

Cal Tech's FPI Journey

By Jim Cowell, P.E.

As a facilities manager, you are constantly presented with a multitude of questions regarding the current operation of your university. Having a robust set of facility metrics describing your operations is a helpful tool to answer these questions on an internal level. Yet, often you will also be asked by those outside the facilities organization to compare your university with other universities or over a span of time to capture historical trends. At this point, you will also require a robust network of facilities metrics and data sets. Over the past five years the California Institute of Technology has used data and metrics from APPA's Facilities Performance Indicators (FPI) to gauge performance, observe trends, and compare operations across a network of different campuses.

As a facilities manager in higher education, you may be presented with one of the following questions:

- Your university is building a new facility and you are asked for historical data to support your request for added resources.
- Your CFO wants to know how your maintenance costs trend over time.
- Your provost asks how your facilities management (FM) costs compare to other similar universities.

The APPA FPI provides a tool to respond to all of these questions and more.

OUR FPI EXPERIENCE

In 2011, we were unable to answer the questions listed above, and had no consistent method for reporting and analyzing our FM costs. Yet, we knew there was value to be gained from answering these questions and comparing ourselves to other, similar

universities in a systematic method. Thus we began our journey into the FPI.

We explored the FPI and determined that this tool would meet our needs to collect and analyze facilities data in a systematic way, and we then set a goal to complete data entry for the first year. One year of data is a mere snapshot of a facility's operations, not viable enough to identify meaningful trends. However, after several years of participation, we have derived trends from our data to tell us a number of vital metrics regarding the facilities operations, performance, and overall health of our building portfolio.

The FPI data is organized around major facilities functions such as custodial, energy/utilities, grounds and maintenance/trades, administration, and design and construction. This structure allows the user to isolate trends in certain functions, with unique maintenance and operations concerns and equally diverse metrics to measure success.

Through the FPI, we are now able to answer the questions posed above and to have a fact-based discussion regarding how much we are spending throughout facilities to support the mission of our university.

OBJECTIONS TO USING FPI

There are some objections to using the FPI. Critics might say data collection and entry with the FPI is a cumbersome and lengthy process. Regarding this point, we did find that the efforts to compile the data during the first year were challenging—because we were simply working through it the first time. However, in the following years the data input required a fraction of the time, and in each subsequent year we formed a better understanding of the data required. Additionally, after the first year it was clear that this



data collection effort was needed to track performance, regardless of the system employed to synthesize the data, and that the efforts to collect pertinent data varied little with the analysis tool.

The seemingly onerous task of data entry is made easy through drop-downs, explanations of the data fields, and definitions of the required information. And if you are a little less adventurous, you can engage one of APPA's Qualified Facilities Performance Advisors. FPI Advisors are seasoned educational facilities professionals who can help out if you get stuck. Being on the less adventurous side of the spectrum, we engaged a coach who proved helpful in answering questions during the initial data collection and entry process.

BENEFITS OF PARTICIPATING

After a few years of participation, we were able to see trends in the data and to understand cost drivers. For example, the cost driver for grounds is related to building density rather than Carnegie Classification (i.e., associate, baccalaureate, research, etc.). So you might be tempted to compare your grounds costs to schools with similar academic profiles rather than similar building density.

Another applicable example of where the FPI helped us understand cost drivers was associated with energy conservation measures and their impact on building maintenance. The FPI data revealed HVAC annual maintenance costs were increasing at a significant rate due to the increasing complexity of our buildings. Namely, the energy-saving measures implemented simply required more maintenance than the previous, less energy-efficient systems. FPI identified this through the trend of data acquired and analyzed since 2011.

The database is flexible enough to be sorted and offers any number of ways to look at the comparison set of schools you are interested in. It also has a robust, integrated dashboard to help you see how your university is performing compared to others.

Ultimately, through our efforts and participation, we were able to answer the facilities maintenance questions imperative to measuring our success and charting a path for improvement.

WHAT IS FPI?

The APPA Body of Knowledge (BOK) provides an excellent description of the FPI:

The APPA Facilities Performance Indicators (FPI) survey is an annual collection and reporting of data (KPIs), creating a baseline for performance

evaluation across education facilities. The FPI survey and resulting FPI reports take a comprehensive look at facilities' operating costs, staffing levels and expenses, building and space costs and usage, strategic financial measures, and much more to provide a benchmark by which related institutions can compare, contrast, measure, and elevate their facilities' performance.

PROCESS AND COST

You might think the FPI appears to be a useful tool for your organization, but how much does it cost? Simply, it costs nothing—it is included in your APPA membership. Your only cost is the time to collect and manage the data; fortunately, this is data you are already collecting as a facilities manager.

So how is the data collected? You compile and input your data into the FPI online portal, offered in a full, or in a light version, which you can transfer between at any point. We found that the light version provides the majority of relevant data we are interested in analyzing. I would suggest using the light version through the first year, then moving to the full version once you are comfortable with the data or identify a specific function you wish to focus on in order to expand the capacity of analysis.

The FPI assigns various portions of the data collection effort to match functional areas of your facilities team, e.g., custodial, grounds, etc. At the end of the fiscal year, individuals are tasked to collect data such as labor, full-time equivalents (FTEs), costs, etc. and populating the FPI database with that information. These individuals have until early December to complete their submission (note that internal quality checks should be conducted before submitting to APPA). After submission the data is reviewed by APPA, and you have the opportunity to fix any anomalies before it is finalized.

The APPA FPI can be your answer to successfully monitoring performance through robust metrics, as well as your strategy to answer many of the questions that will land in your inbox as a facilities manager. The FPI was created to help APPA members answer these questions—but you have to participate. ☺

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FPI Survey Deadline: December 12, 2016!

<http://www.appa.org/research/fpi>