



COMMONWEALTH of VIRGINIA

Lemuel C. Stewart, Jr.
CIO of the Commonwealth
Email: lem.stewart@vita.virginia.gov

Virginia Information Technologies Agency
411 EAST FRANKLIN STREET, SUITE 500
RICHMOND, VIRGINIA 23219
(804) 225-VITA (8482)

TDD VOICE -TEL. NO.
711

January 25, 2005

The Honorable Mark R. Warner
Governor of Virginia
State Capitol
Richmond, Virginia 23219

Members of the Joint Commission on Technology and Science
General Assembly Building
Richmond, Virginia 23219

Dear Governor Warner and Members of JCOTS:

The *Code of Virginia* requires the Chief Information Officer of the Commonwealth to report annually to the Governor and to the Joint Commission on Technology and Science on technology efforts in the Commonwealth that are helping to improve efficiency, access and convenience (*Code of Virginia* § 2.2-2007A. 8.).

In response, I am pleased to submit the enclosed *Report on Selected Information Technology Efforts of State Agencies and Public Institutions of Higher Education*. If you have any questions about this report, please contact Paul E. Lubic, Jr., Associate Director for Policy, Practice and Architecture for the Virginia Information Technologies Agency at 804-371-0004.

Sincerely,

A handwritten signature in cursive script, appearing to read "Lemuel C. Stewart, Jr.".

Lemuel C. Stewart, Jr.
Chief Information Officer for the Commonwealth

Enclosure

c: The Honorable William H. Leighty
The Honorable Eugene J. Huang
Mitchell P. Goldstein

**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 OF THE COMMONWEALTH
TO
THE GOVERNOR
AND
JOINT COMMISSION ON TECHNOLOGY AND SCIENCE**

JANUARY 2005

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

Executive Summary

This report addresses a General Assembly mandate to 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. The report identifies numerous examples of both specific information technology projects and important enabling processes and trends that have permitted the Commonwealth to increase efficiency, accessibility and convenience for its citizens. This report is produced annually.

Background

The *Code of Virginia* (the *Code*) requires the Chief Information Officer of the Commonwealth (CIO) report annually to the Governor and to the Joint Commission on Technology and Science (JCOTS) on technology efforts in the Commonwealth of Virginia that are helping to improve efficiency, access and convenience. The following citation from the *Code* specifies the reporting requirement.

§ 2.2-2007. Powers of the CIO.

A. In addition to such other duties as the Board may assign, the CIO shall:

- 8. Report annually to the Governor and the Joint Commission on Technology and Science created pursuant to § 30-85 on the use and application of information technology by state agencies and public institutions of higher education to increase economic efficiency, citizen convenience, and public access to state government.*

Agencies of the Commonwealth are engaged in numerous small and large information technology (IT) projects and procurements. Most of these have some impact on improving economic efficiencies, citizen convenience, and/or public access. For example, IT projects in individual agencies often address operational efficiencies, citizen service quality, electronic access to services, 24x7 convenience, wireless access convenience, handicap access improvements, or consolidation efficiencies. As the comprehensive list of agency IT plans and projects is extensive, this report highlights only the most representative efforts within each secretariat 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

Across agencies, there are many examples of IT projects that address economic efficiencies, citizen convenience, and/or public access. Analysis of those projects shows four general approaches for IT projects 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, promoting collaboration among agencies, facilitating collaboration at all levels of government, and supporting the IT Transformation efforts underway to expand citizen services and recapitalize IT for the Commonwealth. Following are discernable patterns and trends of interest.

Collaborating on Enterprise Solutions

- Consolidated central services both within and across agencies are enabling efficiencies to accrue from how email, data storage, and networking are handled.

- 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 procurement contracts, transportation contracts, unemployment and workforce systems, and fingerprinting systems.
- Foundation services and infrastructure including GIS base maps, public safety radio network improvements, centrally managed gigabit networking, central VoIP/PBX, and other important elements are rapidly being put into place.
- Use across universities of the same package software suite for administrative systems is increasing.
- Data systems are being integrated and expanded in criminal justice, transportation, education, social services and administration areas in such a way as to improve and increase citizen access to services and information.
- Efforts being implemented for one agency are being considered for applicability to other agencies including ticketing, licensing, emergency notification, geographic information systems (GIS), and other applications.

Taking Advantage of Newer Technologies

- 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.
- Use of specialized imaging systems to improve speed of access and therefore, citizen convenience and workforce efficiency is also on the rise.

Improving Access and Convenience

- Numerous systems currently being developed or modified will improve the anywhere/anytime accessibility of information, data entry and notification capabilities to citizens, the state's workforce, police, students, faculty and other groups by use of web interfaces.
- 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.

Changing Business Practices

- Business process reengineering may enable high dollar returns in several instances, including Real Estate Management, Laboratory Management, remote searching of fingerprints from non-police office locations, centralizing data storage across multiple systems, and evaluation of PPEA reengineering proposals.
- 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 executive branch agency projects within each secretariat. 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
Administration				
DGS	eVA Phase III [improvements in tools enabling agencies to interface with the state’s procurement system]			X ¹
Commerce & Trade				
VEC	Virginia MACC System Implementation [Mid-Atlantic Computing Consortium multi-state project for workforce employment]	X	X	X
Education				
GMU	Patriot Project Banner Student Implementation [a new, web-enabled integrated student information system]		X	X
RBC	Enterprise Resource Management System [a new administrative system for student, staff and finance data]		X	X
UVA	Oracle 11i Database Upgrade [a web-facing capability enhancement]		X	X
DOE	Web-based Standards of Learning Technology Initiative [online state testing and reporting system for required tests]		X	X
Technology				
VITA	Portfolio Version 2 [enabled enhancements to project reporting including the public access to the project dashboard]			X
Transportation				
VDOT	Coleman Bridge Toll Facility [a smart-tag use project for citizens and businesses]		X	

¹ Each X is a designation by VITA that the project illustrates a significant and easily identified strength for the characteristic noted in the column heading. However, these projects may be complex and may offer numerous examples of each of the three criteria specified in the *Code* as being of interest to the General Assembly. The absence of an X, therefore, does not indicate a total absence of economic efficiencies, citizen convenience attributes, or public access to government features in a particular project.

**Table 2
Representative Projects (Planning or Implementation Stages)**

Agency	Project Formal Title	Economic efficiency	Citizen convenience	Public access to government
Administration				
DGS	Seat of Government Voice Over Internet Protocol (VoIP) [capitol area telecommunications]	X		
SBE	Campaign Finance Management System [e-filing]		X	
DGS	DCLS Laboratory Information Management System [statewide access to lab reports plus other process automation]	X	X	X
DGS	Real Estate Portfolio Management [contributes greatly to planning and management]	X		
Commerce & Trade				
DPOR	Electronic Access to Government Licensing and Enforcement System	X	X	X
VEC	Customer Contact Centers [multiple methods of access for unemployed]	X	X	X
Education				
JYF	JYF Ticketing Improvements [upgrade to handle 400 th anniversary traffic at Jamestown/Yorktown Foundation]		X	
VCCS	AIS Administrative Information System	X	X	X
LU	Purchase and Install Enterprise Resource Program (ERP)		X	X
UVA	Student Systems Project [student information system enhancement]		X	X
UMW	Administrative System Implementation -Bring On Banner		X	X
VCU	Administrative Systems Replacement - ARIES		X	X
CNU	Web Accessible Integrated System		X	
RU	Upgrade Administrative Computer Systems		X	X
VSU	Re-engineer Core Business Processes [administrative systems replacement]		X	X
VSU	Student IT Services [wireless enhancements]		X	
VCU	Modernization of Communications Infrastructure [Health Systems telephony replacement]	X		
NSU	Residence Hall Connectivity [wired and wireless computing and telecommunications]		X	

Agency	Project Formal Title	Economic efficiency	Citizen convenience	Public access to government
GMU	Telecommunications Infrastructure Project [enables but does not provide wireless and streaming]		X	
RU	Voice Over Internet Protocol (VoIP) Telephone System Project	X		
RU	Storage Area Networks (SANs) Project [central data and image computer storage]	X		
ODU	Digital Library [preliminary proposal for a central digital library for all universities]	X	X	X
Finance				
DOA	Commonwealth Integrated Payroll/Personnel System (CIPPS) FINDS Web [enhanced online capabilities for state payroll and decreased mainframe use]	X	X	
DOA	Lease Accounting System (LAS) Replacement		X	
TAX	Public/Private Partnership Project [comprehensive reengineering of tax systems including online filing]	X	X	X
Health & Human Resources				
VDH	Women, Infant, and Children [replacement of statewide system for providing nutrition health service to women and children]	X	X	X
DSS	Child Support Payment Processing Modernization [also addresses DSS database simplification]	X	X	X
VDH	WebVISION Lab Module [distributed access to lab reporting]	X	X	X
VDH	WebVISION - Private Provider Immunization [distributed access to lab reporting]		X	
DSS	PPEA--Integrated Social Services Delivery System [reengineering of existing processes; integration of systems; web enablement]	X	X	X
DSS	Child Care System [based on national model]		X	X
DRS	Implement Core Integrated Case Management System [central system across DRS agencies and locations]	X	X	
DSS	APECS - IMS to DB2 Reengineering Project [part of database simplification moving hierarchical to relational]	X		
Natural Resources				
DGIF	Point of Sale License System	X	X	X

Agency	Project Formal Title	Economic efficiency	Citizen convenience	Public access to government
Public Safety				
DOC	Automated Offender Sentence Calculation System (part of offender management program)	X		
DOC	Offender Management System Program (centralized system across prisons)	X		
DCJS	Grants Tracking [a grants management system with multi-agency implications]	X	X	X
VDEM	IT Infrastructure for the Joint Virginia Emergency Operations Center			X
VSP	Enhancement of the Automated Fingerprint Identification System ²¹ (AFIS ²¹) - Wireless Access [Adds a new wireless access and data entry capability for police in the field]			X
VSP	Re-Write the Automated Workflow for Fingerprint Submissions [addition of sex offender registry and more]	X	X	X
VSP	Sex Offender Registry/Livescan Interface for Mugshots	X		
VSP	Statewide Mug-shot and Other Images Repository	X		
VSP	Upgrade of Virginia Criminal Information Network software	X	X	X
VSP	Consolidated Billing System	X		
VSP	Conversion of Master Fingerprint File to Electronic Archive [local police access to electronic master file]			X
VSP	Criminal Justice Information System (CJIS) Master Name Index [access speed improvement]	X		
VSP	Statewide Agencies Radio System	X	X	X
Technology				
VITA	Virginia Readiness, Response, and Recovery GIS [a mapping support system for emergency response use]	X	X	X
VITA	PPEA - Electronic Government and Associated Business Transformation	X	X	X
VITA	Commonwealth Technology Portfolio (Version 2)			X
VITA	Virginia Base Mapping Program Road Centerline Project	X		X
VITA	PPEA - Enterprise Messaging/E-mail System	X		

Agency	Project Formal Title	Economic efficiency	Citizen convenience	Public access to government
VITA	PPEA - Comprehensive Statewide Network Services	X		
VITA	PPEA - Enterprise Customer Care Center [cost effective/ employee convenience]	X	X	
VITA	PPEA - Enterprise Desktop Management [cost effective management and support]	X		
VITA	PPEA – End-to-end Systems and Process Management	X		
Transportation				
DMV	Integrated Systems Redesign	X	X	X
DMV	Weigh-in-Motion System		X	
VDOT	EZ Pass Implementation		X	
VDOT	American Association of State Highway and Transportation Officials (AASHTO) Bridgework Implementation [use of nationally developed solutions]	X		
VDOT	Hampton Roads Smart Traffic Center Software Integration		X	
VDOT	Asset Management System [more integrated workflow solution]	X		X
VDOT	Inventory Management System [new web-based system with statewide accessibility]	X		X
VDOT	Roadway Network System [database architecture simplification]	X	X	
VDOT	Midtown Tunnel Traffic Management System		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:

- VITA has a new, statewide business architecture, which will help to improve understanding of the Commonwealth's business and will help in identifying opportunities for new, multi-agency solutions.
- VITA coordinates a common IT strategic planning process across agencies that is integrated with each agency's strategic business planning.
- VITA reviews procurements and projects from an enterprise architecture perspective.

- VITA has encouraged the use of the PPEA process to develop central solutions to address the needs of multiple agencies.
- VITA's service and infrastructure mandates have strengthened the Commonwealth's technology infrastructure planning and provision, thus providing greater efficiencies.
- VITA is providing central hosting of utility applications, which enables cost-effective options for small to large agencies.

Even greater efficiencies, accessibility, and convenience will be possible in the future through 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 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 greater efficiencies, accessibility to citizens and customers, and enhanced convenience. Furthermore, by adopting enterprise standards and consolidating the IT infrastructure under VITA, the Commonwealth is in a position to leverage and recapitalize the IT infrastructure to truly transform the delivery of government services to citizens, students, and taxpayers. Virginia will no longer invest in duplicative, stand-alone systems. Rather, the Commonwealth will promote the "build once, use many times" approach to service improvement and continue to be the catalyst for customer- and citizen-centric service provision.