EXECUTIVE SUMMARY

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This State of Hawai`i's Enterprise Architecture (EA) document is an appendix to the Business Transformation and Information Technology (IT)/Information Resource Management (IRM) Strategic Plan.

The purpose of the EA is to describe the To Be or future state EA that will guide information technology (IT) architectural directions and decisions within the State from this point forward. The EA defines the current state but focuses on the future state vision for each EA element or layer (business architecture, information architecture, solutions architecture, and technology architecture).

In addition, the EA includes a strategic roadmap (Transition and Sequencing [T&S] Plan) of projects and initiatives that will close the gaps between the current state and future state vision. The T&S plan elements are described for each layer of the EA and for the State's lines of business (LOB) and provides details relative to the:

1. ongoing and planned investments and projects that will address the transition between the As Is and To Be states; and,

2. strategic order or sequence of the defined investments or projects to achieve or move the State of Hawai`i closer to the future state vision over the next ten years.

The EA for the State of Hawai`i is a comprehensive description of the enterprise or all IT components of the State (each Department or more specifically each LOB) and the relationships of these components with one another (e.g., services delivered internally and services delivered to residents) as well as the relationships with external entities (e.g., the city and county governments, other offices and entities, business partners, and the Federal government). This description includes the goals for the enterprise, business processes, roles, organizational elements or business alignment, business information, solutions or software applications and computer systems, and the IT infrastructure that supports the environment.

Each of the EA layers is defined by taxonomies, diagrams, documents, and models to describe the components and their logical organization of business functions, business capabilities, business processes, people organization, information resources, business systems, software applications, computing capabilities, and the information exchange and communications infrastructure within the enterprise. These are presented in an ever increasing level of detail in an effort to improve the effectiveness and efficiency of the State through:

• an improved organizational structure for service delivery,

• the integration/centralization or distribution of business processes,

• the quality, availability, and timeliness of business information,

• ensuring that IT investments are aligned and justified.

The EA is a living document and will be reviewed at least annually and updated in order to incorporate new technology advancements, as appropriate, and account for the changing needs of the State and especially the changing needs of the LOBs. The population of an EA tool, while underway, will require significant attention to ensure all information associated with the current environment is captured. The T&S Plan in particular will require continual update to account for new initiatives and projects.

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[1] Line of Business (LOB) is an approach for defining the activities performed and services provided within the enterprise. The LOBs are subdivided into Enterprise Mission Support Services that are citizen-facing services and Enterprise Common Support Service Areas that are provided internally to support the mission service delivery areas. The LOB is a critical entity for organizing business operations of the State from a functional perspective independent of the Departments, attached agencies, or programs that perform them in order to promote collaboration across the Departments to bring cross-cutting transformation. The LOBs are used in organizing all stewardship/leadership responsibilities for business service/process performance, information quality and availability, and information system functionality, usability, and integration.

The foundation for EA is the State's strategy for business transformation. This transformation is defined as part of the New Day Plan and identifies three key elements:

• immediate job growth as Hawai'i's economy is shifted to a sustainable foundation,

• invest in the education, skills, and well-being of Hawai'i's people, and

• transform State government into an efficient and effective enterprise.

Stated another way the strategy for transformation includes ensuring that State government is cost-effectively and efficiently managing all resources (e.g., investments, revenues, employees, IT) and delivering services and programs to all stakeholders (e.g., people of Hawai`i, citizens, residents, businesses, cities, counties, State employees, State government, business partners) in a manner they want/need; and operating in an aligned, streamlined, and integrated manner so that stakeholders' service expectations and information needs are met in terms of quality, timeliness, reliability, and transparency.

The current state environment for the State of Hawai`i was characterized in the Final Report published in 2011 and the key elements are identified by architectural layer in Table 1. In the future, each of the items identified for the current state architectural layers must undergo a transformation in order for the State of Hawai`i to more effectively and efficiently deliver services to people of Hawai`i, the citizens, and other stakeholders. The transformation will occur by addressing every action and activity (e.g., business processes, IT investment decisions, information use and utility, taking advantage of new less expensive hardware, software, and data management solutions) from an enterprise perspective. A summary of the future state vision by architectural layer is also summarized in Table 1.

Table 1: Current and Future State Summaries by Architectural Layer

Current State by Architectural Layer	Future State by Architectural Layer
• Enterprise Business Architecture (EBA) - organized in a siloed, bottom-up approach with only pockets of Departments actually having or practicing EBA and primarily evolved due to the manner in which funding is provided at the program level and by default for IT.	• Enterprise Business Architecture (EBA) - composed of a series of integrated value streams across the State's Departments that can be further developed by LOB and by reference models. By using LOB and reference models to define the enterprise moves or transitions the State away from the siloed approach of functional processes and disconnected IT projects to an integrated environment
• Enterprise Information Architecture (EIA) – characterized by a general lack of information sharing across Departments and organizations within the State even though some exceptions exist.	• Enterprise Information Architecture (EIA) – characterized by information and data that are recognized/acknowledged by everyone as a statewide asset and are managed and shared effectively among all State organizations
• Enterprise Solution Architecture (ESA) - characterized by: few, true statewide solutions; large numbers of Department-specific applications have proliferated within the State; and, need to "right-size" the State's applications portfolio.	• Enterprise Solution Architecture (ESA) – features a dynamic mobile integration architecture that responds rapidly to change and delivers quality information from trusted sources to all stakeholders.
• Enterprise Technology Architecture (ETA) - decentralized because the technical infrastructure supports a very fragmented ESA and EIA.	• Enterprise Technology Architecture (ETA) – enables rapid deployment of new services to LOBs, employees, and residents and fully supports the EBA, EIA, and ESA.

As the current state was analyzed and the future state was defined, a number of high priority transition projects or initiatives were identified across the four architectural layers. Figure 1 identifies each of the priority items and its associated architecture layer(s).

The business services provided within each LOB scope are also defined within the EA in terms of the future state vision for a comprehensive IT solutions architecture to deliver all required business services and functions and the investment initiatives required to achieve the targeted future state for each of the LOB segments is also included provided.

Of particular note, this version of the EA for the State of Hawai`i has addressed business analysis and planning at two levels: 1) the state-wide enterprise which established the LOBs, and 2) the individual LOB business segment architectures and two priority segments Health IT and the ERP. The primary accomplishment of this planning function and all associated meetings with LOB leads has been the building of cultural momentum for enterprise solutions and consolidated investment planning. Additional opportunities will exist in the years ahead for specific LOB Business Segments to be analyzed in more detail to expand and provide additional architectural detail to other priority areas. The LOBs, Health IT, and the ERP business segments are included in Appendix A – Line of Business Segment Architecture Transformation.

The projects and initiatives required

Priority Future State Areas	Architectural Layer
OneNet - Enterprise Services Network	ETA
Adaptive Computing Environment	ETA
Shared Services Center	ETA
Information Assurance, Security/Privacy	EIA, ESA, ETA
Email/Collaboration	ESA, ETA
Open Gov	EIA
Mobile Technologies	ESA, ETA
Tax Modernization	ESA
ERP	ESA
Health IT	ESA

Figure 1: Priority Transition and Sequencing Activities

to move the State from the current to the future state environment for each EA layer and by LOB are described at a high level as part of the T&S planning summaries by architectural layer and in Appendix A. Each project and initiative is then further described as a business case and with budgetary detail (i.e., description of specific activities and tasks associated with the initiative or activity; hours to perform the task by fiscal year; labor costs; equipment and hardware costs; estimated lease costs, and any other associated costs) as part of an

Appendix B – Project Charters. This document is intended for IT practitioners to use when planning technology directions (i.e., development, modernization, enhancement (D/M/E); operations and maintenance (O&M) of existing technology/steady state (SS); or retirement) within the LOB

and Departments. The document also supports the evaluation of technology reviews/requests/approvals by the Chief Information Officer (CIO), Office of Information Management and Technology (OIMT), Department leadership and IT management, Executive Leadership Council (ELC), and CIO Council (CIOC) and IT Steering Committee.