



# Information Technology Steering Committee (ITSC)

## AGENDA

Thursday, April 25, 2019

9:00 a.m.

1151 Punchbowl Street, Basement Video Conference Center,  
Honolulu, Hawai'i

I. Call to Order

II. Review and Approval of February 28, 2019 Meeting Minutes

III. Public Testimony on Agenda Items

*Any interested person may submit data or views, in writing or in person, to the committee on any agenda item. Testimony must be related to an item on the agenda, and such person shall be required to identify the agenda item to be addressed by the testimony. Each individual or representative of an organization is allotted three (3) minutes, or an amount of time otherwise designated in advance by the chairperson, to provide testimony to the ITSC.*

IV. CIO Report

- A. Update on Enterprise Resource Planning Project
- B. Evaluation of Enterprise Architecture Products
- C. CIO Traveling to NASCIO Summit
- D. Personnel Changes
- E. LinkedIn Learning

V. State Information Technology Strategic Plan

– Discussion and Appropriate Action

VI. Status of Legislative Bills

– Discussion and Appropriate Action

- HB531 HD1 SD1 Requires the Office of Enterprise Technology Services Chief Information Officer to update the state information technology strategic plan every four years, with the first update to be completed in advance of the 2021 regular session.

[https://www.capitol.hawaii.gov/measure\\_indiv.aspx?billtype=HB&billnumber=531&year=2019](https://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=HB&billnumber=531&year=2019)

- HB532 HD1 SD1 Establishes a Chief Data Officer and Data Task Force in the Office of Enterprise Technology Services to develop, implement, and manage statewide data set policies, procedures, and standards. Appropriates moneys.

[https://www.capitol.hawaii.gov/measure\\_indiv.aspx?billtype=HB&billnumber=532&year=2019](https://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=HB&billnumber=532&year=2019)

- HB1593 HD1 SD1 Requires the department of education, in consultation with the office of enterprise technology services, to develop and procure a uniform financial database, with parameters, benefits, and features that are compatible to the software system being implemented by the office of enterprise technology services for use by all state agencies. Appropriates moneys.

[https://www.capitol.hawaii.gov/measure\\_indiv.aspx?billtype=HB&billnumber=1593&year=2019](https://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=HB&billnumber=1593&year=2019)

- HB2 HD1 SD1 CD1 Appropriates funds for the operating budget of the Executive Branch for fiscal years 2019-2020 and 2020-2021.

[https://www.capitol.hawaii.gov/measure\\_indiv.aspx?billtype=HB&billnumber=2&year=2019](https://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=HB&billnumber=2&year=2019)

- SB695 SD2 HD1 Requires the Department of Hawaiian Home Lands to digitize and create a database of its applicant, beneficiary, and lessee records. [ETS to assist.]

[https://www.capitol.hawaii.gov/measure\\_indiv.aspx?billtype=SB&billnumber=695&year=2019](https://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=SB&billnumber=695&year=2019)

- SCR 175 HD1 Requesting the State to convene an Artificial Intelligence Advisory Committee to investigate how to implement, develop, and regulate artificial intelligence in the state. [CIO or designee as member]

[https://www.capitol.hawaii.gov/measure\\_indiv.aspx?billtype=SCR&billnumber=175&year=2019](https://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=SCR&billnumber=175&year=2019)

VII. Good of the Order

A. Announcements

B. Next Meeting: May 23, 2019, 1151 Punchbowl Street, Honolulu, Hawai'i

VIII. Adjournment

*Individuals who wish to request an auxiliary aid/service or other accommodation for this meeting are asked to call the Office of Enterprise Technology Services at (808) 586-6000 as soon as possible, at least three days before the meeting. Due to a limited number of communication access providers, provision of the requested accommodation cannot be guaranteed.*



## Information Technology Steering Committee (ITSC)

### Meeting Minutes

February 28, 2019, 1:30 p.m.  
1151 Punchbowl Street, Honolulu, Hawai`i  
Video Conference Center

**DRAFT**

#### **Members Present:**

Douglas Murdock, Chair, Office of Enterprise Technology Services (ETS), State of Hawai`i  
Benjamin Ancheta, Inkinen & Associates  
Jared Kuroiwa, Upspring – AIO Digital  
Michael Nishida, First Hawaiian Bank  
Christine Sakuda, Transform Hawai`i Government  
Kevin Thornton, Judiciary, State of Hawai`i  
Marcus Yano, SystemMetrics Corporation

#### **Members Excused:**

Aryn Nakaoka, Tri-net Solutions  
Kelly Taguchi, Spectrum  
Representative Kyle Yamashita, Hawai`i State Legislature  
Garret Yoshimi, University of Hawai`i

#### **Other Attendees:**

Todd Omura, ETS  
Michael Otsuji, ETS  
Vincent Hoang, ETS  
Caroline Julian-Freitas, ETS  
Valri Kunimoto, Deputy Attorney General, State of Hawai`i  
Lauren Fukuoka, Representative Yamashita's Office  
Keith DeMello, Anthology  
Peter Fritz, Member of the Public

[Note: Minutes are presented in the order shown on the agenda, not as discussed at the meeting.]

#### **I. Call to Order**

Quorum was established. Chair Murdock called the meeting to order at 1:32 p.m. and introduced himself as the newly designated ETS Chief Information Officer (CIO), pending legislative confirmation. [Note: The Senate Committee on Technology hearing took place at 3:00 p.m. after the ITSC meeting.] The CIO expressed enthusiasm at the prospect of continuing and expanding on the good work of ETS.

#### **II. Approval of December 13, 2018 and December 20, 2018 Minutes**

Chair Murdock called for a motion to accept the minutes as distributed. A motion was made by Member Thornton and seconded by Member Ancheta. Chair Murdock called for a vote, and the motion carried by acclamation.

#### **III. Public Testimony on Agenda Items**

No public testimony was given.

#### **IV. State Information Technology Strategic Plan – Discussion and Appropriate Action**

- A. Chair Murdock presented an overview of the updated draft State IT Strategic Plan (“the plan”) and reviewed changes that occurred after a February 15, 2019 workshop. The plan is essentially the same with some items combined or added and some different words or phrasing

### **1. Digital Workforce Development**

Strategy: Modernize our personnel system to enable the State to develop and sustain the digital workforce needed in a constantly evolving IT world.

The CIO noted that our workforce is very important and will need to learn new technologies. The State will also need to look for ways to develop its digital workforce. It may become necessary to train employees without expertise due to difficulties in hiring those with expertise because of the competitive market.

### **2. Extend Portfolio Planning and Portfolio Management** (formerly *IT Governance*)

Strategy: Extend the State IT Governance Model to cover system life cycle to ensure the State follows industry best practices and garners the full benefits of its investments.

The existing Sharp Cloud dashboard is a good tool for transparency and looks at current investments but not at life cycle of applications. ETS is searching for a portfolio management system that offers more depth.

### **3. Partner for Successful Business Outcomes**

[absorbs *Business Process Re-engineering* (BPR) and *Organizational Change Management* (OCM)]

Strategy: Shape the partnership between business and IT by creating a standard framework to ensure successful business and citizen outcomes.

BPR and OCM were incorporated as part of this larger process that includes governance, program management, and other business practices used for developing good business systems.

### **4. Implement Evergreen IT Practices**

(formerly *Modernize and Standardize State IT Infrastructure*)

Strategy: Implement evergreen IT operations to ensure business systems are ready to support the current and future needs of business users and citizens at all times.

This is a concept that we should use technology that refreshes itself rather than having to do upgrades all the time. Other practices include using a system that can be patched while still running, not having to bring down the entire system first, to try to help systems run better.

In the CIO's experience, business units have wanted to make regular changes to systems but were unsure if those changes could be made without breaking the system. We need to get to a point where systems are always ready to be changed to meet business needs.

**5. Optimize Enterprise Systems**  
(formerly *State IT Optimization*)

Strategy: Optimize ETS enterprise systems to leverage the State's investment in centralized IT services.

The focus will be to optimize and expand on enterprise systems, such as the Next Generation Network and Office 365.

**6. Enhance the Value of State Data**  
(formerly *Open Data*)

Strategy: Maximize the value of State data by designing, implementing, and governing State systems for data stewardship, sharing, and public use.

This expanded priority encompasses data governance and open data, as well as master data management and other data best practices.

**7. Expand Statewide Cyber Security Strategy**

Strategy: Extend the statewide cyber security strategy to protect the State's IT infrastructure and constituent data through adoption of cyber security industry best practices across the State's IT systems.

- B. Each strategy includes an outline of desired outcomes, key stakeholders, expected benefits and challenges, and near-term and long-term objectives. For the near-term and long-term objectives, the CIO would like to put in place a process for determining best practices and how to measure progress. He presented the Center for Internet Security (CIS) Controls as an example, which show basic, foundational, and organizational steps to be implemented. The CIO proposes to create a list of best practices for each strategic priority, and then start to measure how many are put in place. For the near-term, ETS will look at the big picture, exercising best practices across the enterprise and in the long-term will start to look more granularly, system by system.

Another tool the CIO plans to use is a Capability and Maturity Model (CMM) for business intelligence that places organizational maturity at one of five levels. The first level is ad hoc or unaware, where there is spreadsheet and information anarchy and one-off report requests. The second level is opportunistic, where there is no business sponsor, data inconsistency, and "stove-piped" systems. This is where organizations typically start. Level three has standards that exist. Level four is

enterprise, where there is an enterprise metrics framework, sophisticated program management, and proactive research of new methods and technologies. Level five is transformative, business strategy driven, and there is an enterprise performance culture, an outside-in perspective, and driving enterprise transformation. The CMM is a useful tool for each of the strategic areas for ETS and even for other departments to see where they are at in terms of maturity in running their IT organization. ETS will look for a tracking tool to show progress.

- Member Nishida asked if the CIO had a target where he wants to be. The CIO noted the ultimate goal is to be at level five. The CIO estimated current status at two or three and aims to get to three or four in the near-term. Member Nishida noted that to get to level five is expensive. The CIO agreed and is open to input. Member Yano added that it also depends on what model is used. He advised that throughout the process of developing best practices, the State needs to constantly evaluate if the practice is applicable to supporting the near-term and long-term objectives. If the practice is not going to help achieve the goal or if they will not get the budget approvals, the list may not be realistic.

The idea would be to implement a governance process for the seven strategic priorities, assigning an executive sponsor, a team lead, and a working group to work on a CMM for each area. The CIO believes success can be achieved faster by starting with a model. Member Ancheta asked if the executive sponsor would be ETS staff. The CIO said he will likely be the sponsor, ETS staff will be team leads, and he would consider options for the work group.

- Member Sakuda offered comments to reflect background and perspective. In 2018, HCR 94 tasked the ITSC to develop the plan. The ITSC provided the framework, and work groups flushed out ideas and details for ITSC review. The plan presented today is a little different than the previously defined eight priorities from 2018. Member Sakuda asked how the ITSC can contribute and support the current plan and how to proceed for presenting to the legislature.
- The CIO thinks this is the beginning of the next round of dialog, i.e., as a new CIO he needs to work with the groups on the redefined priorities. For example, digital workforce was not a part of the original plan, some other phrasing was added, such as “evergreen operations”, because he wants to get the message out that the State has many systems that are “red”, out of support, and need to be a focus area. Most of the original plan is the same but with some different wording.
- Member Ancheta noted that although not explicitly in the original plan, the thoughts contained in the current plan were there. The CIO said he is incorporating the same concepts as the original plan but in a way that allows him to focus in and execute the plan and make it a perpetual plan, by using the capability model and best practices for each area.

- The CIO would like the ITSC to review and digest the current plan, and he is open to input from them and from the work groups. The constraint is trying to capture everything on a PowerPoint presentation.
- Member Nishida asked what is the next step. Does the CIO take this to the legislature, by what month, and will this be needed to get funding for the budget? How does this translate into what the CIO needs? The CIO agreed that the plan does need to be presented to the legislature, but there is no pressure from them for an immediate presentation. He believes they are close to an executable plan, but welcomes input and is willing to make changes as needed.
- Member Sakuda asked if anything more is needed from the contracted facilitator for the plan development. The CIO reviewed the documentation provided by the facilitator and thinks they are okay. He also reviewed the 2012 IT strategic plan and the *Top 10 Priorities* of the National Association of State CIOs (NASCIO) as reference for developing the current plan.
- Member Sakuda expressed thanks to the CIO for his accessibility and was pleased to see the CIO and ETS staff interacting with the community at the workshops. She asked what background information will the legislature need to accompany the plan. The CIO said things like inventory of IT systems are complicated to do in a short time. ETS is tracking current investments, but the important legacy items are not tracked. This is the reason the CIO created portfolio management as a separate category rather than simply calling it IT governance, and because it informs other areas such as cybersecurity. If unaware of what equipment and software is used, how do you know you have cybersecurity.
- As mentioned, ETS is searching for a more in-depth portfolio management tool that goes beyond Sharp Cloud capabilities. Member Yano agreed that Sharp Cloud is good as a visualization tool but lacks other capabilities such as tracking. The CIO noted that it was put in for transparency and as an initial effort for controlling investments, but now we need to go to the next level. Member Ancheta asked if portfolio management is less concerned about the projects and more about the assets. The CIO thinks it is about both.
- Member Nishida asked Member Sakuda what she thought is missing from the plan. Member Sakuda referred to background information such as the 50-plus year-old financial system, the legacy systems that are not tracked, those systems that provide services to the public. That helps to inform what the priorities are, and a plan provided to the legislature needs to be somewhat self-explanatory and communicated in a way that will stand on its own to explain the reasoning behind the prioritizations. Member Nishida asked if it is a tactical approach, and Member Sakuda said it's more about informing the public and the legislature for decision-making. Member Nishida asked if the initiative was to come up with the framework or the plan. Member Sakuda replied that it was for the plan, but the framework is important too. The plan is to help orient and connect everyone

together. If anything, we want to err on the side of less versus more, and leave it up to the leadership to flush out details and tactics. The intent of the high-level plan is to show the vision and purpose. Vince Hoang suggested that is where a technical plan fits in. Define the high-level strategic plan, then develop the technical plan to bridge all the projects that the agencies have on the roadmap.

- Member Yano asked if the concern is that the plan is missing some explanations, or that the legislature or the public would question why the objectives were chosen, or they may not know what else is there, and for transparency the background needs to be included. In the private sector, they would not want to invest more in legacy systems because there's a plan to retire them, but for the State, is the concern that the legacy systems are not identified. Member Sakuda said it's to be transparent so we know where we're at so that the State can start to address them with the support of the ITSC.
- The CIO said that with portfolio planning we can identify the highest need for modernization, and potentially that would be the financial systems, FAMIS and Data Mart, but he doesn't know what he doesn't know at this point. The CIO is meeting with each department and they are starting to discuss legacy systems. But he pointed out that even fairly modern systems, such as KOLEA, are already on outdated software (from 2013).
- Member Yano said a Capability Maturity Model Integration (CMMI) will show what level you're at, but in perpetuity, he does not think we could ever ideally be where we want to be and keep up-to-date. He is comfortable with the plan providing holistic frameworks guiding departments to adopt the vision.
- Member Thornton thought the target audience is the legislature, for HCR 94, then afterwards proceed with the next step, the budget. He felt they should not wait until next year to share the plan. The CIO agreed, and noted there is an Administrative Directive (18-03) directing departments to submit IT project requests to ETS for program governance. The plan can help manage the budget and governance aspects.
- Member Thornton believes there's also a public side, the need to share with the public. The CIO agreed and feels they need to make informational presentations to concerned legislative committees and get feedback. Member Thornton restated that he feels it is a year-round process.
- Member Sakuda noted that it's unfortunate Representative Yamashita could not attend today's meeting for consultation. Chair Murdock said he will talk with him before the next meeting. Lauren Fukuoka, from the Representative's office, apologized that he was unable to attend today's meeting because session ran long and offered to take back whatever the ITSC would like him to review.



- Member Ancheta noted a gaping hole in Sharp Cloud has been that certain departments opted out of ETS oversight and asked if addressing that issue would be a part of the plan. The CIO noted that UH has some constitutional separation from the executive branch. He has met with DOE, and he does not foresee them being comfortable with ETS oversight. The Independent Verification and Validation Reports (IV&V) requirement would be a hard sell. Ultimately, the DOE is accountable to follow the Board of Education's direction.
- Member Sakuda noted that part of the reason for the oversight is that initiatives cross over, and the State makes large investments, and there's no coordination because of this independence, which is not productive. The CIO feels there is a real opportunity in front of us with the dire need to replace the financial system. The DOE is also in need of a replacement financial system, and the CIO believes they can work together and leverage contracting for the same system.
- Member Sakuda noted that last year the ITSC spent time evaluating the CIO on related metrics for coordinating with other departments and asked if Chair Murdock had looked at the evaluation. Chair Murdock replied that he did review the evaluation, but it has not been on his to do list. He mentioned that the previous CIO initiated the evaluation process. Chair Murdock feels that progress should be measured against the strategic plan progress for ETS, but the discussion can be put on a future agenda if the ITSC so desires. The prior CIO appreciated having a grade. Chair Murdock would prefer to see them focus on the strategic plan and its execution.
- Member Ancheta noted that in absence of a strategic plan they had evaluated the previous CIO to identify the gaps in his authority and reach. Chair Murdock also noted grades may have been helpful to ETS staff, but that he prefers to measure progress against the strategic plan.
- Member Kuroiwa noted also that because the CIO position reports directly to the Governor, the previous CIO wanted the grading to be a guide for hiring and firing the CIO and as a stopgap; Member Ancheta agreed he wanted "guardrails". Chair Murdock acknowledged that the previous CIO felt the CIO position had a lot of power. Chair Murdock still talks a lot with the previous CIO, and the Governor is extremely interested in the effectiveness of the CIO and ETS.
- Member Sakuda asked if the Governor had seen the strategic plan, and the CIO said he hadn't yet shown it to him. Member Sakuda expressed that she likes the vision of the plan. Chair Murdock said it's worth further discussion of the vision. The one part he doesn't like about the vision is that it's very IT focused, and that IT shouldn't drive government; business should drive government. IT is a tool.
- Member Yano recalled the discussion of IT as a tool, but because it's ETS' goals, they decided at the time that it should be IT focused as opposed to things like renewable energy, which would be a statewide focused goal. However, he agrees

that ETS is part of the machine that should help deliver the overall vision for the State; one of the tools in the toolbox. The CIO also thinks it's important to educate the State's IT workforce in that way; their priority is to make business and citizen outcomes that are good, not to get cool toys. We're doing it so citizens get good results and our lines of business can finish what they're supposed to do efficiently.

- Member Sakuda asked what the next steps would be. Chair Murdock said the ITSC should look at the plan, digest it, and provide feedback for the next meeting. They can look at making revisions as needed and approve it when ready. He will take it to the legislature.

## V. Status of Legislative Bills

Chair Murdock gave an overview of the bills in legislative session that ETS is supporting, and he confirmed with ETS Senior Communications Manager, Caroline Julian-Freitas, that both bills were still alive and moving in session.

- A. HB531 HD1, Requires the Office of Enterprise Technology Services Chief Information Officer to update the state information technology strategic plan every four years, with the first update to be completed in advance of the 2021 regular session.  
([https://www.capitol.hawaii.gov/measure\\_indiv.aspx?billtype=HB&billnumber=531&year=2019](https://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=HB&billnumber=531&year=2019))
- B. HB532 HD1, Establishes a Chief Data Officer (CDO) and Data Task Force in the Office of Enterprise Technology Services to develop, implement, and manage statewide data set policies, procedures, and standards. Appropriates moneys.  
([https://www.capitol.hawaii.gov/measure\\_indiv.aspx?billtype=HB&billnumber=532&year=2019](https://www.capitol.hawaii.gov/measure_indiv.aspx?billtype=HB&billnumber=532&year=2019))

The CIO noted the catch is that the bill would not create a position or funding. ETS may need to make someone internally a CDO and then go back next year and ask for a position. Chair Murdock said his understanding is that positions and funding have to go through budget bills as opposed to legislation.

Member Sakuda asked if ETS will plan to ask for funding for a CDO. The CIO affirmed that if the law passes, then next year ETS would request funding through the regular budget process. Member Sakuda asked for clarification that the bill doesn't account for funding and Member Nishida asked if the first year is to get the position and the second year is to get funding. The CIO confirmed that is the case.

## VI. CIO Priorities, Strategic Initiatives

Most of today's discussion was around this topic, but the CIO wanted to give specific targeted project information. Enterprise Resource Planning (ERP) completion is top of the list. The Human Resources Management System (HRMS) upgrade and Payroll Modernization projects were completed, and the Time and Attendance phase has started. The financial system would be next, and in the current session there is related legislation

pending. The other top priorities are portfolio management, digital workforce, the IT strategic plan, and cybersecurity.

**VII. Good of the Order**

The next ITSC meeting is scheduled for April 25, 2019, 9:00 a.m., at 1151 Punchbowl Street, in the basement Video Conference Center, Honolulu, Hawai`i

**VIII. Adjournment**

Chair Murdock called for a motion to adjourn. Motion made by Member Sakuda was seconded by Member Nishida. None opposed. Meeting adjourned at 2:30 p.m.



# 2019 HAWAII INFORMATION TECHNOLOGY STRATEGIC PLAN

OFFICE OF ENTERPRISE TECHNOLOGY SERVICES

AS OF APRIL 9, 2019

## *BACKGROUND*

The Office of Enterprise Technology Services (ETS) was established by Hawaii Revised Statutes §27-43. ETS is headed by a full-time chief information officer (CIO) to organize, manage, and oversee statewide information technology. The chief information officer is appointed by the governor and reports directly to the governor. A key responsibility of the CIO is to develop, implement and manage the state information technology strategic plan.

The 2019 Hawaii Information and Technology Strategic Plan was developed with input from stakeholders including the staff at ETS, representatives from departmental business and IT staff, and members of the community. The final plan has been approved by the state Information Technology Steering Committee for implementation (pending).

## *PURPOSE*

The purpose of this Strategic Plan is to:

- Clearly articulate the State Information and Technology future vision, mission, strategic priorities, expected outcomes, major initiatives to achieve those priorities, and responsible owners for key plan elements.
- Establish a system for implementation of the plan over the first year and next four years.
- Provide guidance to ETS and department IT organizations to help with alignment throughout the state.
- Create an instrument to support awareness and accountability for all parties to the strategic plan.
- Fulfill the requirement of Hawaii Revised Statutes §27-43 and House Concurrent Resolution 94.

## *VISION, MISSION, VALUES*

The Vision, Mission, and Core Values statement that guide the Strategic Plan are listed on the following page:

## **VISION, MISSION, CORE VALUES**

### *VISION STATEMENT*

Transformative technology-driven government that serves all the people of Hawai'i and the 'āina

### *MISSION*

Seamlessly blend innovative IT with well-engineered business processes to deliver and support dynamic and sustainable systems that empower our workforce to accelerate excellent outcomes in support of the state's priorities

### *CORE VALUES*

Our core values come from Governor David Ige's Priorities for Hawaii:

- |                 |  |
|-----------------|--|
| <i>Aloha</i>    | We treat everyone with dignity, respect and kindness, reflecting our belief that people are our greatest source of strength.                                 |
| <i>Kuleana</i>  | We uphold a standard of transparency, accountability and reliability, performing our work as a government that is worthy of the public's trust.              |
| <i>Laulima</i>  | We work collaboratively with business, labor and the community to fulfill our public purpose.  |
| <i>Kūlia</i>    | We do our very best to reflect our commitment to excellence.   |
| <i>Pono</i>     | We strive to do the right thing, the right way, for the right reasons to deliver results that are in the best interest of the public.                        |
| <i>Lōkahi</i>   | We honor the diversity of our employees and our constituents through inclusiveness and respect for the different perspectives that each brings to the table. |
| <i>Ho'okumu</i> | We continually seek new and innovative ways to accomplish our work and commit to finding creative solutions to the critical issues facing this state.        |

## STRATEGIC PRIORITIES

Our IT Strategic Priorities reflect 7 key focus areas necessary to take full advantage of the state's investments and attain long-term success:

<p><i>Partner for Successful Outcomes</i></p>	<p>Shape the partnership between government functions and IT by creating a standard framework to ensure successful outcomes.</p> <p style="text-align: right;">❖ <i>Team Lead: ETS Enterprise Program Manager</i></p>
<p><i>Expand Statewide Cyber Security Strategy</i></p>	<p>Extend the statewide cyber security strategy to protect the State's IT infrastructure and constituent data through adoption of cyber security industry best practices across the State's IT systems.</p> <p style="text-align: right;">❖ <i>Team Lead: ETS Chief Information Security Officer</i></p>
<p><i>Enhance the Value of State Data</i></p>	<p>Maximize the value of State data by designing, implementing and governing State systems for data stewardship, sharing, and public use.</p> <p style="text-align: right;">❖ <i>Team Lead: ETS Chief Data Officer</i></p>
<p><i>Optimize Enterprise Systems</i></p>	<p>Optimize ETS enterprise systems to leverage the state's investment in centralized IT services.</p> <p style="text-align: right;">❖ <i>Team Lead: ETS Chief Operations Officer</i></p>
<p><i>Extend IT Portfolio Governance</i></p>	<p>Extend the State IT Governance Model to better align the state's functions with resources and ensure the State follows industry best practices and garners the full benefits of its investments.</p> <p style="text-align: right;">❖ <i>Team Lead: ETS Enterprise Architect</i></p>
<p><i>Implement Dynamic and Sustainable IT Operations</i></p>	<p>Implement dynamic and sustainable IT operations to ensure business systems are up-to-date and ready to support the current and future needs of business users and citizens at all times.</p> <p style="text-align: right;">❖ <i>Team Lead: ETS Chief Governance Officer</i></p>
<p><i>Digital Workforce Development</i></p>	<p>Establish a continuous learning culture and growth mindset to modernize how we work and enable the state to develop and sustain the digital workforce needed in a constantly evolving IT world.</p> <p style="text-align: right;">❖ <i>Team Lead: ETS Personnel Officer</i></p>

## IMPLEMENTATION

For each of the seven Strategic Priorities, the following objectives will be implemented.

### ***Near-Term Objectives (FY 2020: 12 months)***

- Establish a strategy governance process, executive sponsor, charter, program lead, working group and user groups
- Develop a high-level prioritized reference model for best practices in tactics, techniques and procedures and begin measurement
- Establish a high-level Capability Maturity Model measurement framework and begin measurement
- Plan & begin implementing change management efforts
- Team Leads begin reporting to IT Steering Committee (ITSC) at each ITSC meeting

### ***Longer-Term Objectives (FY 2021-2024, Years 2-4)***

- Continue to operate Governance process
- Increase successful implementation in prioritized reference model and adjust as necessary
- Capability Maturity Model: Increase level attained and granularity for state, departments and agencies
- Identify & drive next-tier legislative changes/additions
- Adjust the Strategic Plan elements to maintain a current and relevant plan
- Team Leads continue reporting to IT Steering Committee (ITSC) during each ITSC meeting

### ***Additional Documentation***

A reference book of work products developed during the strategic planning process will be used by ETS, the ITSC, team leads and working groups. It is presented as a separate volume that includes situation analysis, workshop notes, and detail for each strategic priority including Microsoft Word and PowerPoint versions.



## MAHALO NUI LOA

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

Sarah Allen, State Procurement Office Tracy Ban, Dept. of Budget and Finance Dwight Bartolome, Dept. of Health Della Au Belatti, House of Representatives Kaimana Bingham, ETS Brian Black, Civil Beat Law Center Jennifer Brooks, Office of Information Practices Robert Choy, Asst. to Rep. Belatti Mark Clemente, Asst. to Rep. Matsumoto Brook Conner, Dept. of Education Rachel Faitau, ETS Vincent Hoang, ETS Jodi Ito, University of Hawaii Caroline Julian-Freitas, ETS Leila Kagawa, ETS Jarett Keohokalole, State Senate Arnold Kishi, ETS Tiger Li, Office of Hawaiian Affairs Lauren Matsumoto, House of Representatives Keith Miyamoto, Employees' Retirement System	Douglas Murdock, ETS & Department of Human Services Todd Nacapuy, ETS Todd Omura, ETS Mike Otsuji, ETS Jennifer Pegarido, ETS Judy Mohr Peterson, Dept. of Human Services Capsun Poe, Dept. of Education Amy Saito, Dept. of Transportation Steve Sakamoto, Dept. of Health Merissa Sakuda, Dept. of Business, Economic Development & Tourism Clay Sato, Office of the Attorney General Ryan Shimamura, Dept. of Human Services Stuart Shirai, Dept. of Commerce & Consumer Affairs Jussi Sipola, ETS Phan Sirivattha, Dept. of Human Services Corie Tanida, Common Cause Hawaii (former) Jaren Tengan, Asst. to Sen. Keohokalole Ben Trevino, Common Cause Hawaii Donna Tsuruda-Kashiwabara, State Procurement Office
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## IT STEERING COMMITTEE

Douglas Murdock (Chair), Office of Enterprise Technology Services, State of Hawaii

Todd Nacapuy, prior Chief Information Officer

Benjamin Ancheta, Ekahi Health System Jared I. Kuroiwa, KHON2 Aryn H. K. Nakaoka, Tri-net Solutions Michael Nishida, First Hawaiian Bank Christine Sakuda, Transform Hawaii Government	Kelly Taguchi, Spectrum Kevin Thornton, Hawaii State Judiciary Kyle Yamashita, House of Representatives Marcus Yano, SystemMetrics Corporation Garret Yoshimi, University of Hawaii
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## SPECIAL THANKS TO

Leslie Mullins, Playbook Consulting for facilitating  
 and  
 Transform Hawaii Government for sponsorship

## ***Strategy: Partner for Successful Outcomes***

Shape the partnership between government functions and IT by creating a standard framework to ensure successful outcomes.

### ***Desired Outcomes***

- *Successful business process implementation*
- *IT systems are well-engineered and appropriately designed for their intended use*
- *Effective partnership between IT and business*
- *Procurement efficiency and cost savings*
- *Standard governance, business process re-engineering, program management, organizational change management and procurement systems followed*

### ***Expected Benefits***

- *Business process outcome improvement*
- *Confidence in state's ability to implement systems*
- *ETS/CIO are broker of technology solutions*
- *Successful procurement, design and implementation of department and agency IT projects*

### ***Expected Challenges***

- *IT may not have "consultant" skills to aid business*
- *Culture shift – both IT and business will need to see the value and initiate partnership*
- *Trust & understanding may be lacking between business & IT*
- *Time & re-prioritization – using consultants vs. State IT*

### ***Key Strategic Stakeholders***

- *Functional business owner/decision-maker*
- *IT leaders and next-tier teams tasked with the work*
- *Governance Groups*
- *Procurement*
- *Cabinet – buy-in to drive culture/process changes*

### ***Metrics***

- *Cost, schedule, and performance on development*
- *# of re-baselines*
- *CMM and Reference model score*

## **Strategy: Extend Statewide Cyber-Security Strategy**

*Extend the statewide cyber security strategy to protect the State's IT infrastructure and constituent data through adoption of cyber security best practices across the State's IT systems*

### **Desired Outcomes**

- *Safeguard state and constituent information*
- *Reduce vulnerability to external threats*
- *Immediate system-wide threat response*
- *Security efficiency through use of AI/ML*
- *Minimize storage of sensitive data*

### **Expected Benefits**

- *Increased public trust in systems, state government*
- *Reduced/eliminated breaches*
- *Cost savings*
- *Safer data, applications, systems*
- *Increased system up-time (True 24/7 availability)*

### **Expected Challenges**

- *Change Management – new systems, role, processes, relationships, behavior expectations*
- *Adequate, skilled staffing*
- *Adequate funding (CISO, staffing, Data Officer, training, technology)*
- *Legacy infrastructure & applications*
- *Evolving nature of threats*

### **Key Strategic Stakeholders**

- *Cyber security specialists*
- *State IT Directors, leaders/management*
- *Employees (buy-in, good security hygiene)*
- *Legislature (funding & resource commitment)*
- *IT product and service providers and industry associations*
- *Federal government*

### **Metrics**

- *# of verified cyber security incidents/year*
- *Training participation*
- *CIS Reference Model Scorings*
- *CMM level score*

## **Strategy: Enhance the Value of State Data**

*Maximize the value of State data by designing, implementing and governing State systems for data stewardship, sharing, and public use*

### **Desired Outcomes**

- *Data Usage: State data is more valuable for economic and public purposes*
- *Transparency & Accessibility: All appropriate State-stored/managed data is available to the public and to other State departments, agencies, and users*
- *Increased awareness – all stakeholders know what is accessible and why specific data classes are not*

### **Expected Benefits**

- *Increased constituent trust in government and civic engagement*
- *Improved cross-department, cross-agency, cross-sector collaboration that benefits Hawai'i*
- *Broader data visibility leads to problem identification & solutioning*
- *Increased data interoperability & sharing – more opportunity for informed decision-making*
- *Better service delivery & client experience*
- *Decreased redundancy – greater efficiency in government*

### **Expected Challenges**

- *Change Management – new systems, processes, relationships, expectations (Culture of Sharing)*
- *Inconsistency across agencies – resistance to standardization*
- *Culture – public interest vs. sole client focus*
- *Adequate funding*
- *State & federal law – inter-agency sharing, confidentiality rules*
- *Fear of data integrity, quality, security, ownership/governance*

### **Key Strategic Stakeholders**

- *Data Stewards: Department and program leadership (buy-in, commitment, support, use, reporting)*
- *State leadership and employees*
- *Office of Information Practices (OIP) and Attorney General*
- *Federal agencies*
- *Legislature (funding, policy changes)*
- *Open Data advocates and users including businesses*

### **Metrics**

- *Visits to data.hawaii.gov site*
- *# of data sets inventoried and classified*
- *% of data sets available on data.hawaii.gov*
- *Reference Model & CMM Scores*

## **Strategy: Optimize Enterprise Systems**

*Optimize ETS enterprise systems to leverage the state's investment in centralized IT services*

### **Desired Outcomes**

- *Decreased IT costs and redundancy*
- *Role clarity, increased employee retention*
- *Streamlined, more effective communication*
- *Accelerated execution: Procurement, SDLC*
- *Enterprise systems are well-engineered and appropriately designed for their intended use*

### **Expected Benefits**

- *Seamless operation of enterprise systems*
- *Expanded service catalogues*
- *Service level agreement transparency*
- *Prioritization of investments*

### **Expected Challenges**

- *Large catalogue of systems including NGN, ERP/HRMS/Payroll, FAMIS/DataMart, Office 365, identity management (Active Directory), land mobile radio, GIS, eSign, hosting platforms (Mainframe, GPC), SharpCloud, cybersecurity suite, open data platforms, and Access Hawaii digital government portal*
- *Adequate skilled staffing and funding*
- *Change Management – new systems, role, processes, relationships, expectations*

### **Key Strategic Stakeholders**

- *Executive branch department heads (buy-in, commitment, engagement/support, use, reporting)*
- *Citizens using open data or digital government systems*
- *DHRD (staffing)*
- *Legislature (funding)*
- *Employees (continuity of leadership, engagement)*

### **Metrics**

- *Reference Model & CMM Scores*
- *SLA measures for systems*

## **Strategy: Extend IT Portfolio Governance**

*Extend the State IT Governance Model to better align the state's functions with resources and ensure the State follows industry best practices and garners the full benefits of its investments.*

### **Desired Outcomes**

- *Proactive and transparent portfolio planning and management through system life cycle*
- *Transparency into cost, schedule and performance and re-baselining of projects*
- *Sharing and reuse of existing hardware and software*
- *IT systems are well-engineered and appropriately designed for their intended use*

### **Expected Benefits**

- *Transparency into system investment, performance and lifecycle including planning, investments, system health, modernization, end of service and system replacement*
- *Better planning by ETS and departments Resource leveling to avoid spikes in budget and staff levels*
- *A more effective accountability framework*

### **Expected Challenges**

- *Gathering, organizing and analyzing portfolio data from across the enterprise*
- *Resource constraints – funding, limited skillsets*
- *Buy-in to adopt required standards, shared services, common platforms vs. customized habits, systems*
- *Organizational commitment to share data*
- *Selecting appropriate performance indicators & best practices*

### **Key Strategic Stakeholders**

- *State departments, agencies – IT and business partners*
- *ITSC*
- *Legislature*
- *Public/constituents/interest groups*
- *Vendors*

### **Metrics**

- *# of systems monitored*
- *% of systems with complete information*
- *# of re-baselines*
- *Reference Model & CMM Scores*

## ***Strategy: Implement Dynamic and Sustainable IT Operations***

*Implement dynamic and sustainable IT operations to ensure business systems are up-to-date and ready to support the current and future needs of business users and citizens at all times.*

### ***Desired Outcomes***

- *IT Systems can be quickly configured to meet business needs*
- *Systems are healthy, stable and upgradeable*
- *IT systems are well-engineered and appropriately designed for their intended use*
- *State quickly benefits from new technology*
- *Legacy systems decommissioned*

### ***Expected Benefits***

- *Faster response to changing business needs*
- *New features available to businesses as soon as added*
- *System health maximized and down-time reduced*
- *Reduced risk in cyber security*
- *Reduced cost of hardware/software development, operation & maintenance*

### ***Expected Challenges***

- *Skills gaps in risk management & Agile methodology*
- *Procurement feature/process adds/changes needed*
- *Requires a long-term funding plan*
- *Differing agency priorities*
- *ITSM & GRC tools (skills & processes)*

### ***Key Strategic Stakeholders***

- *Business users & leaders*
- *Tech implementors & operators*
- *Citizens, Customers*
- *Legislators, Cabinet & Governor*
- *Procurement*

### ***Metrics***

- *# of systems on legacy /IAAS/PAAS/ SAAS*
- *Version and patch currency at n-1*
- *Reference Model & CMM Scores*

## **Strategy: Digital Workforce Development**

*Establish a continuous learning culture and growth mindset to modernize how we work and enable the state to develop and sustain the digital workforce needed in a constantly evolving IT world.*

### **Desired Outcomes**

- *State government consistently attracts high quality candidates for all IT job openings*
- *Culture and work environment that promotes/encourages remote work and flexibility*
- *Re-branding of government workforce as an Innovation Center with a culture that embraces digital tools/tech, flexible/remote work environment*

### **Expected Benefits**

- *Build recruitment, hiring, training, assignment and staffing models*
- *Qualified talent at all levels (apprenticeship, entry, senior, enterprise-level)*
- *Expanded learning and cross-training to have some level of “generalists” depending on job class/type*
- *In-house development of IT talent*

### **Expected Challenges**

- *Retention/turnover – pay, upward mobility issues*
- *Skillsets – need to be able to deal with legacy & new tech*
- *Competition with private sector*
- *Antiquated banding/hiring processes & rules*
- *Current climate, lack of learning/growing opportunity*

### **Key Strategic Stakeholders**

- *Current & potential employees*
- *Unions (legislative change support)*
- *CIO & IT leadership*
- *Legislature*

### **Metrics**

- *Vacancy aging*
- *Reference Model & CMM Scores*
- *Training completed*
- *Internal Promotions*



# State IT Strategic Plan Overview

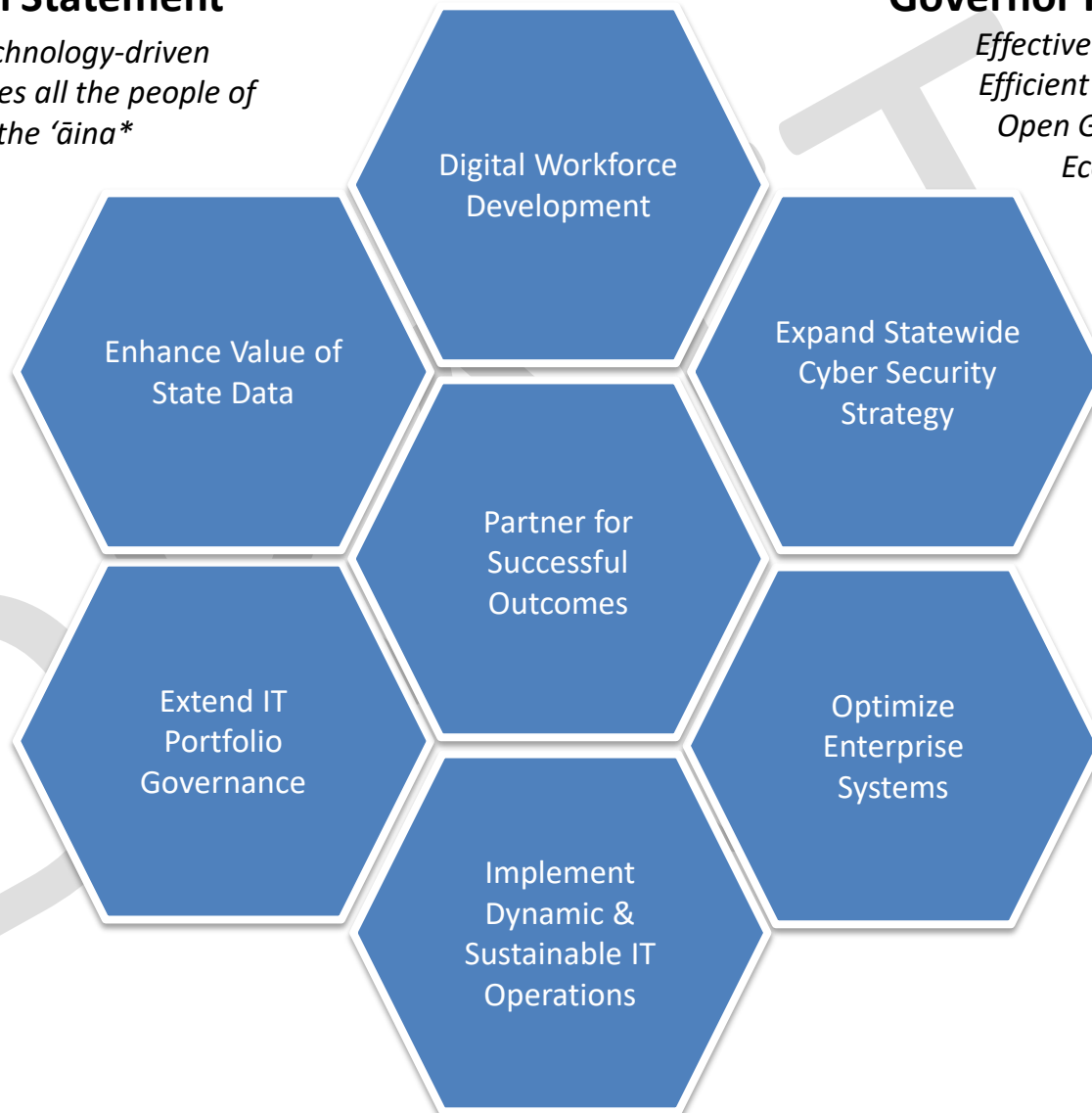
## State IT Vision Statement

*Transformative technology-driven government that serves all the people of Hawai'i and the 'āina\**

## Governor Ige's Priorities

*Effective Government  
Efficient Government  
Open Government  
Economy*

## STATE'S IT STRATEGIC PRIORITIES



\*The 'āina (land) is not just soil, sand or dirt. The 'āina is a heart issue for the people of Hawai'i. The very word 'āina brings forth deep emotion evolved from ancestral times when people lived in nature as an integral part of it. We chose to incorporate the ethical, philosophical, and spiritual aspects not only present in Governor Ige's vision and mission statements, but also that are present in the culture that make Hawai'i Hawai'i.

# Hawaii IT Strategic Priorities

Partner for Successful Outcomes

## **Strategy**

*Shape the partnership between government functions and IT by creating a standard framework to ensure successful outcomes.*

Enhance Value of State Data

## **Strategy**

*Maximize the value of State data by designing, implementing and governing State systems for data stewardship, sharing, and public use*

Extend IT Portfolio Governance

## **Strategy**

*Extend the State IT Governance Model to better align the state's functions with resources and ensure the State follows industry best practices and garners the full benefits of its investments.*

Digital Workforce Development

## **Strategy**

*Establish a continuous learning culture and growth mindset to modernize how we work and enable the state to develop and sustain the digital workforce needed in a constantly evolving IT world.*

**Strategy**  
*Extend the statewide cyber security strategy to protect the State's IT infrastructure and constituent data through adoption of cyber security industry best practices across the State's IT systems*

Expand Statewide Cyber Security Strategy

**Strategy**  
*Optimize ETS enterprise systems to leverage the state's investment in centralized IT services*

Optimize Enterprise Systems

**Strategy**  
*Implement sustainable IT operations to ensure business systems are up-to-date and ready to support the current and future needs of business users and citizens at all times*

Implement Dynamic & Sustainable IT Operations

## **State IT Vision Statement**

*Transformative technology-driven government that serves all the people of Hawai'i and the 'āina*

# Vision

- *Transformative technology-driven government that serves all the people of Hawai‘i and the ‘āina*
- *Driving citizen value through technology*
- *Modern State Government for Hawaii*

# Mission Statement

- *Seamlessly blend innovative Information Technology with well-engineered business processes to deliver and support sustainable systems that empower our workforce to accelerate excellent outcomes for business, citizen and the 'āina in support of the State's priorities*

# Extend Statewide Cyber-Security Strategy

- ***Strategy***

- *Extend the statewide cyber security strategy to protect the State's IT infrastructure and constituent data through adoption of cyber security industry best practices across the State's IT systems*



# Extend Statewide Cyber-Security Strategy

## Strategy

*Extend the statewide cyber security strategy to protect the State's IT infrastructure and constituent data through adoption of cyber security industry best practices across the State's IT systems*

### Desired Outcomes

- Safeguard state and constituent information
- Reduce vulnerability to external threats
- Immediate System-wide threat response
- Security efficiency through use of AI/ML
- Minimize storage of sensitive data

### Key Strategic Stakeholders

- Cyber security specialists
- State IT Directors, leaders/management
- Employees (buy-in, good security hygiene)
- Legislature (funding & resource commitment)
- IT product and service providers and industry associations
- Federal government

### Expected Benefits

- Increased public trust in systems, state government
- Reduced/eliminated breaches
- Cost savings
- Safer data, applications, systems
- Increased system up-time (True 24/7 availability)

### METRICS

- # of verified cyber security incidents/year
- Training participation
- CIS Reference Model Scorings
- CMM level score

### Expected Challenges

- Change Management – new systems, role, processes, relationships, behavior expectations
- Adequate, skilled staffing
- Adequate funding (CISO, staffing, Data Officer, training, technology)
- Legacy infrastructure & applications
- Evolving nature of threats

### Near-Term Objectives (12 months)

- Establish a strategy governance process, executive sponsor, charter, program lead, staff, working group and user groups
- Develop a high-level prioritized reference model for best practices in tactics, techniques and procedures and begin measurement
- Establish a high-level Capability Maturity Model measurement framework and begin measurement
- Plan & begin implementing change management efforts – early communications: Threats, benefits, timing, current action

### Longer-Term Objectives (2-4 years)

- Capability Maturity Model: Increase level attained and granularity in for state, departments and agencies
- Reference Model: Increase progress in prioritized reference model and adjust as necessary
- Identify & drive next-tier legislative changes/additions



## Basic

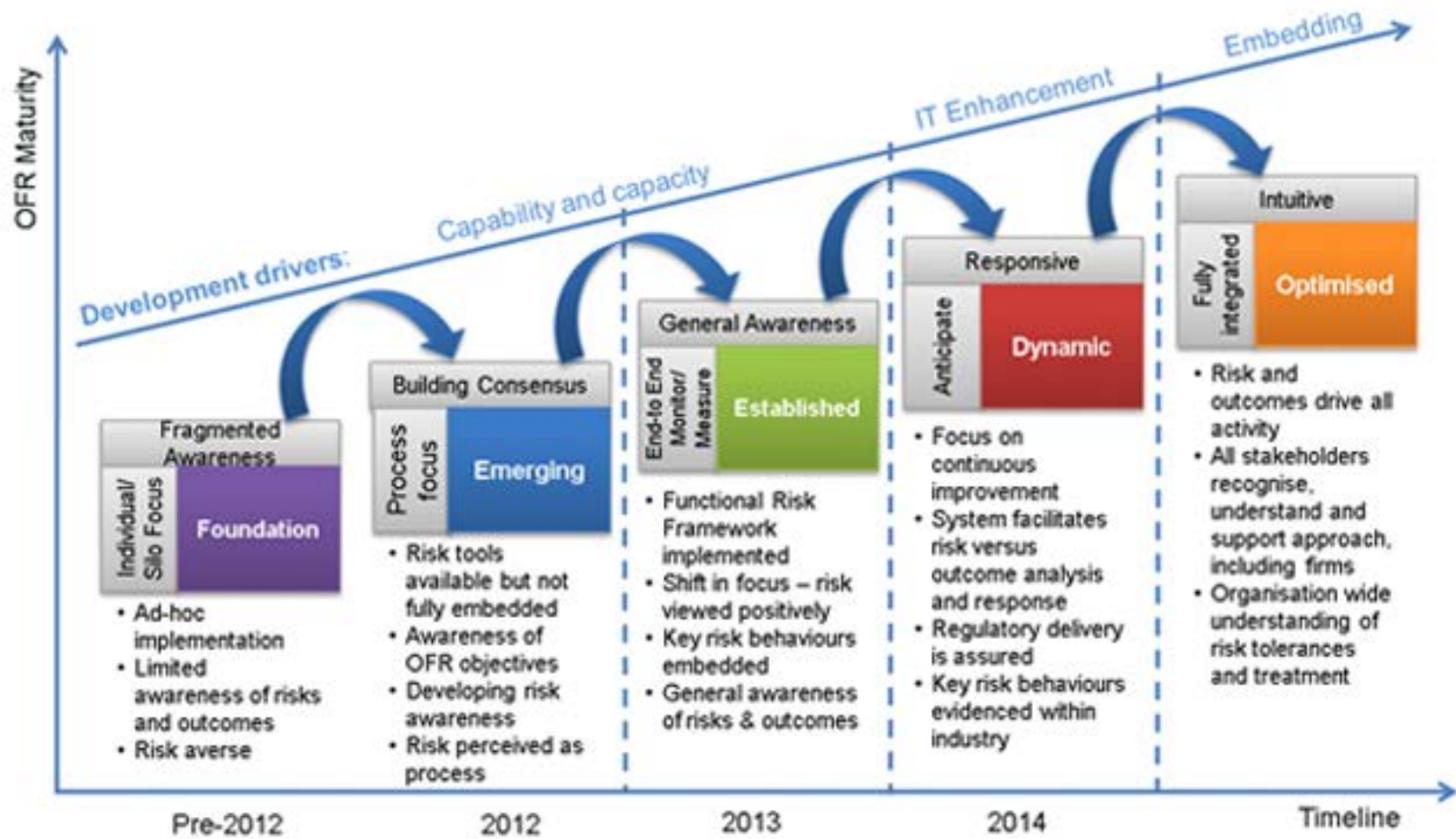
- 1 Inventory and Control of Hardware Assets
- 2 Inventory and Control of Software Assets
- 3 Continuous Vulnerability Management
- 4 Controlled Use of Administrative Privileges
- 5 Secure Configuration for Hardware and Software on Mobile Devices, Laptops, Workstations and Servers
- 6 Maintenance, Monitoring and Analysis of Audit Logs

## Foundational

- 7 Email and Web Browser Protections
- 8 Malware Defenses
- 9 Limitation and Control of Network Ports, Protocols, and Services
- 10 Data Recovery Capabilities
- 11 Secure Configuration for Network Devices, such as Firewalls, Routers and Switches
- 12 Boundary Defense
- 13 Data Protection
- 14 Controlled Access Based on the Need to Know
- 15 Wireless Access Control
- 16 Account Monitoring and Control

## Organizational

- 17 Implement a Security Awareness and Training Program
- 18 Application Software Security
- 19 Incident Response and Management
- 20 Penetration Tests and Red Team Exercises





# LEVEL 1

## UNAWARE

Spreadsheet & information anarchy

One-off report requests

Appoint governance sponsor

# 1

# LEVEL 2

## OPPORTUNISTIC

No business sponsor; IT executive in charge  
Data inconsistency & "stove-piped" systems

**★ ORGANIZATIONS TYPICALLY STARTS HERE**

Limited users

Document hidden cost of silos

# 2

# LEVEL 3

## STANDARDS

Technology standards start to emerge

Business executive becomes BI champion

Projects cross business processes

BICC started

# 3

# LEVEL 4

## ENTERPRISE

Deploy an enterprise metrics framework

Sophisticated program management

Proactively research new methods, technologies

CFO or COO becomes sponsor

# 4

# LEVEL 5

## TRANSFORMATIVE

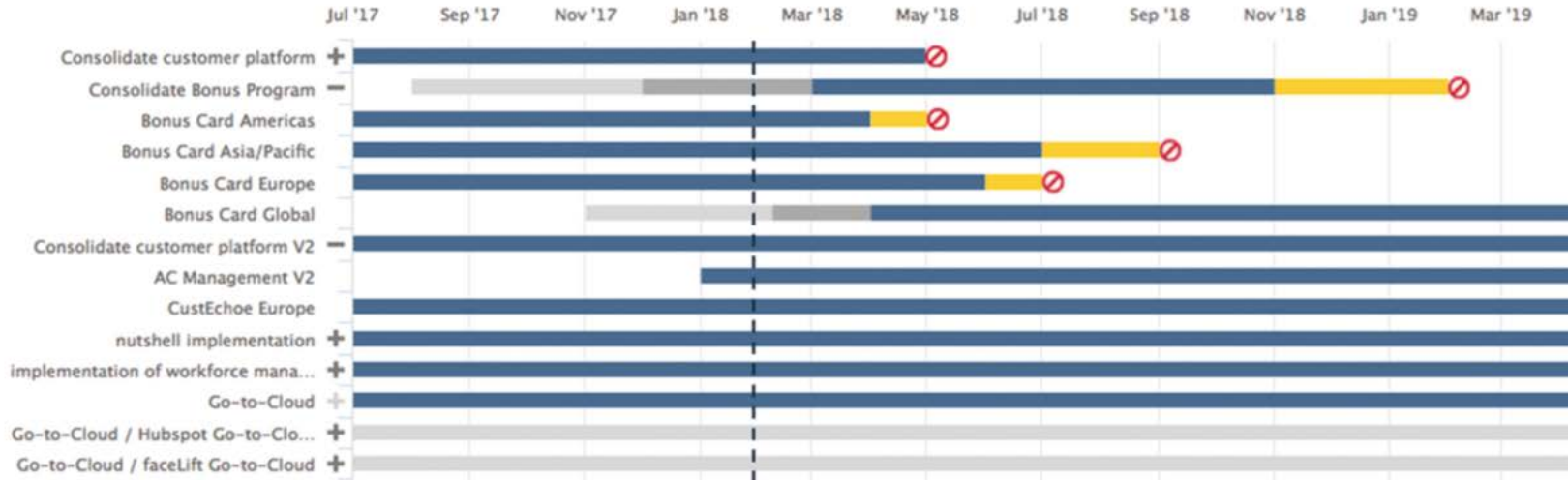
Enterprise performance culture  
Business strategy driven

Outside in perspective

Driving enterprise and industry transformation

# 5

# Program Management



## Project Setup

### BUDGET / COSTS

	YTD	Budget	Ordered	Actuals	ETC	Delta
OpEx	€ 895,000	€ 1,088,000	€ 1,060,323	€ 27,677	(€ 193,000)	
CapEx	€ 300,000	€ 300,000	€ 288,150	€ 11,850	€ 0	

### PROVIDERS

Which Providers work for this Project (on which order)?

acctur

YTD

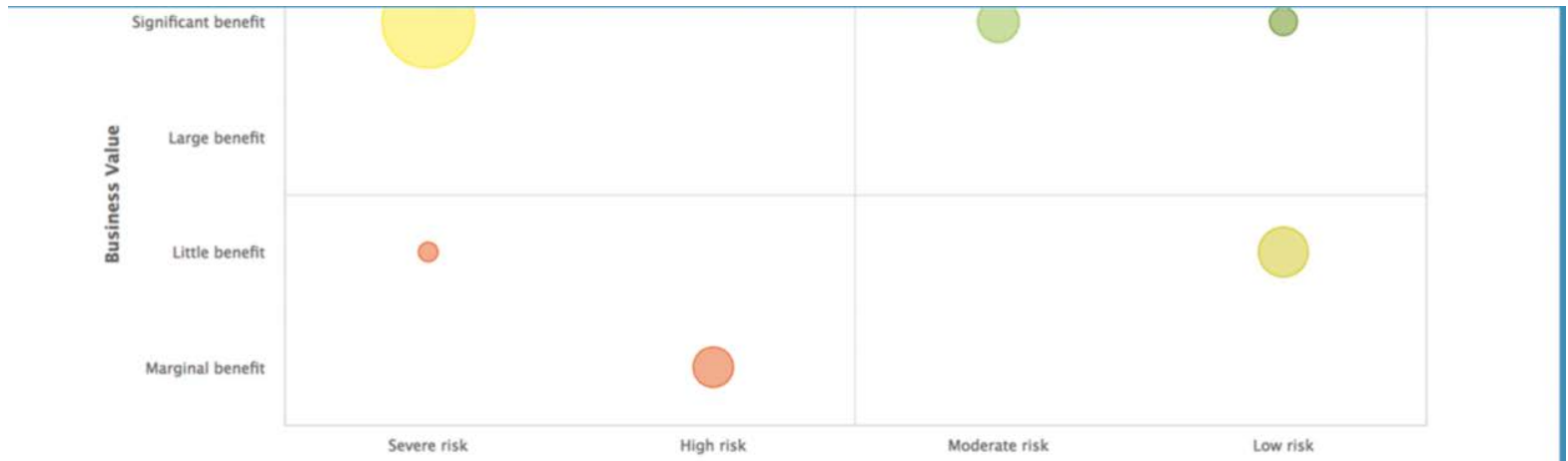
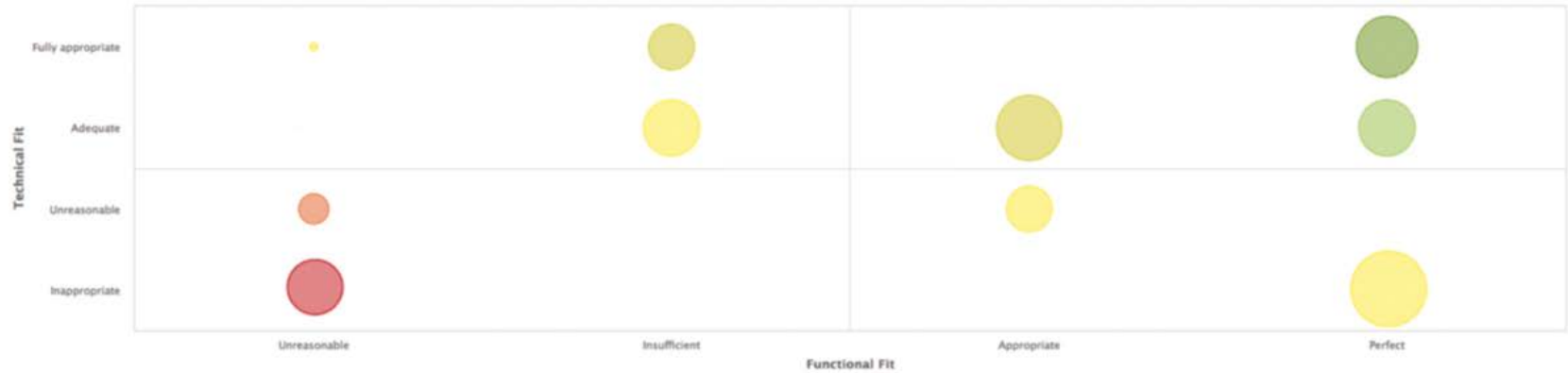
Ordered

Actuals

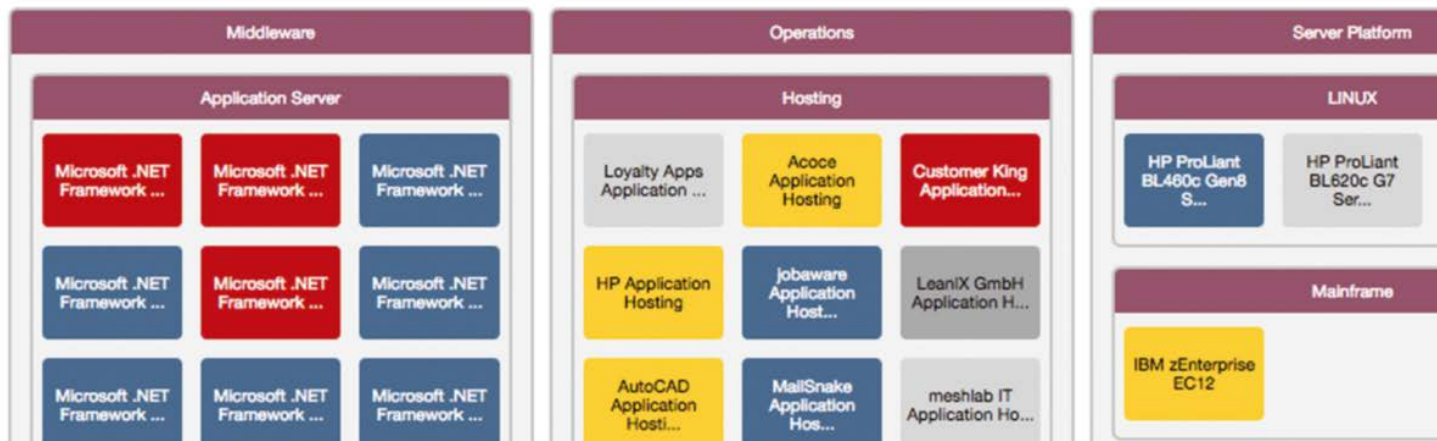
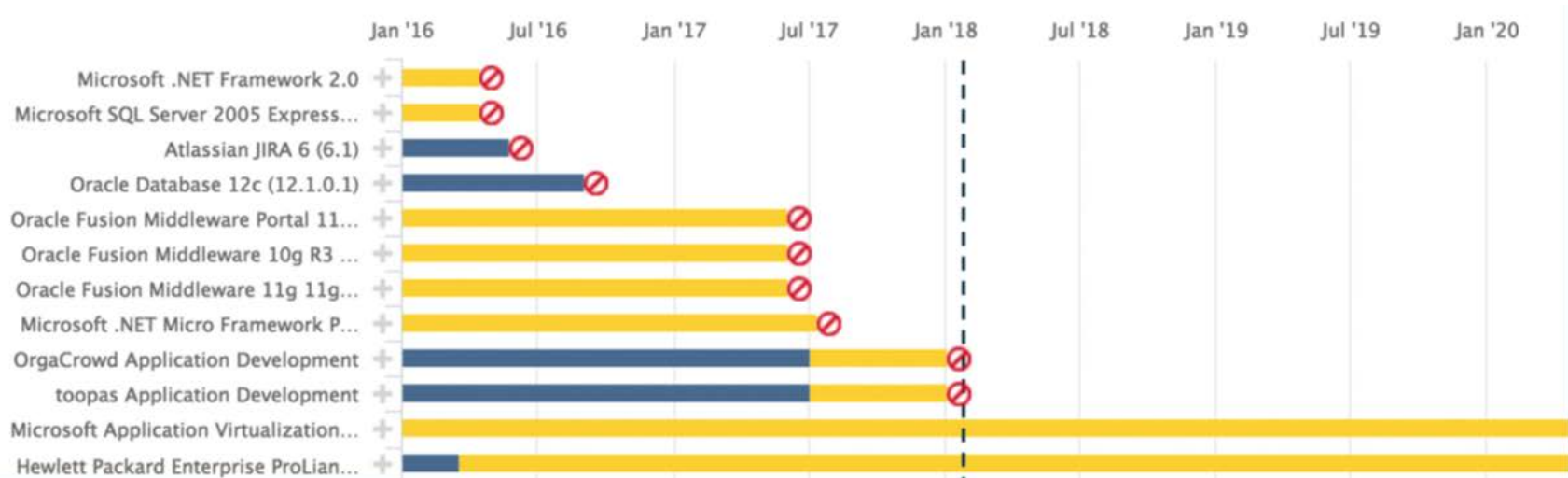
ETC

Delta

# Program Fit




# Technology Obsolescence



# Partner for Successful Outcomes

- ***Strategy***
- *Shape the partnership between government functions and IT by creating a standard framework to ensure successful outcomes.*



## Partner for Successful Outcomes

## Strategy

Shape the partnership between government functions and IT by creating a standard framework to ensure successful outcomes.

### Desired Outcomes

- Successful business process implementation
- IT systems are well-engineered and appropriately designed for their intended use
- Effective partnership between IT and business
- Procurement efficiency and cost savings
- Standard governance, business process re-engineering, program management, organizational change management and procurement systems followed

### Key Strategic Stakeholders

- Functional business owner/decision-maker
- IT leaders and next-tier teams tasked with the work
- Governance Groups
- Procurement
- Cabinet – buy-in to drive culture/process changes

### Expected Benefits

- Business process outcome improvement
- Confidence in state's ability to implement systems
- ETS/CIO are broker of technology solutions
- Successful procurement, design and implementation of department and agency IT projects

### METRICS

- Cost, schedule, and performance on development
- # of re-baselines
- CMM and Reference model score

### Expected Challenges

- IT may not have “consultant” skills to aid business
- Culture shift – both IT and business will need to see the value and initiate partnership
- Trust & understanding may be lacking between business & IT
- Time & re-prioritization – using consultants vs. State IT

### Near-Term Objectives (12 months)

- Establish a strategy governance process, executive sponsor, charter, program lead, staff, working group and user groups
- Develop a high-level prioritized reference model for best practices in tactics, techniques and procedures and begin measurement
- Establish a high-level Capability Maturity Model measurement framework and begin measurement
- Plan & begin implementing change management efforts – early communications: Threats, benefits, timing, current action
- Research and implement IT tools to standardize processes

### Longer-Term Objectives (2-4 years)

- Capability Maturity Model: Increase level attained and granularity in for state, departments and agencies
- Reference Model: Increase progress in prioritized reference model and adjust as necessary
- Identify & drive next-tier legislative changes/additions
- Enhance/expand IT governance model to ensure modernization success
- Standardize to include SPO at onset of all modernization efforts

# Expand IT Portfolio Governance

- ***Strategy***
- *Extend the State IT Governance Model to better align the state's functions with resources and ensure the State follows industry best practices and garners the full benefits of its investments.*



## Expand IT Portfolio Governance

**Strategy**  
*Extend the State IT Governance Model to better align the state's functions with resources and ensure the State follows industry best practices and garners the full benefits of its investments.*

### **Desired Outcomes**

- *Proactive and transparent portfolio planning and management through system life cycle*
- *Transparency into cost, schedule and performance and re-baselining of projects*
- *Sharing and reuse of existing hardware and software*
- *IT systems are well-engineered and appropriately designed for their intended use*

### **Key Strategic Stakeholders**

- *State departments, agencies – IT and business partners*
- *ITSC*
- *Legislature*
- *Public/constituents/interest groups*
- *Vendors*

### **Expected Benefits**

- *Transparency into system investment, performance and lifecycle including planning, investments, system health, modernization, end of service and system replacement*
- *Better planning by ETS and departments Resource leveling to avoid spikes in budget and staff levels*
- *A more effective accountability framework*

### **METRICS**

- *# of systems monitored*
- *% of systems with complete information*
- *# of re-baselines*
- *Reference Model & CMM Scores*

### **Expected Challenges**

- *Gathering, organizing and analyzing portfolio data from across the enterprise*
- *Resource constraints – funding, limited skillsets*
- *Buy-in to adopt required standards, shared services, common platforms vs. customized habits, systems*
- *Organizational commitment to share data*
- *Selecting appropriate performance indicators & best practices*

### **Near-Term Objectives (12 months)**

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- *Plan & begin implementing change management efforts – early communications: Threats, benefits, timing, current action*

### **Longer-Term Objectives (2-4 years)**

- *Capability Maturity Model: Increase level attained and granularity for state, departments and agencies*
- *Reference Model: Increase progress in prioritized reference model and adjust as necessary*
- *Complete inventory that informs plan & funding for modernizing/replacing legacy systems across the enterprise*



# Enhance the Value of State Data

- ***Strategy***

- *Maximize the value of State data by designing, implementing and governing State systems for data stewardship, sharing, and public use*

## Enhance the Value of State Data

### Strategy

Maximize the value of State data by designing, implementing and governing State systems for data stewardship, sharing, and public use

#### Desired Outcomes

- *Data Usage: State data is more valuable for economic and public purposes*
- *Transparency & Accessibility: All appropriate State-stored/managed data is available to the public and to other State departments, agencies, and users*
- *Increased awareness – all stakeholders know what is accessible and why specific data classes are not*

#### Key Strategic Stakeholders

- *Data Stewards: Jurisdiction, department and program leadership (buy-in, commitment, support, use, reporting)*
- *State leadership and employees*
- *Office of Information Practices (OIP) and Attorney General*
- *Federal agencies*
- *Legislature (funding, policy changes)*
- *Open Data advocates and users including businesses*

#### Expected Benefits

- *Increased constituent trust in government and civic engagement*
- *Improved cross-department, cross-agency, cross-sector collaboration that benefits Hawai'i*
- *Broader data visibility leads to problem identification & solutioning*
- *Increased data interoperability & sharing – more opportunity for informed decision-making*
- *Better service delivery & client experience*
- *Decreased redundancy – greater efficiency in gov't*

#### METRICS

- Visits to data.hawaii.gov site
- # of data sets inventoried and classified
- % of data sets available on data.hawaii.gov
- Reference Model & CMM Scores

#### Expected Challenges

- *Change Management – new systems, processes, relationships, expectations (Culture of Sharing)*
- *Inconsistency across agencies – resistance to standardization*
- *Culture – public interest vs. sole client focus*
- *Adequate funding*
- *State & federal law – inter-agency sharing, confidentiality rules*
- *Fear of data integrity, quality, security, ownership/governance*

#### Near-Term Objectives (12 months)

- *Establish a strategy governance process, executive sponsor, charter, program lead, staff, working group and user groups*
- *Develop a high-level prioritized reference model for best practices in tactics, techniques and procedures and begin measurement*
- *Establish a high-level Capability Maturity Model measurement framework and begin measurement*
- *Plan & begin implementing change management efforts to address culture & gain departmental and employee buy*
- *Standardize business intelligence tools*
- *Establish business case analysis model for open data and data sharing*

#### Longer-Term Objectives (2-4 years)

- *Capability Maturity Model: Increase level attained and granularity for state, departments and agencies*
- *Reference Model: Increase progress in prioritized reference model and adjust as necessary*
- *Identify & drive next-tier legislative changes/additions*
- *Data drives government and economic decisions*
- *Sharing data becomes the norm*

# Implement Dynamic & Sustainable IT Operations

- **Strategy**

- *Implement dynamic and sustainable IT operations to ensure business systems are up-to-date and ready to support the current and future needs of business users and citizens at all times.*



# Implement Dynamic and Sustainable IT Operations

## Strategy

Implement dynamic and sustainable IT operations to ensure business systems are up-to-date and ready to support the current and future needs of business users and citizens at all times.

### Desired Outcomes

- IT Systems can be quickly configured to meet business needs
- Systems are healthy, stable and upgradeable
- IT systems are well-engineered and appropriately designed for their intended use
- State quickly benefits from new technology
- Legacy systems decommissioned

### Key Strategic Stakeholders

- Business users & leaders
- Tech implementors & operators
- Citizens, Customers
- Legislators, Cabinet & Governor
- Procurement

### Expected Benefits

- Faster response to changing business needs
- New features available to businesses as soon as added
- System health maximized and down-time reduced
- Reduced risk in cyber security
- Reduced cost of hardware/software development, operation & maintenance

### METRICS

- # of systems on legacy /IAAS/PAAS/ SAAS
- Version and patch currency at n-1
- Reference Model & CMM Scores

### Expected Challenges

- Skills gaps in risk management & Agile methodology
- Procurement feature/process adds/changes needed
- Requires a long-term funding plan
- Differing agency priorities
- ITSM & GRC tools (skills & processes)

### Near-Term Objectives (12 months)

- Establish a strategy governance process, executive sponsor, charter, program lead, staff, working group and user groups
- Develop a high-level prioritized reference model for best practices in tactics, techniques and procedures and begin measurement
- Establish a high-level Capability Maturity Model measurement framework and begin measurement
- Plan & begin implementing change management efforts – early communications: Threats, benefits, timing, current action
- Define and agree on characteristics for inventories

### Longer-Term Objectives (2-4 years)

- Capability Maturity Model: Increase level attained and granularity for state, departments and agencies
- Reference Model: Increase progress in prioritized reference model and adjust as necessary
- Identify & drive next-tier legislative changes/additions
- Implemented lifecycle model showing confidentiality, integrity, availability, and continuous improvement
- Establish our best practices around lifecycle

# Digital Workforce Development

- ***Strategy***

- *Establish a continuous learning culture and growth mindset to modernize how we work and enable the state to develop and sustain the digital workforce needed in a constantly evolving IT world.*



# Digital Workforce Development

## Strategy

Establish a continuous learning culture and growth mindset to modernize how we work and enable the state to develop and sustain the digital workforce needed in a constantly evolving IT world.

### Desired Outcomes

- State government consistently attracts high quality candidates for all IT job openings
- Culture and work environment that promotes/encourages remote work and flexibility
- Re-branding of gov't workforce as an Innovation Center with a culture that embraces digital tools/tech, flexible/remote work environment

### Key Strategic Stakeholders

- Current & potential employees
- Unions (legislative change support)
- CIO & IT leadership
- Legislature

### Expected Benefits

- Build recruitment, hiring, training, assignment and staffing models
- Qualified talent at all levels (apprenticeship, entry, senior, enterprise-level)
- Expanded learning and cross-training to have some level of "generalists" depending on job class/type
- In-house development of IT talent

### METRICS

- Vacancy aging
- Reference Model & CMM Scores
- Training completed
- Internal Promotions

### Expected Challenges

- Retention/turnover – pay, upward mobility issues
- Skillsets – need to be able to deal with legacy & new tech
- Competition with private sector
- Antiquated banding/hiring processes & rules
- Current climate, lack of learning/growing opportunity

### Near-Term Objectives (12 months)

- Establish a strategy governance process, executive sponsor, charter, program lead, staff, working group and user groups
- Develop a high-level prioritized reference model for best practices in tactics, techniques and procedures and begin measurement
- Establish a high-level Capability Maturity Model measurement framework and begin measurement
- Plan & begin implementing change management efforts – early communications: Threats, benefits, timing, current action

### Longer-Term Objectives (2-4 years)

- Capability Maturity Model: Increase level attained and granularity for state, departments and agencies
- Reference Model: Increase progress in prioritized reference model and adjust as necessary
- Identify & drive next-tier legislative changes/additions

# Optimize Enterprise Systems

- ***Strategy***

- *Optimize ETS enterprise systems to leverage the state's investment in centralized IT services*



# Optimize Enterprise Systems

## Strategy

Optimize ETS enterprise systems to leverage the state's investment in centralized IT services

### Desired Outcomes

- Decreased IT costs and redundancy
- Role clarity, increased employee retention
- Streamlined, more effective communication
- Accelerated execution: Procurement, SDLC
- Enterprise systems are well-engineered and appropriately designed for their intended use

### Key Strategic Stakeholders

- Executive branch department heads (buy-in, commitment, engagement/support, use, reporting)
- Citizens using open data or digital government systems
- DHRD (staffing)
- Legislature (funding)
- Employees (continuity of leadership, engagement)

### Expected Benefits

- Seamless operation of enterprise systems
- Expanded service catalogues
- Service level agreement transparency
- Prioritization of investments

### METRICS

- Reference Model & CMM Scores
- SLA measures for systems

### Expected Challenges

- Large catalogue of systems including NGN, ERP/HRMS/Payroll, FAMIS/DataMart, Office 365, identity management (Active Directory), land mobile radio, GIS, eSign, hosting platforms (Mainframe, GPC), SharpCloud, cybersecurity suite, open data platforms, and Access Hawaii digital government portal
- Adequate skilled staffing and funding
- Change Management – new systems, role, processes, relationships, expectations

### Near-Term Objectives (12 months)

- Establish a strategy governance process, executive sponsor, charter, program lead, staff, working group and user groups
- Develop a high-level prioritized reference model for best practices in tactics, techniques and procedures and begin measurement
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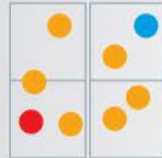


# IMMEDIATE CLEANUP

1 Collect IT Portfolio Information



2 Analyze Portfolio Information



3 Identify and communicate potential measures



4 Implement Quick Hit Initiatives



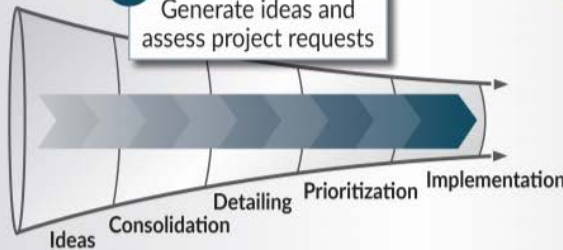
5 Develop Capability Models



# REDUCE COMPLEXITY



6 Generate ideas and assess project requests



7 Program manage Reduction Initiatives



8 Establish Portfolio Governance



# INCREASE VALUE OF IT

9 Establish balanced operating model



10 Create an agile Enterprise Architecture



11 Engage with stakeholders



12 Track & measure value delivery

- ✓ Market Value
- ✓ Process Value
- ✓ Technology Value