Sightlines LLC
University of Maine System Presentation
FY2011
January 23, 2012
Presented by: Jim Kadamus & Jon King
Sightlines profile
Common vocabulary, consistent methodology, credibility through benchmarking

- 10 year old company based in Guilford, CT
- Common vocabulary and consistent methodology
  - 95% Annual retention rate
- Tracking $5.9 billion in operations budgets and $4.2 billion in capital projects
- Database of 23,500 buildings and 825 million GSF
A vocabulary for measurement

The Return on Physical Assets – ROPA™

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

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

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

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

Annual Stewardship

Asset Reinvestment

Operational Effectiveness

Service

Asset Value Change

Operations Success
### Institution abbreviations and peer systems

<table>
<thead>
<tr>
<th>University of Maine System Institutions:</th>
<th>Abbreviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Maine</td>
<td>UM</td>
</tr>
<tr>
<td>University of Maine at Augusta</td>
<td>UMA</td>
</tr>
<tr>
<td>University of Maine at Farmington</td>
<td>UMF</td>
</tr>
<tr>
<td>University of Maine at Fort Kent</td>
<td>UMFK</td>
</tr>
<tr>
<td>University of Maine at Machias</td>
<td>UMM</td>
</tr>
<tr>
<td>University of Maine at Presque Isle</td>
<td>UMPI</td>
</tr>
<tr>
<td>University of Southern Maine</td>
<td>USM</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>State System Comparisons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mississippi Institutions of Higher Learning</td>
</tr>
<tr>
<td>Oregon University System</td>
</tr>
<tr>
<td>Pennsylvania State System of Higher Education</td>
</tr>
<tr>
<td>University of Alaska System</td>
</tr>
<tr>
<td>University of Missouri System</td>
</tr>
<tr>
<td>University System of New Hampshire</td>
</tr>
</tbody>
</table>
Core Observations

**Aging Campus Profile:**
Although the Maine System has seen some recent new space and major renovations, 69% of System space is over 25 years of age, a time at which critical building needs come due and investment is needed.

**Historically Low Capital Investment:**
Annual Stewardship funding has been insufficient to meet Sightlines recommended investment targets across the System. Furthermore, one-time infusions of capital have been inadequate to make up the annual shortfall and address the growing backlog of needs.

**Solid Operations Performance:**
Solid operations metrics, generally satisfied customers, and improving energy management indicate effectiveness of campus facilities staff despite limited funds and generally inadequate service process.
Physical Profile
UM System age profile – 69% of space over 25 years old
 UM System Total GSF: 9.03 Million

Campus Age Distribution over time

- U Maine System 2006:
  - Under 10: 18%
  - 10 to 25: 10%
  - 25 to 50: 43%
  - Over 50: 29%

- U Maine System 2009:
  - Under 10: 20%
  - 10 to 25: 11%
  - 25 to 50: 38%
  - Over 50: 30%

- U Maine System 2011:
  - Under 10: 18%
  - 10 to 25: 13%
  - 25 to 50: 34%
  - Over 50: 35%
UM System age profile – 69% of space over 25 years old
UM System Total GSF: 9.03 Million

Campus Age Distribution over time

- High Risk: U Maine System 2006 (43%), U Maine System 2009 (38%), U Maine System 2011 (30%)
- Moderate Risk: U Maine System 2006 (10%), U Maine System 2009 (11%), U Maine System 2011 (20%)
- Low Risk: U Maine System 2006 (18%), U Maine System 2009 (20%), U Maine System 2011 (20%)

Legend:
- Blue: Under 10
- Red: 10 to 25
- Green: 25 to 50
- Purple: Over 50
UM System age profile compared to public universities

Maine has more space in the over 50 category compared to other public schools

Renovation Age Profile by Category

- **Under 10**: UM System 18%, Public University Database Average 21%
- **10 to 25**: UM System 13%, Public University Database Average 19%
- **25 to 50**: UM System 34%, Public University Database Average 39%
- **Over 50**: UM System 35%, Public University Database Average 21%
Space Per Student vs. Public Database

UM has a comparable amount of program space and more residential space per student.

<table>
<thead>
<tr>
<th></th>
<th>Program Space per Student FTE</th>
<th>Residential Space per Student FTE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maine</td>
<td>Public Average</td>
</tr>
<tr>
<td>GSF per Student</td>
<td>180</td>
<td>140</td>
</tr>
<tr>
<td></td>
<td>160</td>
<td>120</td>
</tr>
<tr>
<td></td>
<td>140</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>120</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>
Asset Value Change Analysis
System Total Project Spending
$292M spent in last 6 years; 44% into existing facilities

University of Maine System Investment Profile

6-Year Capital Investment Distribution

UM System Annual Average 2010- $51.2M
UM System Annual Average 2011- $48.7M

Significant Projects from FY2011:
• AEWC Expansion at UM
• Community Arts Center at UMF
• Dental Clinic Renovation at UMA-Bangor campus
Investment into existing space system comparison

FY2011 investment the lowest of peer systems and half of the public university average

**FY2011 Capital investment into existing space**

<table>
<thead>
<tr>
<th></th>
<th>Maine</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>$/GSF</td>
<td>$5.00</td>
<td>$6.00</td>
<td>$6.00</td>
<td>$5.00</td>
<td>$7.00</td>
<td>$7.00</td>
<td>$7.00</td>
</tr>
</tbody>
</table>

Peer Systems Average: $4.19/GSF

Change from FY10:
- Increased 5%+
- Decreased 5%+
- Stayed within 5%

*SL Public University FY2011 avg. - $3.86/GSF*
Balanced mix of spending into existing space

Increased investments in FY 2011 to protect and sustain building systems

**UM System FY2006-2010 Investment Mix**
- Building Envelope: 30%
- Building Systems: 29%
- Infrastructure: 15%
- Space Renewal: 13%
- Safety/Code: 13%

**UM System FY2011 Investment Mix**
- Building Envelope: 25%
- Building Systems: 37%
- Infrastructure: 12%
- Space Renewal: 5%
- Safety/Code: 6%

**Public Universities FY2006-2011 Investment Mix**
- Building Envelope: 30%
- Building Systems: 29%
- Infrastructure: 15%
- Space Renewal: 13%
- Safety/Code: 22%
Defining Stewardship Investment Targets

Meeting targets enables System to maintain Net Asset Value

FY2011 Stewardship Targets

UM System Replacement Value: $2.3 Billion

- 3% Replacement Value: $69.5
- Life Cycle Need: $29.4
  - Space/Program: $25.9
  - Envelope/Mechanical: $19.4
- Target: $14.7

Depreciation Model

Sightlines Recommendation
Total capital investment over time

UM System reaching target zone in only one of the last six years

Total Capital Investment FY06-FY11

- Increasing Asset Value
- Stabilizing Asset Value
- Declining Asset Value

$ in Millions


Recurring Capital One-Time Capital
**Net Asset Value by Campus**

UM System is below public database; remains above the critical maintenance stage.

**NAV Index**

- **Capital Upkeep Stage:** Primarily new or recently renovated buildings w/ sporadic building repair & life cycle needs; “You pick the projects”
- **Repair and Maintain Stage:** Buildings are beginning to show their age and may require more significant investment on a case-by-case basis
- **Systemic Renovation Stage:** Buildings may require more significant repairs; large-scale capital infusions/renovations are inevitable; “The projects pick you”
- **Critical Maintenance/Gut Renovation Stage:** Major buildings components are in jeopardy of complete failure. Reliability issues are widespread throughout the building.

**NAV = \frac{\text{Replacement Value} - \text{Building Needs}}{\text{Replacement Value}}**
**Asset Reinvestment Backlog Estimation**

Strategic investments of capital keeps UM System backlog in line with public average.

<table>
<thead>
<tr>
<th>Total Asset Reinvestment Backlog $/GSF</th>
<th>Maintenance Repair Backlog $/GSF</th>
</tr>
</thead>
<tbody>
<tr>
<td>UM System</td>
<td>SL Public University Avg.</td>
</tr>
<tr>
<td>$80</td>
<td>$88</td>
</tr>
<tr>
<td>SL Public University Avg.</td>
<td>UM System-Maint/Repair</td>
</tr>
<tr>
<td>$45</td>
<td>$45</td>
</tr>
<tr>
<td>UM System-Maint/Repair</td>
<td>SL Public University Avg-Maint/Repair</td>
</tr>
</tbody>
</table>

**Total Asset Reinvestment Backlog $/GSF by Campus**

Campus Backlog $/GSF Range: $67–$98

<table>
<thead>
<tr>
<th>Campus</th>
<th>Total Asset Reinvestment Backlog $/GSF</th>
</tr>
</thead>
<tbody>
<tr>
<td>UM</td>
<td>$80</td>
</tr>
<tr>
<td>USM</td>
<td>$80</td>
</tr>
<tr>
<td>UMA</td>
<td>$80</td>
</tr>
<tr>
<td>UMF</td>
<td>$80</td>
</tr>
<tr>
<td>UMFK</td>
<td>$80</td>
</tr>
<tr>
<td>UMM</td>
<td>$80</td>
</tr>
<tr>
<td>UMPI</td>
<td>$80</td>
</tr>
</tbody>
</table>
Campus Operations
Facilities Operating Budget

System budget higher than Public University Average, but lower than in FY 2010

**FY2011 Facilities Operating Budget**

<table>
<thead>
<tr>
<th></th>
<th>UM System</th>
<th>Public Database</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily Service</td>
<td>$4.61</td>
<td>$3.98</td>
</tr>
<tr>
<td>Planned Maintenance</td>
<td>$0.12</td>
<td>$0.23</td>
</tr>
<tr>
<td>Utilities</td>
<td>$2.66</td>
<td>$2.22</td>
</tr>
</tbody>
</table>

UM System: - Year Distribution

- Daily Service: 36%
- Planned Maintenance: 2%
- Utilities: 62%

Public Database: 6- Year Distribution

- Daily Service: 35%
- Planned Maintenance: 4%
- Utilities: 61%
Unit costs decreased in FY11, but harsh winter increased consumption.
Service Process in need of improvement across System

Improved service process will make facilities operations more proactive and efficient

Service Process Index vs. Peer Systems

- Maine
- B
- C
- D
- E
- F
- G

- Service Process Index vs. Peer Systems
Service Process
Understanding the effectiveness of a powerful work order system

<table>
<thead>
<tr>
<th>Category</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization</td>
<td>4.00</td>
</tr>
<tr>
<td>Centralization</td>
<td>4.00</td>
</tr>
<tr>
<td>Scheduling</td>
<td>3.00</td>
</tr>
<tr>
<td>Work Request System</td>
<td>4.00</td>
</tr>
<tr>
<td>Performance Measurement</td>
<td>3.00</td>
</tr>
</tbody>
</table>

**Enhancing your Service Process**

- Install a functioning system
- Make sure the system provides more than data
- Streamline your work-order process
- Clearly define who does what
- Track and report frequently for reliable data
Service Process

Understanding the effectiveness of a powerful work order system

- Assess buildings with largest number of requests
- Assess trades with most requests
- Identify potential projects and address with capital funding

- Designate PM work orders within system
- Track PM labor and materials costs
- Develop PM schedule through standing/recurring work requests

- Regularly assess backlog of work orders
- Identify trades or zones with greatest draw on resources
- Reallocate resources as needed
- Improve customer communication

Track and report frequently for reliable data
Bringing it all together
Concluding Comments
FY2011 Progress & Actions

FY2010 UM System Recommendations

- Develop an annual stewardship investment strategy focused on envelope/mechanical lifecycle replacements.
- A portion of the annual investment should continue to come from campus operating budgets, possibly supported by increasing efficiencies in daily operations and reducing energy costs.
- Update/expand the database of deferred maintenance projects.

FY2011 UM System Progress and Recommendations

- FY 2011 data provides evidence that a greater percentage of capital funds are being used for envelope/mechanical lifecycle projects. This focus on core existing space issues should be monitored and continued.
- Campus are beginning to make annual stewardship commitments by funding a portion of investment targets. This effort should be continued.
- There is still a need to document deferred maintenance projects at the campus and building level as a basis for capital priorities.
Concluding Comments

FY2011 Progress & Actions

FY2010 UM System Recommendations

FY2011 UM System Progress and Recommendations

- Develop a request for capital funding that targets priority projects that will raise the overall Net Asset Value (NAV) of campuses in the system as a whole.

- Limit funding for new space unless that space is replacing obsolete buildings with significant reliability problems.

- Modernize the Integrated Work Management System.

- Develop a comprehensive energy plan to identify and implement campus projects that will provide additional energy savings.

- The University is working with Sightlines to identify the highest need buildings as determined by their NAV as a factor in developing a capital funding request. The current economic environment makes acquiring additional capital challenging.

- Enrollment and space trends support a policy to limit new space investments unless that space is replacing obsolete, low NAV buildings or there is a demonstrated mission-related need for the space.

- Proposals to develop a work management system have been solicited and a decision to move forward will occur in 2012. Having this system in place will help document high need buildings and set capital priorities.

- FY 2011 report identifies projects at each campus that have generated energy savings. Opportunities should continue to be identified and pursued.
Questions & Discussion