Findings and Recommendations of the State Property Data Maintenance Work Group per Item 252.C, Chapter 2, 2014 Special Session I Virginia Acts of Assembly

Recommendations and findings for improving the efficiency and accuracy of the Commonwealth's collection and maintenance of state property data

October 1, 2014

INTRODUCTION:

Item number 252.C, of the Virginia Acts of Assembly – Chapter 2, approved June 23, 2014, requires the Secretary of Finance and the Secretary of Administration to convene a work group to consist of representatives from the Department of Accounts (DOA), the Department of General Services (DGS), and the Department of the Treasury (Treasury) to evaluate options for improving the efficiency and accuracy of the Commonwealth's current methods of collecting and maintaining state property data.

Specifically:

C.1. The Secretary of Finance and the Secretary of Administration shall convene a work group to consist of representatives from the Department of Accounts, the Department of General Services, and the Department of the Treasury to evaluate options for improving the efficiency and accuracy of the Commonwealth's current method of collecting and maintaining state property data. The evaluation shall include, but not be limited to, options for consolidating state property management information systems in production at the Department of Accounts, Department of General Services, and the Department of Treasury into a centralized information system solution, designating the appropriate agency to maintain and administer a centralized state property information system, identifying the costs associated with the implementation of a selected system solution, and identifying costs to administer and maintain the system as well as any savings that may be realized by each agency currently maintaining a legacy application. In conducting this evaluation, the Chief Information Officer of the Commonwealth shall determine if the proposed solution is an enterprise project as defined in § 2.2-2006, Code of Virginia.

2. The Department of the Treasury may use up to $30,000 the first year from the State Insurance Reserve Trust Fund for third party costs associated with paragraph C.1.

3. The work-group shall report its findings and recommendations to the Director, Department of Planning and Budget, the Governor, and the Chairmen of the House Appropriations and Senate Finance Committees no later than October 1, 2014.

Representatives from the Department of Planning and Budget (DPB), Treasury, DOA and DGS met on July 15, 2014, to discuss options for consolidating individual agency maintained and operated state property information management systems. The following information is a result of discussion between the aforementioned agencies, and provides a collaborative recommendation on a path forward.

Option 1: Current Environment – Maintain Status Quo

Department of the Treasury

System Functionality

The Department of the Treasury internally developed the Virginia Agency Property System (VAPS) to maintain insurance values for all state-owned buildings, buildings in the Commonwealth's care, custody and control, and contents of Commonwealth owned and non-owned buildings occupied by state agencies. State agencies and institutions enter and modify

their own property and location data and values, as well as other property insurance-related information. This information includes address, description, owner, value, flood zone information, critical facility type, construction year, construction material, square footage, and boiler and fire suppressant information. Entities also report summary information about building contents and values into VAPS. Treasury's Division of Risk Management (Risk Management) also maintains insurance coverage information in VAPS.

VAPS also allows users to:

- Update member and user information,
- Upload photographs and inspection reports,
- Export information based upon membership and permissions, and
- Generate reports of information stored and associated with their membership and permissions.

The original data uploaded into VAPS was supplied by Commonwealth agencies and institutions in the late 1980's and was annually updated. Currently, agencies are responsible for updating their property information directly in VAPS as soon as changes occur. Annually, Risk Management updates the values of the buildings and contents system-wide based upon the consumer price index (CPI), building construction, and regional location.

VAPS is a primary system for Risk Management, as it allows the Division to comply with the property record keeping requirements for the Commonwealth in Code of Virginia §2.2-1833. When a state agency reports a property loss to Treasury, Risk Management first verifies the property information and values in VAPS prior to performing other steps in the investigation and claims process. VAPS is also used for program valuation, loss exposure, and underwriting purposes; this data helps insurers determine the amount of property exposure the entity will assume when insuring the Commonwealth's property.

System Technology

VAPS was implemented statewide in February 2001. VAPS is a public facing, web-based application written using Microsoft Active Server Pages. It runs on a Microsoft Windows Server and the database is hosted using Microsoft SQL Server. Users access the application through a link on the main Treasury website.

System Administration

VAPS is currently running on the Virginia Information Technologies Agency (VITA) IT infrastructure. Treasury maintains the code base and performs any maintenance on the application and database servers. Minor changes to the system are made annually to ensure compatibility with client computers and web browsers. Bug fixes are also implemented as they are identified, although the system is mature and stable. Treasury is responsible for ensuring the system is available and performs system and database maintenance, which includes annual CPI updates of building and content values.

Treasury is also responsible for the administration of user accounts, to include: adding new users, modifying access, and deleting user accounts. For security of data, agencies approve their users in a two step review process, along with a review by Risk Management. Treasury provides assistances to users and troubleshoots any performance issues that users experience.

Users

Authorized state employees within each agency have access to the VAPS system, as the entities are responsible for ensuring that building and content information is up-to-date. Individual agencies determine which users require update capability and which users need to view the property data. These users have access to update and/or view their respective agency or another approved agency.

Treasury employees have administrative access within the application and have the ability to add, modify, and delete user accounts, as well as the ability to update information. Treasury users generate reports and view the information routinely both proactively in loss mitigation processes, as well as during claims processes.

Treasury's insurance brokers also have view access to the information in VAPS for underwriting and loss control purposes. Risk Management's actuary reviews the data for program valuation purposes. Other agencies use VAPS information to obtain various details of the Commonwealth's property. For example, the Virginia Department of Emergency Management requested that Risk Management maintain more detailed information on Commonwealth-owned larger buildings that could be used as a temporary housing location in the event of a significant disaster.

Estimated Cost to Maintain

Support requirements are minimal because of the mature state of the system and infrastructure. The application hosting including server costs and storage per year are approximately $3,000. Support costs which include software development and application support are approximately $2,500 annually for a total of approximately $5,500 in estimated support and maintenance costs.

Operational Issues

The technology, including the platform and the language, supporting VAPS is no longer mainstream technology. VAPS will need to be replaced within the next five years in order to maintain compatibility with client web browser software. Additionally, the system will require information security upgrades to maintain compliance with Commonwealth security standards.

Risk Management would like to add additional functionality to VAPS that would aid them in their proactive approaches in mitigating loss exposure. This would include having more detailed location data, such as maps and GPS coordinates, to ensure Treasury has the most accurate location data to evaluate flood, wind and earthquake exposure. Treasury could also benefit from the ability to track risk management evaluations and inspections within VAPS to allow Risk Management the opportunity to better evaluate the risk and exposure associate with individual buildings, locations, and sites.

If other additional property information is captured, Risk Management, the insurers, and the actuaries would better understand the Commonwealth's loss exposure to catastrophic events. For example, over the past few years, Risk Management has emphasized obtaining more accurate and detailed location data to aid the insurer in determining loss exposure. As a result of this improved data, the property insurer was able to lower the property premiums for the Commonwealth, resulting in premium savings.

The complete accuracy of data in VAPS is always difficult to guarantee as there is currently no way to readily confirm the data's accuracy. Agencies are required to provide building values for historical or older buildings which do not always have available valuations. Agencies are also required to provide content values but do not always have sufficient records to ensure all assets are included in this evaluation. Risk Management would like to add additional functionality requiring an authorized agency official to annually certify property information.

Department of Accounts

System Functionality

The Department of Accounts implemented the Fixed Asset Accounting and Control System (FAACS) primarily to provide auditable information for the Comprehensive Annual Financial Report. Additionally, it provides agencies the ability to ensure certain Commonwealth assets are accounted for and controlled (including the acquisition and disposal) in a manner consistent with internal control best practices surrounding fixed asset management. State agencies and institutions enter descriptive and other programmatic information into FAACS for each asset. FAACS contains required fields that include: asset category, FAACS identification number, description, building identification number, FIPS code, responsible position, acquisition basis, availability code, acquisition method, ownership status, control indicator, acquisition date, nomenclature code, and voucher number. FAACS also requires selected programmatic information to be entered for each asset including: fund, program, service area, asset cost, and funding source.

FAACS was first implemented in the early 1980's as a stand-alone application that required DOA employees to enter assets for all agencies and institutions within the Commonwealth. An online web-based front end was developed in the early 1990's that allowed each agency to enter its own assets.

Agencies are required to update FAACS within 30 days of the receipt of an asset and at least quarterly for construction in progress assets. FAACS interfaces with the Commonwealth Accounting and Reporting System (CARS) and updates asset and depreciation balances at the general ledger account level. FAACS produces various reports to facilitate proper stewardship and control of both capitalizable and controlled assets. Depreciation is calculated monthly during a month-end FAACS closing process. At year-end, FAACS creates various downloads used in the preparation of the Comprehensive Annual Financial Report.

System Technology

FAACS is mainframe application that has a web-based front end that allows only authorized users to enter asset information into the system. Access to FAACS is controlled through user identification numbers and passwords. Users access FAACS through a link on the main DOA webpage. Nightly edits are performed to pull in "released" transactions from the FAACS web-based front end which then updates the FAACS Masterfile and the appropriate CARS asset and depreciation general ledger account balances.

System Administration

FAACS runs on the VITA IT infrastructure. DOA maintains the production code and performs all maintenance on the application and database servers as necessary. DOA is responsible for

ensuring that FAACS is available to users and performs system and database maintenance as needed.

DOA administers all FAACS user accounts. This includes: adding new users, modifying user access, and deleting user accounts that are no longer needed. Agencies must formally request that DOA establish new user accounts using approved FAACS access forms that are retained by DOA. DOA provides training and assistance to FAACS users and troubleshoots any performance issues that users experience.

Users

Only authorized state employees within each agency are allowed access to FAACS. Individual agencies determine which users require "release," "hold," or "inquiry" access to FAACS based upon employee job descriptions and responsibilities. The "hold" security access provides users the ability to enter transactions into FAACS until the record is reviewed and approved by a user having "release" access. Only "released" transactions update FAACS and interface to CARS.

Selected DOA employees have administrative access within the application and have the ability to add, modify, and delete user accounts and to update other information within FAACS. DOA requires that agencies certify annually that all users having "release" access to FAACS are appropriate.

Estimated Cost to Maintain

Support requirements for FAACS are minimal because of the mature nature of the application and supporting infrastructure. DOA has onsite programmers that are available to modify FAACS as needed.

Operational Issues

The technology, including the platform and programming language, supporting FAACS is older technology. As Cardinal replaces CARS, new interfaces will need to be developed so that FAACS can update asset and depreciation balances in Cardinal. Currently, there are no immediate plans to replace FAACS with the capital asset module that exists within Cardinal.

Since FAACS was implemented primarily to provide data necessary for the Comprehensive Annual Financial Report, certain assets are not captured in FAACS due to materiality thresholds. Additionally, certain agencies do not enter specific asset data into FAACS (primarily Higher Education Institutions) or enter data at the summary level. The fixed asset information required for financial reporting is obtained from these entities through other sources such as CAFR Directive submissions.

Department of General Services

System Functionality

Since 2008, the Division of Real Estate Services (DRES) has been using the Integrated Real Estate Management System (IREMS), a web-based vendor system/database, to maintain a comprehensive inventory of the Commonwealth's owned and leased real estate assets for all state agencies and higher education institutions including those with delegated authority over their real

estate transitions. IREMS is also used for administering leases for numerous executive branch agencies including monthly accounts payable and accounts receivable processing. IREMS is a Commonwealth of Virginia (COV) hosted system. In addition to IREMS being used as DGS' data repository to have visibility over and analyze the Commonwealth's portfolio of real estate assets and manage leased space, IREMS data is also used when responding to Executive and Legislative inquires concerning the Commonwealth's real estate assets.

DGS is confident of the accuracy of its data for DGS-administered leases and for property ownership on transactions managed by the agency. The verification as to the accuracy of non-administered leases and owned property for agencies and institutions with delegated authority is ongoing. Reports are generated from the system on an annual basis and pursuant to requirements set forth in certain sections of Virginia Code, agencies with delegated authority are required to verify and submit changes by established deadlines.

System Technology

IREMS is a web-based application written in JAVA J2EE. The application is no longer supported by the vendor DGS purchased the application from because the vendor dissolved its business. However, DGS does have the software code in escrow should it be needed to troubleshoot software glitches.

System Administration

Data entry into IREMS is limited to DGS staff only with a small exception of higher-education institutions having permissions to enter records for inventory purposes only.

DGS is responsible for troubleshooting any software glitches and uses its in-house resources to maintain application data, make customizations to software, and correct any technical problems with the system.

System Users

User licenses for the IREMS system are unlimited. Currently, there are 28 full-access user licenses assigned to DGS staff and there are 59 licenses assigned to agency users, the majority being read-only and limited to access leases within their own agency.

Estimated Costs to Maintain

Current estimated costs to maintain the IREMS system include:

- $120,000/year for the 3-dedicated servers (VITA server fees plus storage fees)
- DGS system administrator and technical support: approximately $155,000/year

Operational Issues

IREMS is an at-risk application, as a result of its developer going out of business, and options for replacement of this system are currently being evaluated pursuant to a request for proposal (RFP) issued in 2013.

Continuing with this current system is not feasible for several reasons such as:

- lack of vendor support since July 2012 when the vendor announced dissolution and termination of its business,
- the system no longer meets the functional business needs of DGS/DRES; in 2010 an Access database was created to replace the 'Transactions' module of IREMS in order to meet new service fees and track the status of new purchase or leasing transactions because the existing module lacked such functionality,
- the system is written in JAVA J2EE which is not a core technology supported in DGS, and
- the hosting infrastructure is outdated and cannot be upgraded; significant VITA charges for 3 dedicated servers

Option 2: Centralized Solution:

System Functionality

As noted in the DGS summary, DGS issued a RFP to replace IREMS because the application contractor no longer supports the system. This RFP sought proposals for an integrated workplace management system (IWMS) to meet the immediate real estate data management needs of DGS, but also be scalable to meet the needs of other state agencies to achieve consolidation of the collection and maintenance of the Commonwealth's real estate and asset property data into a single data repository. DGS' inventory of state-owned and leased buildings would be the foundation upon which the data repository would be built and customized to meet other state agency assets tracking needs.

System Technology

Seven (7) proposals were received in response to the RFP. All but one of the vendors and/or systems addressed in the proposal were recognized as Leaders by Gartner, an information technology research and advisory company, in their 2013 *'Magic Quadrant for Integrated Workplace Management Systems'* report. In addition, a consultant feasibility study also recognized the majority of vendors and/or systems as potentials for meeting DGS requirements. DGS' evaluation includes looking for a solution that provides the functionality and requirements to manage and support all Commonwealth real estate assets.

The solutions being evaluated are IWMS that provide shared platform components such as user security, hierarchy business organization, document and financial management with integrated modular components covering the entire lifecycle of a real estate asset from end-to-end managing acquisition, operations and disposition, configurable to meet user business requirements.

System Administration:

DGS will be the contract administrator of the resulting contract, and primarily responsible for maintaining the foundation data for leased and owned state property. Additional data elements to be captured and maintained for other purposes, i.e. other agencies, will be that agency's responsibility to maintain and update. Training and licenses to the system for DGS and other agencies will be managed by DGS. Systems being evaluated provide administrative tools to define and control user access to modules, data elements, and records through roles and/or functional groups.

Potential users, including potential user responsibilities

Potentially, any Commonwealth employee who has a key role or responsibility for record-keeping could be a user. Agencies with legislative or otherwise mandated reporting responsibilities in regards to any aspect of Commonwealth real estate assets, i.e. DGS, Treasury and DOA, would users. Beyond DRES, DGS may have opportunities to expand the use of the solution to other divisions.

Potential user savings

With a consolidated system, users will have one source in which to submit information. In addition, should the new system be implemented as a SaaS model, fees related to infrastructure and data storage will cease; for DGS only, that is a savings of approximately $120,000 per year.

Estimated cost

Acquisition and Implementation:

DGS' RFP for the new IWMS has been approved with a procurement figure of not to exceed $1.25 million plus 10% (software purchase, configuration and implementation costs).

In addition, the following additional DGS expenses will be incurred during the design, build and implementation phases:

- Staff– $127,858/year
- Contractor/Project Manager – $173,938/year
- VITA Staff/PMD Analyst – $9,492/year
- IV&V (estimate 2) – $40,000 per occurrence

The acquisition, design, build, and implementation costs identified above will be incurred by DGS regardless of whether there is a consolidation of agency systems because the current DGS system is not supported and must be replaced.

Maintenance Cost after Implementation:

Under a SaaS model being evaluated, the hosting infrastructure, system support and implementation of system upgrades as released (follow UAT testing and acceptance) will be the burden of the vendor. Annual SaaS fees could be based upon modules and the number of licenses purchased.

There are four application modules that DGS will be purchasing, they are:

- Portfolio Management – functionality to manage the Commonwealth's real estate assets and land use plans
- Transaction Management – functionality to track external and internal real estate transaction information
- Lease Management – functionality to track active lease data
- Financial Management – functionality to manage financial data associated with the Commonwealth's real estate and asset holdings

The annual costs for the SaaS solution, with stated modules, are estimated to be:

- Contractor fees: $68,000 annually
- DGS technical staff: first year - $65,000; after year one - $33,000 annually
- Total maintenance operation:
  - Year 1 = $133,000
  - Year 2 and beyond = $101,000 (expect CPI escalation each year)

Operational issues system can satisfy

Benefits of having a centralized solution include:

- Reduction in expenses to support multiple applications maintaining common data; fewer separated systems to maintain, support and enter data into,
- Overall improvement in accuracy of statewide real estate and asset data,
- Reduce administrative burden on agencies and institutions that are required to input data into multiple real estate and asset tracking automated management systems

Potential challenges

As with any new system implementation, there will challenges to address. This could include loss of essential staff members having extensive knowledge in the project, and changes in business requirements during implementation resulting in additional or revised configurations.

Potential challenges with implementing a centralized system include data verification/migration from multiple systems into one, considering our current data inconsistencies. Information will need to be validated from the multiple existing systems as to what is most accurate. In addition, there may be a challenge with agency buy-in, including participation in training and acceptance of modified reporting formats and data elements. Lastly, any budget changes that would affect ongoing support and agency staffing levels have the potential to influence the accuracy and reliability of the data.

Anticipated funding

Funding for the initial acquisition, build and implementation will come from DRES non-general fund balances.

Maintenance and operation of the DGS functionality will be funded through the DRES current internal service fund fee, non-general fund. These are the same funds used today to support the current system. With a reduction in cost from the current system, DRES will have sufficient operational funds to cover the maintenance and operation costs of a new system.

As other state agencies participate in the functionality offered by a new application, there may be minimal additional maintenance fees dependent upon the need for customization or additional functionality requiring work to be performed by the selected contractor. Such costs would be the responsibility of the agency the customization work would benefit.

SUMMARY OF RECOMMENDATIONS

The Department of Accounts, Department of General Services, and Department of the Treasury should consolidate the Commonwealth's three current methods of collecting and maintaining state property data. There are no options for DGS; DGS must replace the DRES IREMS. DGS is moving forward with the replacement system procurement as described within this document. DGS is working closely with the Virginia Information Technologies Agency to ensure appropriate VITA approvals are obtained to move this information technology procurement and implementation forward. DGS has funding, from DRES non-general fund, for the purchase, build, and implementation of a new system. The functionality of a new system will be more robust than DGS' current system. In addition, the cost to maintain a new system will be less than DGS' current system maintenance costs.

For Treasury and DOA, the new system under consideration has the functionality to manage each of the agencies' real estate and asset management requirements. There are technical matters that will need to be explored to determine necessary interfaces specific to both agencies. Technical matters will be evaluated with DGS and the selected vendor during development and implementation of the core applications. It is expected that operational efficiencies and maintenance cost savings will be achieved as a result of all of the agencies using the new integrated property management system.

Annual maintenance cost summary of current agency applications:

DGS:	$275,000
Treasury:	$ 5,500
DOA:	$ 0
Total:	$280,500

Annual maintenance cost of new system for DGS after implementation and expiration of initial warranty:

Year 1:	$133,000
Year 2 and beyond:	$101,000

It is recommended that Treasury and DOA begin working with the DGS vendor to meet their real property and asset management data needs in order to complete the integration of the centralized real estate management system by the end of FY 2016.

Authority /Requirements to be address by the General Assembly:

None needed at this time.

Short-term (FY 2015) objectives:

DGS should complete its acquisition of its new real estate management system and be in the implementation phase by the end of FY 2015. DGS looks to complete full implementation by the beginning of FY 2016.

Treasury and DOA will be included in DGS' implementation discussions, as necessary, to ensure the system functionality and technical requirements will meet the needs of each agency for the management of their real estate and asset data.

Long-term (FY 2016) objectives:

DGS will fully implement the new real estate management system that supports the business needs of DGS and roll the functionality out to its user customers. DGS will continue to work with Treasury and DOA to complete the implementation process for the integration of each agency's system. Treasury and DOA will work with the DGS vendor on the planning, development, and implementation of modifications to the DGS system to meet the needs of each agency. In addition, Treasury and DOA staff will assist DGS in the development of the integrated system's procedures, documentation, data collection instructions, training, analysis and verification of data, and other necessary administrative duties required for the management and operation of the integrated system.