pennsylvania
OFFICE OF ADMINISTRATION
INFORMATION TECHNOLOGY

Information Technology Policy

Requirements, Data and Object Modeling Tools

ITP Number ITP-APP016	***Effective Date*** September 18, 2008
Category Recommended Policy	***Supersedes***
Contact RA-itcentral@pa.gov	***Scheduled Review*** April 2015

This Information Technology Policy (ITP) establishes enterprise-wide standards and guidance for requirements, data and object modeling tools.

1. Purpose

The purpose of this Information Technology Policy (ITP) is to establish enterprise-wide standards and guidance for requirements, data and object modeling tools.

2. Background

Modeling tools facilitate the design and documentation of complex information and its relationships, dependencies, and hierarchies. The tools also provide a methodology to organize information. A model is a graphical representation of an application, system, or database, and can include functional requirements views, static structural views, and dynamic behavior views. Business or solutions use-case models address the functional requirements aspect. Physical data models with attributes, operations, and relationships represent the static structural aspect. Other examples of structural models are package, class, object, composite, component, and deployment diagrams. The dynamic behavior aspect of a model is often represented with sequence, activity, and state machine diagrams.

Modeling tools enhance effective communication with a variety of stakeholders. These tools can be used to create compliance-related documentation and aid in impact analysis. Software solutions built on object models are more maintainable, reusable, extensible, flexible, and scalable.

3. Scope

This Information Technology Policy (ITP) applies to all departments, boards, commissions and councils under the Governor's jurisdiction. Agencies not under the Governor's jurisdiction are strongly encouraged to follow this ITP.

4. Policy

Application development projects that require modeling tools are to use the current requirements, data, and object modeling tools as defined in section 5 of this ITP.

Major revisions to existing applications that are not using the current standards are to be reviewed as part of the ITP-PRO001 - Procurement Review Process to determine if the investment warrants a change in standards at that time.

For application development projects using modeling tools classified as "Retire," a date for migration off this technology has been established.

The output of modeling tools is considered part of the software configuration and is to be managed in accordance with ITP-APP018 - *Software Configuration Management Tools*.

Use of a modeling tool is recommended when the application development project requires a collaborative team-based modeling and design environment.

Agencies are to use the requirements, data, and objects modeling tools as described by the software engineering processes prescribed in ITP-APP012 – *Systems Development Life Cycle Policy*.

All IT projects related to application development are to be subject to review prior to inception for compliance with this standard through the Procurement Review Process (See ITP-PRO001).

5. Standards

CURRENT STANDARDS

(These technologies meet the requirements of the current architecture and are recommended for use.)

Technology	Platforms	Technology Classification
IBM Rational Software Architect	Windows	Current
IBM Rational Software Modeler	Windows	Current
Computer Associates ERwin Data Modeler	Windows	Current
Microsoft Visio (Standard/Professional/Enterprise Architect Editions)	Windows	Current
Sparx Systems Enterprise Architect	Windows	Current

Sparx Systems MDG Integration for Visual Studio	Windows	Current

CONTAIN

(These technologies no longer meet the requirements of the current architecture and are not recommended for use. They are to be phased out over time. No date has been set for their discontinuance.)

Technology	Platforms	Technology Classification
IBM Rational Rose Modeler (all versions)	Windows	Contain
IBM Rational Rose Developer for Java(all versions)	Windows	Contain
IBM Rational Rose Developer for Visual Studio (all versions)	Windows	Contain
IBM Rational Rose Enterprise (all versions)	Windows	Contain
Borland Together	Windows	Contain
Sybase PowerDesigner (all versions)	Windows	Contain
MagicDraw UML (all versions)	Windows	Contain
Computer Associates Groundworks (all versions)	Windows	Contain

RETIRE

(These technologies are being phased out. Plans are to be developed for their replacement, especially if there is risk involved, such as lack of vendor support. A date for retirement has been set.)

Technology	Platforms	Technology Classification
IBM Rational Rose XDE Modeler (all versions)[1]	Windows	Retire by 12/31/07
IBM Rational Rose XDE Developer for Java (all versions) [1]	Windows	Retire by 12/31/07
IBM Rational Rose Developer XDE for Visual Studio (all versions) [1]	Windows	Retire by 12/31/07
IBM Rational Rose XDE Developer Plus (all versions) [1]	Windows	Retire by 12/31/07
Oracle Designer	All	Retire by 12/31/2005

[1] – IBM withdrew support for these products – June 2006

EMERGING / RESEARCH

(Emerging technologies have the potential to become current standards. At the present time, they are to be used only in pilot or test environments where they can be

evaluated. Use of these technologies is restricted to a limited production mode, and requires approval of a waiver request. Research technologies are less widely accepted and time will determine if they will become a standard.)

Technology	Platforms	Technology Classification
		Emerging / Research

6. Related ITPs/Other References

- ITP-PRO001 – *IT Procurement Review Process*
- ITP-APP012 –*Systems Development Life Cycle Policy*
- ITP-APP018 - *Software Configuration Management Tools*

7. Authority

- Executive Order 2011-05, Enterprise Information Technology Governance

8. Publication Version Control

It is the user's responsibility to ensure they have the latest version of this publication. Questions regarding this publication are to be directed to RA-itcentral@pa.gov.

This chart contains a history of this publication's revisions:

Version	Date	Purpose of Revision
Original	9/18/2008	Base Document
	10/25/2010	ITB Refresh
	4/2/2014	ITP Reformat; Merged STD-APP016A into ITP