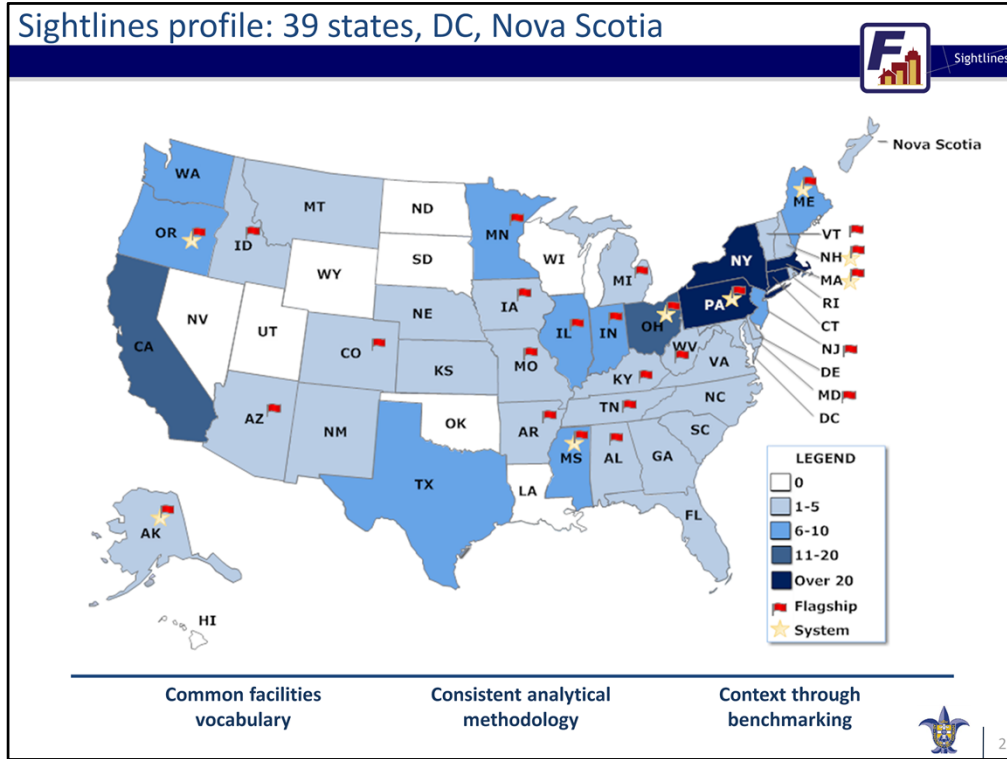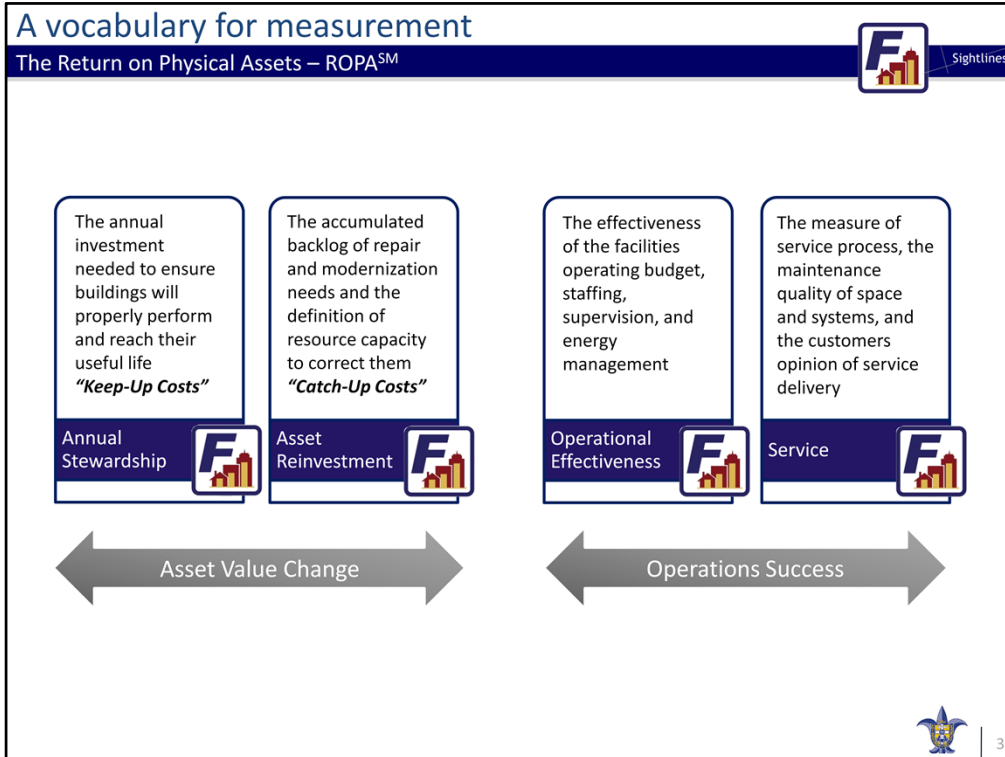**Sightlines LLC**
FY2012 Facilities MB&A Presentation
Saint Louis University

Date October 31,2012
Presented by: Peter Reeves and Kathleen Buckley
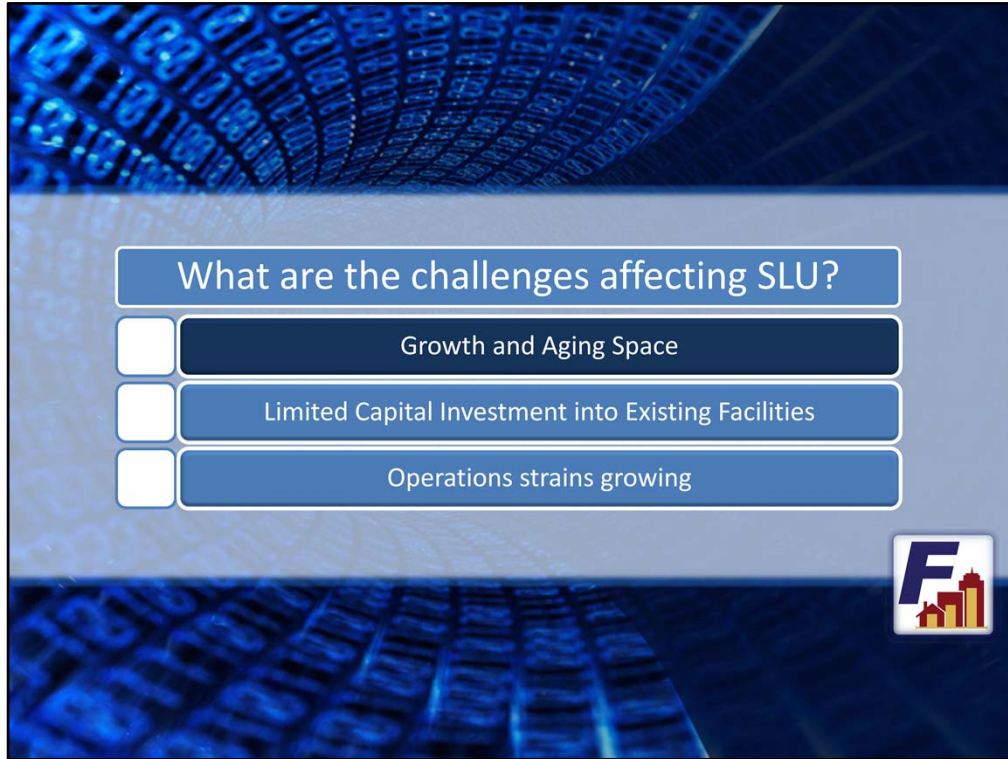
Sightlines

Sightlines profile: 39 states, DC, Nova Scotia

Common facilities vocabulary | Consistent analytical methodology | Context through benchmarking

Sightlines LLC

A vocabulary for measurement
The Return on Physical Assets – ROPA^{SM}

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

Annual Stewardship

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

Asset Reinvestment

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

Operational Effectiveness

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

Service

← Asset Value Change →

← Operations Success →

3

Peer Institutions

Institution	Location
Boston College	Boston, MA
Brown University	Providence, RI
Duke University	Durham, NC
Georgia Institute of Technology	Atlanta, GA
University of Chicago	Chicago, IL
University of Notre Dame	South Bend, IN
University of Pennsylvania	Philadelphia, PA

Comparative Considerations

Size, technical complexity, region, geographic location, and setting are all factors included in the selection of peer institutions
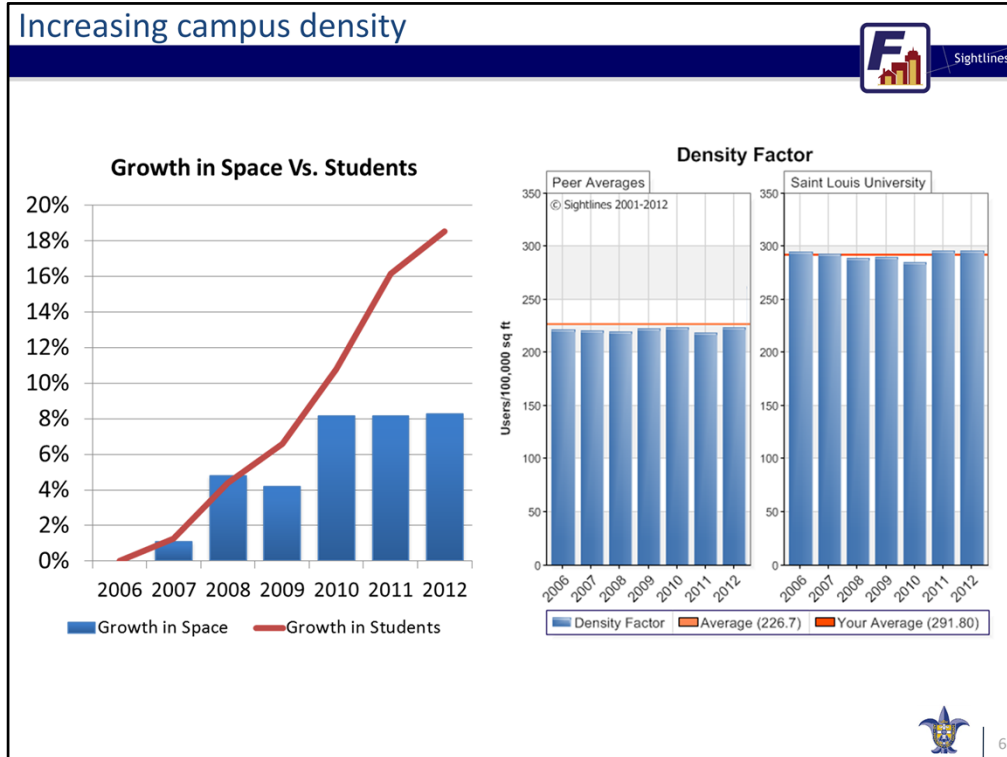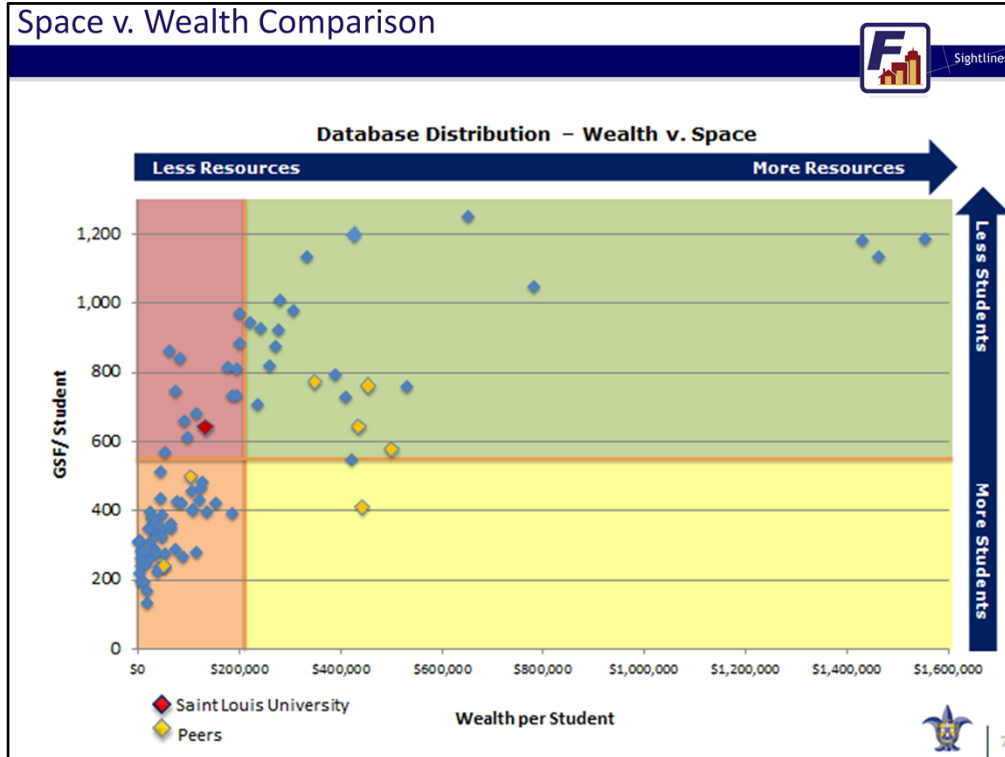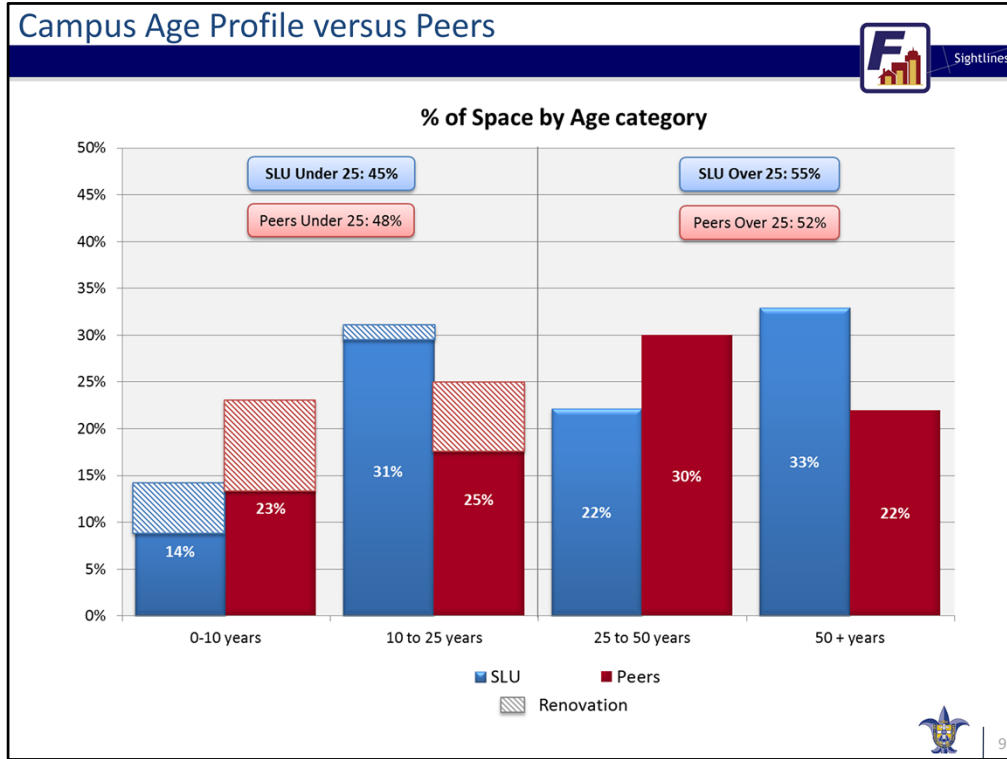
4

Student Enrollment has outpaced the growth in space over the last 7 years, particularly in the last 3 years. This has had campus density factor increase in the last three years, from a level that is already above peers.

This slide measures Space versus Wealth. Space is measured on the y – axis as GSF per Student, which is looking at how much space you have to maintain for each student you enroll. Wealth is measured by Endowment per student, which is measuring how much wealth the institution has per student to maintain that space. SLU(the red dot) is falling in the quadrant that says, "a lot of space, not a lot of wealth". This is a challenging space to be as it means, compared to other institutions, SLU has a significant amount of space, while not as much wealth to maintain that space, which makes SLU vulnerable to emergency repairs and deferred maintenance growth.
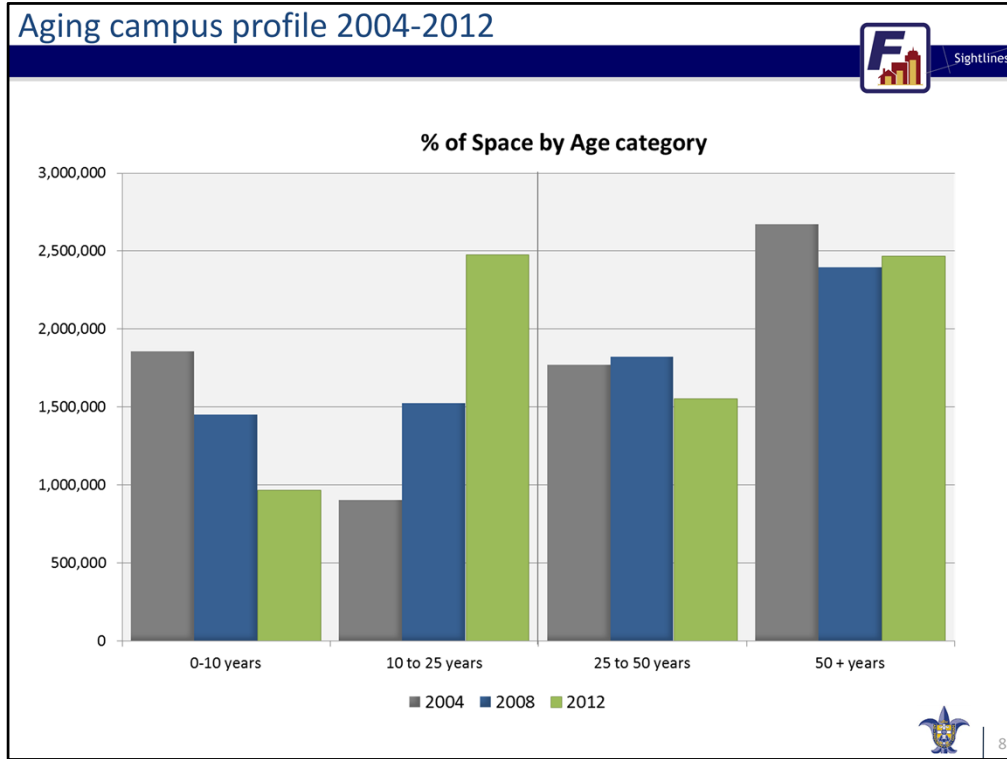
When measuring the aging of space over the last 8 years, you can see that a significant amount of space that was "new" (under 10 years old) in 2004, has begun to move into an older age category. This shift represents the increase in life cycle capital costs in those spaces.

Campus Age Profile versus Peers

% of Space by Age category

SLU Under 25: 45%

Peers Under 25: 48%

SLU Over 25: 55%

Peers Over 25: 52%

31%

14%

23%

25%

22%

30%

33%

22%

0-10 years | 10 to 25 years | 25 to 50 years | 50 + years

SLU ■ Peers
Renovation

When looking at how SLU and Peers have gotten to their respective age profile, which a similar(in terms of % of space under/over 25 years), you can see peers have a greater portion of their young space as a result of renovations(shaded area), while SLU's younger space is the result of new construction. This implies that peers have addressed some of their older building in getting to a younger campus profile, while SLU has not.
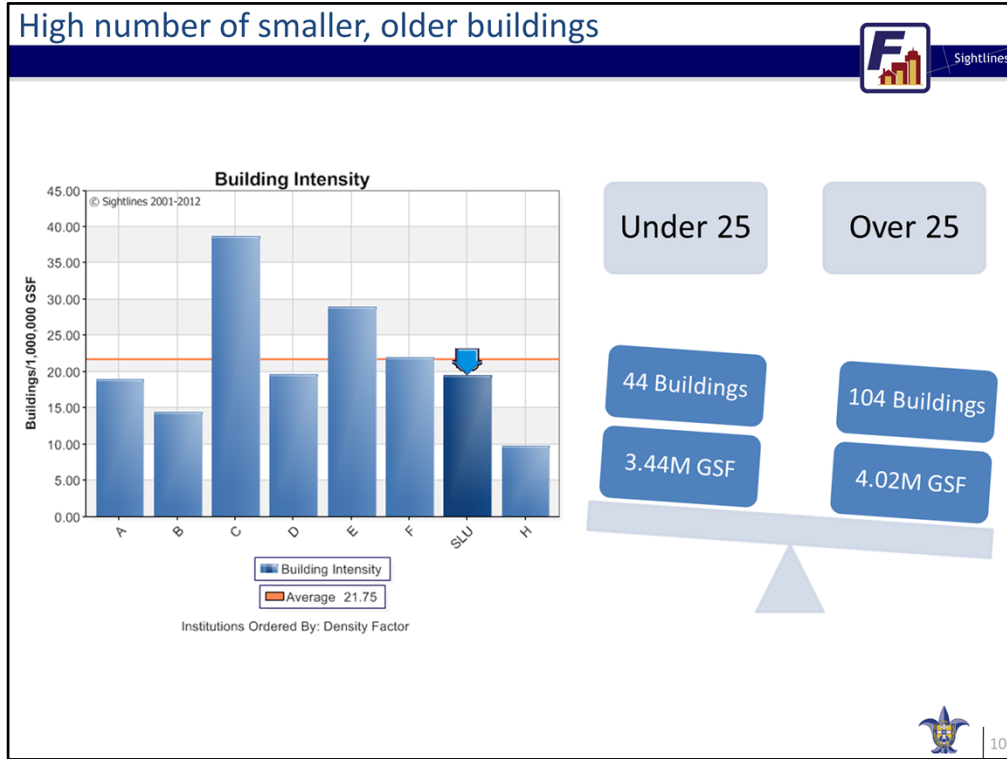
Building intensity measure the "average size of buildings". It is the number of building per 1 M GSF on campus. The higher the number, on average the smaller the facilities. What this shows that in general, SLU as similar sized buildings compared to peers, but when you look between under/over 25 years old, you can see more than twice the buildings make up a similar amount of space in the over 25 category. This means there are a significant number of smaller older facilities on campus. These could be good targets for transition or removal.
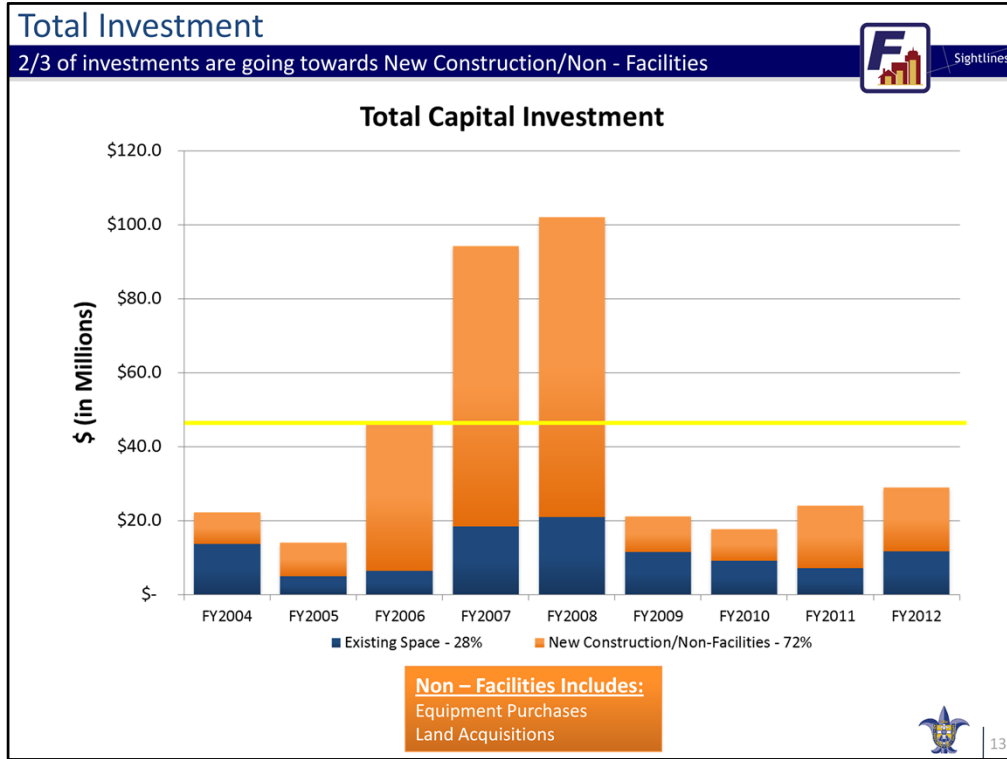
Sightlines LLC
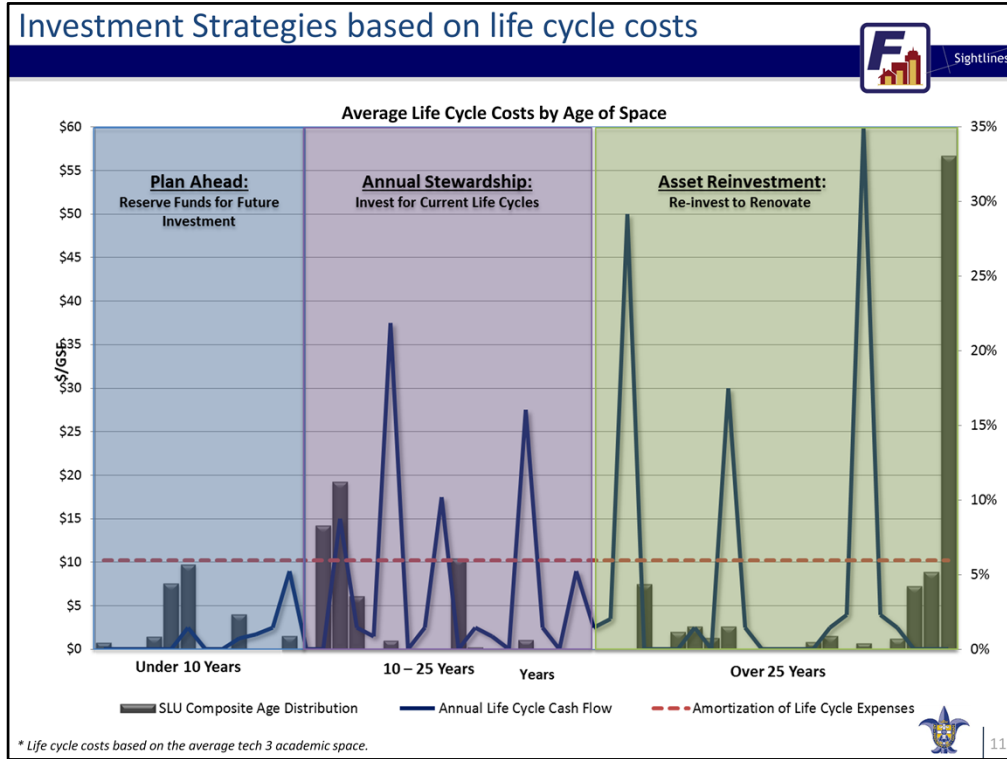
Understanding the life cycle needs of your buildings also help with understanding upcoming or deferred capital needs. Using a typical life cycle chart, one can see that SLU's campus can be broken roughly into 3 categories based on where they fall on the life cycle curve. These categories can be tied broadly speaking to the investment strategies that should be take with each groups of buildings.
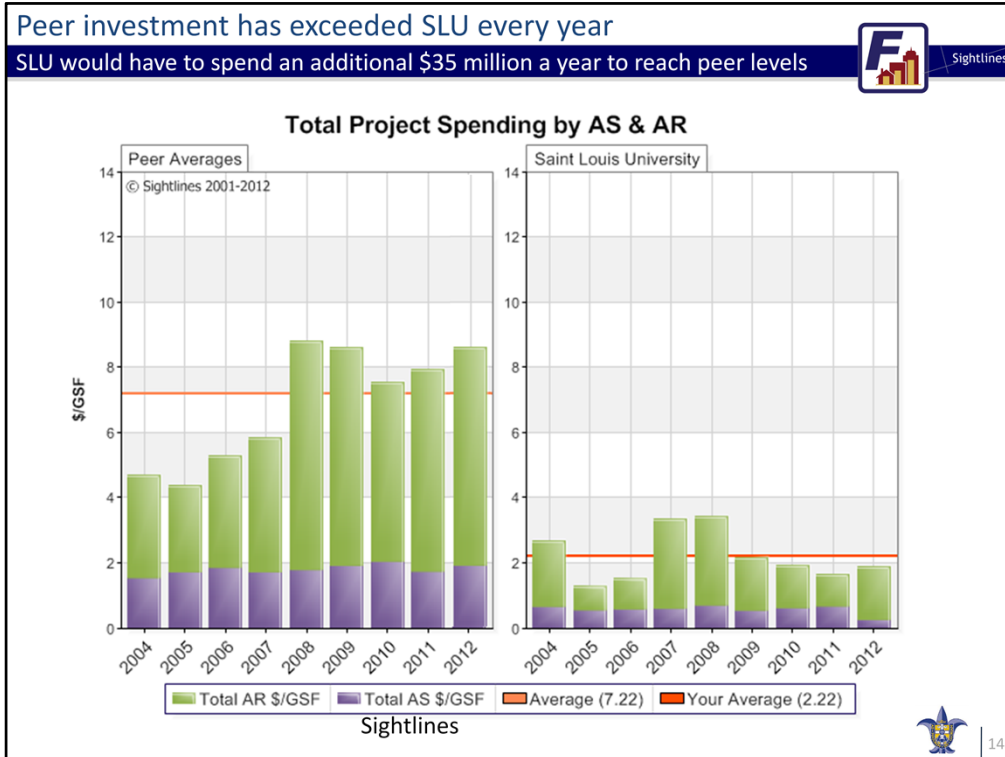
Total Investment

2/3 of investments are going towards New Construction/Non - Facilities

Total Capital Investment

Non – Facilities Includes:
Equipment Purchases
Land Acquisitions

Legend: Existing Space - 28% | New Construction/Non-Facilities - 72%

The vast majority of investment at SLU has gone towards New Construction or Non-facilities type spending. A very limited amount has gone toward existing space. The limited dollars going towards existing space indicate that the capital needs of the buildings are not being addressed to the extent that the aging campus buildings need.

Peer investment has exceeded SLU every year
SLU would have to spend an additional $35 million a year to reach peer levels

Total Project Spending by AS & AR

Capital Investment levels at SLU remain significantly below peer institutions. Both sources of funding are below peers Annual Stewardship – Purple & Asset Reinvestment – Green). While peers have been able to address deferred maintenance and perform major renovations through significant investments, SLU has not.
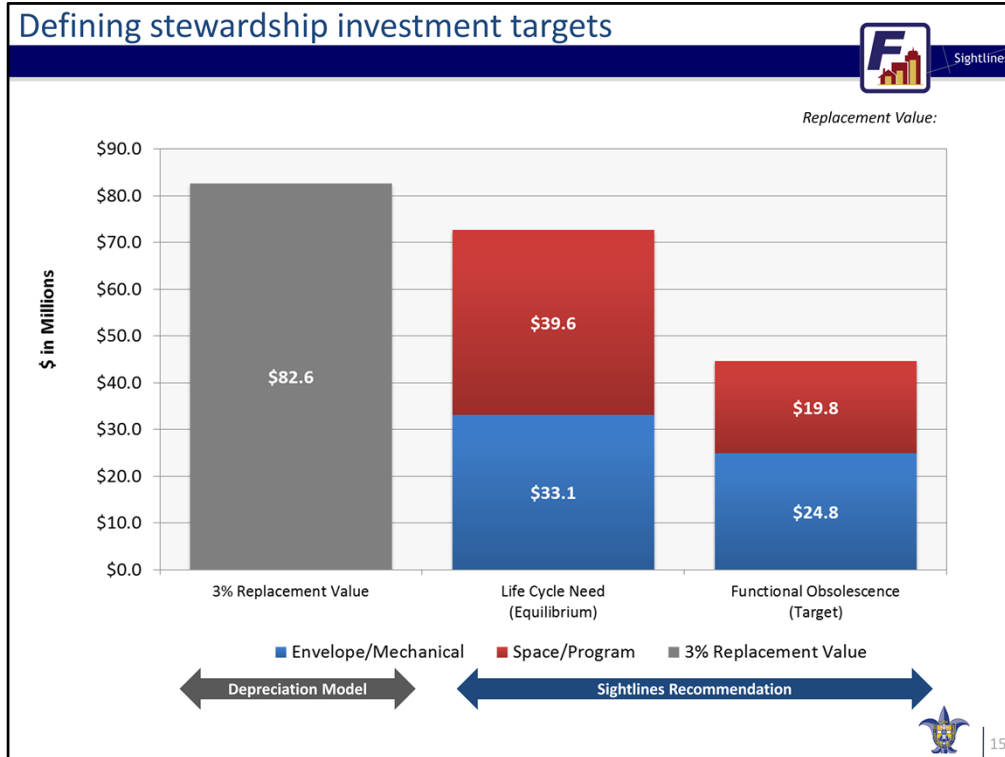
How much does an institution need to invest on an annual basis.
3% Of replacement value – Reference point. Based on Straight line depreciation of assets.
Life Cycle Need – Sightlines Generated number based on Age, Function, and Technical Complexity. What would it cost to replace every building component at the end of its useful life. Red – Space and Programming, Blue – Envelope and Mechanical.
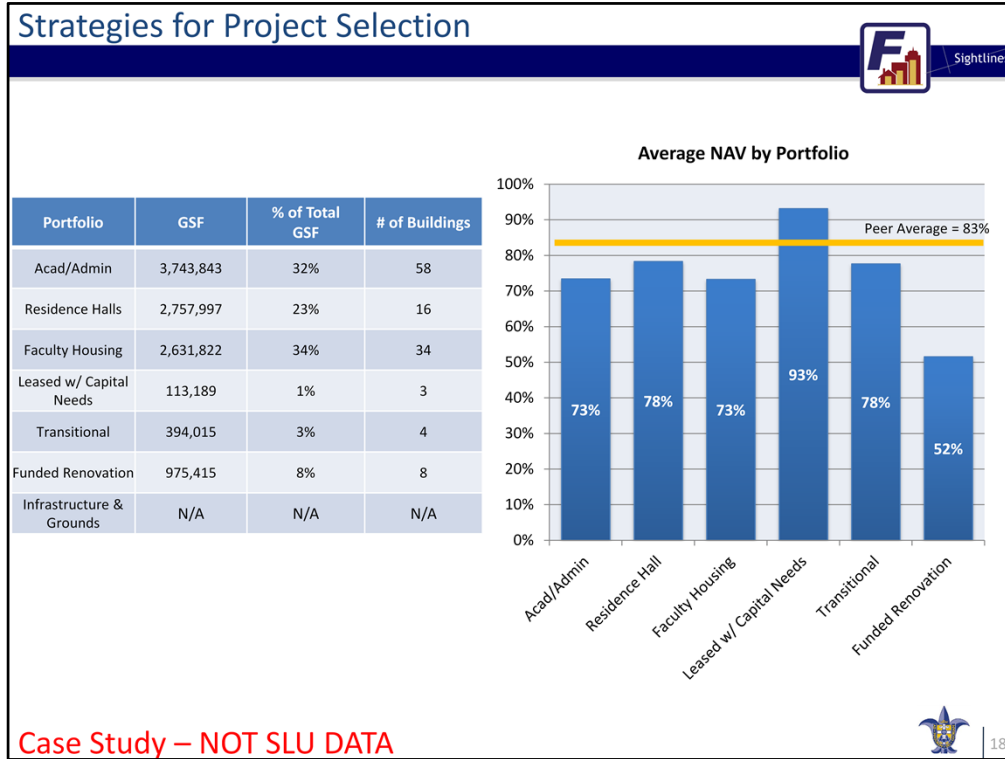Annual Stewardship Target – Discounts the Life Cycle Need for the coordination of Renovations and Modernizations, as well as the extensions of building life cycles through proper upkeep.
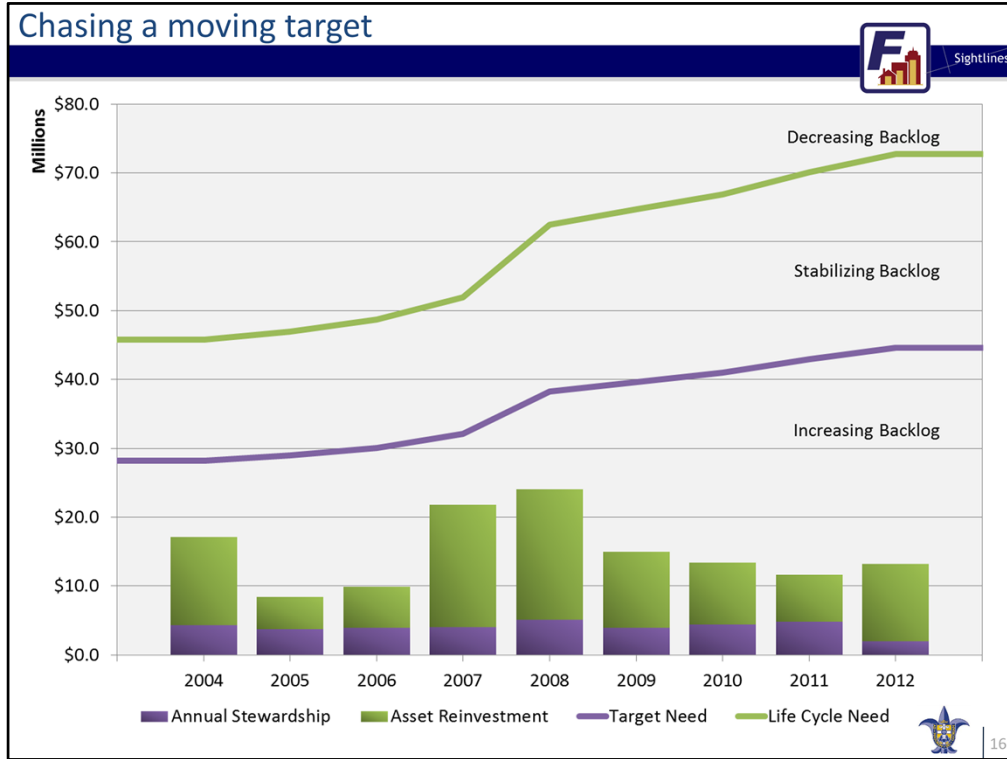
When you fall below the annual investment target range, the backlog of need increases. This chart shows that even in the years with the greatest level of investments, SLU has still fallen short of the target, meaning backlog of need has increased in every year.

Growing backlog
Backlog has almost doubled since 2006

Total Asset Reinvestment Backlog $/GSF
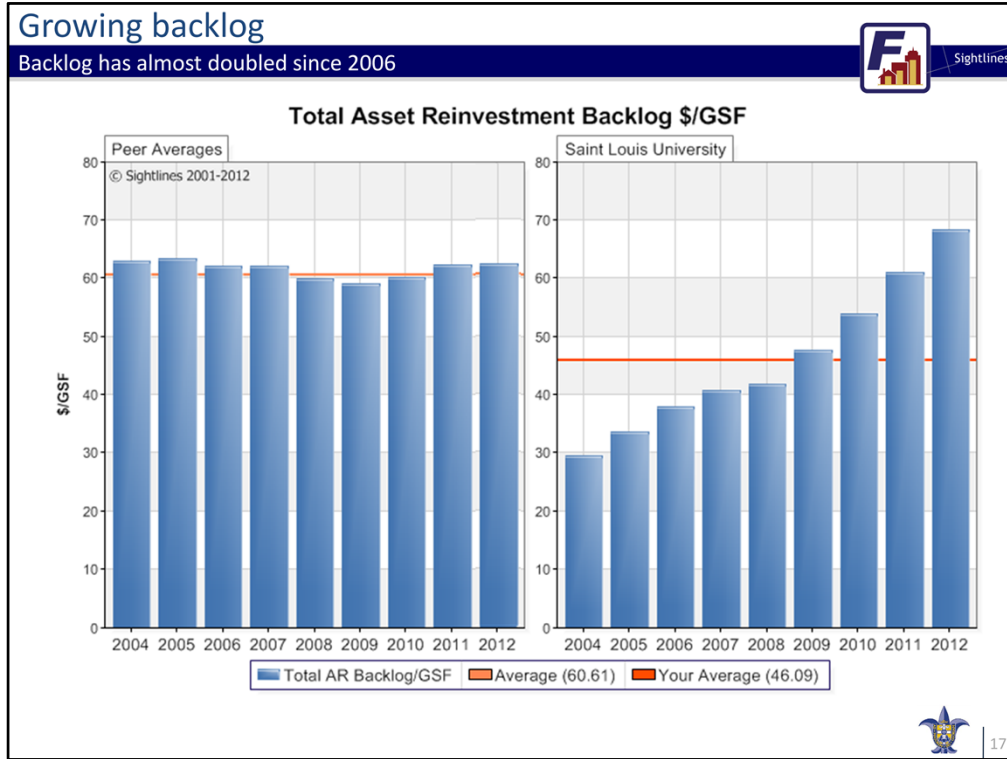
The Estimated backlog of need at SLU has increased dramatically since 2004. Campus that see this significant growth in backlog will begin to see the affects in other areas of facilities performance, such as operational effectiveness and campus appearance. It will be important that SLU develops a plan that will stabilize the growth of the backlog in the near future to limit the overall campus impact.
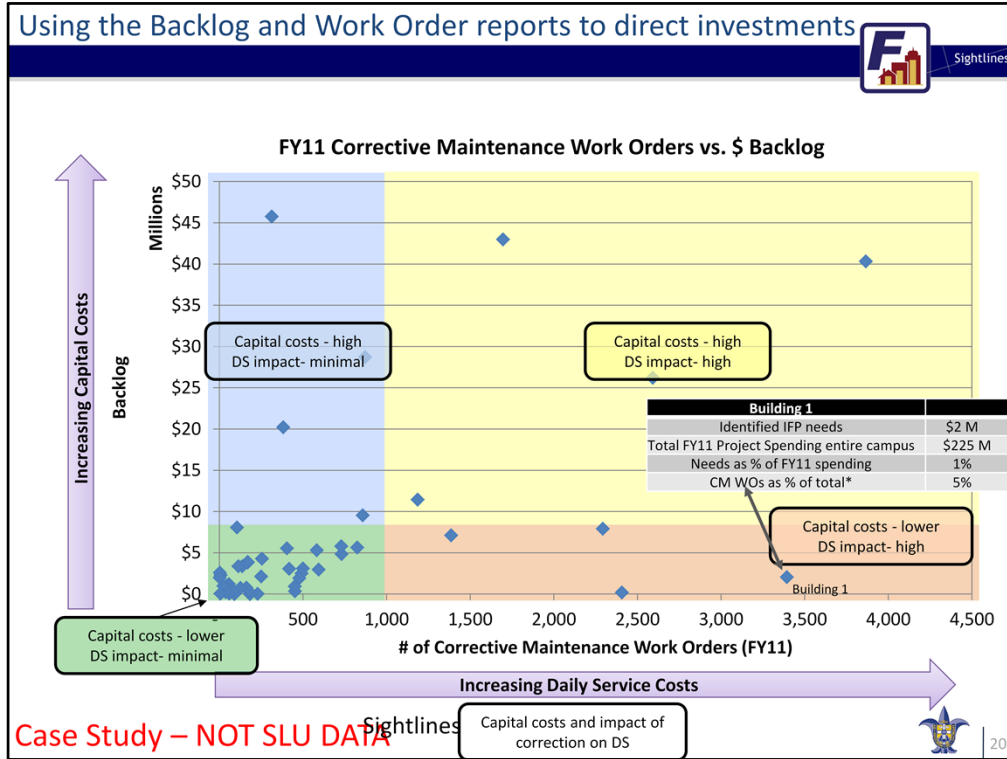
Sightlines LLC

Strategies for Project Selection

Portfolio	GSF	% of Total GSF	# of Buildings
Acad/Admin	3,743,843	32%	58
Residence Halls	2,757,997	23%	16
Faculty Housing	2,631,822	34%	34
Leased w/ Capital Needs	113,189	1%	3
Transitional	394,015	3%	4
Funded Renovation	975,415	8%	8
Infrastructure & Grounds	N/A	N/A	N/A

Case Study – NOT SLU DATA

The next three slides are case studies (Not SLU data) that show how a "Building portfolio" approach can be take to aim in strategic capital spending. The concept is that instead of each building being considered independent, group buildings (and needs) by like characteristics.
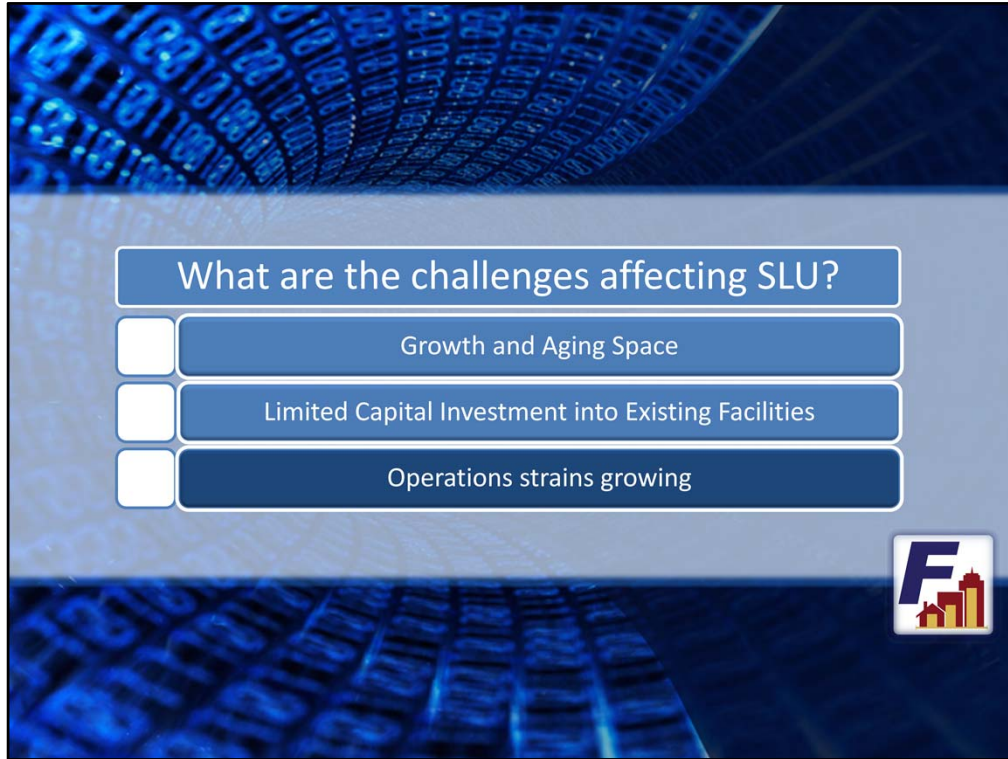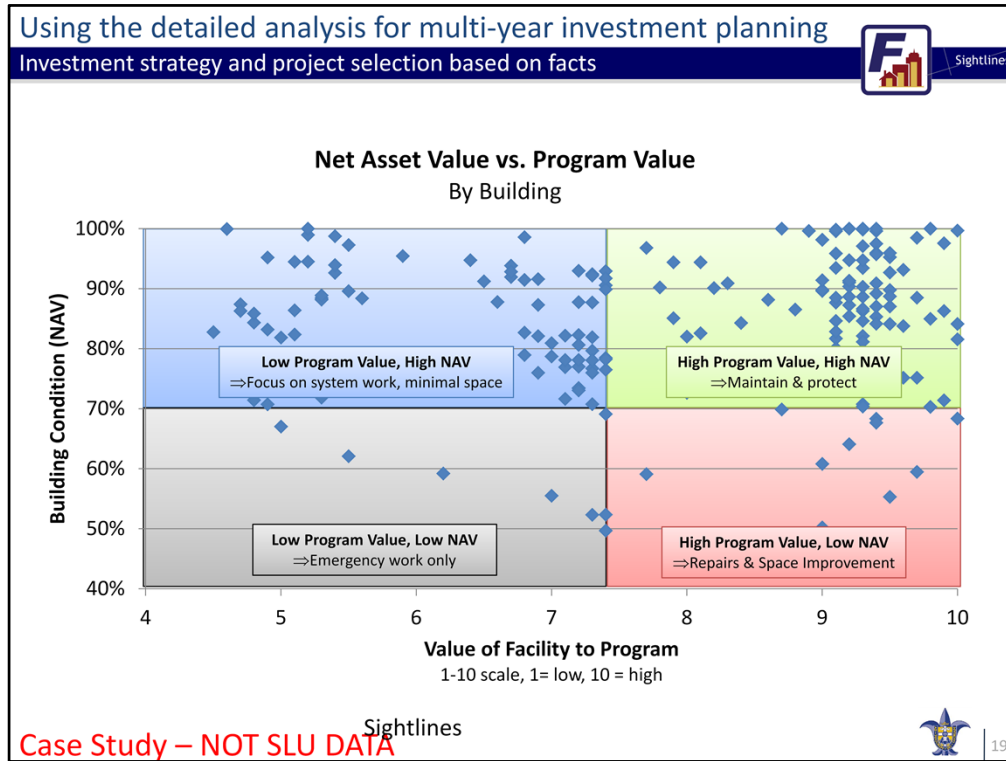
The detailed analysis and assigned program value scores to each building. Arraying the condition of the buildings with this program value allowed them to identify investment strategies for 4 different groups of buildings.

Red Block – high program value, poor condition– repairs & space improvement
Green Block – high program value, good condition– maintain & protect
Blue Block – low program value, good condition– focus on systems work, minimal space
Grey Block – low program value, poor condition– emergency work only

The focus of the investment plan would be the red block above. In this way they could prioritize projects based on the criteria above, along with other metrics, to validate the project selection methodology within the annual plan. Since this investment strategy was set out for the multi-year plan, and a full list of needs over the length of the plan had been identified, it made the annual process much simpler.
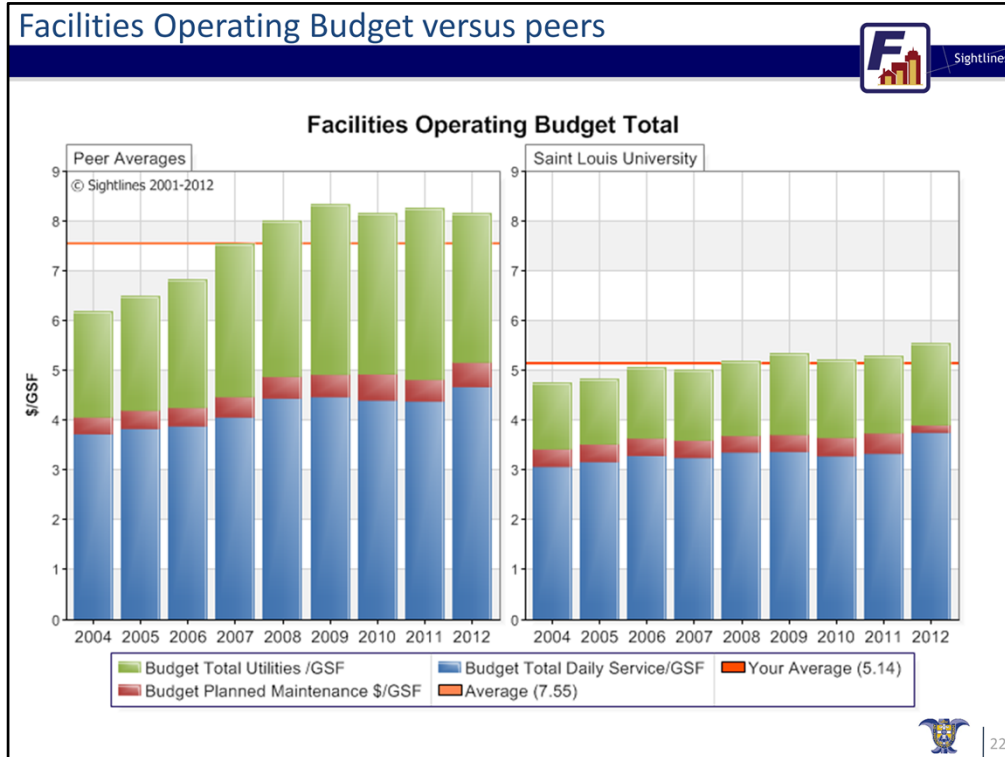
Sightlines LLC

Using the Backlog and Work Order reports to direct investments

FY11 Corrective Maintenance Work Orders vs. $ Backlog

Capital costs - high
DS impact- minimal

Capital costs - high
DS impact- high

Building 1	
Identified IFP needs	$2 M
Total FY11 Project Spending entire campus	$225 M
Needs as % of FY11 spending	1%
CM WOs as % of total*	5%

Capital costs - lower
DS impact- high

Building 1

Capital costs - lower
DS impact- minimal

# of Corrective Maintenance Work Orders (FY11)

Increasing Daily Service Costs

Case Study – NOT SLU DATA

Capital costs and impact of correction on DS

Case Study – NOT SLU DATA

Projects can be selected based on a number of strategies. One example would be trying to target projects in areas where there are significant Daily Service demands, to eliminate those demands and free up operations for other activities.

Facilities Operating budget against peers. SLU is spending over $2/GSF less than peers. Driven in large part due to the low utility costs. But Daily Service costs also remain below peers, meaning SLU is running a efficient operations. As backlog continues to increase, performing at the level that SLU currently is, despite having fewer resources, will become difficult.
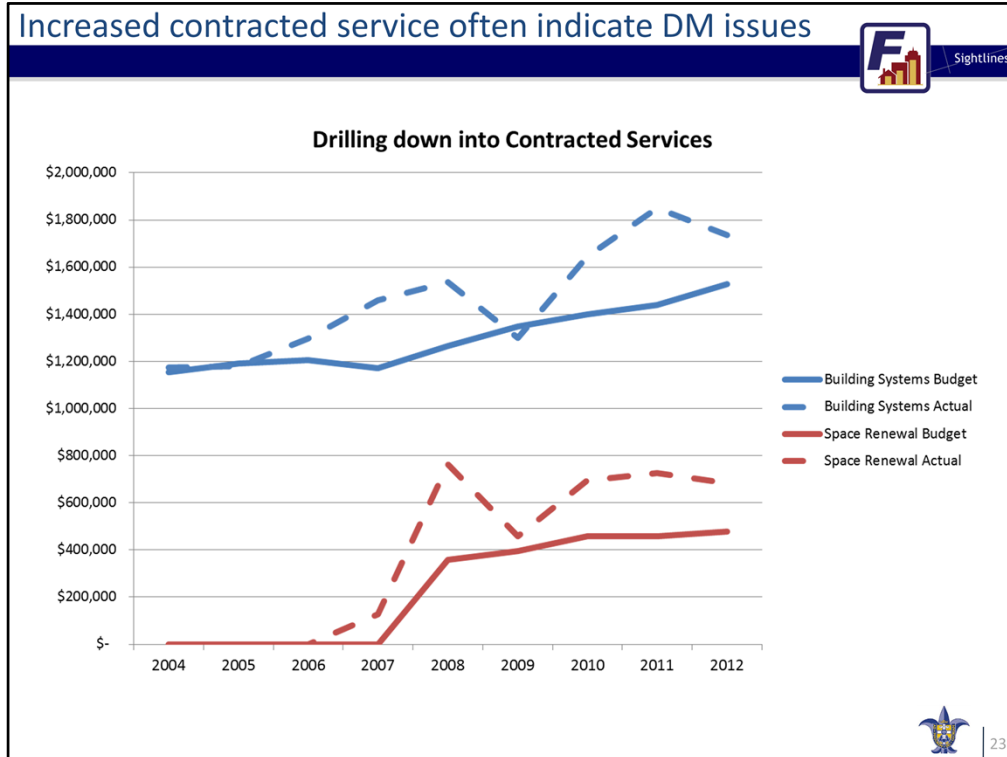
Comparing Budget to actual for contracted services expenses can be a good early warning sign as to limited capital investment catching up with a campus. The idea is that campuses with underinvestment will have more "unforeseen" repairs and thus go over on the contracted services budgets.
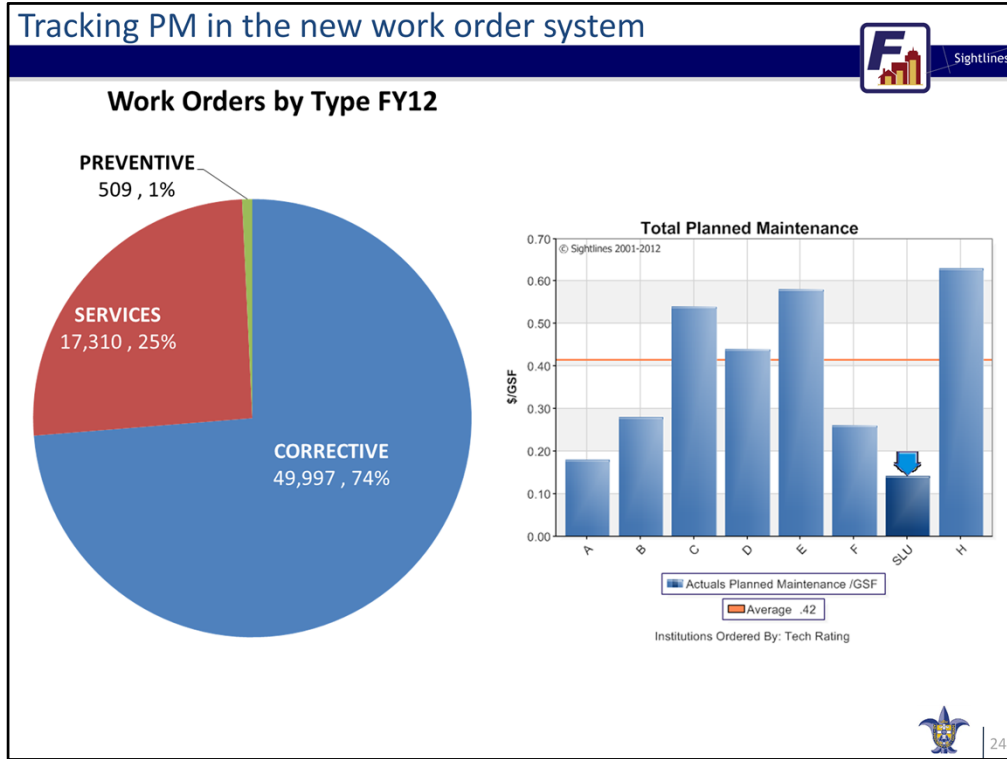
As the PM module is brought into full use, this data will improve along with the metric.

Similar Inputs, better Outputs
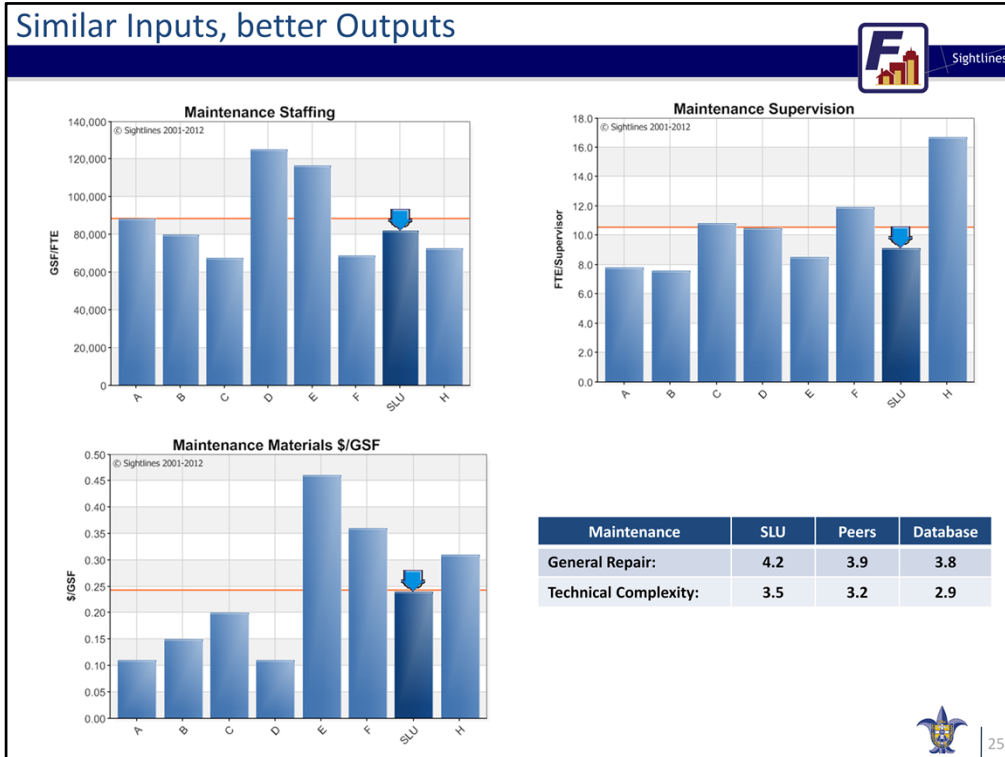
Given the growing backlog of need, SLU is performing at a higher level(4.2 versus peers of 3.9 inspection) with similar inputs. This is an area of strong performance. Sustainability becomes the question, with the pace of growth of the backlog, as there are more emergencies, do scores start to see an impact.
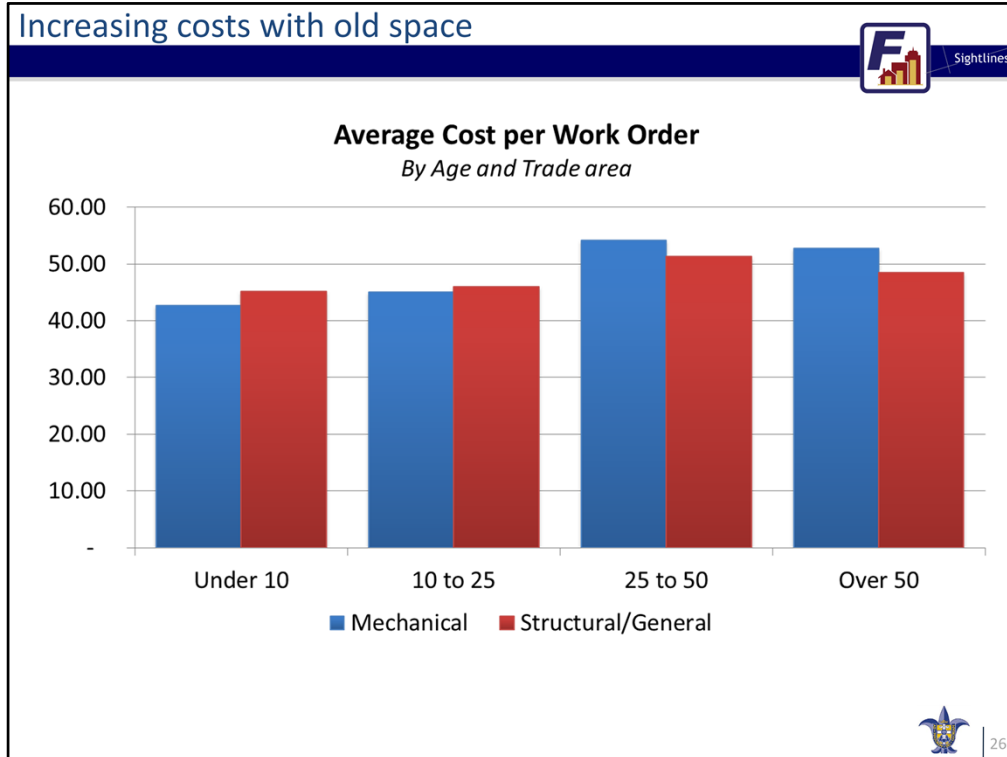
This is one example of the number of analyses you can do with work order data. By drilling into the information, you can target specific areas or projects. It also helps communicate the challenges that limited investments are having by assigning a dollar amount to the repairs or building costs.
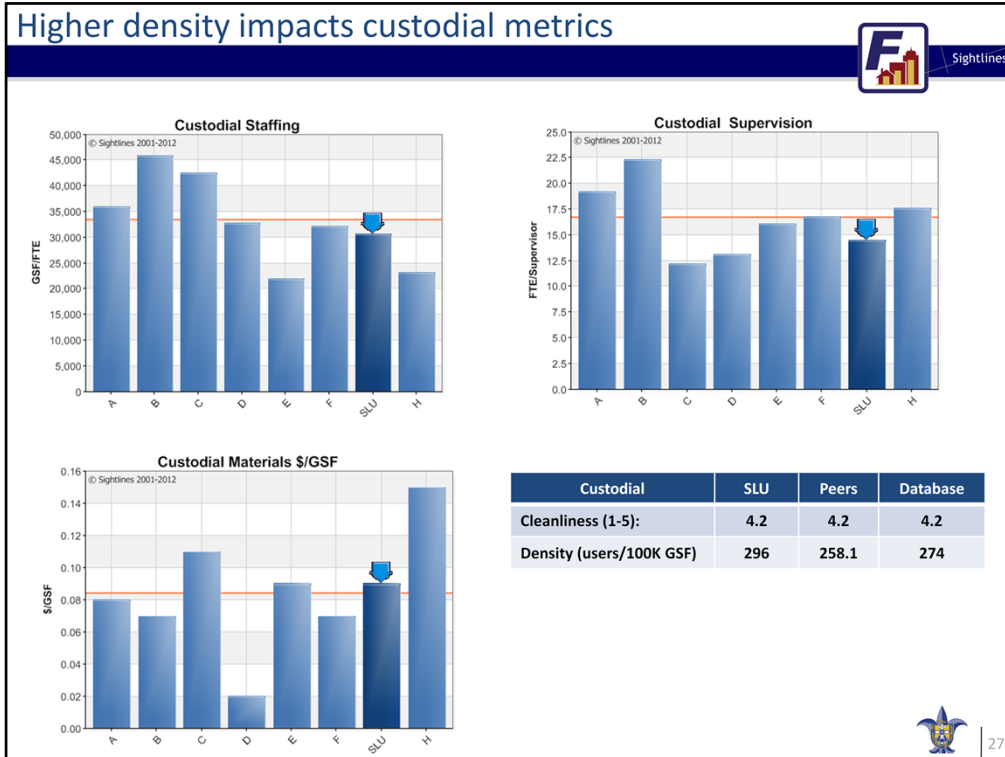
Higher density impacts the custodial operations. Custodial metrics are inline with peers, while the score has come down from a 4.4 last year to a 4.2 this year. This says SLU is getting similar output with similar inputs.

With Fewer staff, performance is significantly above peers
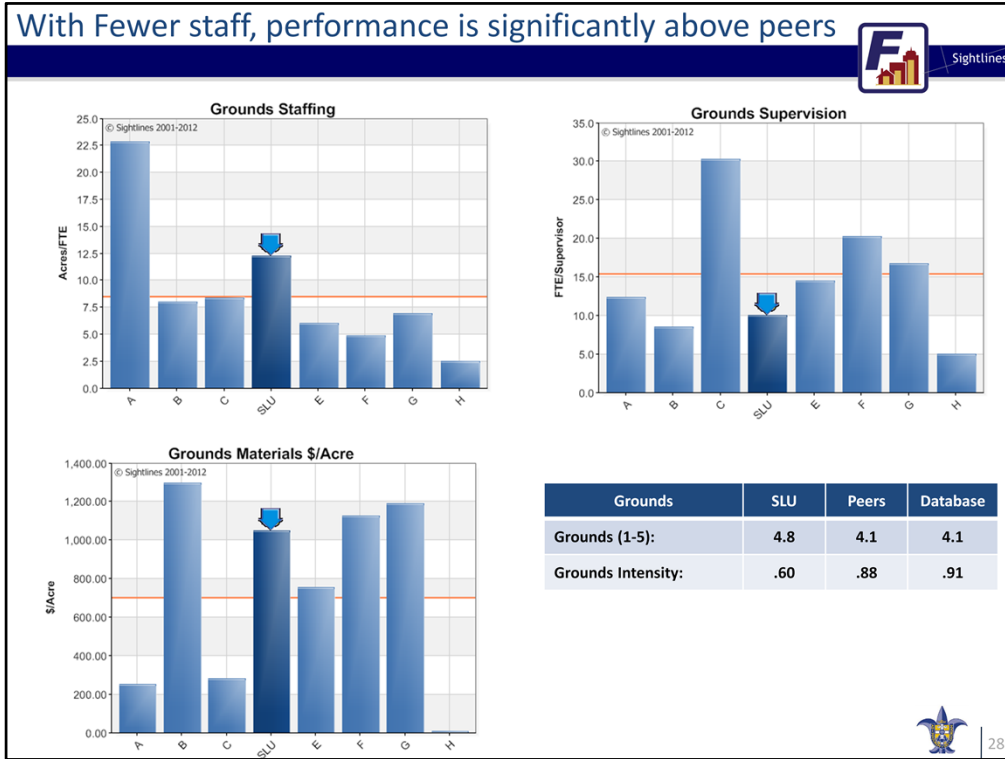
This is a best practice area for SLU. With less staffing and slightly more supervision and materials, SLU is getting one of the highest scores in our Sightlines database for grounds performance (4.8 out of 5).

Lower energy consumption compared to peers
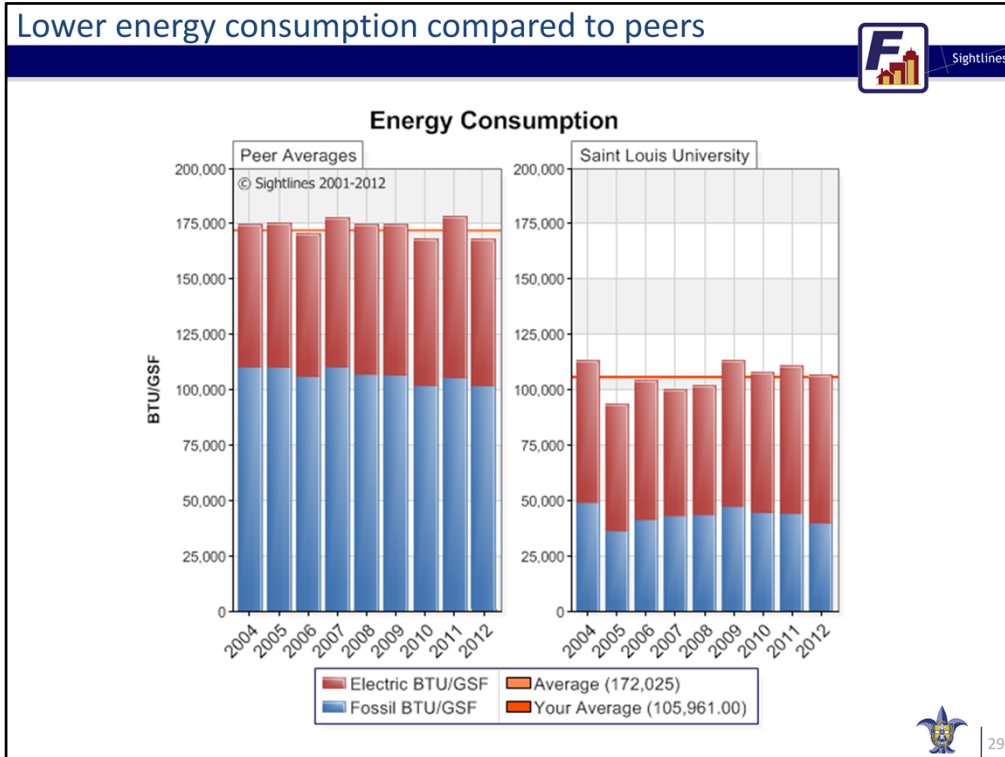
Energy Cost and Consumption have been below peers and trending has been relatively flat. This is one area where age and backlog could begin to put upward pressure on consumption.
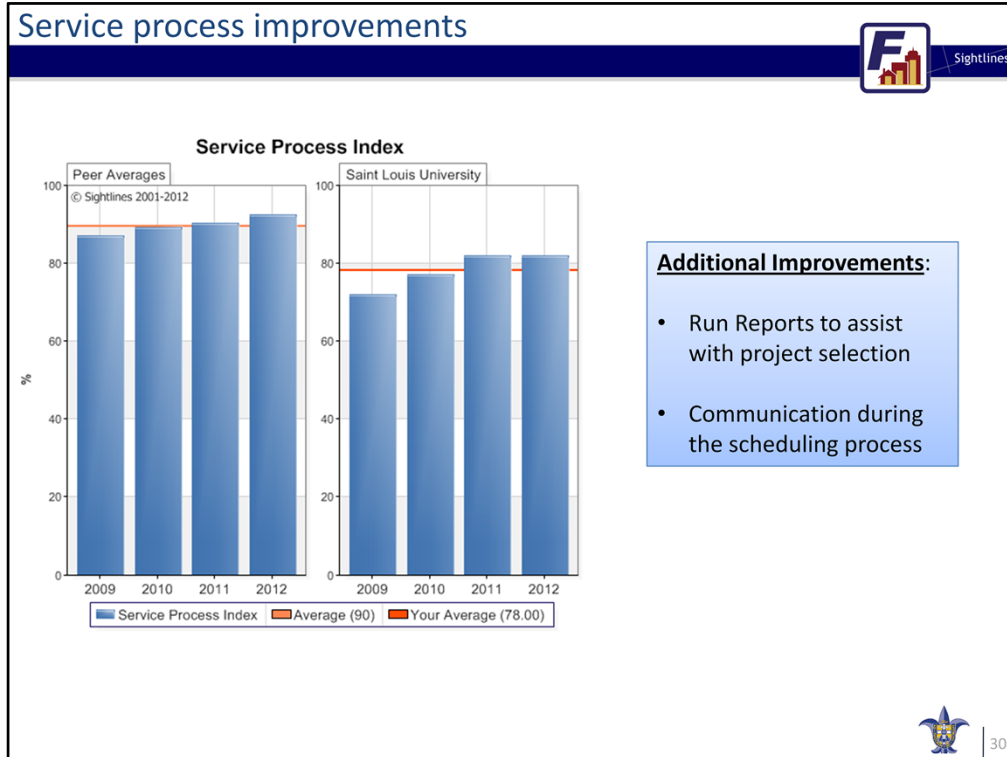
SLU has made improvements to the service process with the implementation of the new work order system.

Questions & Comments