

FPI

FM Success Through Analytics

The APPA Facilities Performance Indicators (FPI) is perhaps one of the most powerful analytical tools that institutional facilities professionals have at their disposal. It is a diagnostic facilities performance management tool that addresses the essential questions that facilities executives must answer to effectively perform their roles. It can provide the data that highlights current levels of performance and opportunities for potential improvement. And, the metrics that it provides range from the strategic to tactical.



WHY ARE FACILITIES METRICS NECESSARY?

A few years ago I heard an APPA regional vice president say to a regional conference audience that they should consider participating in the FPI because “it provided information that their boss would be interested in.” The implication of this statement could be that the FPI is not too useful for facilities management executives – but, their bosses want to know what is happening. Or, it could suggest that facilities personnel should be effectively managing what their bosses are interested in.

Either way, it struck me that there seemed to be a somewhat “reactive” intonation about the value of the FPI directly to the institutional chief facilities executive. I firmly believe that the

FM professional would do well to aggressively embrace the FPI as a tool to effectively manage their facilities operations.

Although many institutions are seeing some budgetary relief with recent economic trends, this is being countered by current public pressure and expectations for the costs of higher education to be controlled. There have been several articles published in the *Wall Street Journal* and *New York Times* in the past few months reflecting the public expectations being placed on both public and private institutions in controlling costs and managing resources effectively. In addition, the rising cost of higher education was the central theme of APPA's 2013 Thought Leaders symposium.



Facilities managers play a significant role in responding to these concerns. They are managing the largest capital portfolio for most institutions. Even a moderately sized campus can have a replacement value of several hundred million dollars. Only the top level elite institutions have a financial endowment larger than the institution's capital investment in its facilities portfolio. The difficult thing that facilities managers face is that expenses are incurred in managing the facilities portfolio, whereas, the financial endowment of an institution creates income. Effective management of institutional O&M (operations and maintenance) activities is critically important in helping sustain the financial standing of an institution.

So, it is not surprising that institutional executive leadership expects the facilities professional to collect, possess, and understand analytical information that demonstrates how the management of the facilities portfolio is aligned with the institutional goals and objectives. There is usually a much greater degree of trust and confidence when FM is able to provide this information in a proactive manner.

Conversely, if the chief business officer does not trust the institutional facilities management leadership to gather the information that demonstrates the FM organizational perfor-

mance and hires an outside firm to gather it for them, it's a good indicator that they aren't sure that the FM department has a good handle on the management of the facilities. It is a wise facilities management leadership team that uses the tools available to them to report on the performance of the condition of the management of the facilities portfolio.

FM ANALYTICS AND PERFORMANCE MEASUREMENT

The FPI provides in-depth cost analysis for institutional FM practices—and does so across the spectrum of FM activities. However, it also provides metrics reflecting staffing density for various FM activities, utilities cost and usage, capital investment ratios, customer service ratings, and a host of other metrics. The metrics also report on the quality of the services provided for custodial, building maintenance, and grounds operations.

The foundation of the FPI is a database that is created by the results of a survey of approximately 350 participating institutions. Many facilities managers tend to think of the FPI as a benchmarking tool—using it to compare facilities data between various institutions. In doing this, the results are often used by institutions to attempt to justify current levels of spending, staffing levels, or related facilities metrics.

However, FM performance measurement is so much more than making comparisons between institutions to verify levels of spending on facilities management activities. The FPI offers the opportunity to measure the health of a facilities management program on many levels. It creates the opportunity to explore the results of various FM management practices. As an example, it can be an indicator of the potential expected impact of installing information technology to support FM practices and the benefits of improving work processes. In other words, what happens to the cost and quality of FM services when information technology has been deployed throughout the organization?



A SAMPLE ANALYSIS

Figure 1 is an example of analysis done with statistics from the FPI database to measure management practices. In this example, we've identified four institutions that have fully deployed FMIT systems (1-4 in Figure 1 vs. A-D for those who don't) and are comparing their performance against four institutions that have not yet invested in either the systems or the redesign of the corresponding work processes that is done for an effective implementation of this technology. (The complete characteristics of each of the groups are listed in the Notes section below.)

It is easy to argue that this sort of analysis might be suspect in that it is not an "apples to apples" comparison. It is correct that the institutional sample did not attempt to find institutions that are similar in their profile characteristics. They were selected on their known FMIT investment or lack thereof. All eight institutions have hardworking facilities management departments, and were performing relatively well using the available tools and

techniques at the time that this survey was done. Some of them have had to respond to serious budget constraints and are working hard to improve their performance on several levels (e.g., life-cycle cost, customer satisfaction, and productivity).

The observation from this comparison is that there is a general trend of both maintenance and custodial services being delivered at a reasonable level for less cost when the FM organization has invested in the deployment of FM information technology and has made the effort to adjust work processes to use the systems effectively. Group 1-4 schools also show that they have on average more GSF per FTE. The analysis would indicate that these IT systems have allowed them to work smarter.

This analysis does not tell us specifically what management activities are causing the improvements. But, organizations that have data that can support their ongoing operational decision making almost always develop a degree of discipline and rigor that continuously improves their operations.

Figure 1. Maintenance and Cleaning Service Levels¹ and Costs

Groups (1-4 & A-D)	Maintenance			Custodial		
	Service Level	Cost/GSF	GSF/FTE	Service Level	Cost/GSF	GSF/FTE
1	3	\$1.42	77,272	3	\$1.23	44,859
2	3	\$0.57	91,817	3	\$0.89	55,497
3	3	\$1.08	69,686	2	\$1.09	38,504
4	2	\$1.49	77,480	2	\$1.16	29,497
A	4	\$3.08	77,962	3	\$2.18	33,259
B	3	\$1.62	71,176	2	\$2.19	27,292
C	3	\$1.98	61,693	2	\$1.21	38,292
D	2	\$2.00	41,467	2	\$2.11	35,289
All APPA Average		\$1.57	71,192		\$1.36	32,592

Data from 2011-12 APPA Database.

¹ Service levels are measured reported using the APPA operational guidelines for both building maintenance and custodial cleaning.

NOTES: The following are the characteristics of the respective groups shown in Figure 1.

	Funding	Carnegie Classification	APPA Region	Campus Size (GSF)
1	Public	Masters	PCAPPA	3.0 million
2	Public	Research VH	CAPPA	6.8 million
3	Public	Research VH	CAPPA	13.8 million
4	Private	Research VH	SRAPPA	5.8 million
A	Private	Masters	MAPPA	.8 million
B	Private	Baccalaureate	PCAPPA	1.2 million
C	Public	Research VH	ERAPPA	4.5 million
D	Private	Doctoral	PCAPPA	1.5 million

Examples of additional data that can be collected in the FPI survey include measuring worker productivity, closely tracking parts, materials and services costs, and creating effective business cases for repair vs. replace decisions on major equipment. This last point improves the effectiveness of the organization's capital renewal spending by treating it as an investment that can not only improve facilities reliability, but control annual O&M costs.

FM AT THE AT THE DECISION TABLE?

One complaint often heard from facilities departmental leadership is that they don't have a seat at the table when institutional decisions are made that impact the facilities portfolio. Academic or research initiatives may be launched requiring significant facilities input and FM leadership learns about it "after the fact." This forces them into the mode of trying to catch up in supporting the decision, or worse, trying to support the decision without recognition of the resources that might be required to effectively make the initiative successful.

The best way for FM managers to be included in an institution's decision making is to be in a position to provide value to the exercise. By having data that offers hard, proven analytical information, institutional executives will usually develop a level of trust in the dialog that is provided and will more frequently ask for the information to be made available.

Nonetheless, it is important to know that a level of trust in the management ability of FM leadership does not necessarily mean that money and other resources will flow freely to the FM department.

The challenge facing executive leadership is to try to maximize the resources that are dedicated to the core mission of the institution (i.e., academic instruction, tuition paying students, or research). The task of the facilities management professional is to get the maximum amount of value out of the resources available. Any excess funding that is spent on the physical campus may mean that the institution has few funds for library acquisitions, student aid, support of research, or for faculty recruitment.

This is where the FPI can be an enormously effective tool. It can help the institution's management team understand if full value is being derived from the resources that are spent on the facilities portfolio. "Full value" may be different for different institutions. If an institution is experiencing financial difficulty, it may be necessary to adopt a "minimalist approach" and reduce costs while trying to hold an acceptable level of quality. If the college, university, or school is in a growth mode, it may require that the facilities department increase quality. Other

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drivers may be facilities reliability, improvement of curb appeal, support research initiatives, or even, how to effectively reduce a campus size while sustaining the highest quality of services.

Answering these questions is not a matter of comparing institutional FM expenditures. It is more a matter of looking across an array of multiple metrics to determine what the reality is of the total organizational performance. In the same way that a physician needs multiple tests and vital sign readings to make a successful diagnosis of a patient, it's necessary to review multiple metrics to understand what the condition is of a facilities portfolio—and what the optimum management actions should be.

FPI PARTICIPATION

Given the power and versatility of the FPI program, one could ask why more APPA member institutions are not participating. After all, participation and the results are at no charge for institutional members; approximately 24 percent of the APPA member institutions participate in the annual survey. In my discussions with FM leaders over the past few years, I've often asked them about their hesitation with the program. There are several reasons that are often cited:

- Concern about the amount of time to complete the survey

- Concern that the data is not accurate—or, data is tracked differently at other institutions
- Unclear how to interpret or use the data
- Not sure how it could help us do a better job managing the facilities
- The results might make us “look bad” to our executive leadership or public stakeholders

These are all understandable and valid concerns. It's hard to enthusiastically embrace a set of management tools if they are time consuming, benefits are unknown, and they might not be accurate, and, worse, someone might use the results against us.

APPA has done a good job in responding to most of these concerns. First, there is an abbreviated survey of “essential questions.” The survey instrument is shortened to gather only the most essential information and gives a higher level and less detailed set of information. It allows an organization an easier road into the survey database.

APPA has also created detailed and easy-to-read definitions on every survey question. The survey instrument allows the reader to access the definition with only a mouse click. Data accuracy is assisted by the survey instrument triggering an alert when a response appears to be out of line. This alerts the survey responder to check their entry.

APPA has also sponsored conferences, meetings, and provided advisors to help members interpret their FPI data and use it to more effectively in managing their campus facilities portfolio. This assistance can be as broad as attending a conference or contacting APPA for personalized assistance from an APPA identified advisor. And, although the fear may be real that FPI data may show that some organizations are resulting in performance that is not currently up to par, it has often been shown that a management team that sees opportunities for improvement and starts on a road of enhancing FM performance will ultimately be highly appreciated. ⑤

Duane Hickling is president of Hickling & Associates, Chicago, IL, and serves as a qualified FPI advisor. This is his first article for *Facilities Manager*, and he can be reached at dhickling@hicklingassociates.com.

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