



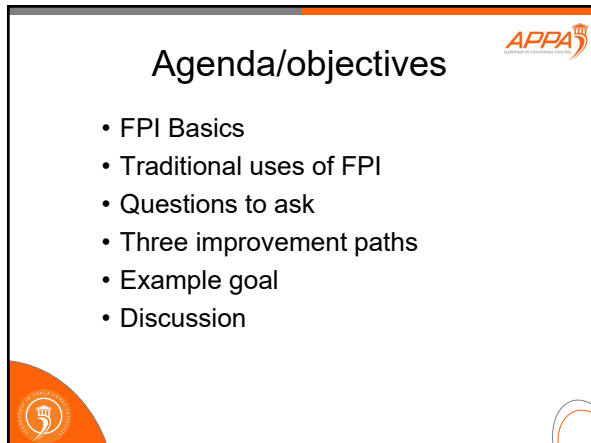
FPI 2.0
Facilities Performance Indicators

Creating a path for improvement

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APPA

The slide features a white background with an orange header bar. The title 'FPI 2.0' is in large blue and green letters. Below it, 'Facilities Performance Indicators' is in black. A subtitle 'Creating a path for improvement' is in italics. The presenters' names and affiliations are listed below. Logos for Purdue University and APPA are in the top right and bottom left corners.

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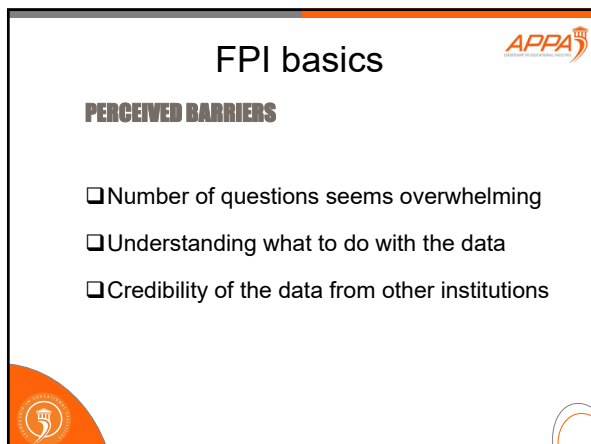


Agenda/objectives

- FPI Basics
- Traditional uses of FPI
- Questions to ask
- Three improvement paths
- Example goal
- Discussion

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FPI basics

PERCEIVED BARRIERS

- ☐ Number of questions seems overwhelming
- ☐ Understanding what to do with the data
- ☐ Credibility of the data from other institutions

The slide has a white background with an orange header bar. The title 'FPI basics' is in black. Below it, 'PERCEIVED BARRIERS' is in bold. A list of three items with checkboxes follows. Logos for Purdue University and APPA are in the top right and bottom left corners.


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FPI basics

APPA

GENERAL DESCRIPTION

- ❑ 136 questions
- ❑ Multiple ways to filter/sort data
- ❑ Flexible presentation of major parameters
- ❑ Almost 20 years of application/data




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Why use any measures?

APPA

Not everything that counts can be counted, and not everything that can be counted counts.
Albert Einstein

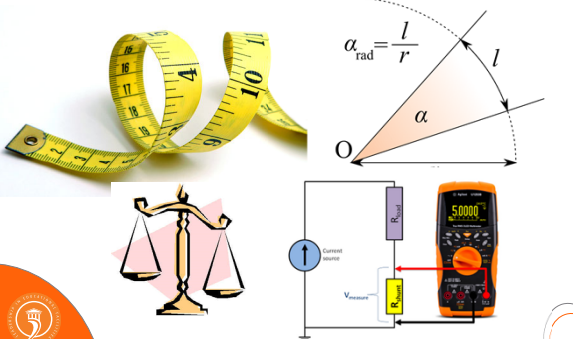
If you don't know where you're going, any road will take you there.
Cheshire Cat, Alice in Wonderland




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What tools exist to measure?

APPA



The collage includes a yellow measuring tape, a balance scale, a diagram of a circular arc with radius r and angle α (with the formula $\alpha_{\text{rad}} = \frac{l}{r}$), and a digital multimeter displaying 50000.



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Facilities measurement

MOST FACILITIES ORGANIZATIONS ALREADY MEASURE A LOT OF THINGS

CMMS/IWMS – Computerized Maintenance or Integrated Work Management System

Track work performed by building and sometimes by specific components. Employee time may be tracked and used for payroll or annual evaluation purposes.

Sophisticated implementations include:

- Component service history
- Maintenance materials inventory
- Preventive maintenance steps
- Predictive/Reliability maintenance processes
- Integration with building management systems
-



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APPA FPI

What FPI Does

- Looks at major and minor characteristics: physical, financial, and staffing, across an entire campus.
- Identifies important ratios that provide a sense of the current and future condition of the campus.

What FPI Doesn't

- Solve campus condition, growth, or service levels – *these are your job.*
- Answer questions about individual buildings or systems.




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APPA FPI

FIRST, KNOW YOURSELF

- ☐ What is your Carnegie Class?
- ☐ Who are your peers?
- ☐ What is your environment?
- ☐ What is your history?
- ☐ What is your mission?
- ☐ What are your goals?



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COMPARISON CHARACTERISTICS

			
Mission	Size	Site	Character
Baccalaureate	Small	Rural	Formal
Masters	Medium	Suburban	Informal
Doctoral	Large	Urban	
Research	Very Large		
Special			



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What to measure

THREE ESSENTIAL QUESTIONS


Who is going to use the data –
understanding the problem

What data will be collected and how –
defining the solution

How will the data be maintained –
ensuring integrity & confidence (present and future)



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Performance measurement

AN EVOLUTION

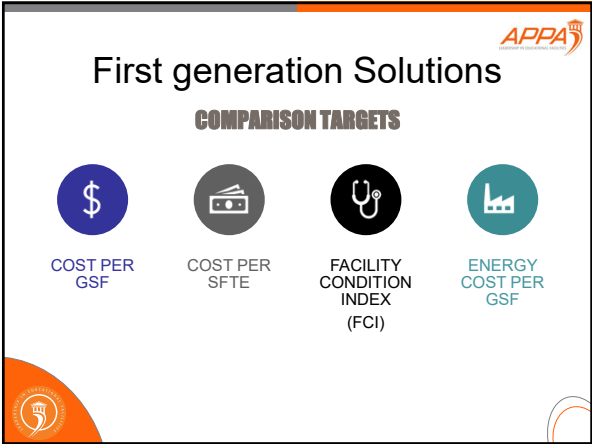
First Generation:
Are facilities expenditures comparable to peers?

Second Generation:
Are we maximizing the resources committed to sustaining our facilities portfolio?

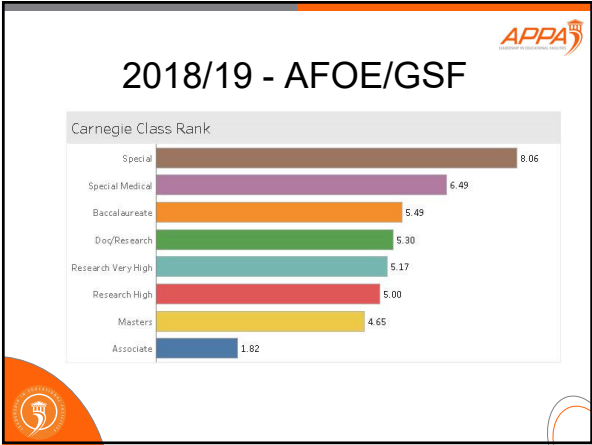
Third Generation:
Can we make better operational decisions with our facilities data?



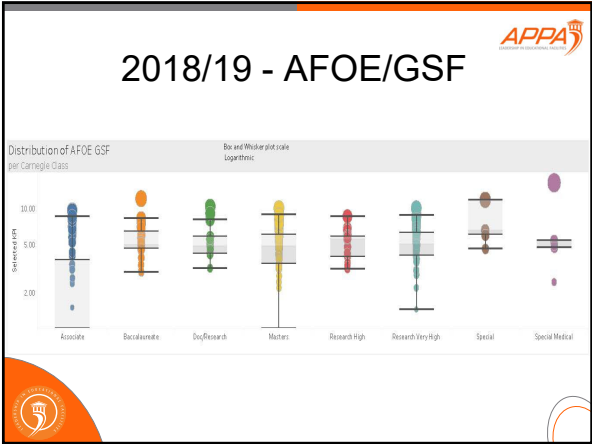
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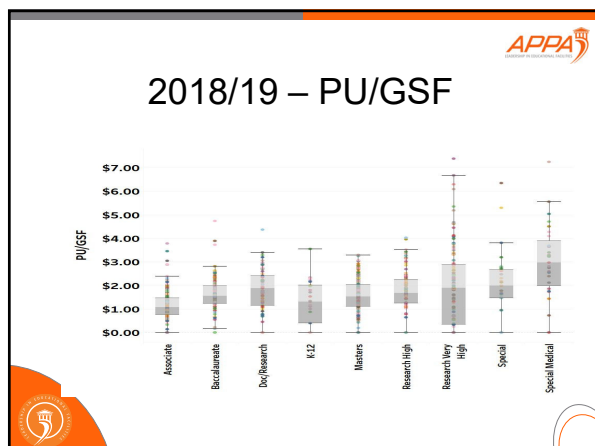
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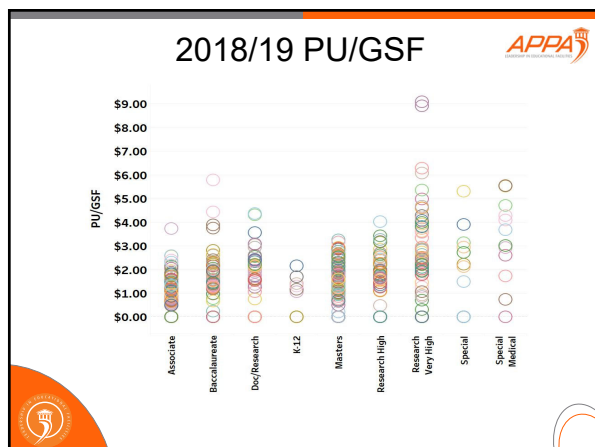
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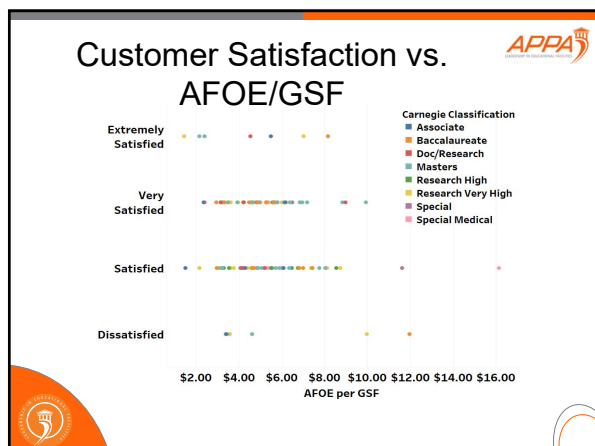
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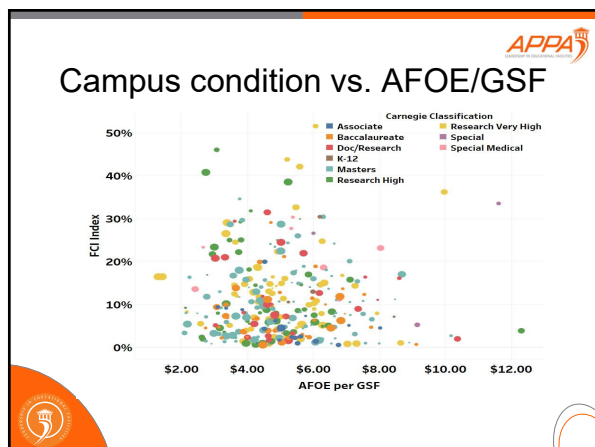
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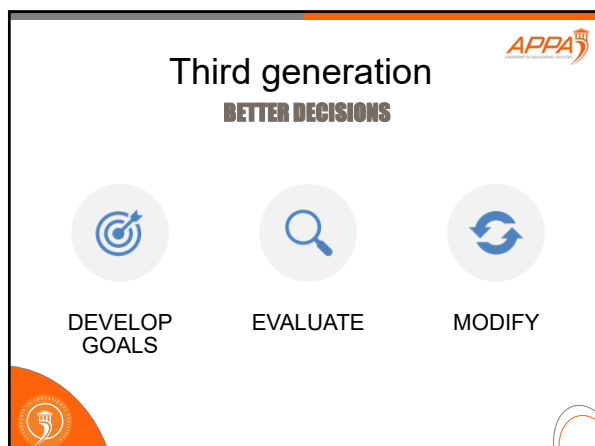
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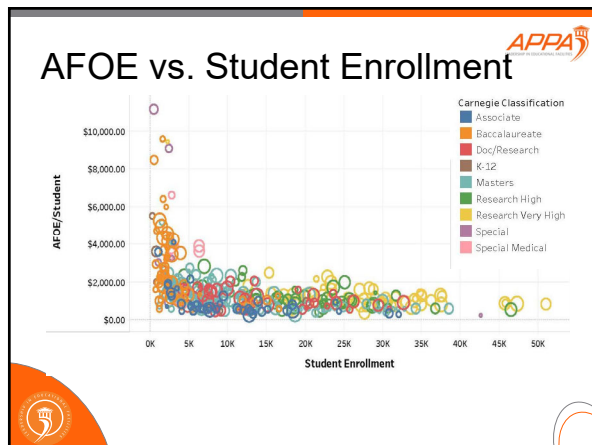
Benchmarking tools

FPI RATIOS

- ✓ AFOE – Annual Facility Operating Expenditures
- ✓ GIE – Gross Institutional Expenditure
- ✓ CRV – Current Replacement Value
- ✓ Customer Surveys
- ✓ Energy Consumption



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The move between generations

HOW TO SWITCH FROM COMPARISONS TO CONTINUOUS IMPROVEMENT

- ❖ Know the campus vision and mission
- ❖ Get familiar with the strategic plan
- ❖ Identify and set:
 - Goals and objectives for FM
 - Metrics – KPIs (key performance indicators)
 - Baseline measurement and targets
 - Actions to move toward the targets (strategic plan)
 - Who/What/How/When will the strategic plan be achieved
- ❖ Utilize APPA FPI tools to improve and document



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Develop goals

Align

Identify

Deliver

Align FS mission with that of University mission

- Understand the mission through interviews and discussion with campus leadership
- (e.g.) Create sustainability focus – facilities, institution, environment

Identify what behaviors create positive occupant experiences

- Delivery of reliable services (service when promised)
- (e.g.) 'FedEx' like status of work orders and other services

Deliver the services occupants want

- Service Level Agreements (SLA)
- Individual
- Uniform
- Support where appropriate

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Metrics - example

CREATE A SUSTAINABLE CAMPUS

- MMBTU/GSF
- MMBTU/SFTE
- Energy Source Mix (Purchased commodities)
 - Coal
 - Oil
 - Natural Gas
 - Wood
 - Electricity
 - Renewable (non-carbon)

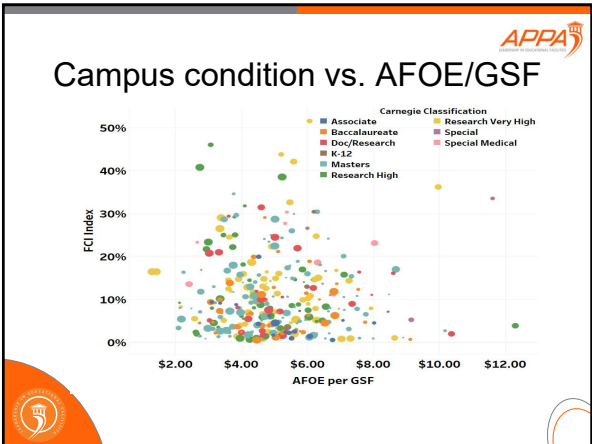
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Metrics - example

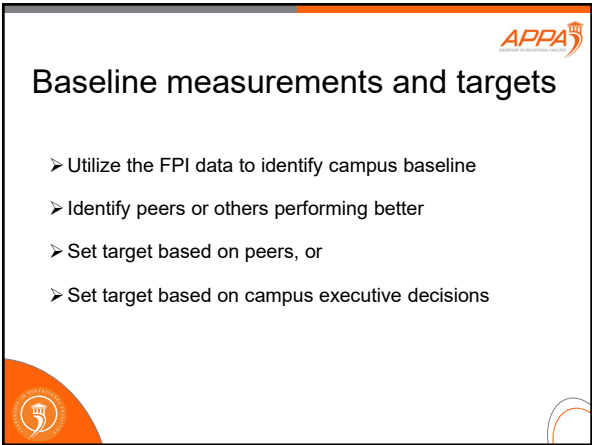
IMPROVE FACILITY CONDITIONS

- Facility Condition Index - FCI
- Average building age
- Needs index
- Customer Rating

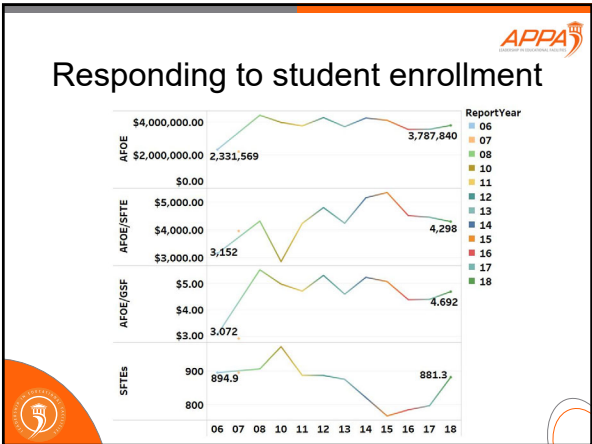
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Move to the targets 


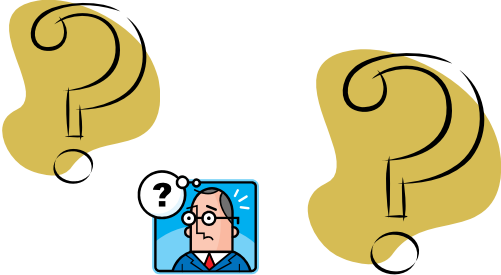
RACI { RESPONSIBLE – APPROVE – CONTRIBUTE – INFORM } CHART

- ✓ Who is responsible for the target
- ✓ What will be done to achieve the target
- ✓ How will progress to the target be measured
- ✓ When should the target be achieved
- ✓ Where will data come from to measure progress




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What's next? 



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"IT IS THE CAPACITY FOR MAINTENANCE WHICH IS THE BEST TEST FOR THE VIGOR AND STAMINA OF A SOCIETY. ANY SOCIETY CAN BE GALVANIZED FOR AWHILE TO BUILDING SOMETHING, BUT THE WILL AND THE SKILL TO KEEP THINGS IN GOOD REPAIR DAY-IN AND DAY-OUT ARE FAIRLY RARE." 

Eric Hoffer, Working and Thinking on the Waterfront



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