Athabasca University

PROCEDURE

System Development Lifecycle Procedure			
Parent Policy	Technology Management Policy		
Policy Sponsor	Vice President Information Technology and Chief Information Officer (VPIT & CIO)	**Category**	Administrative
Policy Contact	Deputy CIO	**Effective Date**	December 12, 2019
Procedure Contact	Director of Digital Transformation	**Review Date**	December 12, 2024

1. Purpose

System development projects are often complex and inter-related. To manage this complexity, repeatable system development procedure will be followed, regardless of the development methodology used. This procedure outlines the main steps and controls to be followed in developing systems to meet the University's business needs and strategic requirements, and that will operate within the University's technology infrastructure.

2. Scope

The scope for this procedure includes all types of system development projects, including configuration and adaptation of purchased software applications, as well as custom software and application development and enhancements.

3. Definitions

Change Advisory Board (CAB)	Includes IT personnel who have the authority to approve Operations Change Requests (OCR). CAB members have a clear understanding of the University's operational demands, the needs of the user community, and ICT environments.
DevSecOps	The practice of building security into all aspects of the technology lifecycle and its assets into requirements, into design, into code, and into deployment, logging, and monitoring.
Digital Governance Committee	An advisory committee reporting to Executive Team for the purpose of assisting Executive Team in fulfilling its due diligence, fiduciary, financial reporting and audit response responsibilities by monitoring, evaluating and providing advice

	to the Executive Team on matters affecting all university digital initiatives.
Lifecycle (IT)	The span of time between the creation of a technology and digital assets and its disposal.
Product Squad Owner	Small, multi-disciplinary team of IT members focused on a specific AU product or feature-set and its services. Product squads are created and dissolved, and membership changes based on the product and service prioritization of annual Integrated Resource Planning decisions.
Standard Operating Procedure (SOP)	A standard operating procedure addresses process-related information that is below the level of policies and procedures. Their content often inform the Policy Framework. A SOP is highly detailed, regularly revised and is deemed internal to the University, although a SOP may be shared on a need-to-know basis.

4. Guiding Principles

4.1. System development standards follow the DevSecOps approach.

4.2. Security considerations and best practices are built into all aspects of the technology lifecycle: in vendor consideration, requirements gathering, program and project planning, design and architecture of code, unit, integration and user acceptance testing, data transmission, data storage, system logging and system monitoring.

4.3. Testing and operations personnel are involved with systems development, business analysts and project managers in system design and development

4.4. Best practices in build, test and deploy automation are used wherever possible to ensure consistency and security and provide more members of the IT team to have improvements pushed to production automatically without waiting for the Change Advisory Board schedule.

a. Automation of changes pushed to production are required to follow the production-ready checklist.

4.5. DevSecOps Product Squad teams own the full lifecycle of their product or service from planning through deployment, through maintenance and continuous improvement, through to decommission and replacement.

4.6. Cloud native security will be considered and utilized for all systems development.

4.7. AWS Security Hub will be utilized to assess operational security and compliance of all systems in the AU cloud with oversight by the Chief Information Security Officer (CISO).

4.8. Project controls on systems development are achieved through the Project Management Framework and the documentation required for the project controls accountability of the Digital Governance Committee.

5. Applicable Legislation and Regulations

None applicable

6. Related Procedures/Documents

Security of Digital Information and Assets Policy and related Procedures
Information Technology Service Management Procedure
Information Technology Change Management Procedure
Project Management Lifecycle Procedure
Project Management Framework
Digital Governance Control Framework – Governing Policy
Alberta Association in Higher Education for Information Technology's ITM Control Framework

NOTE: The subject matter and scope of this procedure are also supported by internal-use only Standard Operating Procedures.

History

Date	*Action*
December 12, 2019	Executive Team (Policy Approved)