COMMONWEALTH of VIRGINIA

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MEMORANDUM

TO: The Honorable Timothy M. Kaine, Governor of Virginia
The Honorable Joe T. May, Chair, Joint Commission on Technology and Science
The Honorable John Watkins, Vice Chair, Joint Commission on Technology and Science
The Honorable Kenneth C. Alexander, Member, Joint Commission on Technology and Science
The Honorable John A. Cosgrove, Member, Joint Commission on Technology and Science
The Honorable Janet D. Howell, Member, Joint Commission on Technology and Science
The Honorable Stephen D. Newman, Member, Joint Commission on Technology and Science
The Honorable Samuel A. Nixon, Jr., Member, Joint Commission on Technology and Science
The Honorable Kenneth R. Plum, Member, Joint Commission on Technology and Science
The Honorable Harry R. Purkey, Member, Joint Commission on Technology and Science
The Honorable Thomas D. Rust, Member, Joint Commission on Technology and Science
The Honorable Kenneth W. Stolle, Member, Joint Commission on Technology and Science
The Honorable William C. Wampler Jr., Member, Joint Commission on Technology and Science

FROM: Lemuel C. Stewart, Jr.

SUBJECT: 2006 Annual Report on Selected Information Technology Efforts of State Agencies and Public Institutions of Higher Education

The Code of Virginia, 2.2-2007, directs the Chief Information Officer (CIO) to prepare an Annual Report on Selected Technology Efforts of State Agencies and Public Institutions for the Governor and the Joint Commission on Technology and Science.

I am pleased to report that under the auspices of the IT Investment Board, IT investment management in the Commonwealth continues to promote greater efficiencies, accessibility to citizens and customers, and enhanced convenience. Furthermore, by adopting enterprise standards and consolidating the IT infrastructure, the Commonwealth is in a position to leverage and recapitalize the IT infrastructure to truly transform the delivery of government services to citizens.

As always, I would welcome the opportunity to discuss with you any aspects of VITA and the IT integration efforts underway.

Attachment

c: The Honorable William H. Leighty, Chief of Staff
The Honorable Aneesh Chopra, Secretary of Technology
The Honorable Walter A. Stosch, Chair, Senate General Laws Committee
The Honorable John S. Reid, Chair, House General Laws Committee
Lisa Wallmeier, Executive Director, Joint Commission on Technology and Science

Glen Tittermary, Joint Legislative Audit and Review Commission staff
Paul Van Lenten, House Appropriations staff
Bill Echelberger, Senate Finance staff
Karen Helderman, Auditor of Public Accounts staff
Paul Nardo, Speaker's staff

2006 ANNUAL REPORT ON SELECTED INFORMATION TECHNOLOGY EFFORTS OF STATE AGENCIES AND PUBLIC INSTITUTIONS OF HIGHER EDUCATION

§ 2.2-2007 *Code of Virginia*

SUBMITTED BY
THE CHIEF INFORMATION OFFICER
TO
THE GOVERNOR
AND
THE JOINT COMMISSION ON TECHNOLOGY AND SCIENCE
COMMONWEALTH OF VIRGINIA

OCTOBER 1, 2006

2006 Annual Report
Selected Information Technology Efforts of State Agencies and Public Institutions of Higher Education

Executive Summary

This report addresses a General Assembly mandate to annually inform the Governor and the Joint Commission on Technology and Science of the efforts of state agencies and public institutions of higher education to increase economic efficiency, citizen convenience, and public access to state government through the use of information technology[1]. The report identifies numerous examples of specific information technology initiatives and important enabling processes and trends that have permitted the Commonwealth to increase efficiency, accessibility and convenience for its citizens.

Background

Almost all agency information technology (IT) projects and procurements, as well as several 2006 enterprise initiatives, have a direct impact on improving economic efficiencies, citizen convenience, and/or public access to government services. For example, individual agency IT projects often address business process improvements, worker productivity, availability and delivery of citizen services, Web accessibility, and operational efficiencies. In addition, enterprise initiatives address multi-agency collaborative opportunities, consolidation of IT infrastructure, and facilities management that improve economic efficiencies of state agencies and enhance their ability to deliver government services to citizens.

This report highlights representative efforts within state government to convey the breadth and scope of quality ideas being put into action to improve efficiencies, access and services in the Commonwealth. Also highlighted are the processes instituted by VITA and others that strengthen interagency collaboration and multi-agency planning.

Patterns and Trends for Agency Projects

An analysis of recently completed and currently planned major IT projects shows four general approaches occurring in agencies and institutions of higher education, including collaborating on enterprise solutions, taking advantage of newer technologies, improving access and convenience, and changing business practices. These approaches result in modernizing and streamlining IT infrastructure and service delivery and in promoting collaboration among agencies.

Collaborating on Enterprise Solutions

- Geographic information systems (GIS) resources are contributing to a wealth of collaborative efforts including multi-agency and multi-locality updating of road and address changes for unprecedented day-to-day accuracy of roadway centerline and statewide address files. These and other resources including base imagery can be used for Virginia's emergency management (e.g., 911), by VDOT for assets and maintenance, and by companies like MapQuest.
- Colleges and universities are sharing technical solutions for common problems through a variety of issue-specific and general committees. Both common IT solutions and common policy approaches may result from their work. Examples include a security group (VASCAN - Virginia Alliance for Secure Computing and Networking) that explores solutions to such common problems as wireless security and protecting identities. In the administrative area, one interface to the state's eVA purchasing system was jointly developed by all schools that

[1] *Code of Virginia, § 2.2-2007. Powers of the CIO. A. 8.*

use Banner administrative systems. Institutions are also gearing up to deal with recent CALEA (Communications Assistance for Law Enforcement Act) rulings that impose wiretap and data snooping on university networks.

- Agencies are considering data warehousing strategies at the secretariat level.
- The Secretary of Technology is providing leadership for common electronic health records systems, tools and strategies.
- The Commonwealth is continuing its quest for modern modular enterprise applications addressing finance, human resource and other central systems. *http://dgs.virginia.gov/PPEA_EAP.htm*
- The Commonwealth's Information Technology Investment Board (ITIB) identified enterprise and multi-agency collaboration opportunities as primary ranking criteria in the Recommended Technology Investment Projects Report (RTIP) for both 2005 and 2006. *http://www.vita.virginia.gov/ITIB/rtip.cfm*
- Consolidated central services both within and across agencies are enabling efficiencies to accrue from handling of e-mail, data storage, and networking.
- Agencies, universities and community colleges are taking advantage of national consortium efforts and reaping the benefits and efficiencies of such multi-state efforts in areas including call centers, voter information systems, unemployment and workforce systems.
- Centralized foundation and infrastructure services are constantly improving including: GIS base maps; public safety radio networks; central VoIP/PBX options; and cost-effective infrastructure services.
- Use across universities of the same packaged software suite for administrative systems is increasing.
- Integrated data system improvements are meeting the needs of multiple agencies in areas including corrections systems and social services case management.
- At the direction of the ITIB, single-agency implementations of enterprise-applicable solutions are being considered for applicability to other agencies including ticketing, licensing, grant management and emergency notification.

Taking Advantage of Newer Technologies

- Virginia's doctoral universities have partnered on a statewide high speed research network and connection to the national LambdaRail. The universities are working with institutions in Tennessee, Maryland, and the District of Columbia to form a regional consortium linking research institutions in the Mid-Atlantic area.
- Several agencies are incorporating global positioning (GPS) devices to drive efficiency and accuracy improvements in field-based data entry and emergency management system improvements. Example agencies include VDOT for maintenance services data entry and emergency road services, Forestry for mapping and field data collection, and Health for inspection and epidemiological data entry.
- Agencies are moving away from inflexible legacy databases and increasing the use of modern, state-of-the-art tools, such as the VDSS SPIDER system (Systems Partnering in a Demographic Repository) which provides real time data sharing between localities, state and federal agencies across disparate systems, greatly improving citizen service.
- Many agencies and universities are considering potential telecommunications cost savings by providing part of their communications across geographically dispersed business units and campus buildings via voice over Internet protocol (VoIP).
- University campuses, libraries, public spaces, conference rooms, police cars, and other areas are being equipped with secure and open wireless access to countless systems and resources.

- Agencies are considering central document management strategies and opportunities such as the Library of Virginia's Web archival system and the Virginia State Police's archive system.

Improving Access and Convenience

- Numerous systems currently being developed or modified will improve the anywhere/anytime accessibility of information, data entry and notification capabilities via Web interfaces that will assist citizens, the state's workforce, police, students, faculty and other groups.
- 24x7 access to reporting systems, data entry systems, and information stores is now common and continues to grow due to the efforts of agencies and universities.
- Proven tools for improving citizen convenience and public access are being rolled out to more areas of the state, including: wireless access; toll booth vehicle smart tag capabilities; and integrated student, staff, finance, and classroom capabilities within universities and across community colleges. Examples include The Online Academy developed by George Mason University and three localities and Southwest Virginia Community College's Web-based Fast Track training program.
- Web site standardization and technology accessibility requirements are making state Web sites and other technology-based services more accessible to people with disabilities and easier for the general public to use.

Changing Business Practices

- Business process reengineering that may enable high dollar returns or improved citizen service is a key focus of numerous efforts currently underway including: elections information accessibility and use; consolidated laboratory service provision; licensing systems customer interfaces; workforce systems; event ticketing; college administrative processes; case management; grant management; sentencing calculations; toll booth violations handling; and emergency management handling.
- Mechanisms including the Public Private Education Facilities and Infrastructure Act (PPEA) and other cooperative public/private ventures are enabling efficiencies to be considered due to a willingness of the private sector to provide up-front investments in the Commonwealth's future.

Tables 1 and 2 below cite representative IT projects that impact economic efficiency, citizen convenience, and public access to government. Table 1 includes recently completed projects and Table 2 lists projects currently in the planning or implementation stages. The designations in the table columns indicate a particular strength of each project with respect to the General Assembly's three characteristics of interest (economic efficiency, citizen convenience, and public access to government).

Table 1
Representative Projects (Recently Completed)

Agency	Project Formal Title	Economic efficiency	Citizen convenience	Public access to government
Agriculture and Forestry				
Forestry	Integrated Forest Resource Information System (IFRIS)	X		
Commerce and Trade				
Employment Commission	Customer Contact Centers (Pre-ITIB)	X	X	X

Agency	Project Formal Title	Economic efficiency	Citizen convenience	Public access to government
Mines, Minerals, and Energy	Mine Mapping system	X		X
Mines, Minerals, and Energy	Electronic Permitting System	X	X	X
Education				
Library of Virginia	Automated Web archiving application (Archive-It)		X	X
George Mason University	The Online Academy: A Virtual High School		X	
University of Mary Washington	Administrative System Implementation (Pre-ITIB)	X	X	X
Virginia Tech	Institute for Advanced Learning and Research		X	X
Finance				
Tax	Public Private Partnership Project (Pre-ITIB)	X	X	X
Health and Human Resources				
13 collaborating agencies	Community Profile Database (GOSAP)	X	X	X
Social Services	Child Support Payment Processing Modernization	X		
Social Services	Automated Program to Enforce Child Support - IMS to DB2 Conversion (Pre-ITIB)	X		
Social Services	Systems Partnering in a Demographic Repository system (SPIDER)	X	X	X
Natural Resources				
Game and Inland Fisheries	Automated License Delivery System	X	X	X
Game and Inland Fisheries	Automated mapping display of public hunting grounds (Find Game)		X	X
Marine Resources Commission	Digital Audio Recordings System of public meetings		X	X
Public Safety				
Corrections	Automated Offender Sentence Calculation System (part of offender management program—Phase I)	X		
Criminal Justice Services	Dissemination of crucial public safety information to law enforcement officers throughout the Commonwealth using video and the Internet.	X		
Criminal Justice Services	Virginia Integrated Justice Program	X		
State Police	Archive System - Registered Sex Offender Look Up	X	X	X

Agency	Project Formal Title	Economic efficiency	Citizen convenience	Public access to government
State Police	State and Local Preparedness Program (Pre-ITIB)	X		

Table 2
Representative Projects (Planning or Implementation Stages)

Agency	Project Formal Title	Economic efficiency	Citizen convenience	Public access to government
Governor's Office – Council on Virginia's Future	Virginia Results	X	X	X
Administration				
Elections	Virginia Election and Registration Information System (VERIS)	X	X	X
Agriculture and Forestry				
Forestry	Integrated Forest Resource Information System - Forest Protection and Mobile Computing	X		
Commerce & Trade				
Professional & Occupational Regulation	Electronic Access to Government Licensing and Enforcement System	X	X	X
Virginia Employment Commission	Virginia Workforce Network Information System (VWNIS)		X	
Education				
Community College System	Administrative Information System	X	X	X
Jamestown/Yorktown Foundation	Ticketing Improvements [upgrade to handle 400th anniversary traffic]		X	
Longwood University	Administrative System Replacement (BLISS)		X	X
Virginia Commonwealth University	Administrative System Replacement		X	X
Virginia Commonwealth University	Modernization of Communications Infrastructure (telephony replacement)	X		
Virginia State University	Reengineer Core Business Processes	X	X	X
Health & Human Resources				
Aging & 7 partner agencies	No Wrong Door Initiative	X	X	X
Rehabilitative Services	Implement Core Integrated Case Management System [central system across DRS agencies and locations]	X	X	X

Agency	Project Formal Title	Economic efficiency	Citizen convenience	Public access to government
Public Safety				
Corrections	Correctional Information System (Virginia CORIS) Phase 2/3	X		
Emergency Management	IT Infrastructure for the Joint Virginia Emergency Operations Center			X
State Police	Statewide Agencies Radio System	X	X	X
Technology				
VITA	Commonwealth Technology Portfolio (Version 2)			X
VITA	Virginia Base Mapping Program Road Centerline Project	X		X
Transportation				
Motor Vehicles	Traffic Records Electronic Data System (TREDS)	X	X	
Motor Vehicles	PCs on the Front Counters	X		
Transportation	Electronic Toll Customer Service and Violation Enforcement System (ETCS-VES)	X		
Transportation	Roadway Network System [database architecture simplification]	X		

Governing from an Enterprise Perspective

The characteristics of interest to the General Assembly may be addressed by multi-agency efforts and centralized services, in addition to being addressed by agency-specific IT projects. Several processes are currently in place in the executive branch under the auspices of the Information Technology Investment Board (ITIB), the CIO, and the Virginia Information Technologies Agency (VITA) that facilitate the development and implementation of such enterprise-level solutions. These processes facilitate the executive branch's ability to rapidly identify opportunities and reap benefits. Example processes include the following:

- The ITIB, in partnership with agencies, has developed a new, statewide business architecture, which will help improve understanding of the Commonwealth's business and identify opportunities for new, multi-agency solutions. http://ww2.vita.virginia.gov/ea/library/ea-documents.aspx
- On behalf of the Commonwealth, the ITIB and CIO published the *2007-2011 Commonwealth of Virginia Strategic Plan for Information Technology*, which offers technology direction and guidance for state agencies and institutions, and supplies a foundation to base technology investment decisions supporting Virginia's business direction.

  This plan was also designed to be incorporated into Virginia's existing strategic planning and budgeting processes, and to be available to state agency decision makers as guidance on the direction of information technology in the Commonwealth as they prepare their strategic plans and budgets.
- The ITIB and the CIO now coordinate a common IT strategic planning process across agencies that is integrated with each agency's strategic business planning.

- The ITIB and the CIO review procurements and projects from an enterprise architecture perspective.
- The ITIB and the CIO encourage the use of the PPEA process to develop central solutions to address the needs of multiple agencies. The Commonwealth through the ITIB entered into a 10-year partnership agreement with Northrop Grumman to modernize the Commonwealth's information technology infrastructure and services. The partnership is managed by VITA and will provide a streamlined 21st century infrastructure with no additional taxpayer dollars above current funding levels. The agreement includes hardware, voice and data networks, operating systems, e-mail, security, help desk services, and data center facilities. http://www.vita.virginia.gov/itpartnership/index.cfm
- The Commonwealth has also entered into a PPEA agreement with CGI-AMS to modernize the state's enterprise applications. This agreement is focused on administrative, financial, human resources, and supply-chain management business functions and processes and how best to re-engineer and re-solution those processes across state government. http://dgs.virginia.gov/PPEA_EAP.htm
- VITA is providing central hosting of utility applications, which enables cost-effective options for small to large agencies, including Help desk, backups, router management, and central VoIP services.
- VITA provides statewide geospatial data including digital orthophotography, road centerlines and addressing capabilities that support multi-agency geographic information systems application development and use. Example enterprise applications include voter registration and the Virginia Readiness, Response, and Recovery application to assist with emergencies.

Even greater efficiencies, accessibility, and convenience will be possible in the future by ensuring that tools and mechanisms are available to encourage enterprise-wide thinking. Centrally coordinated planning, business identification, solution generation, solution evaluation, and solution provisions are all key to strengthening enterprise-level effectiveness.

Conclusion

Under the auspices of the IT Investment Board and the CIO of the Commonwealth, IT investment management in the Commonwealth continues to promote efficient, accessible and convenient customer services. Furthermore, having adopted enterprise standards and having consolidated the IT infrastructure, the Commonwealth is now in a better position to leverage the IT infrastructure to transform the delivery of government services. The Commonwealth will continue to promote collaborative enterprise-wide initiatives and appropriate agency specific solutions that provide cost-effective, customer-centric services.