Information Officer



The Hawai'i State Department of Education (HIDOE) Strategic Plan for Technology (2025-2029) arrives at a pivotal moment for the Office of Information Technology Services (OITS). We're on the cusp of a collaborative exploration into potential organizational realignment, an effort that will involve discussions within OITS and with adjacent offices.

As we pursue realignment conversations, we will strive to be open minded in our approach, seeking to clarify our shared responsibilities, our organizational boundaries and our collective ways of working. Ultimately, we are aiming to enhance the services and support we provide to students, teachers and administrators, and the realignment process may lead us to redefine our vision for the central IT organization.

Regardless of the outcome of our organizational realignment exploration, OITS has two clear priorities for the next five years:

1. We will invest heavily in updating, upgrading and securing our technologies to strengthen our foundational services; and
2. We will also work to become a more effective partner with technology teams across HIDOE by offering clearer guidelines, better tools and more timely and actionable advice.

This Strategic Plan for Technology is the result of extensive collaboration, shaped by many discussions with HIDOE leadership and a wide range of stakeholders across HIDOE, developed through a series of working sessions with OITS directors, and iterated following a review by a panel of chief information officers from third-party organizations.

This Strategic Plan for Technology is designed to be a living document, subject to periodic updates to maintain alignment with HIDOE's critical priorities as they evolve over time.

Executive Summary

The HIDOE Strategic Plan for Technology (2025-2029) outlines a comprehensive vision to modernize technology infrastructure and services and directly supports the broader HIDOE Strategic Plan's priorities of High-Quality Learning for All, High-Quality Educator Workforce, and Effective and Efficient Operations. This plan also addresses the Strategic Plan Implementation Plan (2023-2029) action item to “develop a technology master plan” to foster efficient operations, streamline processes, eliminate redundancies, and facilitate effective management (Desired Outcome 3.2.3). This plan addresses the critical need to elevate student success, strengthen public education and prepare all graduates to be ***Globally Competitive, Locally Committed***.

SECTION 1 – Current State Inventory:

HIDOE considered the enhanced security that may be achieved through the economies of scale of a centralized approach, compared with a decentralized approach that prioritizes academic freedom and local responsiveness. HIDOE settled on a federated IT operating structure that leans heavily towards decentralization, while seeking to balance the benefits of both.

While the Office of Information Technology Services (OITS), led by the Chief Information Officer (CIO), acts as the centralized IT services provider for schools and administrative offices, several other teams currently take a lead role in delivering specific technology and information services to the broader organization:

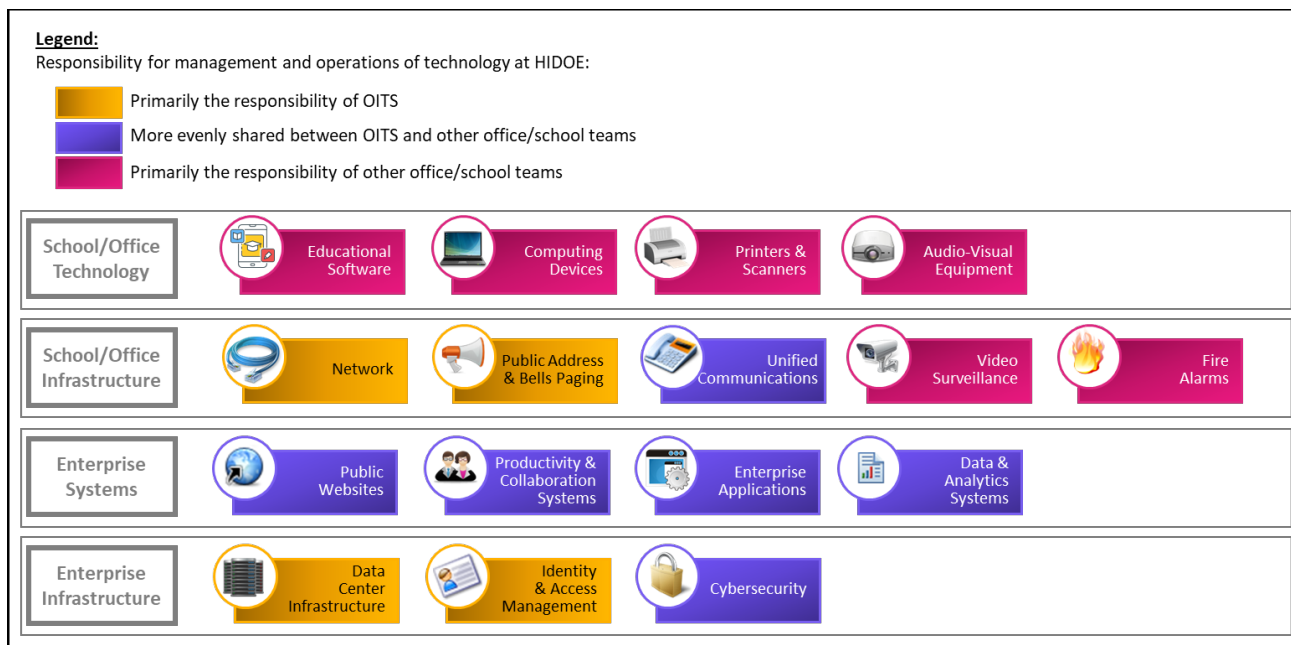
- The Office of Strategy, Innovation and Performance (OSIP) is responsible for the data and analytics strategy, data governance, data quality, custom data analyses and reporting.
- The Office of Curriculum and Instructional Design, Extended Learning Branch, Digital Design Team (OCID-ELB-DDT) is responsible for enabling technology integration in the classroom, including the strategy for leveraging educational software and new technologies, like Artificial Intelligence (AI).
- The Office of Facilities and Operations (OFO) is responsible for the installation and maintenance of life-safety technologies, including video surveillance systems and fire alarms installed by HIDOE, while the Office of Campus Operations and Support (OCOS) is responsible for planning and oversight related to those systems.

All schools and offices are responsible for managing their own computing devices, printers, audio-visual equipment, websites and any other technologies they independently elect to procure. The vast majority oversee their own technology teams, independent of the centralized IT organization, to support these efforts.

OITS, therefore, has two roles that it often struggles to balance:

- 1) A centralized service provider who delivers technology services directly to students, teachers and administrators.
- 2) A partner who provides guidelines, recommendations, tools, training and best effort support to other service providers to help them deliver technology and information services to the broader HIDOE organization.

A conceptual view of shared organizational responsibilities for management and operations of technologies within HIDOE is provided in the diagram below.



A review of the technologies in use today shows a strong need to address HIDEOE’s enterprise applications and specialized data centers housing an array of servers and networking equipment, where end-of-life and unsupported technologies should be replaced.

SECTION 2 – Strategic Opportunities:

An assessment of the strengths, weaknesses, opportunities and threats shows some strong points HIDEOE can build on:

- **High Bandwidth Connectivity:** Secure and responsive internet connectivity supporting student learning and staff operations.
- **Pockets of Excellence:** A significant number of employees with deep technology expertise and breadth of experience across the tri-level organization.
- **Mission-Driven:** Employees who are deeply committed and willing to go above and beyond to support technology efforts that will benefit teachers and students.

HIDEOE also has significant weaknesses to address:

- **Cybersecurity Gaps:** While progress has been made, the cybersecurity program at HIDEOE remains a work in progress, with uneven security tooling deployment and a need for more robust incident response, disaster recovery planning and comprehensive policies.
- **Aging Infrastructure:** A significant amount of outdated technology, including computing devices, network equipment, phone systems and data center infrastructure, some of which are at or nearing end-of-life.
- **Inconsistent Funding:** A struggle to consistently fund the replacement of technologies that are end-of-life or end-of-support.
- **Fragmented Systems:** A reliance on a disparate collection of separate antiquated software applications and manual processes. This fragmented approach is labor-intensive and error prone, and increases operational risks.

- **Immature IT Service Management:** Reactive IT support, unclear responsibilities, an underutilized IT Service Management system and a lack of defined performance metrics.
- **Workforce Challenges:** Difficulties in recruiting and retaining IT staff due to non-competitive pay and limited career progression paths.
- **Decentralized IT Management:** A highly decentralized IT model across schools and offices, leading to inconsistent support, varied skill sets and missed opportunities for cost savings and standardized practices.

HIDOE also has a key opportunity it should capitalize on:

- **AI-Driven Transformation:** Emerging technologies may be leveraged to drive process optimization, task automation and predictive analytics.

HIDOE also has a critical threat it should mitigate:

- **Growing Cybersecurity Risks:** Cyberattacks against K-12 organizations are accelerating rapidly and cybercriminals are increasingly conducting AI-powered cyberattacks that are more difficult to counter.

As a part of the Strategic Plan for Technology, HIDOE is pursuing seven strategic focus areas and associated technology initiatives that build on existing strengths, address key weaknesses, mitigate critical threats and capitalize on key opportunities, to become both a better service provider and a better partner to teams across the organization. The estimated cost, effort and value of each initiative were rated against the following scoring framework.

Cost Rating	Effort Rating	Value Rating
Low Cost Under \$250,000	Low Effort 1-2 full-time equivalents for less than 6 months	High Value A game-changer, fundamentally reshaping capabilities, drastically reducing risks, driving order of magnitude productivity gains or efficiency savings and delivers exceptional return on investment.
Medium/ Low Cost Between \$250,000 and \$1 million	Medium/ Low Effort 1-3 full-time equivalents for 6 months to 1 year	Medium/ High Value Delivers substantial, measurable benefits, significantly improving efficiency, enhancing capabilities, or reducing risk. Yields an excellent return on investment.
Medium Cost Between \$1 million and \$5 million	Medium Effort 2-4 full-time equivalents for 1 to 2 years	Medium Value Provides clear, noticeable improvements and a justifiable return on investment. It addresses important needs and contributes positively to the organization.
Medium/ High Cost Between \$5 and \$10 million	Medium/ High Effort 2-4 full-time equivalents for 2 to 4 years	Medium/ Low Value Offers only minor or incremental benefits, with a marginal return on investment. Its impact on overall performance or strategic goals is minimal.
High Cost Greater than \$10 million	High Effort 4+ full-time equivalents for 4+ years	Low Value Delivers near zero benefits with a questionable to nonexistent return on investment.

Strategic Focus Area 1 (Cybersecurity): Build “defense-in-depth” by layering practical investments that strengthen the organization’s cybersecurity posture.

The data HIDOE collects and stores is incredibly sensitive, including students’ grades, discipline records and medical histories. HIDOE must not underinvest in cybersecurity; the stakes are simply too high. This plan outlines a few labor-intensive yet relatively low-cost ways that HIDOE plans to meaningfully enhance its security posture to mitigate the increasing cybersecurity risks it faces.

Strategies	Initiatives	Funding Status	Cost	Effort	Value
1. Improve detection & response capabilities	1. Complete implementation of antivirus and endpoint detection and response.	Partially Funded	Medium/Low	Medium/Low	High
	2. Implement security orchestration, automation and response.	Partially Funded	Low	Medium	High
	3. Develop an incident response playbook.	Labor Only	N/A	Medium	Medium/Low
2. Cultivate a security-conscious culture	1. Build out an annual penetration testing program.	Not Funded	Low	Low	High
	2. Expand coverage of cybersecurity assessments.	Labor Only	N/A	Medium	Medium
	3. Build out a security awareness training program.	Not Funded	Medium/Low	Medium	High
3. Improve prevention capabilities	1. Upgrade email and web security solutions.	Partially Funded	Medium/Low	Medium	Medium/High
	2. Implement network access control.	Partially Funded	Medium/Low	High	High
	3. Conduct pilots to refine plans for enhancing security.	Partially Funded	Low	Medium	Medium

Strategic Focus Area 2 (Infrastructure Refresh): Stabilize technology infrastructure by making smart, systematic and timely investments in system upgrades and lifecycle refreshes.

Fifteen percent of HIDOE’s public schools are on failing analog phone systems with no backup plan in place. Thirty-five percent of HIDOE’s public schools don’t have fully functioning public address and bells paging systems. HIDOE operate critical unified communications services on end-of-life equipment. HIDOE needs to establish a transparent lifecycle planning process that makes refresh priorities and expected implementation timelines clear, including the fact that at the current rate of funding over two dozen schools will be operating on failed and failing analog phone systems 15 years from now.

Strategies	Initiatives	Funding Status	Cost	Effort	Value
1. Be more proactive in lifecycle planning	1. Implement a more transparent infrastructure lifecycle refresh planning process.	Labor Only	N/A	Medium	Medium
2. Modernize data center hosting infrastructure	1. Refresh data centers.	Fully Funded	Medium	Medium	High
3. Modernize network infrastructure	1. Refresh enterprise network.	Partially Funded	High	High	High

Strategies	Initiatives	Funding Status	Cost	Effort	Value
4. Modernize converged infrastructure	1. Complete public address and bells paging upgrades.	Partially Funded	High	High	High
	2. Migrate off legacy call managers to enterprise unified communications solution.	Fully Funded	Medium/Low	High	Medium/High
	3. Replace failing analog phone systems.	Not Funded	High	High	High
	4. Modernize unified communications with cloud-based service offering.	Not Funded	Medium/High	Medium/High	Medium/High

Strategic Focus Area 3 (Cloud Adoption): Leverage cloud technologies responsibly by systematically assessing and incrementally migrating resources to the cloud when appropriate.

While HIDEOE has an incredible amount of technical debt, the organization cannot wait to replace all of its legacy technologies before pursuing opportunities to modernize. It's clear that the long-term industry trend is towards cloud adoption, and HIDEOE must begin building relevant expertise and strategically pursuing opportunities to mitigate in a planful way where the business case makes sense.

Strategies	Initiatives	Funding Status	Cost	Effort	Value
1. Build cloud skills and expertise	1. Pilot multiple cloud services across multiple cloud providers.	Partially Funded	Low	Medium / Low	Medium
2. Purposefully migrate to the cloud	1. Establish a cloud governance framework and develop a cloud migration roadmap.	Labor Only	N/A	Medium/Low	Medium
	2. Establish primary cloud hosting site and begin migrating applications.	Partially Funded	Medium/Low	Medium	High

Strategic Focus Area 4 (Application Modernization): Optimize the application portfolio by shifting toward commercial solutions, while retaining ability to build in-house where needed.

HIDEOE has a history of failing to maintain applications and their enabling technologies (e.g., purchasing perpetually licensed software and electing not to pay for ongoing maintenance). HIDEOE has so much technical debt that multiple critical enterprise systems are at high risk of failure (including the time and leave system HIDEOE depends on for making timely payroll payments). HIDEOE needs to establish an application portfolio management discipline and build an executable plan forward. HIDEOE's greatest challenge will be addressing the tremendous need with limited resources and securing the additional required investment.

Strategies	Initiatives	Funding Status	Cost	Effort	Value
1. Continuously review and assess the portfolio	1. Establish application portfolio management and plan and execute specific upgrade projects.	Labor only	N/A	Medium	Medium
	2. Assess facilities applications.	Labor Only	N/A	Low	Medium
2. Prioritize "buy before build" when modernizing	1. Implement modern student support information system.	Fully Funded	Medium	Medium/High	High
	2. Implement modern school nutrition enterprise solution.	Fully Funded	Medium/High	High	High
	3. Implement a modern human resources application suite.	Partially Funded	High	High	High
	4. Implement a modern visitor, volunteer and contractor management system.	Fully Funded	Medium/Low	Medium/High	Medium/High

Strategies	Initiatives	Funding Status	Cost	Effort	Value
3. Strategically select and execute custom development	1. Redevelop the Harm to Students Registry application.	Not Funded	Low	Medium	Medium/High
	2. Redevelop the memos and notices application.	Labor Only	N/A	Medium/Low	Medium/High
	3. Redevelop the legislative bill tracker.	Fully Funded	Medium/Low	Medium	Medium
	4. Retire the Lotus Notes platform.	Partially Funded	Medium	High	High

Strategic Focus Area 5 (IT Service Management): Build a culture of continual improvement and professionalize IT operations by shifting toward a service management approach.

OITS has historically taken a very reactive approach to IT support. Instead of constantly firefighting, OITS needs to invest in monitoring, predictive analytics and preventative measures to avoid issues before they impact users. Artificial Intelligence can help analyze vast amounts of operational data, identify patterns, predict outages and even suggest resolutions, significantly improving efficiency and reducing human effort.

Strategies	Initiatives	Funding Status	Cost	Effort	Value
1. Establish baseline and set strategic direction	1. Conduct an assessment and develop plan for maturing IT Service Management.	Labor Only	N/A	Medium/Low	Medium
2. Continually improve IT service delivery	1. Mature practices and remediate and enhance IT Service Management system.	Fully Funded	Medium	Medium/High	Medium/High
	2. Establish performance metrics and approach for continual improvement.	Fully Funded	Low	Medium/High	Medium/High

Strategic Focus Area 6 (IT Workforce Development): Develop and empower a highly skilled and adaptable IT workforce by pursuing multiple interrelated strategies.

OITS has a significant culture challenge with frequent disagreements over roles and responsibilities, misaligned expectations on the requirements for cross-office collaboration, uneven distribution of workloads and a lack of advancement opportunities. HIDOE must tackle these deeply rooted issues with a multi-pronged approach that clarifies and re-baselines roles and responsibilities, optimizes the organizational structure for effective collaboration, incentivizes and provides opportunities for skill development and builds a knowledge sharing culture.

Strategies	Initiatives	Funding Status	Cost	Effort	Value
1. Improve employee retention	1. Develop a comprehensive IT training program.	Partially Funded	Medium/Low	Medium	High
	2. Establish communities of practice for different IT domains.	Labor Only	N/A	Medium	Medium/High
2. Enhance organizational effectiveness	1. Adjust and realign positions to increase collaboration and clarify career paths.	Labor Only	N/A	High	Medium

Strategic Focus Area 7 (Partnerships): Foster a more open-minded and collaborative culture by seeking new partnerships and creative solutions to challenges.

To thrive in today's technological landscape, OITS must prioritize openness to new ideas and strong collaboration, leveraging partnerships — both internal and external — for innovative solutions. Historically, limited external collaboration and a lack of involvement in technology procurements have created challenges, leading to difficult implementations and siloed efforts. By dismantling barriers and proactively seeking new partnerships, OITS will accelerate problem-solving and drive better outcomes for HIDEOE.

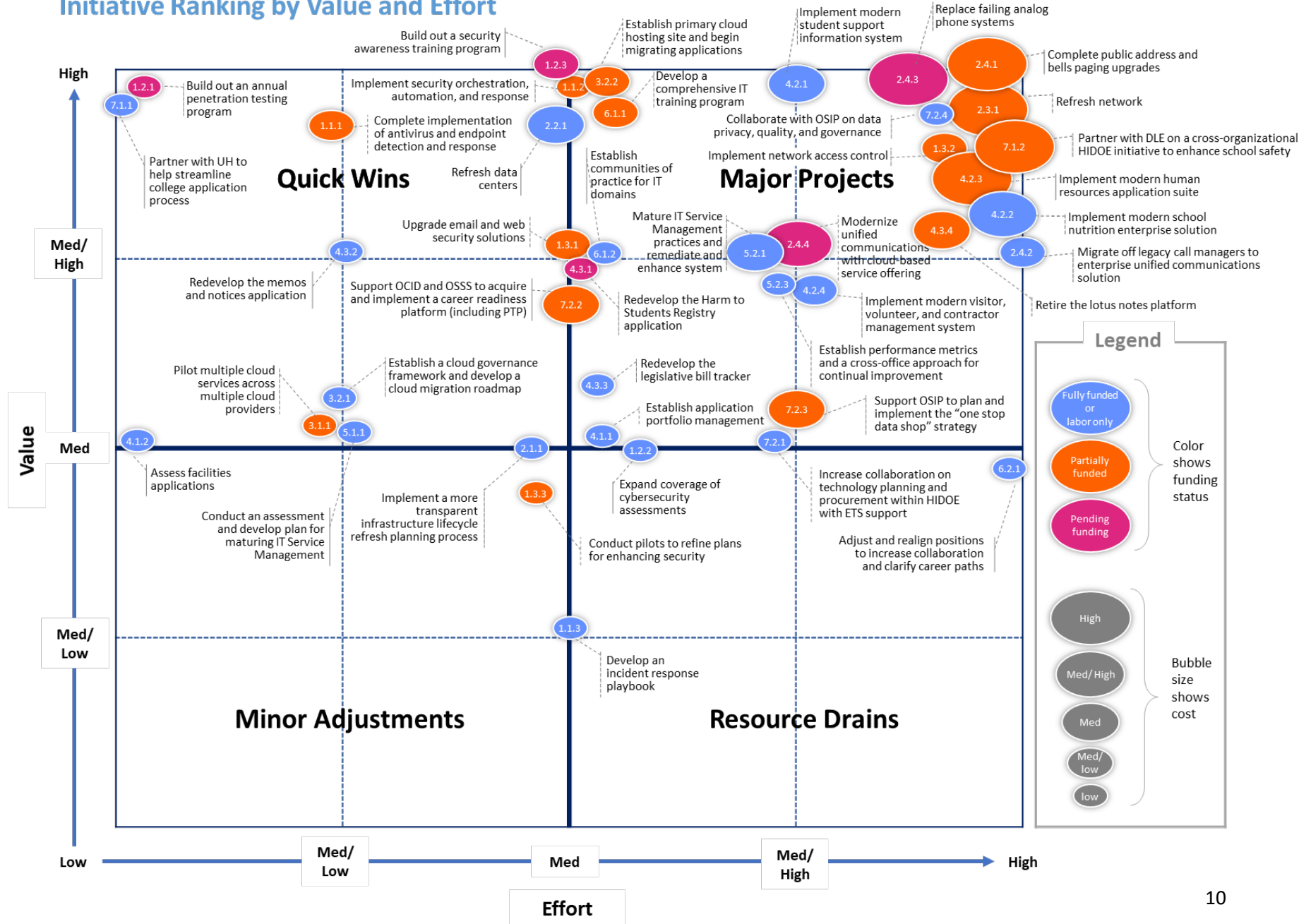
Strategies	Initiatives	Funding Status	Cost	Effort	Value
1. Strengthen partnerships with other organizations	1. Partner with University of Hawai'i (UH) to help streamline college application process.	Labor Only	N/A	Low	High
	2. Partner with Department of Law Enforcement (DLE) on a cross-organizational HIDEOE initiative to enhance school safety.	Partially Funded	High	High	High
2. Strengthen internal partnerships across HIDEOE teams	1. Increase collaboration on technology planning and procurement within HIDEOE with Office of Enterprise Technology Services (ETS) support.	Labor Only	N/A	Medium/High	Medium
	2. Support OCID and OSSS to acquire and implement a career readiness platform (including personal transition plan).	Partially Funded	Medium	Medium	Medium/High
	3. Support OSIP to plan and implement the "one stop data shop" strategy.	Partially Funded	Medium	Medium/High	Medium
	4. Collaborate with OSIP on data privacy, quality and governance.	Labor Only	N/A	High	High
	5. Partner on internal and external communication of priorities and resource requirements.	Labor Only	N/A	N/A	N/A

SECTION 3 – Implementation Plan:

The plan includes an initiative ranking based on estimated value and effort, along with a time-phased implementation roadmap. Many initiatives are already funded, while others require additional financial commitment.

The successful execution of this ambitious plan is contingent on securing necessary funding, overcoming persistent resource constraints and fostering strong collaboration across all levels of the HIDEOE organization and with external partners.

Initiative Ranking by Value and Effort



Implementation Plan Roadmap

