State of Alaska
Enterprise Strategic IT Plan

Executive Summary

Background

Information Technology (IT) is a key enabler for many of the State's executive branch agency missions to effectively deliver services and drive efficiencies. IT has become the way that government provide services in a more effective and efficient manner.

Ideal State:

A holistic strategic approach to core service delivery can be more efficiently deployed through investment optimization and risk management. Services that all state agencies hold in common can be procured and managed as commodity services via economies of scale in either a shared service and/or outsourced models.

Large complex initiatives can be managed more effectively through portfolio management with shared expertise regarding business and technical requirements. Projects will have a high level of oversight and support enabling on-time on-budget outcomes. State data can be more readily protected from cyber threats while retaining integrity, availability and confidentiality as required.

Problem Statement:

Historically, when structuring IT services the state has placed the highest priority on a Department's "Accountability"; or the successful delivery of Department services. State agencies have exercised broad latitude when structuring their IT environment to deliver services that meet their specific needs without regard to larger state enterprise goals. The result is a government of state agencies, many of which have become technology silos wherein agency IT staff work toward solutions in a largely provincial, agency-centric culture.

This lack of a statewide or enterprise approach in the delivery of IT services has also resulted in duplication of service delivery and investment across an array of service offerings, including for example: server hosting, desktop support, database services, networking, and information security. Further, without enterprise wide orchestration in standards, purchasing, service level agreements there is a disparity in approaches, architecture, design, required development and maintenance skillsets, data architecture, data quality, purchase and subscription contracts, vendor relationship management, and reporting.

Alaska is lagging other states in addressing this issue of IT Governance and strategy. In the 2014 digital state's survey conducted by the Center for Digital Government, Alaska received the lowest score of all 50 states with a C- (C minus).   At this time, research indicates that Alaska is one of nine (9) states that have not centralized the delivery of IT services accompanied by a strong Chief Information Officer (CIO) function.   For example, Colorado recently appointed a strong centralized Chief Information Officer tasked to improve effectiveness and efficiency of government through the use of shared information and technology. They claim a 30% reduction in overall IT spending.

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Problem's Financial Costs:

In FY 2014, the explicit IT spend was ~$218M. The total IT spend was certainly more than $218M as agencies accounting for their IT spend often miss factoring the full burden of delivering IT services as well as some portion of purchases of technology and services. The FY16 IT Plans indicated in excess of 800 IT employees statewide (including shadow staff), personnel services account for approximately 40% of total IT spend.

Recommendations

The challenge to improve the state's IT capabilities is not the result of a lack of financial resources. The fundamental issue is a lack of organizational and governance structures that have created silos leading to divergent and occasionally conflicting operational goals, which have contributed to a level of mistrust between IT organizations. The recommendation below attempts to address the issues.

Guiding Principles: Balancing Efficiency and Accountability

Presently, the state has prioritized agency "Accountability" – or successful delivery of Department services – over the financial efficiency. As a result, state agencies provide various internal IT services that meet their specific needs without regard to larger state-wide goals. This lack of statewide or enterprise approach in the delivery of IT services results in duplicating service delivery across an array of services, including: servers, desktop support, database services, networking, and information security. Multiple agencies delivering similar IT services tends to raise the overall spend for IT in the state.

There are three pillars to ensuring balancing the need for efficiency with the need to meet Department specific business requirements:

Intelligent Integration

Central to the State's efforts to gain efficiency in the delivery of IT services in the most cost-effective manner, is the concept to distinguish between "Commodity Services" and "Line-of-Business Services."

- A Commodity Service is a service with little or no qualitative differentiation meaning that there is no advantage to be gained from one solution as compared to another.
- Line-of-Business Services consist of differentiated services and generally are often core to the strategic mission of the Department. Line-of-Business Services tend to be applications but may also be hardware if an agency has a unique requirement that cannot be delivered efficiently and effectively in a commoditized manner.

Commodity Services

Commodity IT Services should be considered for centralization and delivery in the most cost-effective manner, benefiting from economies of scale as progressive adoption reduces overall costs. Line-of-Business Services, in contrast, should not be centralized but should remain within the business unit where the

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knowledge and expertise reside. Many services may initially be viewed as Line-of-Business Services, but will mature through their lifecycles and become Commodity Service.

The first step in the process of commoditization is to create an inventory of each IT service currently being delivered within all agencies and as an enterprise service offering, as well as IT projects that are planned or in process. The inventory should capture all infrastructure and assets – including network, security, servers and mobile applications as well as catalogue all operating systems, software, databases, business applications, & websites. The inventory process must establish the fully burdened cost of delivering each service, including the staffing and support.

This cost of an identical centralized service becomes the measuring stick to gauge the success or failure of a potential integration effort. If a consolidated approach cannot deliver a commodity service more effectively and efficiently at a lower price, then there is no benefit to consolidation.

In addition to reducing the overall cost, from the Departments' perspective commoditization of services moves the expense from a fixed capital expenditure to an annual operating expense. Agencies will no longer be required to invest capital on a periodic basis to provision services.

Line-of-Business Services

Not all IT services can or should be delivered in an integrated method. Those services identified during the analysis which are not or cannot meet the commodity criteria above will continue to be delivered in a Department-centric fashion. In those cases the service will typically:

- Be unique to a business unit's primary function/mission
- Meet definition of being highly specialized, custom, and complex.
- Require specific hardware or software.

As part of the recommendation, it is an intentional best practice to leave application developers, data owners, data administrators, and business analysts as employees of each agency. These positions require intimate knowledge of agency business processes and the applications that they support.

Even in cases of a service not meeting criteria for commodity delivery, it is still very likely some components of the service infrastructure may be enabled by commodity services. For instance, an application for managing lease space and contracts may require Oracle database, that database can be served by a commodity server housed in a commodity data center, or purchased via a common contractual vehicle. Instances of absolute uniqueness which would dictate completely separate services would likely be very rare.

Organizational Structure

A trade-off central to the governance recommendation attempts to balance the efficiency benefits of "Integration" with the accountability advantages of allowing Department-centric decision-making. The guiding principle that frames the recommendation intends to balance these potentially competing requirements.

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Office of Information Technology (OIT)

This proposal envisions a Phase I Transition Period during which an Office of Information Technology (OIT) is established with a strong and empowered Chief Information Officer (CIO). Following this initial period and introducing Phase II, the OIT would be located within the Governor's Office reporting to the Director of the Office of Management and Budget. The CIO will have ultimate statewide responsibility for all technology related strategy and operations within the state.

Enterprise Portfolio Management Office (EPMO)

The OIT will house the Enterprise Portfolio Management Office (EPMO). The EPMO supports the state's IT enterprise projects by providing a unique blend of business experience, methodology, and skill that often determine IT projects' success or failure. Recognizing that subject matter experts such as application developers, data owners, data administrators, and business analysts will remain within the Departments, the EPMO will leverage these dedicated professionals and provide them with the project management skills that large IT development and implementation projects require. The primary responsibility of the EPMO is to support the successful implementation of large-scale projects undertaken by either the OIT or by Departments with consistent structure, guidance, central reporting, and visibility into such projects on a scheduled basis.

Department Technology Officer

Most Departments will also house a Department Technology Officer (DTO) whose primary focus is the internal operations and delivery of IT services of their respective Department. The DTO will have a solid line reporting relationship with the CIO. This will ensure that enterprise-established policies are enforced, that coordination between Departments is well-managed, and IT budgets for both enterprise (commodity) and departments (Line-of-Business Services) are well-understood.

The DTO will have a dotted line reporting relationship within the Department, generally to the Commissioner or a Deputy Commissioner. The DTO will be physically located within and involved in the management of the Department, including attending staff meetings. Indeed, the DTO's day-to-day activities will be directed by and responsive to the Department leadership. The DTO's annual review will be written by the Department and determined by the ability to meet the Department's requirements. This dotted line relationship to the Department leadership will ensure that the DTO meets Department needs.

Equally important, by housing all IT resources within the OIT, the enterprise is able to move resources to the highest need. This will allow the state to ensure that the projects with the greatest need receive the most effective assets.

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OIT ORGANIZATIONAL STRUCTURE
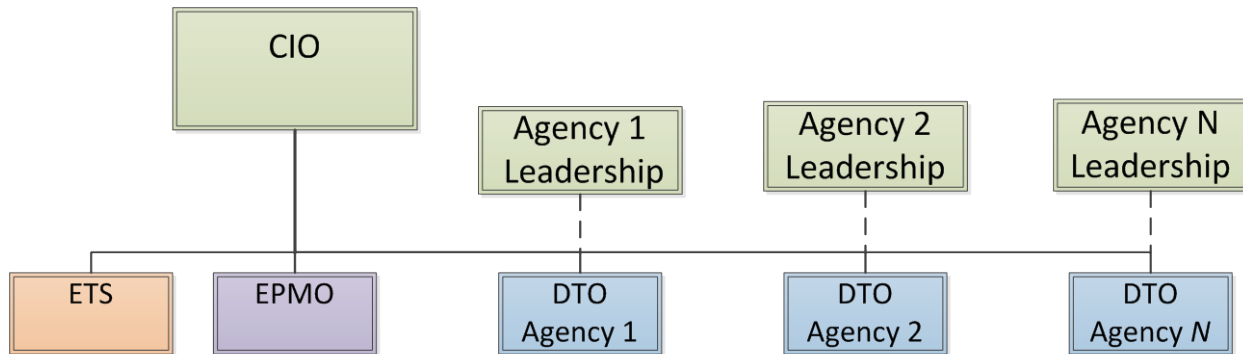
Governance: Strategic Guidance & Oversight

In addition to the OIT Organizational structure, it is recommended that an oversight structure to help align IT strategy with Department level mission strategy to better enable each Department to achieve its strategies and goals, and to resolve conflicting priorities between Departments. In addition, the Oversight function will be accountable to implement strategies for measuring the OIT's performance. This Oversight structure ensures that all stakeholders' interests are taken into account and that processes provide measurable results.

Information Management Governance Board (IMGB)

The Information Management Governance Board serves as the group responsible for determining business need with a "mission" focus. This board would determine the "what" needs to happen for business delivery and would make the initial assessment on services that should be commoditized vs. specialized. This "what" determination would be sent to the ITC to determine "how" technology can best be deployed to deliver the service or meet the required business need.

This board would be chaired by the CIO and be comprised of members who represent each agency as determined by that agency. While each agency may select its representatives, it is expected that Administrative Services Directors would serve as the primary fiscal consultants and subject matter experts and will be the initial members of the IMGB.

Information Technology Committee (ITC)

The Information Technology Committee serves as the technology committee that will make recommendations on "how" to best deploy technology to meet the mission-focused "what" requested by the IMGB. Options for technology standards, build vs. buy, and service delivery methods that meet service level requirements and continuity of operations / disaster recovery (DRCOOP) and security standards are recommended to the IMGB with initial risk and cost analysis.

The ITC will be chaired by the CIO, and other members will consist of agency DTOs.

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The ITC will establish Centers of Excellence around commodities, shared services or other subjects where cross-department collaboration is helpful to improve efficiency, and performance.

Executive Investment Board (EIB)

The Executive Investment Board functions as the state's highest level strategic organization for IT. The OIT in collaboration with the Information Management Governance Board (IMGB) and the Information Technology Committee will present an annual IT Plan to the EIB for review / approval of all IT related activities and associated budgets. In addition, the OIT with support from the EPMO will provide regular reporting on progress for IT project portfolio investment. The IMGB's primary responsibility is to provide strategic direction as it relates to all IT management issues while considering enterprise driven business decisions. The IMGB provides direction to the OIT which is then responsible for making and implementing technology-related decisions.

Core Membership should include: The Governor's Chief of Staff, the OMB Director or designee, DOA Commissioner.

Summary

To proceed effectively, a strategic vision which can provide the guidance to allow the state to execute an overarching IT plan is required.   An unaligned IT enterprise results in redundant investment; expanded portfolios of technologies, skillsets and training; service duplication; and system disparities which not only constrain the state's ability to leverage data for optimal access, planning and management but also exposes the state's information assets to greater risk of security incidents. Appropriate alignment of select technologies and services is necessary. It is essential to manage the transition toward this alignment in a way that balances the need for efficiency while meeting agency requirement to meet their mission to the Alaska public.

This approach will reduce costs with less capital expense and lower operating costs, reduced risk with more agile and rapid deployment, result in higher customer satisfaction, and enable better decision making.