

**1. AUTHORITY**

The Government Information Technology Agency (GITA) shall develop, implement and maintain a coordinated statewide plan for information technology (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**

Platform Architecture describes common, industry-wide, open-standards-based, interoperable devices, facilitating the reliable and pervasive availability of, access interfaces with, and processing for, the State's distributed information processing environment. It defines various technologies required to facilitate and deliver individual budget units' and the State's business application systems and services to its citizens.

**3. SCOPE**

This applies to all budget units. Budget unit is defined as a department, commission, board, institution or other agency of the state organization 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 Platform Architecture target technologies, methodologies, standards, and best practices to develop, implement, and/or acquire computer systems.

**4.1. PLATFORM ARCHITECTURE APPROACH**

Platform Architecture addresses platform devices relative to their: versatility, capability to seamlessly interoperate with other platform devices, operating systems, embedded security, adherence to open or pervasive industry standards, provision for open system standard interfaces, and utilization of open standard drivers. This approach aligns with Statewide Policy P100, Information Technology, by focusing on the functionality of platform technologies to support budget unit business requirements that enhance budget unit services and operational capacities, improve productivity, performance, and public services

rather than addressing attributes such as specific platform configurations, explicit devices, and operating system revisions that neither provide a direction for current and future activities nor directly relate to the State's business functions.

#### 4.2. PLATFORM ARCHITECTURE CATEGORIES

Categories of the Platform Architecture range from enterprise-class mainframe-servers to individual workstations and hand-held computing devices along with the operating systems that control these devices. Platform categories, or tiers, complement each other and maximize the operation and usefulness of various specialized platform devices to address budget unit business requirements. Platform Architecture categories include the following:

- Server. The server with its associated operating system provides services requested by end-user devices (clients). Types of servers included are: mainframes, midrange, and network servers (application, file, print, database, etc.). Servers should be positioned to embrace a variety of applications so that, over time, as open-standard operating systems and open-standard interfaces are deployed, the traditional boundary lines between voice, data, and video are eliminated. Server-attached, or network-attached output devices such as printers, plotters, etc., should use IEEE-standard interfaces and industry de facto standard software drivers.
- Storage. Storage is increasingly recognized as a distinct resource, one that is best thought of separately from the devices (servers, end-user devices) that are its consumers and beneficiaries. Such storage is increasingly often shared by multiple servers/end-user devices, and acquired and managed independently from them. Storage solutions should address the State's requirements for short term, long term, and permanent storage of information. Types of storage include:
  - Direct Attached Storage (DAS) is comprised of interfaces (controllers) and storage devices that attach directly to a server or an end-user device. DAS, in the form of independent storage devices, RAID arrays, or tape libraries, is the most common storage architecture today.
  - Network Attached Storage (NAS) is an open-industry-standard, file-oriented, storage implementation where storage devices are connected to a network and provide file access services to server and end-user devices. A NAS storage element consists of an engine, which implements the file services, and one or more devices, on which data is stored. By connecting directly into a network, NAS technologies allow users to access and share data without impacting application servers.
  - Storage Area Network (SAN) is an open-industry-standard, data-centric, storage implementation that traditionally uses a special-purpose network that incorporates high-performance communication

and interface technologies as a means to connect storage devices with servers.

- End-User Device (Client). The end-user device, with its associated operating system, provides the end-user interface to the business application. End-user devices include the personal computer (PC), thin client, host-controlled devices (terminals, telephones, etc.), voice interface devices, single- and multi-function mobile devices (Pocket PC, PDA, PDA-phone, etc.), telephony devices, smart cards, etc. “Personal” input devices (tablet, keyboard, probe, etc.) and output devices (monitors, displays, projectors, speakers, printers, etc.) attached to an end-user device should use IEEE-standard interfaces and industry de facto standard software drivers.

4.3. TARGET PLATFORM ARCHITECTURE ASSESSMENT

The Target Platform Architecture Assessment, codified in Statewide Standard P720-S720, Platform Infrastructure, expands upon the categories summarized below to demonstrate the approach and methodology for determining a budget unit’s platform technology position. The assessment validates Statewide Policy P100, Information Technology, through the incorporation of the underlying principles, standards, and best practices of the Target Platform Architecture.

**Target Platform Architecture Assessment Summary**

<b>Device Category</b>	<b>Description</b>
1. Versatility	Provides interoperability, flexibility, adaptability, and scalability without substantial modification
2. Operating Systems	Utilizes open- or pervasive-industry-standard operating systems
3. Operating Systems Security	Addresses the security functionality of Operating Systems
4. Open Standard Interfaces and Drivers	Adhere to open-system-standard interface specifications and utilize device drivers with IEEE interfacing and industry de facto standard protocols and formats

4.4. PLATFORM ARCHITECTURE GENERAL PRINCIPLES

The planning, design, and development of Platform Architecture are guided by the following general principles that support the State’s strategic business goals and objectives.

- 4.4.1. Platform Architecture provides the device infrastructure to support State and budget unit business and administrative processes.
- 4.4.2. Servers and storage that support essential business processes and mission-critical business operations shall be operational, reliable, and available 24x7x365.

- 4.4.3. Platforms shall use industry-proven, mainstream technologies based on pervasive industry-wide, open interfaces, and open architecture.
- 4.4.4. Platform operating system security should be based on industry-wide, open standards.
- 4.4.5. Platform configurations and associated operating system versions should be minimized.
- 4.4.6. Platform infrastructure should employ open, industry-standard components, using an n-tier model.
- 4.4.7. Platform infrastructure should be designed for growth, flexibility, and adaptability.
- 4.4.8. Platform infrastructure should maximize the design and availability of Target Network Architecture for delivery of applications and services to citizens and end-users, regardless of location.

Supporting rationale for the above principles can be found in the Target Platform Architecture document.

4.5. PLATFORM ARCHITECTURE TARGET TECHNOLOGIES

Components of the Target Platform Architecture are reviewed and refreshed on a regular and scheduled basis to address major shifts in technology, as well as the emergence and adoption of new technology-related industry or open standards. Review criteria shall adhere to the lifecycle process described in Statewide Policy P700, Enterprise Architecture.

4.6. PLATFORM ARCHITECTURE STANDARDS

Platform Architecture Standards describe end-user and server devices along with storage platforms, operating systems, and open system interfaces that provide for interoperability [the capability for services (applications) operating on different, diverse devices to exchange information and function cooperatively using this information], and portability [the capability of software to operate and perform in the same manner on different types of devices] of business application systems. Refer to Statewide Standard P720-S720, Platform Infrastructure, 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. Platform Architecture implementations shall adhere to implementation strategies described in Statewide Policy P700, Enterprise Architecture.

Platform Architecture shall be implemented in accordance with Statewide Policy P800, IT Security, and applicable Statewide Standards for Security.

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.

4.8. APPLICABILITY TO OTHER STATEWIDE EA POLICIES AND STANDARDS

Statewide Policy P720, Platform Architecture, adheres to and demonstrates the purpose established in Statewide Policy P100, Information Technology.

Statewide Policy P720, Platform Architecture, adheres to the principles, governance, lifecycle process, and implementation elements described in Statewide Policy P700, Enterprise Architecture.

**5. DEFINITIONS AND ABBREVIATIONS**

Refer to the Glossary of Terms located on the GITA website for 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 Platform 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 Standard P720-S720, Platform Infrastructure.

- 7. ATTACHMENTS**  
None.