

OFFICE OF THE STATE INSPECTOR GENERAL  
Report to President Michael Rao

VIRGINIA COMMONWEALTH UNIVERSITY  
PERFORMANCE REVIEW

June 2016



June W. Jennings, CPA  
State Inspector General  
Report No. 2016-PR-006



**COMMONWEALTH OF VIRGINIA**  
**Office of the State Inspector General**

June W. Jennings  
State Inspector General

Post Office Box 1151  
Richmond, Virginia 23218

Telephone (804) 625-3255  
Fax (804) 786-2341  
[www.osig.virginia.gov](http://www.osig.virginia.gov)

June 7, 2016

Dr. Michael Rao, President  
Virginia Commonwealth University  
910 West Franklin Street  
Richmond, Virginia 23284

Dear President Rao:

Under § [2.2-309](#) [A](9) of the *Code of Virginia*, the Office of the State Inspector General (OSIG) is empowered to conduct performance reviews of state agencies to ensure that state funds are spent as intended and to evaluate the efficiency and effectiveness of programs in accomplishing their purposes. The Virginia Commonwealth University (VCU) performance review covers the period of July 1, 2014 through September 1, 2015.

OSIG's review focused on:

- Investment in Science, Technology, Engineering, Mathematics, and Health (STEM-H)
- Faculty Start-Up Packages
- Transfer and Return of Collected Revenues
- Administrative Functions
- Facility Usage
- Strategic Planning and Performance Measures to Promote Student Success
- Indicators or opportunities for Fraud, Waste, or Abuse in the above areas

VCU was selected for review in these areas based on a 2013 statewide risk assessment completed by Deloitte, LLP. This university was ranked as the 10th highest risk agency of all executive branch agencies. The planning phase of the review consisted of conducting interviews with selected members of executive and divisional management, assessing the risks identified during those interviews, and creating a detailed review plan to accomplish the review objectives. The steps in the review plan were executed, and the results were discussed with VCU management on May 17, 2016.

Observations identified during the review are included in the attached report. In addition, the university plan of action has also been included.

OSIG staff appreciates the assistance provided by your faculty and staff during this review.

Respectfully,

June W. Jennings, CPA  
State Inspector General

CC: Paul J. Reagan, Chief of Staff to Governor McAuliffe  
Suzette P. Denslow, Deputy Chief of Staff to Governor McAuliffe  
Anne B. Holton, Secretary of Education  
The Honorable Stephen D. Newman, Chair Senate Education and Health Committee  
The Honorable R. Steven Landes, Chair House Education Committee

# TABLE OF CONTENTS

- Executive Summary.....i
- Purpose and Scope of the Review.....1
- Background.....2
  - Investment in STEM-H .....2
  - Faculty Start-Up Packages.....3
  - Transfer and Return of Collected Revenues .....3
  - Administrative Functions.....3
  - Facility Utilization .....4
  - Strategic Planning and Performance Measures to Promote Student Success .....4
  - Indicators or Opportunities for Fraud, Waste, or Abuse.....4
- Review Methodology.....5
- Review Results.....6
  - Risk Area 1 — Investment in Science, Technology, Engineering, Mathematics, and Health (STEM-H) .....6
    - Observation No. 1 — Investment in STEM-H should be defined, tracked, and analyzed for outcomes/return on investment.....6
  - Risk Area 2 — Faculty Start-Up Packages .....10
    - Observation No. 2 — Improve efficiency in the budget development process and the ability to track multi-year budgets, especially for start-up packages .....11
  - Risk Area 3 — Transfer and Return of Collected Revenue.....13
  - Risk Area 4 — Administrative Functions.....13
  - Risk Area 5 — Facility Utilization .....14
    - Observation No. 3 — Enhance the process for maintenance and construction planning.....18
    - Observation No. 4 — Enhance strategies to catch up on deferred maintenance .....22
    - Observation No. 5 — Determine and execute a plan for West Hospital .....23
  - Risk Area 6 — Strategic Planning and Performance Measures for Student Success .....25
    - Observation No. 6 — Enhance information sharing among career centers .....25
    - Observation No. 7 — Enhance information sharing among schools and departments and use of Hire VCURams .....26
  - Risk Area 7 — Indicators or Opportunities for Fraud, Waste, or Abuse.....28

## Executive Summary

During the review, OSIG made a number of recommendations where current processes could be enhanced. OSIG staff reached these conclusions after:

- Gaining an understanding of each area under review;
- Interviewing VCU management and faculty;
- Reviewing documents, policies, and procedures;
- Touring the facilities; and
- Benchmarking against other universities or recognized leading practices.

VCU invests in STEM-H primarily through funding that supports increased student enrollment and graduation; increased faculty; and new and renovated research laboratories, class labs, and classroom space and equipment. Although VCU tracks a number of performance metrics such as student enrollment and graduation, the university has not tracked specific investments in STEM-H to determine if desired outcomes were obtained as a result of the investments.

VCU uses faculty start-up packages to attract and retain high quality professors. The packages support faculty success by providing for their instruction and research requirements such as equipment and laboratory space. VCU has cumulatively invested approximately \$20 million in start-up packages during the three most recent academic years. Funding sources include mid-year faculty turnover savings, donors, and the Higher Education Equipment Trust Fund (HEETF).<sup>1</sup> Each faculty member's performance is assessed annually for success in three areas: teaching, research, and service. There were no significant recommendations in this area.

As a result of increased financial authority granted by the Higher Education Opportunity Act of 2011,<sup>2</sup> the Department of Accounts (DOA), the Department of Treasury, and four universities, including VCU, developed a process to transfer and return collected revenues between the universities and DOA on a daily basis to comply with the Virginia Constitution, Article X Section 7<sup>3</sup> and the Commonwealth Accounting Policies and Procedures (CAPP) Manual Volume 1, Function 20000, Section 20200, Topic 20205, Deposits.<sup>4</sup> This transfer process is performed at a low cost and with minimal use of staff resources.

---

<sup>1</sup> State Council of Higher Education for Virginia. The Higher Education Equipment Trust Fund. URL: [http://www.schev.edu/AdminFaculty/HEETF\\_Overview.pdf](http://www.schev.edu/AdminFaculty/HEETF_Overview.pdf). Accessed September 28, 2015.

<sup>2</sup> Virginia's Legislative Information System. 2011 Session, Chapter 828, *Code of Virginia* § 23-38.88[D]. URL: <https://lis.virginia.gov/cgi-bin/legp604.exe?111+ful+CHAP0828>. Accessed October 1, 2015.

<sup>3</sup> Virginia's Legislative Information System. Constitution of Virginia, Article X. Taxation and Finance, Section 7. Collection and disposition of State revenues. URL: <http://law.lis.virginia.gov/constitution/article10/section7>. Accessed October 1, 2015.

<sup>4</sup> Virginia Department of Accounts. Commonwealth Accounting Policies and Procedures Manual Volume 1, Function 20000, Section 20200, Topic 20202, Deposits. URL: [http://www.doa.virginia.gov/Admin\\_Services/CAPP/CAPP\\_Topics/20205.pdf](http://www.doa.virginia.gov/Admin_Services/CAPP/CAPP_Topics/20205.pdf). Accessed October 1, 2015.

The Joint Legislative Audit and Review Commission (JLARC) October 2014 Report on Support Costs and Staffing at Virginia's Higher Education Institutions<sup>5</sup> identified 11 administrative functions outsourced at VCU such as dining, bookstore, transportation, and night IT help desk. For functions retained in-house, VCU has a mix of centralized and de-centralized services. VCU has a process for periodically analyzing cost/benefit of outsourcing or centralizing administrative functions. There were no significant recommendations in this area.

VCU owns or leases approximately eight million square feet of building space, including 40 buildings constructed before 1900 and 54 buildings designated as historic or that lie within a historic district. The university hired a vendor to perform a building space analysis, which was ongoing at the time of this review, that will be used in the 2016 Master Planning process. In addition, the university has \$66 million in three-year and \$329 million in 10-year deferred maintenance needs per a recent assessment performed by Sightlines: Facilities Asset Advisors.<sup>6</sup> Significant recommendations in this area are to enhance the process for building maintenance and construction planning and to enhance strategies to address deferred maintenance.

VCU has recognized and placed emphasis on student success, including community engagement. The university tracks and analyzes multiple success-related metrics such as student retention rates, four-to-six year graduation rates, and degrees awarded. The most significant observation in this area is to improve student internship and jobs self-reporting through [HireVCURams](#).

No indicators or opportunities for fraud, waste, or abuse were identified in the areas reviewed.

---

<sup>5</sup> Joint Legislative Audit and Review Committee. October 2014 Report to the Governor and the General Assembly of Virginia: Support Costs and Staffing at Virginia's Higher Education Institutions. URL: <http://jlarc.virginia.gov/pdfs/reports/Rpt460.pdf>, Appendix F, page 75. Accessed August 24, 2015.

<sup>6</sup> Sightlines: Facilities Asset Advisors. Colleagues in facilities management since 2000. URL: <http://www.sightlines.com/who-we-are/our-story/>. Accessed October 20, 2015.

## Purpose and Scope of the Review

The Office of the State Inspector General (OSIG) conducted a performance review of VCU pursuant to *Code of Virginia (Code)* § [2.2-309](#) whereby the State Inspector General shall have power and duty to:

*“Conduct performance reviews of state agencies to assess the efficiency, effectiveness, or economy of programs and to ascertain, among other things, that sums appropriated have been or are being expended for the purposes for which the appropriation was made and prepare a report for each performance review detailing any findings or recommendations for improving the efficiency, effectiveness, or economy of state agencies, including recommending changes in the law to the Governor and the General Assembly that are necessary to address such findings.”*

This review was not designed to be a comprehensive review of VCU. Instead, the focus was on certain areas identified through a statewide risk assessment of state agencies and interviews with university executive management. The scope and objectives of the review were established through interviews with management concerning VCU’s risks in these areas:

- Investment in Science, Technology, Engineering, Mathematics, and Health (STEM-H)
- Faculty Start-Up Packages
- Transfer and Return of Collected Revenues
- Administrative Functions
- Facility Usage
- Strategic Planning and Performance Measures to Promote Student Success
- Indicators or opportunities for Fraud, Waste, or Abuse in the above areas

The review period was from July 1, 2014 through September 1, 2015.

## Background

VCU is comprised of 13 schools and one college. The university offers undergraduate, graduate, and doctoral degrees. “As the premier urban, public research university in Virginia, VCU’s mission is to advance knowledge and student success through its commitments to:

- “An engaged, learner-centered environment that fosters inquiry, discovery, and innovation in a global setting;
- “Research that expands the boundaries of new knowledge and creative expression and promotes translational applications to improve human health;
- “Interdisciplinary collaborations that bring new perspectives to complex problems and mobilize creative energies that advance innovation and solve global challenges;
- “Health care that strives to preserve and restore health for all people, to seek the cause and cure of diseases through groundbreaking research, and to educate those who serve humanity;
- “Diversity that provides a climate of inclusion, a dedication to addressing disparities wherever they exist, and an opportunity to explore and create in an environment of trust; and
- “Sustainable, university-community partnerships that enhance the educational, economic, and cultural vitality of the communities VCU serves in Virginia and around the world.”<sup>7</sup>

## Investment in STEM-H

The Virginia Higher Education Opportunity Act of 2011, also known as the Top Jobs Act or “TJ21” (*Code* § [23-38.87:10](#)), was enacted to help address STEM-H employment needs projected by the U.S. Bureau of Labor Statistics (BLS).<sup>8</sup> As directed by *Code* § [23-38.87:17](#), the governing board of each Virginia public institution of higher education is required to adopt biennially, and amend and affirm annually, a six-year plan for the institution. Incentives for certain areas, including degree production in STEM-H fields, are identified within *Code* § [23-38.87:16](#). These areas are not required to be included in the six-year plan. However, VCU elected to include goals related to STEM-H in the 2014 plan.<sup>9</sup> Goals included, but were not limited to, adding full-time faculty hires to improve retention and graduation, building translational research in targeted areas, enhancing instruction in STEM-H discipline areas, and increasing research and instructional space in Biology, Chemistry, Engineering, Medicine, Physics, and Psychology.

---

<sup>7</sup> Virginia Commonwealth University. Quest for Distinction. URL: [http://www.quest.vcu.edu/media/quest/pdf/theplan\\_full.pdf](http://www.quest.vcu.edu/media/quest/pdf/theplan_full.pdf), page 13. Accessed August 18, 2015.

<sup>8</sup> United States Bureau of Labor Statistics. Occupational employment projections to 2022, December 2013. URL: <http://www.bls.gov/opub/mlr/2013/article/pdf/occupational-employment-projections-to-2022.pdf>, page 8. Accessed October 28, 2015.

<sup>9</sup> State Council for Higher Education. VCU Six-Year Plan - Part II (2014): 2014-16 through 2018-20. URL: <http://www.schev.edu/Restructuring/2014/VCU/VCU%202014%20Six-Year%20Plan%20Narrative.pdf>, pages 2-5, 8, 10, 1-12. Accessed October 28, 2015.

VCU's Quest for Distinction<sup>10</sup> includes goals specifically aligned with STEM-H to:

- Increase high-impact research, scholarship, and creative expression;
- Grow the next generation of researchers, artists, and scholars who will focus on the discovery of new knowledge that advances human experience and quality of life; and
- Increase interdisciplinary research and inter-professional education, scholarship, and practice among arts, humanities, and sciences.

Performance metrics related to the Quest for Distinction are tracked and include student retention and graduation rates, doctoral degrees awarded, total sponsored awards, and invention disclosures.<sup>11</sup>

### **Faculty Start-Up Packages**

Start-up packages serve two purposes: 1) to attract high quality faculty, and 2) to provide funding, equipment, space, and other resources for the faculty member to be successful. Not all new faculty members receive a start-up package, but for those that do, the package values range from a few thousand to several million dollars depending on the discipline and the rank of the professor.

### **Transfer and Return of Collected Revenues**

The Constitution of Virginia Article X, Section 7 requires the transfer of all revenues to the State treasury.<sup>12</sup> The Commonwealth Accounting Policies and Procedures (CAPP) Manual requires revenues be deposited (into the State account) no later than the next business day following receipt of the revenues. The manual further says that State Funds are allowed to be deposited into local or private fund accounts by universities, but they must be transferred immediately (same day) into the State account.<sup>13</sup>

The Higher Education Opportunity Act (HEOA) gave universities the option to gain increased autonomy over financial operations and management. VCU elected to do so and was designated as a Tier III university. Due to that designation, VCU no longer deposits funds directly into the State account. Therefore, the transfer and return process was established to meet the requirements of the Constitution and CAPP Manual.

### **Administrative Functions**

Outsourcing and centralization of administrative functions are strategies employed by universities to improve efficiency, effectiveness, and economy of operations. VCU has outsourced some

---

<sup>10</sup> Virginia Commonwealth University. VCU Quest for Distinction, Refocused themes and goals 2015-17. URL: <http://www.quest.vcu.edu/media/quest/QuestforDistinctionRefocusedGoalsOnePager.pdf>, pages 1-2. Accessed October 28, 2015.

<sup>11</sup> Virginia Commonwealth University. Core University Initiatives, Performance Dashboard. URL: <http://metrics.vcu.edu/>. Accessed October 28, 2015.

<sup>12</sup> Virginia's Legislative Information System. Constitution of Virginia, Article X. Taxation and Finance, Section 7. Collection and disposition of State revenues. URL: <http://law.lis.virginia.gov/constitution>. Accessed October 1, 2015.

<sup>13</sup> Virginia Department of Accounts. Commonwealth Accounting Policies and Procedures Manual Volume 1, Function 20000, Section 20200, Topic 20202, Deposits. URL: [http://www.doa.virginia.gov/Admin\\_Services/CAPP/CAPP\\_Topics/20205.pdf](http://www.doa.virginia.gov/Admin_Services/CAPP/CAPP_Topics/20205.pdf), pages 2 and 16. Accessed October 1, 2015.

administrative functions such as dining, bookstore, vending, student laundry, night IT help desk, security, and transportation. Other administrative functions such as human resources, treasury services, and facilities management are generally centralized with some specific tasks performed by the various schools or departments.

### **Facility Utilization**

Adequacy and quality of classroom, class lab, research lab, office, housing, parking, and other space is an ongoing concern at VCU and other universities. Increasing student enrollment and faculty, particularly in STEM-H fields, drives the need for sufficient, high quality space.

VCU, being an urban university in the heart of Richmond, has limited options for obtaining new land and buildings. In addition, the university has limited flexibility on the use of many of its buildings because a large number are historic, or are located in historic districts.

### **Strategic Planning and Performance Measures to Promote Student Success**

VCU's mission "is to advance knowledge and student success ..." and VCU's vision includes "the intellectual and academic success of a diverse student body."<sup>14</sup> The university's Quest for Distinction focuses on student success in several areas, including Theme I to provide high-quality learning/living experiences, and Theme II to advance knowledge and quality of life through various goals and strategies.

### **Indicators or Opportunities for Fraud, Waste, or Abuse**

Fraud, waste, or abuse may occur for many reasons including, but not limited to, poorly designed processes, weak or missing controls, or the ability to bypass or override processes.

---

<sup>14</sup> Virginia Commonwealth University. Vision. URL: <https://www.vcu.edu/about/leadership.html>. Accessed August 20, 2015.

## Review Methodology

OSIG staff planned for this review by:

- Examining the detailed results of Deloitte’s statewide risk assessment;
- Performing web research about VCU and universities’ leading practices; and
- Conducting interviews with the following to gain insight into the specific concerns from within the risk areas identified by Deloitte and research performed:
  - Executive Management Team
  - Key Departments’ Personnel
  - Auditor of Public Accounts (APA).

As a result of the interviews, OSIG staff identified associated risks for each of the risk areas, established performance review objectives, and developed detailed review procedures to address these objectives (see specific risk areas under Review Results).

## Review Results

Potential improvements and commendations are noted by risk area below.

### Risk Area 1 – Investment in Science, Technology, Engineering, Mathematics, and Health (STEM-H)

#### *REVIEW OBJECTIVES AND STEPS:*

The review objective was to determine whether VCU has an efficient and effective method of managing STEM-H. OSIG staff reviewed VCU documents including policies and procedures, VCU's Quest for Distinction, and Six-Year Plan; performed a telephone survey of a sample of faculty that received equipment five to 10 years ago; and compared classroom, class lab, and research laboratory space with other similar universities.

The following results were noted:

- OSIG staff determined that lab/classroom space, based on square footage and enrollment counts only, is sufficient overall when compared to similar universities and the State Council of Higher Education (SCHEV) space guidelines. However, since OSIG did not evaluate space by discipline or the condition of space (outdated, in poor condition, etc.), a conclusion on the adequacy of the space for instruction and research could not be reached. The university has contracted for a space analysis with Ayers Saint Gross<sup>15</sup> that will consider space by discipline and general condition/adequacy.
- Through interviews with a sample of faculty, OSIG staff determined that research equipment purchased five to 10 years ago is still in good condition, is current, and meets the needs for research. Although there is no budget for replacement of failed or outdated equipment, there are several funding options such as federal grants, the Higher Education Equipment Trust Fund (HEETF), capital funding requests, and gifts.

#### **OBSERVATION NO. 1 – INVESTMENT IN STEM-H SHOULD BE DEFINED, TRACKED, AND ANALYZED FOR OUTCOMES/RETURN ON INVESTMENT**

A formal, documented definition of what is considered an investment in STEM-H has not been developed by VCU, SCHEV, or other authoritative body. However, universities and federal agencies have identified a variety of costs that support STEM-H. Investments identified by VCU's College of Humanities and Sciences and the Department of Engineering included increasing faculty and the associated costs, increasing student enrollment and the associated costs, new lab space, and enhanced student counseling.

Universities and federal agencies are implementing processes to evaluate the outcomes from those investments. The National Science Foundation (NSF) is in the process of implementing an approach

---

<sup>15</sup> Ayers Saint Gross. What is Space Analytics? URL: <http://asg-architects.com/project-list/space-analytics/>. Accessed October 20, 2015.

to assess the impact of the NSF-wide investment in graduate education (such as through traineeship and fellowship programs).

In 2013, Emory University recognized the need to look at both the cost and value of research to better assess the outcomes gained from the investments.<sup>16</sup> Emory management stated, “Research requires investment, ongoing operational costs, continual strategic thinking, and firm appreciation of its value. Indirect cost recovery from grant awards does not cover all the costs of funded research. Additional institutional dollars support unfunded research, scholarship, and education. The increasing stress to find institutional dollars can lead ... to short sighted decisions. Critical to this discussion is an understanding of our investment in research and the direct and indirect returns on this investment for our university and our community ...”

VCU management told OSIG staff that research is a major investment in STEM-H and, in most cases, research funded by federal agencies and industry requires reporting of progress/performance on a regular basis.

Additionally, the White House August 2009 Memorandum for the Heads of Executive Departments and Agencies: Science and Technology Priorities for the FY 2011 Budget called for defining expected outcomes from research, quantitative measures, identification of high-performing and low-performing programs to better allocate funding, and science of science policy. The National Institute of Health (NIH) and NSF joint Star Metrics program was developed following the passing of the American Recovery and Reinvestment Act of 2009 to create a repository of data and tools to assess the impact of federal research and development investments. The Act provided additional funding for research to several federal agencies. The White House memo provides guidance related to the Act.

The Memorandum states “Science of science policy (SoSP) is a field of interdisciplinary research with the goal of providing a scientifically rigorous, quantitative basis from which policy makers and researchers can assess the impacts of the Nation’s scientific and engineering enterprise, improve their understanding of its dynamics, and assess the likely outcomes. Research in SoSP could be utilized by the Federal Government and the wider society in general, to make better research and development decisions.”

VCU has not determined what expenditures, programs, or goals are considered investments in the STEM-H initiative and has not consistently analyzed the return on, or outcomes from, the investments. VCU’s Quest for Distinction contains goals specifically tied to STEM-H and a number of quantitative measures such as increasing, by specific amounts, the number of students studying

---

<sup>16</sup> Emory University. The Academic Exchange, The Cost and Value of Research: Direct and indirect returns for the university and society, Spring 2013. URL: [http://www.emory.edu/ACAD\\_EXCHANGE/issues/2013/spring/stories/stephens/index.html](http://www.emory.edu/ACAD_EXCHANGE/issues/2013/spring/stories/stephens/index.html). Accessed December 2, 2015.

and the number of graduates in STEM-H fields. These measures are tracked, but not from the perspective of a return on the university's investment.

SCHEV has developed a list of designated Science, Engineering, Technology, Math, and Health programs. SCHEV management stated a university could take this list and ask itself, "What have we invested in these programs?" as a method to determine what is considered an investment in STEM-H.

VCU performed a one-time analysis of return on investment for nine faculty positions in STEM-H in 2012 at the request of the Board of Visitors (BOV). The analysis included salary, cost share, bonus payments, start-up funds, and moving and relocation costs as the investment. Returns/outcomes included invention disclosures, patents filed, creation of new PhD programs, publications in peer reviewed literatures, science journals, etc. Revenue generated by the faculty in the analysis was from sponsored programs (federal, industry, or foundation funding).

VCU's analysis included reference to a comparison of streams of expenses and revenues performed at the University of Rochester (UR) School of Medicine and Dentistry over seven years. UR's analysis was purely financial, and noted that it did not include some sources of economic value generated by the faculty such as teaching, royalties, gifts, and enhancement of the university's reputation. The UR report also noted that despite the limitations in the comparison, there were multiple benefits to an analysis of return on investment in STEM-H. These benefits included the identification of how much the university invested for each extramural grant dollar generated, the identification of indirect costs which were not recovered, aid in planning research programs, the research investments the university made, metrics that reflected both financial and academic outcomes, factors associated with the financial and academic success of investigators, and successful recruitment and development of current and future faculty members.

VCU administration told OSIG staff that the university has never been asked by an outside entity to determine the return on investment in STEM-H.

Potential risks of not analyzing the outcomes/return on investment in STEM-H include ineffective planning of programs which could lead to failure to obtain the desired outcomes such as increased enrollment and graduation in STEM-H disciplines, inability to identify and develop factors which make researchers most successful, and ineffective or uneconomical budgeting.

#### **RECOMMENDATION**

OSIG recommends that VCU explore and expand its definition of STEM-H investments, set targets for STEM-H performance, periodically measure the results against the targets, and continue to assess its progress against strategic priorities to determine where best to refine and expand the efforts and priorities.

### Management Response:

The emphasis on ROI (return on investment) as described within OSIG's observations and recommendation is heavily equated to financial returns, representing the purest definition of ROI. VCU considers STEM-H investment to be more than a compilation of financial transactions over time and an analysis of how these transactions have “performed” against an expectation of favorable financial investment return. Instead, VCU looks at STEM-H investment as encompassing a range of strategic decisions, investments and returns that can be both quantitative and qualitative in nature. The Provost & Vice President for Academic Affairs, the Vice President for Health Sciences, and the Vice President for Research and Innovation will be responsible for overseeing implementation, monitoring, and reporting for STEM-H investments.

1. Develop a definition for VCU’s investment in STEM-H that considers, but is not limited to, the following elements:
  - a. financial expenditures and future commitments;
  - b. human capital (faculty and staff);
  - c. dedicated facilities;
  - d. programmatic changes or additions;
  - e. research in STEM-H fields;
  - f. intellectual property;
  - g. other infrastructure components, e.g., selective technology enhancements; and,
  - h. student outcomes, e.g., degrees conferred by level, progression/retention/graduation performance by student demographic cohorts.
2. Align STEM-H definition with VCU’s strategic priorities.
3. Identify performance measures that support STEM-H investment definition.
4. Establish 2015-2016 baseline performance and, where possible, 5-year trend data for each STEM-H measure.
5. Set 5-year (2020-2021) targets for STEM-H performance measures.
6. Assess and report to VCU senior leadership (and OSIG, upon their request) on results annually.
7. Incorporate review and possible revision of STEM-H priorities, future investments and performance expectations as needed as part of annual planning and budgeting process.



## Risk Area 2 – Faculty Start-Up Packages

### *REVIEW OBJECTIVES AND STEPS:*

The review objective was to determine whether VCU has an efficient and effective method of overseeing faculty start-up packages. OSIG staff tested this through review of processes and systems used for budgeting and tracking of start-up packages, review of a sample of faculty hires for appropriateness of start-up packages, and review of a sample of faculty annual performance reviews to determine that start-up packages were contributing to faculty success.

The following results were noted:

VCU's schools and departments follow the university Faculty Search Process Guidelines. Faculty start-up package offers are extended based on the discipline, rank of the professor, and other variables such as the existing research portfolio and equipment needs for new faculty. OSIG staff reviewed a sample of faculty start-up packages and found the packages to be appropriate.

Several best practices were identified including:

- Asking for start-up package needs with the resume/application. This allows the search committee to determine if the university can meet those needs and if the potential faculty member has the skills to provide a realistic request;
- Having each department chair provide new faculty needs and associated start-up package estimates each year to the Dean. This provides the Dean with an overall view and helps determine how to best allocate funding to meet the needs;
- Keeping track of equipment already owned so that, where possible, existing equipment is used to meet new start-up package needs (sharing of equipment within and across departments/schools). This prevents purchasing the same or similar equipment that is already owned;
- Collaborating with other schools/departments. This allows start-up package funding to be split and reduces the cost to any one school or department; and
- Actively pursuing funding (donors, companies, etc.). This helps produce a pool of funds to meet on-going needs or provide one-time funding to obtain a highly qualified faculty member.

OSIG staff found no unusual fluctuations in start-up package funding for the last three academic years.

The success of a faculty member and the associated start-up package is assessed during the annual performance review process and during tenure review. The review process includes ratings in teaching, research, and service and serves as an adequate method to assess the success of the faculty member and whether or not funding and other items provided in the start-up package are producing the desired outcomes.

## Commendation

VCU has begun a process to evaluate the capabilities of the existing Banner Finance<sup>17</sup> system to enhance use of the system in budgeting and to track start-up packages over a span of years. The university has also implemented Oracle Hyperion Financial Reporting<sup>18</sup> and PFM Future Perfect<sup>19</sup> to further enhance reporting and the budgeting processes.

### OBSERVATION NO. 2 — IMPROVE EFFICIENCY IN THE BUDGET DEVELOPMENT PROCESS AND THE ABILITY TO TRACK MULTI-YEAR BUDGETS, ESPECIALLY FOR START-UP PACKAGES

Price Waterhouse Coopers (PwC), one of the largest providers of accounting services, prepared a 2011 research study<sup>20</sup> titled “Financial planning: Realizing the value of budgeting and forecasting” that states:

- “The process (budgeting and forecasting) continues to be time consuming, iterative, and inaccurate.
- “Best-of-breed financial planning applications such as Oracle Hyperion and SAP BPC (Systems, Applications, and Products Business Planning and Consolidation) can significantly improve the overall financial planning process and reduce manual planning activities and disparate spreadsheets. However, technology by itself does not lead to sustainable and desired improvements.
- “Most of the companies surveyed agreed they are spending a great deal of time and effort on consolidating, explaining, and reviewing information for financial planning.”

The report follows a 2007 PwC “Budgeting and Forecasting Study,”<sup>21</sup> which noted the following concerns:

- 36 percent of survey respondents felt reducing budget cycle time was important;
- 35 percent felt reducing time spent on data collection was needed;
- 29 percent felt investing in technology would be helpful;
- 60 percent said it takes three or more months to complete the budget cycle; and
- 70 percent reported dependency upon spreadsheets in the process.

VCU has an established process for budget development that uses the existing automated tools in Banner Finance, Oracle Hyperion Financial Reporting, and Microsoft Excel spreadsheets for the university, school, college, and department budgets. VCU is currently evaluating Banner and its

---

<sup>17</sup> Ellucian. Banner Finance. URL: <http://www.ellucian.com/Software/Banner-Finance/>. Accessed December 15, 2015.

<sup>18</sup> Oracle. Oracle Hyperion Financial Reporting, Fusion Edition. URL: <http://www.oracle.com/technetwork/middleware/bi-foundation/financial-reporting-095356.html>. Accessed December 15, 2015.

<sup>19</sup> Public Financial Management. Strategic Forecasting Services, PFM FuturePerfect: A Unified Institutional Planning Platform. URL: <https://www.pfm.com/financial-advisory/strategic-forecasting-services/>. Accessed December 15, 2015.

<sup>20</sup> PricewaterhouseCoopers LLP. Financial planning: Realizing the value of budgeting and forecasting. URL: <http://www.pwc.com/us/en/increasing-finance-function-effectiveness/assets/financial-planning-realizing-the-value-of-budgeting-and-forecasting.pdf>, pages 2-3 and 9. Accessed December 15, 2015.

<sup>21</sup> PricewaterhouseCoopers LLP. 2007 Budgeting and Forecasting Study. URL: <https://www.pwc.com/us/en/increasing-finance-function-effectiveness/assets/2007-budgeting-and-forecasting-study.pdf>, pages 10, 17-18. Accessed December 15, 2015.

capabilities to address limitations as noted below as well as building a new budget model to increase efficiency in the process. PFM Future Perfect is an automated tool that is anticipated to be used in the future to assist with budgeting.

Annual budget amounts, some encumbrances/commitments (salary and outstanding purchase orders), and expenses are captured in Banner. However, not all encumbrances such as hourly salary, or funds needed to pay the salary of security staff to another department are committed. A Banner representative stated any encumbrance can be committed in the system. Banner operates on a fiscal year basis except for grants and contracts for which the entire multi-year budget is tracked over the life of the grant or contract.

Hyperion, which was recently implemented, pulls data (except individual transactions) from Banner for fast, easy reporting. Hyperion allows quick access to historical data (prior year's budgets, actual expenditures, salaries, etc.). In addition, there is an existing Banner report with transaction data.

Future Perfect is a financial planning system specifically for colleges and universities. Future Perfect establishes and analyzes relationships among interdependent operating variables including student revenue, personnel, investments, debts, facilities, and more.

In addition, accounting and finance staff in the three schools and departments contacted reported using spreadsheets in their budget development and tracking of actual to budgets, as well as tracking faculty start-up packages. Due to the limitations in Banner — such as some items committing and others not committing and faculty start-up package dollars are broken into two or more years' budget entries — it is difficult to track the cumulative cost of a start-up package from start to finish. In addition, based on a demonstration provided to OSIG staff, pulling a report from Banner requires a good deal of knowledge about the system.

Increasing efficiency in the budget development process — through enhanced knowledge and use of the systems' capabilities, as well as further automation of the tracking of start-up packages and costs which are not currently committed — will result in decreased or no need for dual entry (ex: Banner expense entry and spreadsheet expense entry) and fewer opportunities for errors.

The current process involving multiple automated systems, spreadsheets, not committing all costs, and difficulty in tracking multi-year budgets is the result of limitations with the systems and/or unfamiliarity with system capabilities. However, as noted in the commendation section above, VCU has taken steps to assess both.

**RECOMMENDATION**

VCU should continue efforts to develop the new budget model, increase efficiency in the process by taking advantage of automated systems to the extent possible, and decrease the need for dual entry. Systems should be used to capture all encumbrances and should be evaluated to determine if the capability exists to track multi-year faculty start-up packages to decrease the need for spreadsheets.

**Management Response:**

At its meeting in March 2016, the Finance, Budget, and Investment Committee of the VCU Board of Visitors endorsed the New Budget Model implementation plan. The plan outlines the key components/decision points of the model, including benchmarking our administrative and academic functions, and specific timelines for implementation of each component. The Provost & Vice President for Academic Affairs and the Vice President for Finance & Budget co-chair the New Budget Model Steering Committee. The model is scheduled to be fully implemented by July 2018.

The University will also begin an evaluation of its current budget development practices, including identification of automated enhancements and consideration of multi-year budgeting. A multi-year budget process would include tracking of multi-year commitments such as faculty start-up packages. The University Budget Director will lead this effort, concurrent with the implementation of the New Budget Model. The targeted completion date for all aspects of this evaluation is July 2019, building on the first year of implementation of the New Budget Model.

**Risk Area 3 – Transfer and Return of Collected Revenue**

*REVIEW OBJECTIVES AND STEPS:*

The review objective was to evaluate the efficiency of the process to transfer and return university collected revenues and was accomplished through review of policy and procedures and interviews with VCU management.

Based on work performed, OSIG staff determined that VCU handles the process to transfer and return collected revenue cost effectively.

**Risk Area 4 – Administrative Functions**

*REVIEW OBJECTIVES AND STEPS:*

Objectives in this area were to determine whether VCU has an efficient and effective method of assessing the economy, efficiency, and effectiveness of administrative functions to determine whether each function should be insourced or outsourced and to determine whether similar administrative functions are efficiently performed across university departments and programs.

The objectives were accomplished through review of processes; identification of administrative functions currently insourced, outsourced, centralized; or decentralized; interviews with VCU management; and cost comparison analysis to insource/outsourcing a sample of administrative functions.

The following results were noted:

VCU has a process to evaluate insourcing versus outsourcing administrative functions. In addition, VCU has identified possible decentralization of some functions during its Enterprise Risk Management (ERM) process and has developed action plans to address potential impacts of decentralization such as violation of policies or laws due to inconsistent interpretation and application of Human Resources (HR) policies, inefficient workflow, and increased administrative costs due to duplication and re-work. There were no observations in this area.

### **Risk Area 5 – Facility Utilization**

#### *REVIEW OBJECTIVES AND STEPS:*

The objective in this area was to determine whether VCU has an efficient and effective method of assessing and applying facility utilization and technology methodologies to help ensure that buildings are used to the maximum extent possible and limit the need for constructing similar buildings.

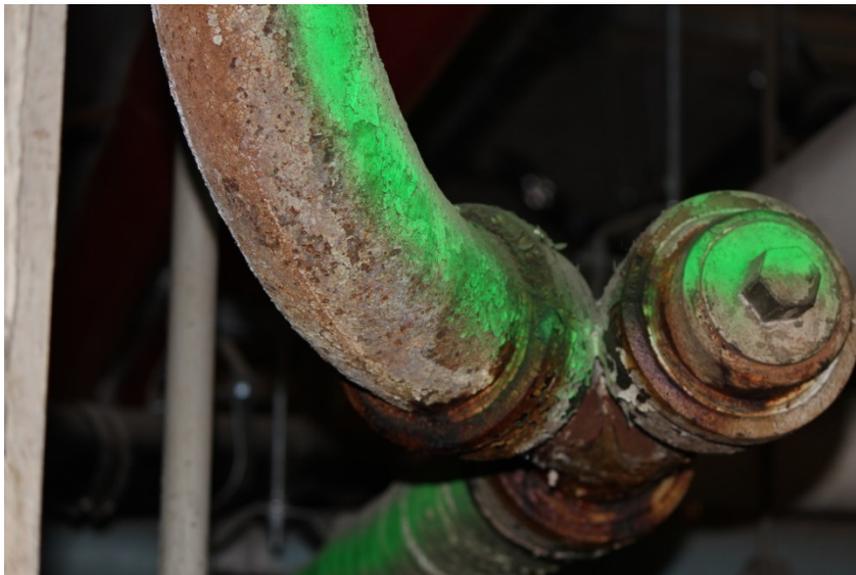
OSIG staff reviewed processes and automated systems for space planning and utilization, conducted web research on facility management and leading practices, and toured selected buildings to document deferred maintenance needs. The following results were noted:

VCU uses automated systems for work orders, and tracking maintenance performed, capital projects, space management, and document storage (blue prints, schematics, etc.).

The university, like others in the state and nationwide, is faced with a significant amount of deferred maintenance needs. The following photographs document a sample of needs and the observations which follow provide further detail.



**Sanger Hall** – Chiller that needs to be replaced



**Sanger Hall** — Lead sewer pipes with corrosion



**Sanger Hall – Domestic water pipes leaking**



**Sanger Hall – Ductwork in renovated lab space**



**West Hospital – External window deterioration**



**West Hospital – Chiller**



**West Hospital** – Corroded, rusting pipes



**Hunton House** – Water damage

### **Commendation**

VCU is currently studying installation of a central chiller plant to serve multiple buildings versus continuing to install and replace individual chillers in each building.

### **OBSERVATION NO. 3 — ENHANCE THE PROCESS FOR MAINTENANCE AND CONSTRUCTION PLANNING**

The APPA (formerly known as the Association of Physical Plant Administrators) Body of Knowledge<sup>22</sup>, available to members online, includes a section on Capital Renewal and Deferred

---

<sup>22</sup> APPA Body of Knowledge. URL: <http://www.appa.org/BOK/>. Accessed December 18, 2015.

Maintenance Programs. The section states that APPA: Leadership in Educational Facilities serves and assists facilities officers and physical plant administrators in colleges, universities, and other educational institutions. The 2009 version<sup>23</sup> (most recent available online without APPA membership) states, “The goal of integrated financial planning is to ensure that capital assets are acquired based on well-defined needs and are cost-effective additions to the plant. This means that utilization of existing space is fully examined prior to commitments for planning and funding new construction. In addition, operations and maintenance, along with repairs, replacements, and renovations, must be fully addressed to prevent accumulation of backlogs.” The document provides guidance on strategy, identifying funding requirements and options, and includes a structured method for setting priorities.

The National Park Service (NPS) implemented a structured process for managing assets beginning in 2002.<sup>24</sup> The process uses the facility condition index (FCI), an asset priority index (API), and critical systems identification. FCI is a relatively simple rating of a building determined by dividing the value of deferred maintenance needs by the replacement value of the building. The NPS realized the FCI was not detailed enough to use as the only ranking of maintenance needs and developed the API to score the relative importance of each asset. The third measure of critical systems looked at items such as roofing, HVAC, and external doors and windows. Using all three measures has allowed the NPS to make facility decisions using data and information rather than just reacting to a particular need.

VCU, like many universities, has a significant deferred maintenance backlog. A recent study performed by Sightlines: Facilities Asset Advisors<sup>25</sup> stated that VCU has \$329 million in capital needs over the next 10 years, with \$66 million of that needed in the next three years. Sources and amounts of funding for deferred maintenance are noted in the table below:

<b>Source of Estimated Funds for Deferred Maintenance</b>	<b>Amount of Funds Available</b> (in millions)	<b>3-Year Deferred Maintenance Needs</b> (in millions)
Virginia Central Maintenance Reserve	\$10.5	
VCU Board of Visitors	\$6	
Facilities Operating Funds	\$2.4	
Physical Plant (for deferred and preventative maintenance – assumes ½ for each)	\$1.5	
<b>3-Year Total</b>	<b>\$20.4</b> (30.9% of 3-year need)	<b>\$66</b>

<sup>23</sup> APPA. Capital Renewal and Deferred Maintenance Programs. URL: <http://certification.appa.org/documents/bokchapter13-capitalrenewalanddeferredmaintenanceprogram.pdf>, page 7. Accessed December 18, 2015.

<sup>24</sup> Facilitiesnet.com. Kincaid, Douglas W. Facility Management: Three Metrics Drive Steer Investment Decisions. URL: <http://www.facilitiesnet.com/facilitiesmanagement/article/Facility-Condition-Index-Other-Metrics-Improve-Asset-Management-at-National-Park-Service--14349?source=part>. Accessed December 18, 2015.

<sup>25</sup> Sightlines. URL: <http://www.sightlines.com/>. Accessed December 18, 2015.

In addition, some deferred maintenance is addressed through state-funded capital renovation projects. In FY 2015, VCU continued with a second phase of renovation at Sanger Hall that addresses some deferred maintenance.<sup>26</sup>

VCU completed a master plan in 2012 to map current and future needs for space (classroom, class labs, research space, offices, parking, housing, etc.) and included a list of capital projects to meet the needs. The plan included major renovations of some buildings and new construction. Facilities staff and management and senior administration provided input on which deferred maintenance needs to address. However, selection of deferred maintenance projects was subjective in nature, based on opinions rather than a structured analysis of risks and costs.

The 2012 master plan included most satellite facilities, but did not include Hanover Farm, an 89-acre property in Hanover County formerly used by VCU for research and later for storage. Facilities management stated some items are still stored there, and a May 2014 report prepared by VCU's Office of Environmental Health and Safety described the state of disrepair and accident hazards around the property and provided recommendations for correcting the issues.

VCU is beginning a new master plan that Facilities management stated will be more objective, but did not provide details since the process is just starting. The planning process includes a space analysis being performed by a third party, multiple meetings with stakeholders including surrounding community groups, and increased alignment with the VCU Quest for Distinction (strategic plan).

VCU Facilities currently uses two automated systems, AiM Integrated Workplace Management Systems (IWMS) Work Order and Capital Projects modules, and FM Systems FM Interact for space management. Deferred maintenance is currently tracked in Microsoft Excel spreadsheets. Both AiM and FM Systems — as well as PFM Future Perfect (being used by the VCU Budget office) and the Facility Inventory Condition and Assessment System (FICAS) — offer modules and/or capability for tracking, risk rating, and prioritizing deferred maintenance needs to assist in assuring projects are addressed in the appropriate order and at the correct time. Such an automated tool may also be used to assess new construction proposals and to prioritize those in conjunction with maintenance projects. VCU Facilities is not currently using the FCI, but VCU Facilities management felt it would be an additional rating method to consider with other methods.

FICAS was selected by the APA in 2004 for centralized tracking of facilities and their condition to assist in decision-making processes, but lost state funding in 2011 due to budget cuts. Use of the system is optional at this time. VCU management stated the system is very detailed and time consuming to use. In the November 2014 report "Addressing the Cost of Higher Education in

---

<sup>26</sup>Virginia Legislative Information System. Fiscal Year 2015 Appropriations. URL: <http://lis.virginia.gov/cgi-bin/legp604.exe?142+bud+62-17.10>. Accessed December 18, 2015.

Virginia,” the Joint Legislative Audit and Review Commission (JLARC) recommends use of the FICAS system to aid in capital and deferred maintenance funding decisions.

Deferred maintenance is an issue at many universities and has been caused by inadequate maintenance funding over the years, particularly during times of recession.<sup>27</sup>

Potential risks of not addressing deferred maintenance include unhealthy working conditions due to mold and mildew from water leaks, dust from aging duct systems, and exposure to asbestos (which is a known human carcinogen)<sup>28</sup> and lead paint (which is linked with a number of illnesses)<sup>29</sup>. There are also potential physical safety risks such as fire hazards, stair railings that need to be replaced, and failed water and sewage pipes, as well as the inability to continue operations due to infrastructure or other building issues, and possible legal action resulting in monetary loss to the university. Continued deferred maintenance also increases costs in the future. Buildings Magazine<sup>30</sup> states each \$1 in deferred maintenance equals \$4 in capital renewal costs later.<sup>31</sup> American School and University<sup>32</sup> also states deferring maintenance costs more later.<sup>33</sup>

#### RECOMMENDATION

VCU should continue its efforts to ensure a structured, documented process. The process should include ratings and methods such as the FCI that provides a high-level rating of each building, API to establish the relative importance of each building, and critical systems identification such as HVAC, electrical, sewer, and water in each building. Having these processes in place will help to rate and prioritize deferred maintenance and new construction for all properties. In addition, a structured process will help ensure existing property is being used as effectively as possible as well as addressing deferred maintenance needs in an efficient manner. Automated systems such as those noted above, although initially taking time to implement, will improve the efficiency, effectiveness, and economy of operations over time.

#### Management Response:

VCU is currently evaluating reestablishing the use of the FICAS system. This summer we will be benchmarking against peer institutions looking for best practices.

---

<sup>27</sup> College Planning and Management. Rowh, Mark, February 1, 2014, Can It Wait? URL: <https://webcpm.com/Articles/2014/02/01/Deferred-Maintenance.aspx>. Accessed December 18, 2015.

<sup>28</sup> National Institutes of Health, National Cancer Institute. URL: <http://www.cancer.gov/about-cancer/causes-prevention/risk/substances/asbestos/asbestos-fact-sheet>. Accessed December 18, 2015.

<sup>29</sup> United States Environmental Protection Agency. URL: <http://www.epa.gov/lead>. Accessed December 18, 2015.

<sup>30</sup> Buildings, Smarter Facility Management which is a community of facility managers and building owners responsible for commercial and public buildings. URL: <http://www.buildings.com/about-us.aspx>. Accessed December 18, 2015.

<sup>31</sup> Buildings, Smarter Facility Management. Paying for Deferred Maintenance. URL: <http://www.buildings.com/article-details/articleid/3161/title/paying-for-deferred-maintenance.aspx>. Accessed December 18, 2015.

<sup>32</sup> American School and University, Shaping Facilities and Business Decisions has been an information source for education facilities since 1928. URL: <http://asumag.com/about>. Accessed December 18, 2015.

<sup>33</sup> American School and University, Shaping Facilities and Business Decisions. Falling Behind: School Maintenance & Operations. URL: <http://asumag.com/deferred-maintenance/falling-behind-school-maintenance-operations>. December 18, 2015.

#### OBSERVATION NO. 4 — ENHANCE STRATEGIES TO CATCH UP ON DEFERRED MAINTENANCE

Sightlines: Facilities Asset Advisors recommended five strategies to “release value from existing assets and optimize scarce capital” in their report, “The State of Facilities in Higher Education: 2014 Benchmarks, Best Practices, and Trends.”<sup>34</sup> The strategies included:

- Build strategically — includes implementing policies to minimize net new square footage until the backlog is reduced to manageable levels;
- Less can be more — consider eliminating buildings and replacing with more modern and efficient facilities such as the new building for the School of Nursing in 2007 after which the old location was demolished;
- Look ahead — set capital priorities at least five years out and do not wait for building failures to occur (VCU sets capital priorities on a six-year cycle and has a Master Site Plan that extends to 2020);
- Keep-up — make annual stewardship (funding for regular/preventative maintenance) a priority; and
- Reward savings — reallocate savings gained by making buildings run more efficiently (modernization, energy savings, etc.) to increase annual capital budgets and stewardship (VCU currently allows use of carryforward funding for deferred maintenance projects).

In a 2012 webinar, “New Strategies for Attacking Deferred Maintenance,” Sightlines: Facilities Asset Advisors listed several other steps that may be taken to catch up on deferred maintenance (see page 13) and used the University of Massachusetts (UMass) at Amherst as an example. UMass-Amherst decreased deferred maintenance by 18 percent between April 2009 and June 2011 using steps listed in the webinar.<sup>35</sup>

Other strategies identified in OSIG staff research include the following:

- Academic Impressions (AI) Proactive Approaches to Deferred Maintenance recommends using energy savings, and developing a reserve maintenance fund;<sup>36</sup> and
- The Auburn University Foundation Assistant Treasurer said the university invests a portion of the budgeted maintenance funds into the endowment pool and receives approximately four percent payout from the endowment pool to supplement current maintenance needs.

VCU management stated that the university has had minimal success with, and therefore does not actively solicit, funding from donors or grants for historic buildings or for maintenance needs. The

---

<sup>34</sup> Sightlines. State of Facilities in Higher Education, 2014 Benchmarks, Best Practices & Trends. URL: <http://www.sightlines.com/wp-content/uploads/2014/08/The-State-of-Facilities-in-Higher-Education-2014-Benchmarks-Best-Practices-Trends-FINAL.pdf>, pages 20-21. Accessed October 20, 2015.

<sup>35</sup> Sightlines. New Strategies for Attacking Deferred Maintenance. URL: <http://www.slideshare.net/Sightlines/new-strategies-for-attacking-deferred-maintenance-december-2012>, slide 37. Accessed October 20, 2015.

<sup>36</sup> Academic Impressions. Proactive Approaches to Deferred Maintenance. URL: <http://www.academicimpressions.com/news/proactive-approaches-deferred-maintenance>. Accessed October 20, 2015.

university is considering the use of tax credits for one facility. However, funding is still not sufficient to catch up on deferred maintenance.

There are multiple potential risks associated with not addressing deferred maintenance including unhealthy working conditions, physical safety, inability to continue operations, legal action, and reputation damage.

**RECOMMENDATION**

VCU should implement strategies such as those noted above to help catch up on deferred maintenance. VCU should also consider applying for grants, particularly for historic buildings, to assist in catching up on deferred maintenance. In addition, the use of tax credits should be considered for additional facilities.

**Management Response:**

As noted in the study, reducing the backlog of deferred maintenance is funding dependent. The University is currently supplementing the Maintenance Reserve appropriation from the General Assembly by approximately 50%. We are in discussions with historic tax credit experts to explore the feasibility of using tax credits. We are pressing forward with identifying facilities to offer Energy Service Company (ESCO) contractors to evaluate and make recommendations on projects that would improve energy efficiency while also eliminating deferred maintenance items. Our deferred maintenance backlog will also significantly decrease this summer with the demolition of the Gladding residences and the low-rise dormitories on the MCV campus.

**OBSERVATION NO. 5 — DETERMINE AND EXECUTE A PLAN FOR WEST HOSPITAL**

West Hospital, opened in 1941, is a 312,000-square-foot building, and currently “houses various clinical, administrative, and support services of the hospitals of VCU Medical Center; clinical, academic and administrative units of the School of Medicine; and academic and administrative units of the School of Allied Health Professions.”<sup>37</sup>

Facilities management said that West Hospital has exterior leaks, but accessing certain exterior walls is difficult. The building requires maintenance at least once a week due to water leaks. In addition, the building has approximately 400 window air conditioning units in place, as well as two chillers. Because modern technology generates significant heat, the chillers are unable to handle the building’s needs, which forced the installation of the window units.

The building has aging infrastructure including water, sewer and steam pipes, and electrical systems. Pipes and chillers in the basements, walls, and ceilings are decaying. Exterior windows and doors need repair or replacement and the brickwork needs to be repointed (old mortar replaced). See [Deferred Maintenance Photos](#).

---

<sup>37</sup> Virginia Commonwealth University Maps. URL: <http://www.maps.vcu.edu/mcv/westhospital/>. Accessed October 14, 2015.

Facilities management felt the West Hospital should be demolished, but in the past, there has been some community opposition due to the architectural style of the building and a desire to preserve historical buildings. To accomplish either renovation or demolition, occupants of the building will need to be moved elsewhere while the work is performed.

In October 2011, VCU management reported to the State Council of Higher Education (SCHEV) that the replacement value for West Hospital was \$195 million and that the building had \$87.75 million in maintenance needs. A FCI of 0.45 (or 45 percent) was calculated by dividing the maintenance needs by the replacement value. The higher the FCI is, the worse the condition of the facility. Any FCI above 30 percent is considered critical.<sup>38</sup>

Through several VCU master plans from 1970 through 2013, the fate of West Hospital has been considered, either to renovate it or demolish it with the most recent consideration being to renovate it. However, Facilities Management told OSIG staff that very little maintenance and no renovation had been done on the building as of the time of this review.

Although the condition of West Hospital has been discussed over the years by VCU management, no assessment of options (demolition, renovate, sell) was documented and actions included in the Master Plans were not implemented.

Failure to address West Hospital's issues may lead to system interruptions such as water and electric resulting in disruption of operations, health implications due to mold and mildew, asbestos (known human carcinogen) and lead paint (linked to multiple illnesses), and sewer spills, which may further lead to negative monetary and reputation impacts. Had conditions and funding allowed, VCU may have been able to upgrade to more efficient systems (chillers and AC units) to decrease operating costs and perform regular preventative maintenance on the building.

#### **RECOMMENDATION**

As part of VCU's next Master Site Plan Update, the University should prepare an analysis of the future use of West Hospital. At a minimum, the analysis should include the financial and programmatic feasibility of renovation versus replacement, and other possible options. The Master Plan Update should also address the cost and the timing of the selected option.

#### **Management Response:**

VCU Facilities Management has initiated a study concerning the future of West Hospital. The first draft is scheduled to be complete in July 2016.

---

<sup>38</sup> Asset Insights. Facility Condition Index. URL: [http://www.assetinsights.net/Glossary/G\\_Facility\\_Condition\\_Index.html](http://www.assetinsights.net/Glossary/G_Facility_Condition_Index.html). Accessed October 14, 2015.

## Risk Area 6 – Strategic Planning and Performance Measures for Student Success

### REVIEW OBJECTIVES AND STEPS:

The review objectives were to evaluate the effectiveness of the university/colleges and businesses collaboration efforts to develop successful academic programs to prepare graduates for the workforce, and to determine whether the university/college has made reasonable progress to develop outcome metrics to measure student and educational program success.

Review steps included identifying student success measures in the Quest for Distinction and reviewing a sample internship programs. OSIG staff identified two areas where efficiency, effectiveness, or economy of operations may be enhanced through changes to current practices.

### OBSERVATION NO. 6 – ENHANCE INFORMATION SHARING AMONG CAREER CENTERS

VCU has three career services centers:

- Division of Student Affairs
- School of Engineering
- School of Business

According to VCU’s Division of Student Affairs Career Services website, “VCU Career Services serves more than 26,000 current students and more than 100,000 alumni across both VCU campuses” (Monroe Park and [Medical College of Virginia] MCV).

In spring 2013, VCU established a Career Council. The council’s goal is to maximize the resources allocated at VCU to ensure that students are successful in the application of their education to post-graduate outcomes and their overall career development. The Director of VCU Career Services convenes this group up to three times per academic year and facilitates the discussion of common issues, resources, and solutions used to manage career-related services for undergraduate and graduate/professional students, alumni, and the community. All members of the VCU community are invited to participate, especially if their role on campus has a direct connection to student career development.<sup>39</sup>

When talking with staff at VCU’s career centers, OSIG staff was informed that some practices among the career services centers vary and practices within the departments are not shared consistently among the three career centers. For example, the Engineering Career Center is the only center that sends out job, internship, etc. notices to a student’s home so that a household member can help to remind the student of important dates.

---

<sup>39</sup> VCU Career Council. Source URL: <http://careers.vcu.edu/facstaff/career-council/>. Accessed January 13, 2016.

## RECOMMENDATION

VCU's career council meetings should be used as a method to communicate office practices among the career centers and the various schools. Additionally, other forms of communication, such as emails, memos, social media tools, etc. should be considered as tools to be used to share information between scheduled council meetings.

### Management Response:

During the 2015-2016 academic year, the VCU Career Council was convened by the Interim Director of VCU Career Services and comprised membership from 10 of the university's 13 schools and colleges. A new Director will be starting July 1, 2016 and her responsibilities will include overseeing enhancements to the Career Council that will establish the Council as a mechanism for sharing best practices, improving communications and expanding the reach and impact of the Council and career services offerings:

1. Review Council composition and identify additional academic and/or administrative units to participate;
2. Use Council to identify and share best practices information;
3. Post calendar of Council meetings to the websites for each of VCU's career centers;
4. Continue to expand communications and message delivery mechanisms regarding job opportunities and career services [note: periodic email now being sent to all students with embedded link to 'careers@vcu.edu' site];
5. Research and benchmark career centers at other very high research, public institutions, considering, but not limited to, the following elements:
  - a. infrastructure,
  - b. service offerings,
  - c. data-sharing mechanisms;
6. Share results of research and benchmarking effort with Council and begin discussions around potential changes at VCU; and,
7. Provide trends in # of job postings and overview of significant changes implemented during an academic year.

## OBSERVATION NO. 7 — ENHANCE INFORMATION SHARING AMONG SCHOOLS AND DEPARTMENTS AND USE OF HIRE VCURAMS

SCHEV held a summit on June 9, 2015, titled, "Our Common Wealth: An Educated Citizenry for the 21st Century — A Summit on Quality and Value in Virginia's System of Higher Education." One of the discussion questions asked during the summit was, "How do we collaborate among all sectors of higher education, instead of the current stratification, where there is little communication and lack of shared mission?"

There were three goals of the summit:

- To encourage meaningful discussions about quality and utility in undergraduate education;
- To enable useful new relationships among businesses, government, and higher education that will promote quality in education and facilitate meeting the needs of society; and
- To identify actions that will improve support for institutions and their students and the contributions they can make to meet the needs of the Commonwealth.

VCU's Quest for Distinction identifies the percentage of students with internships, practicums, etc., as one of the metrics used to provide students a quality education through rigorous and innovative academic programs that support and prepare students for civic engagement and careers in a 21st-century global environment.

VCU utilizes a web-based portal (HireVCURams) to post internships and job opportunities for the University. Additionally, the portal has a component for students to self-report current data about their internship/job activities. For curriculums that require internships, the portal is a means through which students' internships may be approved. However, VCU staff indicated that only some schools utilize this tool to record internships. Not having adequate data could result in the university not being able to effectively measure goals and some students not being able to access valuable information, opportunities, and/or services.

#### **RECOMMENDATION**

Schools should develop strategies to ensure all opportunities are entered into HireVCURams database to share throughout the university. Additionally, other forms of communication, such as emails, memos, social media tools, etc., should be considered as tools to automatically notify students of opportunities listed in the HireVCURams database.

#### **Management Response:**

The VCU Career Services Office designed and launched HireVCURams in 2012 as a comprehensive job and internship search tool available to all VCU students and alumni for life. Since the launch of this search tool, postings have grown over 80% and encompass the majority of VCU's academic programs. Information about HireVCURams is available on the various career center websites. Regular meetings among the three Monroe Park Campus-based career centers are used to discuss issues, coordinate efforts to expand reach, and develop and enhance communication to internal and external stakeholder groups, e.g., students and employers.

In addition to the job posting portal, VCU Career Services has recently launched an email campaign targeting all students, which provides a direct link to the HireVCURams site. This communications mechanism will continue moving forward, with decisions regarding frequency and the need to revise messaging to be determined by the Career Council. VCU

endorses further efforts via the Career Council to continue to expand the use of the job search portal, as described below.

1. Use Council to determine current level of participation and opportunity-posting ‘gaps’ that currently exist;
2. Assess practices currently used to identify opportunities and post to HireVCURams database;
3. Establish ‘best practice’ process for posting opportunities;
4. Determine feasibility of designing a tracking mechanism/report to evaluate level of opportunity posting achieved by school/college, e.g., process, resource needs, ease of implementation and maintenance; and
5. Continue strategic expansion of HireVCURams and report on progress.

### **Risk Area 7 – Indicators or Opportunities for Fraud, Waste, or Abuse**

#### ***REVIEW OBJECTIVES AND STEPS:***

The objective was to determine if there are indicators or opportunities for fraud, waste, and abuse in the areas reviewed. This was accomplished through the work performed in each of the risk areas discussed above.

No indicators or opportunities for fraud, waste, or abuse came to our attention in the areas reviewed.