



FPI 2012—Did You Know?

By Maggie Kinnaman, APPA Fellow

For more information about FPI, visit <http://www.appa.org/Research/FPI/index.cfm>

When using APPA's Facilities Performance Indicators (FPI) to tell our facilities story, most institutions utilize the tried-and-true ratios such as cost per GSF, GSF per FTE, Btu/GSF, Needs Index, and FCI. But let's take a look at some of the other data points and ratios that also present some interesting information.

NASF/TCO

As an example, in module 2 we find a number of ratios related to NASF. An interesting ratio is NASF/Space Inventory GSF for which the overall average is 66.49 percent. This implies that when a new building is built that is 200,000 GSF, only approximately 133,000 NASF is available for programmatic assignment. This means, that 33.5 of the GSF is supporting infrastructure, corridors, elevator shafts, etc.

This is an interesting ratio when coupled with the new Total Cost of Ownership (TCO) report in module 5. In it, we find that on average the TCO per GSF of space is \$21.18 per GSF per each year of a buildings useful life. So going back to our NASF ratio, I'm wondering if there is a strategy that we can use to design our buildings in a way that more SF is available for programmatic assignment. After all, if you're paying \$21 for each SF per year, then increasing the space used by the academic community would certainly be the goal. This entire concept would make an awesome Center for Facilities Research (CFaR) project, so I extend that challenge to each of you.

STAFFING LEVELS

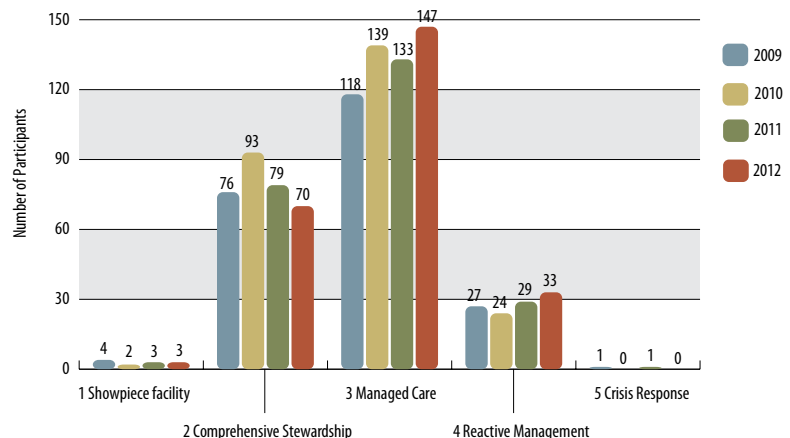
Another interesting area of the report is the demographic information. I find the staffing ratios and levels of service particularly affirming. Looking at the custodial trend analysis, we have shifted from a Level 2 cleaning (APPA's recommendation) to a Level 3. This trend is also evident in grounds services,

while maintenance seems to be holding its own by remaining at Level 2. These statistics are right in line with what we know to be true: we've downsized our staffs, and are being asked to do more with less, consequently affecting the service levels.

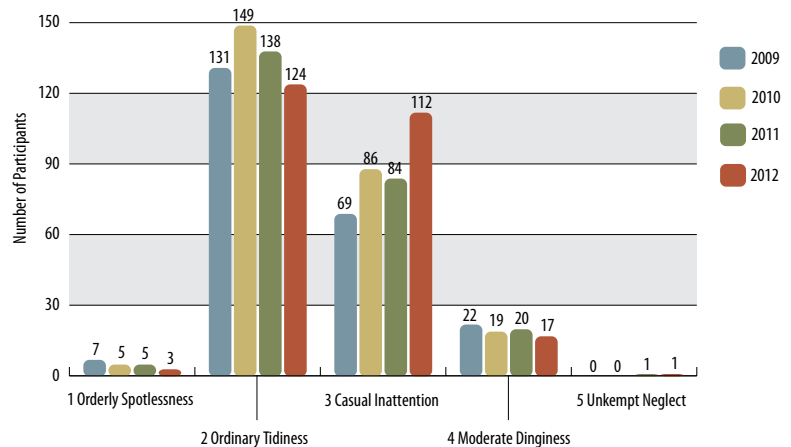
AS A BUILDING AGES

In module 5 the new Building Aging Ratio has pointed out a number of things. First is that the data being captured in average age of mission critical buildings is unadjusted for major recapital-

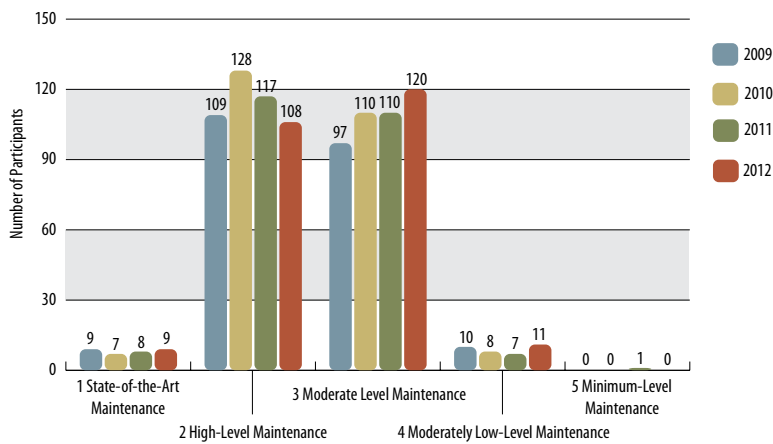
Distribution of Respondents by Maintenance Service (Staffing) Level – Fiscal Year 2011-12 APPA FPI Report



Distribution of Respondents by Custodial Service (Staffing) Level – Fiscal Year 2011-12 APPA FPI Report



**Distribution of Respondents by Grounds Service (Staffing) Level – Fiscal Year 2011-12
APPA FPI Report**



ization—even though the instructions indicate that an adjustment should be made.

For example, the calendar age of a building that was built in 1970 is 43 years old. But during those 43 years, major recapitalization has certainly occurred that would adjust the calendar age. Our 2012 survey tells us that the average age of buildings is 37.3 years while the useful life is 53 years. The building aging ratio is 74 percent which I believe is high due to the lack of adjusting for recapitalization.

TCO

In module 5, you will also find the new Total Cost of Ownership report that was derived from data currently being collected in FPI. The report calculates an average total cost of ownership for each year of building useful life for an entire campus. It’s important to understand that, because this is an average; it does not take into consideration the ranges of TCO when based upon building type.

As an example, using our FPI 2012 data the average CRV/GSF for research space is \$453 while the average CRV/GSF for

classroom/administrative space is \$332. When you look at the cost per GSF for each year of useful life, we’re looking at \$8.55 for research space and \$6.26 for classroom/administrative space. This differential would impact both the construction and recapitalization components of TCO. We also know from experience that it is much more costly to provide maintenance services and utilities to a research building than it is classroom/administrative space. However, we cannot look to the data set for guidance here as we are not collecting annual operating expenditures based upon type of space. The spreadsheet below demonstrates the variety in Total TCO given different building types and different years of useful life.

For a research building with a 30-year useful life, total TCO would be \$37.39 for each GSF for 30 years. For a classroom/administration building with a 53 year useful life, total TCO would be \$19.55 for each GSF for 53 years. Remember that our FPI report is displaying the average Total TCO of \$21.18 for 53 years. As you can see, Total TCO is greatly affected by the type of space and the years of useful life.

FUTURE RESEARCH

I hope that I’ve piqued your interest in exploring what the Facilities Performance Indicators Report (FPI) has to offer. There is so much data to explore, and so many areas that are worthy of future research. If you are looking for a research project, look no further, as the survey has been conducted, the data set established, and the next step is for you to conduct some research that will add to the Body of Knowledge of our profession. §

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TCO By Building Type of Space

Space Type	CRV/GSF	Construction	Maintenance*	Recapitalization	Demolition	TCO with 53 year useful life
Research	\$453.00	\$8.55	\$6.79	\$8.55	\$0.24	\$24.13
Classroom/Admin	\$332.00	\$6.26	\$6.79	\$6.26	\$0.24	\$19.55

Space Type	CRV/GSF	Construction	Maintenance	Recapitalization	Demolition	TCO with 30 year useful life
Research	\$453.00	\$15.10	\$6.79	\$15.10	\$0.40	\$37.39
Classroom/Admin	\$332.00	\$11.07	\$6.79	\$11.07	\$0.40	\$29.33

Space Type	Useful life 53	Useful life 30	Avg TCO
Research	\$24.13	\$37.39	\$21.18
Classroom/Admin	\$19.55	\$29.33	\$21.18

* We are using the overall average of maintenance which includes purchased utilities. We know that it costs more to service a research building than a classroom building but FPI does not currently collect this information.