ARIZONA DEPARTMENT OF ADMINISTRATION	STATEWIDE POLICY	State of Arizona

POLICY 7300 - SOFTWARE ARCHITECTURE

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1. AUTHORITY

To effectuate the mission and purposes of the Arizona Department of Administration (ADOA), the Agency shall establish a coordinated plan and program for information technology (IT) implemented and maintained through policies, standards and procedures (PSPs) as authorized by Arizona Revised Statutes (A.R.S.)§ 41-3504.

2. PURPOSE

The purpose of this policy is to provide a consistent management approach to development of policies, standards and procedures (PSPs). Information Technology (IT) PSPs are essential elements of the application, implementation, and operation of IT systems. The purpose is also to define the approach that budget units (BUs) use to identify, select and implement application software.

3. SCOPE/EXCEPTIONS

3.1. Application to Budget Units (BUs) - This policy shall apply to all BUs and IT integrations or data exchange with third parties that perform functions, activities or services for or on behalf of the BU or its Divisions as defined in A.R.S. § 41-3501(1).

3.2. Application to Third Parties - This Policy shall apply to all State of Arizona vendors and contractors providing goods and services to the State and to third parties, including other government bodies. Applicability of this policy to third parties is governed by contractual agreements between the BU and the third party.

3.3. PSPs may be expanded or exceptions may be taken by following the Statewide Exception Procedure.

3.3.1. Existing IT Products and Services - BU subject matter experts (SMEs) should inquire with the vendor and the state or agency procurement office to ascertain if the contract provides for

additional products or services to attain compliance with PSPs prior to submitting a request for an exception in accordance with the Statewide Policy Exception Procedure.

3.3.2. IT Products and Services Procurement - prior to selecting and procuring information technology products and services, BU SMEs shall comply with IT PSPs when specifying, scoping, and evaluating solutions to meet current and planned requirements.

4. ROLES AND RESPONSIBILITIES

4.1. State Chief Information Officer (CIO) shall:

4.1.1. Be ultimately responsible for the correct and thorough completion of Statewide IT PSPs throughout all state BUs.

4.2. State Chief Technology Officer (CTO) or his/her designee shall:

4.2.1. Be ultimately responsible for all application software selection and implementation.

4.2.2. Ensure that all new application software complies with this policy.

4.3. Budget Unit (BU) Director shall:

4.3.1 Be responsible for the correct and thorough completion of (Agency) BU PSPs;

4.3.2 Ensure compliance with BU PSPs; and

4.3.3 Promote efforts within the BU to establish and maintain effective use of agency information systems and assets.

4.4. Budget Unit Chief Information Officer (BU CIO) shall:

4.4.1 Comply with this policy to identify, select and implement new application software.

5. POLICY

5.1. BUs shall ensure value, availability, efficiency, extensibility, functionality, integrity, maintainability, modifiability, performance, portability, reliability, security, usability, sustainability, interoperability and scalability when selecting and/or developing new software applications and services.

5.2. BUs shall utilize a documented, industry-accepted software development lifecycle (SDLC) for all application software projects.

5.2.1. BUs shall utilize separate and distinct development, QA/test and production environments for new application software and services.

5.2.2. All new application software and services shall comply with the appropriate change management policies and standards including testing prior to promotion into production.

5.3. BUs shall develop and implement a robust process to ensure that stakeholder requirements are identified and documented.

5.3.1. BUs shall ensure that changes in stakeholder requirements are identified and documented timely.

5.3.2. BUs shall ensure that all affected stakeholders are represented.

5.4. BUs shall develop and provide services applicable to the broadest applicable audience.

5.5. Application software that is customized, does not scale or cannot be supported long term shall be avoided.

5.6. Application software shall be compatible and usable with the broadest possible range of user devices including mobile.

5.7. BUs shall utilize Application Programming Interface (API), Microservices and/or cloud native solutions sign where possible.

5.8. BUs shall implement security and privacy controls in accordance with the security and privacy policies and shall practice defensive coding in all new and updated software applications.

5.9. New application software and services should be evaluated based on the following order of preference:

5.9.1. Commercially available cloud-based (Software as a Service, SaaS) application software;

5.9.2. Commercially available, off the shelf (COTS) application software;

5.9.3. Open source application software. Notwithstanding a product's classification, a product can only be used in new production, mission-critical or strategically important applications if:

5.9.3.1. It is actively maintained by the manufacturer;

5.9.3.2. It is covered under a commercial support arrangement;

5.9.3.3. It is supported by BU's enterprise technical support team.

5.9.4. Custom-developed application software;

5.9.5. Nothing in this section shall be construed to override standard State Procurement practices and regulations, nor shall it result in a solution that does not meet stakeholder needs and budget.

5.10. If custom application software is required, it shall be developed and implemented using a technology stack (including programming language, databases, operating systems, middleware, application programming frameworks) that is, or will be, supported by the BU or designated third party/parties and conforms with current statewide technology standards. The BU shall include the cost of supporting that technology stack throughout the application's life cycle in the project plans and budgets.

5.11. BUs shall develop and implement a documented process to ensure that all software licensing terms and conditions are in compliance at all times.

5.12. Prior to acquiring new application software, BUs shall ensure that the chosen architecture and approach are consistent with statewide strategic plans, policies and standards.

5.13. All new application software projects shall conform to applicable policies, standards and procedures.

6. DEFINITIONS AND ABBREVIATIONS

Refer to the PSP Glossary of Terms located on the ADOA-ASET website.

7. REFERENCES

7.1 A.R.S. § 41-3504

8. LINKS

None

9. VERSION HISTORY

Date	Change	Revision	Signature
01/01/2016	Original	1.0	
04/12/2021	Copied into new template and updated per Anny & Sangeetha's notes	1.1	Deirdre LaGuardia