Sightlines, LLC
FY11 Facilities MB&A Presentation
Kansas State University

February 22, 2012
Presented by: Nate Pramuk and Emily Morris
Sightlines profile
Common vocabulary, consistent methodology, credibility through benchmarking

• 11 year old company based in Guilford, CT
• Common vocabulary and consistent methodology
  • 95% Annual retention rate
  • More than 300 campuses
• Tracking $5.9 billion in operations budgets and $4.2 billion in capital projects
  • Database of over 860 million GSF
A vocabulary for measurement

The Return on Physical Assets – ROPA\textsuperscript{SM}

- **Annual Stewardship**
  - The annual investment needed to ensure buildings will properly perform and reach their useful life. "Keep-Up Costs"

- **Asset Reinvestment**
  - The accumulated backlog 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 and the maintenance quality of space and systems

---

**Asset Value Change**

**Operations Success**
Peer group for benchmarking
Peers selected based on campus size, complexity, age, program

<table>
<thead>
<tr>
<th>Institution</th>
<th>Big 12</th>
<th>Land-grant Institutions*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clemson University</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Iowa State University</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Michigan State University</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Oregon State University</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Purdue University</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Texas A&amp;M University</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>The Ohio State University</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>The Pennsylvania State University</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>The University of Mississippi</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>The University of Oklahoma</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>University of Arkansas</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>University of Colorado</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>University of Illinois</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>University of Missouri</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>West Virginia University</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

*Land-grant Institutions as designated by the state legislature. [www.aplu.org](http://www.aplu.org)
Core Issues FY2011

Age of Space
With no record of major renovations done on campus, 90% of space is now over 25 years old, a critical age in a building's lifecycle.

Capital Investment
Total capital investment has increased significantly over time. Spending has been concentrated on Envelope/Mechanical types of projects leaving limited funding for Space/Programming types of projects.

Operations Profile
While total daily operating costs are near the peer average, K-State is spending more on utilities leaving less funding for daily service and Planned Maintenance work. Despite limited funding, operations is providing results comparable to peer institutions.
Space Profile
90% of space is over 25 years old

K-State has oldest age profile of peer group
K-State 2025 – How does K-State compare?
Age compared to top 50 research institutions within Sightlines’ database

Clemson University
Florida State University
Georgia Institute of Technology
Indiana University
IUPUI
Iowa State University
Michigan State University
Purdue University
Rutgers University
Temple University
Texas A&M University
The Ohio State University
The Pennsylvania State University
The University of Alabama
The University of Arizona
University of California Irvine
University of Colorado - Boulder
University of Illinois - Chicago
University of Illinois - Urbana/Champaign
University of Maryland
University of Massachusetts Amherst
University of Michigan
University of Minnesota
University of Missouri
University of Oregon
University of Vermont
Virginia Commonwealth University

Peer Average
Measuring the volume of people on campus

Usage level of campus similar to peers

Density Factor

Sightlines Distribution

Institutions Ordered By: Density Factor

K-State Density Factor: 320 FTE/100,000GSF

Peer Average Density Factor: 314 FTE/100,000GSF
K-State 2025 – How does K-State compare?
Density compared to top 50 research institutions within Sightlines’ database

Clemson University
Florida State University
Georgia Institute of Technology
Indiana University
IUPUI
Iowa State University
Michigan State University
Purdue University
Rutgers University
Temple University
Texas A&M University
The Ohio State University
The Pennsylvania State University
The University of Alabama
The University of Arizona
University of California Irvine
University of Colorado - Boulder
University of Illinois - Chicago
University of Illinois - Urbana/Champaign
University of Maryland
University of Massachusetts Amherst
University of Michigan
University of Minnesota
University of Missouri
University of Oregon
University of Vermont
Virginia Commonwealth University
Technical complexity of campus is 3.08 in FY2011

K-State is less technically complex than peers
Technical complexity of campus is 3.08 in FY2011.

K-State is less technically complex than peers.
K-State 2025 – How does K-State compare?
Tech rating compared to top 50 research institutions within Sightlines’ database

Clemson University
Florida State University
Georgia Institute of Technology
Indiana University
IUPUI
Iowa State University
Michigan State University
Purdue University
Rutgers University
Temple University
Texas A&M University
The Ohio State University
The Pennsylvania State University
The University of Alabama
The University of Arizona
University of California Irvine
University of Colorado - Boulder
University of Illinois - Chicago
University of Illinois - Urbana-Champaign
University of Maryland
University of Massachusetts Amherst
University of Michigan
University of Minnesota
University of Missouri
University of Oregon
University of Vermont
Virginia Commonwealth University
Summary of space by key profile indicators

Profile Characteristics by Age Category

- Size of bubble indicates GSF

<table>
<thead>
<tr>
<th>Technical Complexity</th>
<th>10 yrs</th>
<th>25 yrs</th>
<th>50 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 10</td>
<td>6.6</td>
<td>17.4</td>
<td>36.3</td>
</tr>
<tr>
<td>10 to 25</td>
<td>166,003 GSF</td>
<td>297,029 GSF</td>
<td>1,801,202 GSF</td>
</tr>
<tr>
<td>25 to 50</td>
<td>2,354,734 GSF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over 50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Capital Profile
Capital investment — existing vs. new space

Increase in investment into existing space since FY05

Total Capital Investment

- $45.0
- $40.0
- $35.0
- $30.0
- $25.0
- $20.0
- $15.0
- $10.0
- $5.0
- $-

$ (in Millions)

- Existing Space
- New Construction/Non-Facilities

Average: $18.5M
Capital investment — existing vs. new space

Increase in investment into existing space since FY05

Total Capital Investment

$ (in Millions)

$45.0

$40.0

$35.0

$30.0

$25.0

$20.0

$15.0

$10.0

$5.0

$-

2005 2006 2007 2008 2009 2010 2011

Existing Space

Average: $8.6M
Total project investment vs. peers

Increase in spending has brought K-State to peer average in FY11

Total Project Spending $/GSF

Peer Averages
© Sightlines 2001-2012

Kansas State University

8x increase since FY2005

$/GSF

2005 2006 2007 2008 2009 2010 2011

2005 2006 2007 2008 2009 2010 2011

Total Project Spending $/GSF
Average (4.07) Your Average (1.87)
K-State 2025 – How does K-State compare?

Project spending compared to top 50 research institutions in Sightlines’ database

Clemson University
Florida State University
Georgia Institute of Technology
Indiana University
IUPUI
Iowa State University
Michigan State University
Purdue University
Rutgers University
Temple University
Texas A&M University
The Ohio State University
The Pennsylvania State University
The University of Alabama
The University of Arizona
University of California Irvine
University of Colorado - Boulder
University of Illinois - Chicago
University of Illinois - Urbana/Champaign
University of Maryland
University of Massachusetts Amherst
University of Michigan
University of Minnesota
University of Missouri
University of Oregon
University of Vermont
Virginia Commonwealth University

Total Project Spending $/GSF

© Sightlines 2001-2012

Peer Average  K-State Average FY05-FY11
Investment in existing space over time

Less one-time capital historically, recurring funds are similar to peers

Total Project Spending

Peers

K-State

Spending $10.16M less annually

Peers’ Longitudinal Average: $4.07/GSF

K-State’s Longitudinal Average: $1.87/GSF
Investment in existing space over time

Less one-time capital historically, recurring funds are similar to peers

Total Project Spending

Peers

K-State

peer's Longitudinal Average: $0.88/GSF

K-State’s Longitudinal Average: $0.87/GSF
Defining stewardship investment targets

What is the annual investment need to sustain campus value?

FY2011 Stewardship Targets

Replacement Value: $1.4B

$ in Millions

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Cycle Need (Equilibrium)</td>
<td>$15.84</td>
</tr>
<tr>
<td>Functional Obsolescence</td>
<td>$6.77</td>
</tr>
<tr>
<td>Total</td>
<td>$35.18M</td>
</tr>
<tr>
<td>Minimum Annual Investment Target</td>
<td>$11.88</td>
</tr>
<tr>
<td>Total</td>
<td>$18.65M</td>
</tr>
</tbody>
</table>
Investing 24% of target on average

61% of funding goes to Envelope/Mechanical projects
Investing 24% of target on average

61% of funding goes to Envelope/Mechanical projects
Total capital investment vs. target
One-time capital hits target for first time in FY11

Annual Stewardship Spending Mix

- Life Cycle Need
- Target Need
- Increasing Net Asset Value
- Sustaining Net Asset Value
- Decreasing Net Asset Value

$16.55

Includes one-time capital into existing space
Focusing on the mix of spending at K-State

Concentration on envelope/mechanical projects leaves 24% for space/code needs

Includes all money spent in existing space since FY2005
Large average room capacity
Average room capacity is 58.4 seats

Enrollment Distribution vs. Room Capacities
For General Classrooms

- 25% of rooms have a capacity of less than 15 seats
- 35% of rooms have a capacity of 15 to 24 seats
- 20% of rooms have a capacity of 25 to 34 seats
- 53% of rooms have a capacity of 35 to 50 seats
- 23% of rooms have a capacity of over 50 seats

Enrollment distribution is sample data

Room capacities from General Use Classroom Inventory
Influence of technology on classroom utilization

Classrooms with more technology are more highly utilized

Technology distribution is sample data

* (20% - 40%)
Basic Technology classrooms are rooms with a place to plug a laptop and LCD projector or other display. Video, Internet and audio connections provided.

** (40% - 80%)
Common Technology classrooms are rooms equipped with an LCD projector, or plasma screen display, computer, VCR/DVD player, sound system, document camera, and Internet connection.

*** (Over 80%)
Expanded Technology classrooms are rooms with the common technology which have additional capabilities that include some combination of one or more of the following: Video Conferencing equipment, Video or audio capturing equipment, Enhanced interactive technologies

Room capacities from General / Technology / Studio Classrooms inventory
Asset Reinvestment Backlog
Asset reinvestment backlog
Based on internal deferred maintenance report

Total Asset Reinvestment Backlog $/GSF

Institutions Ordered By: Tech Rating

Peer Average
Asset reinvestment backlog

Estimations based on maintenance deferral, age, and function
Operational Performance
Facilities operating budget compared to peers

Total budget is similar to peers, daily service and PM are below peer average
K-State 2025 – How does K-State compare?

Daily Service budget compared to top 50 research institutions in Sightlines’

Clemson University
Florida State University
Georgia Institute of Technology
Indiana University
IUPUI
Iowa State University
Michigan State University
Purdue University
Rutgers University
Temple University
Texas A&M University
The Ohio State University
The Pennsylvania State University
The University of Alabama
The University of Arizona
University of California Irvine
University of Colorado - Boulder
University of Illinois - Chicago
University of Illinois - Urbana/Champaign
University of Maryland
University of Massachusetts Amherst
University of Michigan
University of Minnesota
University of Missouri
University of Oregon
University of Vermont
Virginia Commonwealth University
Budget mix compared to peers

Saving on energy can bolster Planned Maintenance funding

K-State

51% Daily Service
48% PM
1% Utilities

Peers

33% Daily Service
61% PM
6% Utilities

Utility Budget $/GSF

Total Planned Maintenance

$GSF

Peer Average
Budget mix compared to peers

Saving on energy can bolster Planned Maintenance funding

K-State

47% Daily Service
48% PM
5% Utilities

Peers

33% Daily Service
61% PM
6% Utilities

Utility Budget $/GSF

Total Planned Maintenance

Peer Average
Energy consumption vs. peers

Higher consumption than peers historically, concentrated in fossil fuels

Institutions Ordered By: Tech Rating

Peer Average

Electric BTU/GSF
Fossil BTU/GSF

© Sightlines 2001-2012

Kansas State University

© Sightlines 2001-2012
Energy cost similar to peers levels

Fossil costs are decreasing while electric costs are higher and increasing
Energy cost and consumption by region

K-State has highest consumption
Maintenance operations

Maintenance trades performance impacted by campus age profile

### Maintenance Staffing

- **GSF/FTE (K-State):** 72,115
- **GSF/FTE (Peers):** 97,890
- **GSF/FTE (Database):** 88,999

### Maintenance Supervision

- **FTE/Supervisor (K-State):** 8.1
- **FTE/Supervisor (Peers):** 11.9
- **FTE/Supervisor (Database):** 11.8

### Maintenance Materials

- **$/FTE (K-State):** $20,493
- **$/FTE (Peers):** $18,696
- **$/FTE (Database):** $18,709

### General Repair/Impression

- **Score (K-State):** 3.7
- **Score (Peers):** 3.8
- **Score (Database):** 3.9

### Exterior Inspection Score

- **Score (K-State):** 3.8
- **Score (Peers):** 3.9
- **Score (Database):** 3.9

Institutions Ordered By: Tech Rating

---

Peer Average
Custodial operations
Above average supervision leads to higher inspection scores

### Custodial Staffing

<table>
<thead>
<tr>
<th>Institution</th>
<th>GSF/FTE</th>
<th>Peers</th>
<th>Database</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-State</td>
<td>46,094</td>
<td>44,792</td>
<td>33,284</td>
</tr>
<tr>
<td>Peers</td>
<td>44,792</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Database</td>
<td>33,284</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Custodial Supervision

<table>
<thead>
<tr>
<th>Institution</th>
<th>FTE/Supervisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-State</td>
<td>7.3</td>
</tr>
<tr>
<td>Peers</td>
<td>18.9</td>
</tr>
<tr>
<td>Database</td>
<td>17.9</td>
</tr>
</tbody>
</table>

### Custodial Materials

<table>
<thead>
<tr>
<th>Institution</th>
<th>$/FTE</th>
<th>Peers</th>
<th>Database</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-State</td>
<td>$4,194</td>
<td>$4,126</td>
<td>$3,998</td>
</tr>
<tr>
<td>Peers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Database</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Cleanliness

<table>
<thead>
<tr>
<th>Institution</th>
<th>Inspection Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-State</td>
<td>4.3</td>
</tr>
<tr>
<td>Peers</td>
<td>4.1</td>
</tr>
<tr>
<td>Database</td>
<td>4.2</td>
</tr>
</tbody>
</table>

---

Institutions Ordered By: Density Factor

Peer Average
Grounds operations

Grounds department returning superior results with similar materials

<table>
<thead>
<tr>
<th></th>
<th>K-State</th>
<th>Peers</th>
<th>Database</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acres/FTE</td>
<td>24.8</td>
<td>30.4</td>
<td>22.2</td>
</tr>
<tr>
<td>FTE/Supervisor</td>
<td>8.1</td>
<td>12.1</td>
<td>11.9</td>
</tr>
<tr>
<td>$/FTE</td>
<td>$5,517</td>
<td>$8,914</td>
<td>$9,529</td>
</tr>
<tr>
<td>Grounds Inspection Score</td>
<td>4.3</td>
<td>4.0</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Institutions Ordered By: Grounds Intensity
Concluding Comments
Core observations at Kansas State University

**Campus profile:**
- Kansas State is older than peer institutions. This age profile creates increased demands on capital and operational resources.
- Kansas State is similarly old when comparing to top 50 research institutions in Sightlines’ database. Addressing modernization issues across campus may be influential in meeting “K-State 2025” goals.

**Capital profile:**
- With limited funding and an aging campus, it is important to invest in envelope/mechanical types of projects that will extend the lives of your buildings.
- While large investments have addressed envelope/mechanical needs there has been limited investment to address space/programming need. Because of this limited historic investment, K-State may be suffering from a misalignment of available space on campus and programmatic demands.

**Operational profile:**
- Facilities services is often doing more with less resources than peers. While achieving favorable results effectiveness is impacted by the age of campus and limited daily service and Planned Maintenance resources. Work to reduce energy consumption and reallocate any released budget dollars toward Planned Maintenance investments.
Questions and Discussion