Vanderbilt University
Virginia Commonwealth University
Virginia Department of General Services
Wagner College
Wake Forest University
Washburn University
Washington University in St. Louis
Wellesley College
Wesleyan University
West Chester University
West Liberty University
West Virginia Health Science Center
West Virginia Institute of Technology
West Virginia School of Osteopathic Medicine
West Virginia State University
West Virginia University
Western Connecticut State University
Western Oregon University
Westfield State University
Wheaton College
Widener University
A Vocabulary for Measurement

The Return on Physical Assets – ROPA℠

Annual Stewardship

The annual investment needed to ensure buildings will properly perform and reach their useful life “Keep-Up Costs”

Asset Reinvestment

The accumulation of repair and modernization needs and the definition of resource capacity to correct them “Catch-Up Costs”

Operational Effectiveness

The effectiveness of the facilities operating budget, staffing, supervision, and energy management

Service

The measure of service process, the maintenance quality of space and systems, and the customers opinion of service delivery

Asset Value Change

Operations Success
Campus Observations

• **Renewing Building Inventory** - Harper’s historical construction profile as well as the building renovation strategy has resulted in 60% of space less than 25 years old. This is forecasted to increase to 79% by FY2019 and resulting in a backlog reduction of 40%.

• **Demanding Campus Profile** - The combination of highly technical buildings and an elevated population density contribute to additional capital and operational demands.

• **Increasing Impact of Capital Investments** – Harper’s recent investment profile is above peer average and has surpassed annual funding targets since FY14. Additionally, funding has shifted to focused on replacing aging campus infrastructure and new construction.

• **Superior Service Levels Managing High Expectations** – Despite a challenging campus profile, Harper’s Facilities Team achieves above average output levels to match high campus expectations.
Harper’s Age Profile

Planned renovations will reset much of campus

Campus Age Profile

- **Buildings over 50**
  - Life cycles of major building components are past due. Failures are possible.
  - Highest risk

- **Buildings 25 to 50**
  - Major envelope and mechanical life cycles come due.
  - Higher Risk

- **Buildings 10 to 25**
  - Short life-cycle needs; primarily space renewal.
  - Medium Risk

- **Buildings Under 10**
  - Little work. “Honeymoon” period.
  - Low Risk

*Assumes completed renovations to D, A, F, M

<table>
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<th>% of Space</th>
<th>Harper FY13</th>
<th>Harper FY16</th>
<th>FY16 Peer Avg.</th>
<th>Harper Projected FY19*</th>
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<td>40%</td>
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</tbody>
</table>

* Assumes completed renovations to D, A, F, M.
Total Capital Investment

Harper’s investment level increases in FY16

New Space Spending:
- Parking Garage
- D Building
- Building H
Harper’s Investment vs. Peers

Harper exceeds target in FY16 compared to peers and database averages

Total Capital Investment vs. Funding Targets

Harper exceeds target in FY16 compared to peers and database averages.
Forecasting Harper’s AR Backlog in FY19

Planned renovations will reduce backlog to $74 Million in FY19

Estimated Asset Reinvestment With Planned Renovations

- **Modernization Needs**: $136/GSF
- **Year Add'l Deferred**: estimated using FY11-15 average deferral rate x projected targets FY25-27 (Not ROPA+)
- **Future infrastructure needs not included in backlog projection**
Energy Consumption vs Peers

Harper’s energy profile is below regional peer average

Harper Energy Consumption

Energy Consumption

Inst. Ordered by tech rating

Fossil Electric
Sightlines Inspection Score Vs Peers

General Repair Score (1-5)
- Harper: 4.41
- Peers: 3.73
- Database: 3.85

Cleanliness Score (1-5)
- Harper: 4.72
- Peers: 3.91
- Database: 4.08

Grounds Score (1-5)
- Harper: 4.00
- Peers: 3.94
- Database: 3.91
Campus Strategies

• **Increase Funding to Keep-Up** – The ROPA+ model suggests Harper should fund a minimum of $11 Million per year to maintain a steady-state campus condition. This funding strategy is critical to preserving the value and condition of buildings as renovations wind down.

  **Bottom Line:** Harper should secure an annual funding allocation to “keep-up”

• **Rebalance Project Selection** - The Asset Reinvestment catch-up need identified through the ROPA+ Prediction process identified significant needs in building systems and building envelope components. To mitigate future asset reliability issues, funding should continue to prioritize these types of projects.

  **Bottom Line:** Project selection should prioritize building systems and envelope needs

• **Utilize a Data-Informed Approach to Optimize Performance** – It is recommended that Harper College leverage qualified data and information to optimize operational and capital resources as the campus evolves through strategic master planning efforts. The ROPA+ platform is a data-informed management tool that can support campus leadership through benchmarking, COST-Forecasting, KPI measurement, and multi-year capital planning.

  **Bottom Line:** ROPA+ membership supports strategic campus planning and performance
Questions & Discussion