STATE of ARIZONA

Government Information Technology Agency	**Statewide POLICY** P740 Rev 1.0	**TITLE: Data/Information Architecture** **Effective Date: September 14, 2007**

1. AUTHORITY

The Government Information Technology Agency (GITA) shall develop, implement and maintain a coordinated statewide plan for information technology (IT) (A.R.S. § 41-3504(A (1))), including, the formulation of policies to effectuate the purposes of the agency (A.R.S. § 41-3504(A (13))).

2. PURPOSE

Data/Information Architecture enables data/information systems that support government functions and services to more effectively and efficiently communicate, interoperate, and share resources.

3. SCOPE

This applies to all budget units. Budget unit is defined as a department, commission, board, institution or other agency of the state receiving, expending or disbursing state funds or incurring obligations of the state including the Arizona Board of Regents but excluding the universities under the jurisdiction of the Arizona Board of Regents, the community college districts and the legislative or judicial branches. A.R.S. § 41-3501(2).

The Budget Unit Chief Executive Officer (CEO), working in conjunction with the Budget Unit Chief Information Officer (CIO), shall be responsible for ensuring the effective implementation of Statewide Information Technology Policies, Standards, and Procedures (PSPs) within each budget unit.

4. POLICY

Budget units shall utilize Data/Information Architecture target technologies[1], methodologies, standards, and best practices to develop, acquire, and/or implement application systems that collect, modify, and store data and report information.

4.1. Data/Information Architecture focuses on the process of modeling the information that is needed to support the business processes and functions of budget units, and more strategically, of communities of interest. Where applicable, it spans traditional budget unit organizational boundaries to address interoperability, integration, consolidation, and sharing of resources by correlating budget unit business processes to common government services through the identification and definition of data/information relationships and dependencies.

[1] The Arizona *Target Technology Table* is available at: http://www.azgita.gov/enterprise_architecture.

4.2. Data/Information Architecture outcomes are expressed in the form of data models, information flows, and analysis of inputs/outputs and decision-making criteria for the activities of State government.

4.3. Data modeling produces an accurate model, or graphical representation, of the budget unit's information needs and business processes. The data model is a framework for business re-engineering and the development of new or enhanced applications to fulfill business requirements and processes. Data modeling describes the types of interactions and information exchanges that occur within and between budget units and their various customers, constituencies, and business partners.

4.4. DATA/INFORMATION ARCHITECTURE GENERAL PRINCIPLES
The planning, design, and development of Data/Information Architecture are guided by the following general principles that support the State's strategic business goals and objectives.

4.4.1. E-Government initiatives require a flexible, comprehensive Enterprise Architecture model.
4.4.2. The State's data and information are valued and protected as critical assets of the enterprise.
4.4.3. Secure access to data and information is provided. Data and information are shared securely among budget units.
4.4.4. Statewide interoperability standards facilitate and support community of interest e-government initiatives and other business solutions.
4.4.5. E-Government solutions maximizing Target Architectures will achieve optimal efficiency and effectiveness for the delivery of services.

Supporting rationale for the above principles can be found in the *Target Data/Information Architecture* document available at http://www.azgita.gov/enterprise_architecture.

4.5. DATA/INFORMATION ARCHITECTURE TARGET TECHNOLOGIES
Outcomes (data models) of Target Data/Information Architecture are reviewed and refreshed based on business requirements, applicable statutes, as well as federal mandates and regulations. Shifts in technology, as well as the emergence and adoption of new, technology-related industry or open standards will be addressed as appropriate during reviews.

4.6. DATA/INFORMATION ARCHITECTURE STANDARDS

Data/Information Architecture standards define data and business modeling methodologies designed to promote program interoperability and to increase the efficiency and effectiveness of government services; consistent classifications of data; and secure, business-rule-based database access through software application systems. Refer to Paragraph 6.20, Statewide Standards for Data/Information Architecture, for further information.

4.7. IMPLEMENTATION

Arizona's EWTA has been designed to maximize current investments in technology, provide a workable transition path to targeted technologies, maintain flexibility, and to enhance interoperability and sharing. Data/Information Architecture implementations shall adhere to implementation strategies described in *Statewide Policy P700, Enterprise Architecture*. Data/Information Architecture shall be implemented in accordance with *Statewide Policy P800, IT Security*, and applicable Statewide Standards for Security.

4.7.1 Budget units shall meet the requirements for Data Modeling contained in *Statewide Standard P740-S740, Data Modeling*, for the following types of IT projects having total development costs of $1 million or greater.

A. New, custom-developed, application software and re-engineering projects requiring custom-developed application software.

B. New, commercial-off-the-shelf (COTS) or externally developed, government-off-the-shelf (GOTS), application software involving significant modification to the core application software product. Significant modifications pertain to process and structural changes that are made to application software, such as changes to underlying programming code, files, records, and data elements made to application software. Additions or customization of reports, views, queries, etc., are not considered significant modifications.

4.8. CONFORMANCE OF IT INVESTMENTS AND PROJECTS TO EA

To achieve the benefits of an enterprise-standards-based architecture, all information technology investments shall conform to the established EWTA that is designed to ensure the integrity and interoperability of information technologies for budget units. *Statewide Standard P340-S340, Project Investment Justification (PIJ)*, defines conformance with the established EWTA and associated Statewide Policies and Standards. Variances from the established EWTA shall be documented and justified in the appropriate section of the PIJ document.

4.9. APPLICABILITY TO OTHER STATEWIDE EA POLICIES AND STANDARDS

Statewide Policy P740, Data/Information Architecture, adheres to and demonstrates the purpose established in *Statewide Policy P100, Information Technology*.

Statewide Policy P740, Data/Information Architecture, adheres to the principles, governance, lifecycle process, and implementation elements described in *Statewide Policy P700, Enterprise Architecture*.

5. DEFINITIONS AND ABBREVIATIONS

5.1. "Commercial off-the-shelf (COTS)" application software is a product that is used "as-is." COTS software is designed to be easily installed and to interoperate with existing system components.

5.2. "Custom-developed" application software is defined as software that is specifically designed and programmed for an individual budget unit or customer.

5.3. "Government off-the-shelf (GOTS) application software is defined as software developed for a government agency with funding and specifications from the agency that is made available to other government agencies. GOTS includes technology/system transfers from other government agencies.

5.4. Refer to the Glossary of Terms located on the GITA website at http://www.azgita.gov/policies_standards or additional definitions and abbreviations.

6. REFERENCES

6.1. A. R. S. § 41-621 et seq., "Purchase of Insurance; coverage; limitations, exclusions; definitions."

6.2. A. R. S. § 41-1335 ((A (6 & 7))), "State Agency Information."

6.3. A. R. S. § 41-1339 (A), "Depository of State Archives."

6.4. A. R. S. § 41-1461, "Definitions."

6.5. A. R. S. § 41-1463, "Discrimination; unlawful practices; definition."

6.6. A. R. S. § 41-1492 et seq., "Prohibition of Discrimination by Public Entities."

6.7. A. R. S. § 41-2501 et seq., "Arizona Procurement Codes, Applicability."

6.8. A. R. S. § 41-3501, "Definitions."

6.9. A. R. S. § 41-3504, "Powers and Duties of the Agency."

6.10. A. R. S. § 41-3521, "Information Technology Authorization Committee; members; terms; duties; compensation; definition."

6.11. A. R. S. § 44-7041, "Governmental Electronic Records."

6.12. Arizona Administrative Code, Title 2, Chapter 7, "Department of Administration Finance Division, Purchasing Office."

6.13. Arizona Administrative Code, Title 2, Chapter 10, "Department of Administration Risk Management Section."

6.14. Arizona Administrative Code, Title 2, Chapter 18, "Government Information Technology Agency."

6.15. State of Arizona Target Data/Information Architecture.
6.16. Statewide Policy P100, Information Technology.
6.17. Statewide Policy P340, Project Investment Justification (PIJ).
6.17.1 Statewide Standard P340-S340, Project Investment Justification (PIJ).
6.18. Statewide Policy P700, Enterprise Architecture.
6.19. Statewide Policy P800, IT Security.
6.20. Statewide Standards for Data/Information Architecture.
6.20.1 Statewide Standard P740-S740, Data Modeling.
6.20.2 Statewide Standard P740-S741, Classification of Data.
6.20.3 Statewide Standard P740-S742, Database Access.

7. ATTACHMENTS

None.