2.0 GOVERNANCE

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Governance is the set of the organizational structure, policies, and processes by which the State selects business transformation and IT/IRM investments to ensure that strategic objectives are met efficiently and effectively, while controlling risk. ISACA, an international professional association that deals with IT Governance, defines governance as the practice that:

"...ensures that stakeholder needs, conditions and options are evaluated to determine balanced, agreed-on enterprise objectives to be achieved; setting direction through prioritization and decision making; and monitoring performance and compliance against agreed-on direction and objectives."[1]

ISACA's governance framework, the recently-published COBIT® 5, represents the current best practice in IT governance, and will serve as a model for the State of Hawai'i's governance approach.

One of the key principles of COBIT® 5 is the separation of governance and management. In short, management is about doing things right; governance is about doing the right things. Both are critical to the success of the enterprise. Sections 2-5 of this document is focused on governance; Sections 6-8 focus on management.

How, then, do we make sure we are "doing the right things"? Governance involves three main areas: the governance structure, which is the set of decision-making bodies that select the investments the enterprise will make in business transformation and IT/IRM; the policies that provide guidance on standards those investments must meet; and the process of initiating, selecting, funding, and overseeing the investments. Each of these is described in the following sections. The remainder of this section will establish some of the concepts that tie these three facets together into an integrated whole.

Before we can understand if we are doing the right things, we need to know what the right things are. What tells us what those things are? It depends on the scale and the scope we are looking at. In the broadest sense, what we do is defined by the *State of Hawai'i Strategic Plan* (currently under development). The State *Strategic Plan* establishes the mission, vision, goals, objectives, and performance metrics for the state government as a whole. It defines the outcomes that Hawai'i's taxpayers' dollars are supposed to produce in terms of health, education, transportation, social services, etc. The operations of the government—State employees, organizations, business processes, and information technology—are how these outcomes are achieved. We can go one step further and say that at the very top level why these are the desired outcomes is what the voters have demanded.

Moving down a level, we can re-establish the State government's operations as the what at the new scale. This set of goals and objectives are captured in the *State of Hawai'i Business and IT/IRM Strategic Plan*. It is that Plan that will guide the governance structure in ensuring we are "doing the right things." The how at this level is now the individual programs that are funded and executed by the various Departments and attached agencies. Here, the why can be thought of as "because these are the things we need to do to meet the State's strategic goals."

Thus, the governance we are talking about is not about ensuring the state government as a whole is doing the right things—that is up to the Governor, the Legislature, and other elected and appointed officials in response to the desires of the people. What this governance is focused on is "are we doing the right things to support the established *Business and IT/IRM Transformation Strategic Plan?*" The "we" in this case are the CIO, the Department Directors, and the Departmental IT leads.

To make this determination, we need to establish the concept of an investment. An investment, in terms of governance, is simply a package of funding whose purpose is to improve the performance of the enterprise. We make the decision to fund an investment because we believe that it will improve the efficiency and/or effectiveness of our efforts to achieve our goals and objectives. Funding is provided to State agencies from the Legislature via programs. A program is a combination of people, processes, and technologies that are collectively designed to produce certain outcomes. For example, the objective of the Tourism program (BED 113) is "to achieve a strong and sustainable tourism industry that values and perpetuates Hawai'i's natural and cultural resources, honors Hawai'i's people and heritage, and supports a vital economy." The objective of the School Community Services program (EDN 500) is "to provide lifelong learning opportunities for adults and to meet other community needs of the general public."

Programs encompass leases, operating expenses (including personnel, equipment, other expenses), and capital improvements. An investment, for the purposes of this governance process, is that subset of a program's funding that is intended for business transformation or IT/IRM. A single program can have multiple investments, and it will also likely have spending that is not covered by an investment, as we use the term. Similarly, a given investment may actually be funded by multiple programs. The goal here is to supplement the State's program structure with a parallel structure that enables governance of business transformation and IT/IRM investments without changing the established budget process.

An investment has been established for each existing State program to capture all the information technology that program has purchased and which remains in use. These legacy investments form the foundation of the portfolio of investments established for each Line of Business (LOB) and managed by the Portfolio Executive. (For an explanation of LOB, see "ENTERPRISE ARCHITECTURE METHODOLOGY;" for a description of portfolio management, see "Portfolio Management").

Investments can be short-term pilots, or they can persist over years. They comprise hardware, software, services, and other resources (government full-time employees [FTEs], leased space, etc.). An investment typically has a business process analysis/reengineering and/or a requirements-gathering project in the early stages, and then a system development or acquisition stage.

2.1 ENTERPRISE INVESTMENT LIFE CYCLE (EILC)

Government agencies continually assess current performance, identify opportunities for performance improvement, and translate opportunities into specific actions. Key the effectiveness of governance is the concept of life cycle management. That is, establishing and maintaining visibility into an investment from its conception to its ultimate retirement. Governance that focuses only on the procurement of IT systems is less than optimal, because it would allow, for example, the automation of an obsolete process. Life cycle governance, on the other hand, looks at the entire value chain and requires business process analysis and potential reengineering before buying or building an IT system to support it. This is called the Enterprise Investment Life Cycle (EILC).

The EILC can be thought of as a superposition of several commonly-recognized life cycle models, including the IT Investment Life Cycle (Select, Control, Evaluate) and the Performance Improvement Life Cycle (Architect, Invest, Implement) used by the Federal Government, the Project Management Methodology as defined by the Project Management Institute® and adopted by OIMT, and the System Development Life Cycle (SDLC). The integration and coordination of these interrelated functions into a holistic life cycle (Figure 2) minimizes redundant efforts, stakeholder burden, cost, and complexity and ultimately favors achievement of desired mission outcomes and business results.

<table>
<tr><th>IT Investment Life Cycle</th><th>OMB Performance Improvement Cycle</th><th colspan="2">Project Management/ Methodology</th><th>System Development Life Cycle (SCLC)</th><th>Enterprise Investement Life Cycle (EILC)</th></tr>
<tr><td rowspan="4">(Pre-Select or Analyze)</td><td rowspan="4">Architect</td><td colspan="2">Initiation</td><td rowspan="5"></td><td>Need/Concept</td></tr>
<tr><td colspan="2">Planning & Design</td><td rowspan="2">Definition</td></tr>
<tr><td>Executing</td><td>Monitoring & Controlling</td></tr>
<tr><td colspan="2">Closing</td><td>Financial Planning</td></tr>
<tr><td>Select</td><td>Invest</td><td colspan="2"></td><td rowspan="2">Aquisition</td></tr>
<tr><td rowspan="9">Control</td><td rowspan="10">Implement</td><td colspan="2">Initiation</td><td>Initiation</td></tr>
<tr><td colspan="2" rowspan="4">Planning & Design</td><td>Concept</td><td rowspan="4">Detailed Requirements & Design</td></tr>
<tr><td>Planning</td></tr>
<tr><td>Requirements Analysis</td></tr>
<tr><td>Design</td></tr>
<tr><td rowspan="3">Executing</td><td rowspan="3">Monitoring & Controlling</td><td>Development</td><td>Development</td></tr>
<tr><td>Test</td><td rowspan="2">Deployment</td></tr>
<tr><td colspan="2">Closing</td><td>Implementation</td></tr>
<tr><td rowspan="2">Evaluate</td><td colspan="2" rowspan="2"></td><td rowspan="2">Operations & Management</td><td rowspan="3">Operations & Maintenance</td></tr>
<tr><td></td></tr>
<tr><td></td><td colspan="2"></td><td>Disposition</td></tr>
</table>

At the highest level, the basic flow of EILC governance process is as follows:

NEED/CONCEPT: When a new idea or a new requirement that will require resources arises, the business lead (typically a PM) will initiate a new investment in the OIMT Portfolio Management system (This system has net been deployed. More specifics will be provided in the final publication of this document.) He or she will enter into the system a basic description of the proposed investment, which goals and objectives of the Business and IT/IRM Transformation Strategic Plan it is intended to support, the expected results, a rough order of magnitude (ROM) estimate for the resources that will be required, and identification of potential risks. At this stage, all figures are preliminary.

DEFINITION: OIMT works with the proposed investment's sponsor to understand the proposal and see if there is a potential solution already available. If not, the sponsor proceeds to build a more complete business case and alternatives analysis. Depending on the size, complexity, and risks of the proposed investment, varying levels of detail will be needed to pass the first review gate (review gates are described in Section 5 – Governance Process). In some cases, this is where the enterprise or segment architecture development effort takes place. In most cases, a more narrowly-focused conceptual solution architecture and business process reengineering occurs in the Definition phase.

FINANCIAL PLANNING: The business case is finalized and a funding strategy developed. In many cases, the program already has money available to execute the project. If not, other sources of funding may be required, including potentially a budget request for the next fiscal year.

ARCHITECT REVIEW GATE

ACQUISITION: In the Acquisition phase, high-level requirements identified in the Definition phase are turned into a Request for Proposals (or Request for Quotes, as appropriate) to solicit vendors to provide hardware, software, or services. If Commercial-off-the-Shelf (COTS) hardware or software is to be purchased, the requirements from the Definition phase must be complete enough to allow for selection.

DETAILED REQUIREMENTS & DESIGN: For investments requiring system development, a detailed requirements and system design phase occurs. This phase can be skipped when purchasing COTS products, but is vital to development of successful custom systems. The detailed requirements are a formal statement of the expected benefits, scope, assumptions and constraints, and interfaces. It includes the functional, operational, business, user, technical, performance, security, infrastructure, usability, and integration requirements for the project. Requirements must be testable and in accordance with enterprise architecture standards.

INVEST REVIEW GATE

DEVELOPMENT: System development, including testing, to create a solution that meets business requirements and architecture standards. Development can be done in-house by State resources, by contractors, or a combination.

DEPLOYMENT: Deployment includes installation, configuration, documentation, and training.

IMPLEMENT REVIEW GATE

Operations and Maintenance: Operations and Maintenance outlines the various tasks and activities being performed on an ongoing basis. It will also identify the key personnel and the tasks assigned to them necessary to effectively handle routine production processing, ongoing maintenance, and identified problems, issues, and/or change requests.