



By John D'Angelo and Kerry Galbraith

# Closing the Gap

Using APPA Tools  
to Integrate  
Facilities Verticals



One of the best tools that APPA provides to our industry is the opportunity for higher education facilities executives to share best practices. When groups of our peers get together, we spend time sharing initiatives and lessons learned across a wide range of topics. This transparent approach is unique to higher education institutions, as many professions are more guarded with their knowledge and operating process. One challenge that is commonly discussed among peers and seems to have plagued higher education for decades is how to close the gap between planning, design, construction, and operations and maintenance (O&M).

Like most higher education institutions, the University of Chicago (UChicago) Facilities Services department is constantly working to improve the way we operate and function. Our environment is rapidly evolving and as institutional facility managers, we need to be dynamic in our approach. To gauge our success in this pursuit, we survey our clients—the students, faculty, and staff—for their comment or response to the services we provide. Their responses indicate that they see us as one department regardless of what we are doing—whether it is delivering capital projects or operating and maintaining their built environment—and that they rate our success in supporting their needs as one department. In understanding both our successes and challenges, we look to identify opportunities for improving the way we do our work; we use this assessment as a process to identify mechanisms of change by assigning responsibility, gauging performance, and implementing our lessons learned.

#### **BUILD THE FOUNDATION: USE THE DATA YOU ALREADY HAVE**

Capital project delivery success is traditionally evaluated by cost, schedule, quality, and ultimately how the completed project meets the end user's needs. O&M delivery success is traditionally evaluated by prevention of business continuity disruptions, portfolio safety, appearance and cleanliness, and responsiveness. The respective teams collect and use volumes of data to manage processes, apply controls, and lead teammates to successful outcomes. Because our respective definitions of success are defined differently, the data we collect is different and leads to different processes with different drivers. Each team has become proficient at optimizing their process drivers to deliver team success within their respective vertical.

Because the capital projects and O&M teams don't share the same definition of success, the data and root cause analysis of process drivers and failures tend to be focused internally by each team. As a result, decisions are

made by each team that can adversely affect the overall facility's performance. While the capital projects team may be focused on delivering a project within the established budget, they might implement elements in the building that have higher operational or life-cycle costs. For example, state-of-the-art façade systems or new HVAC technology may be appealing during the project design/delivery phase, but these elements might not yield operational savings or create a low-maintenance environment.

If we look at each vertical independently, we should not be surprised that each vertical develops independent solutions. When the verticals share data, processes, and the goal of service delivery, our success as a single facilities department becomes interdependent. Sharing data creates opportunities for win-wins; putting the capital projects schedules, O&M schedules, and campus events on the same calendar enables teams to find and prevent conflicts that would otherwise cause rework or unnecessary disruption to the campus community.

Using maintenance history to evaluate design strategies and product standards yields a better total cost of ownership and less disruption risk. Engaging maintenance teams in the design process to have input into the selection of systems and materials can reduce downstream O&M costs. Using the data that institutions already have builds the foundation for integrated service delivery; making it part of the process ensures implementation and success.

#### **BUILD THE CULTURE: ACCOUNTABILITY IS THE HIGHEST COMPLIMENT**

Imagine a scenario where an academic unit is complaining to a maintenance technician about the number of times they have to create a service call to fix the same new system. Facilities leadership can quickly assess their culture if that technician states, "I know—the people in capital project delivery always do this to us, and I wish they had to maintain the garbage they build." Imagine the scenario where a researcher is complaining to a project manager about high construction costs. Facilities leadership can quickly assess their culture if that project manager states, "Operations makes us install everything with double and triple redundancy, even though they know it costs too much and doesn't add any value."

The APPA Leadership Academy includes four modules that range from building individual and team effectiveness to positively influencing the organizational culture. Starting with the premise that the vast majority of us want to do the best job we can and want to be proud of our contributions leads to the question of whether the scenario behaviors described above are really



the result of the people on the team or whether they result from the way we define the team's success. If each vertical has defined "success" independently, drivers need to be corrected before the culture can be impacted.

Once success is defined interdependently as the success of the entire facilities department, leadership's actions will need to change to match the new focus. The whole department has to share accountability for achievements, and the whole department has to share accountability for missed expectations. We are judged on the successes and challenges of all, and we must support each other in our pursuit of excellence.

Does your institution always invite the maintenance technicians who contributed to a capital project's success to the ribbon cutting? Does your institution always ensure that project managers participate in emergency management committees? Do you have an organizational process structure that brings the verticals together on a regular basis to foster daily communications? The hurdle that needs to be overcome in achieving a truly integrated structure is often one of human nature. Those historical negative interactions between verticals can form and embed negative perceptions; if not addressed, these perceptions will continue to inhibit organizational performance.

Once success is defined as an interdependent goal, behavioral expectations that support that definition need to be defined, communicated, and taught by leadership. Processes and tools need to be implemented to achieve success. It is leadership's duty to uphold those expectations both in their own interactions and in ensuring that teammate departures from those expectations are corrected. Accountability of teammates to the team is the highest compliment achievable and provides the highest probability of successfully meeting client expectations.

### **BUILD THE PROCESS: DESIGN INTERDEPENDENT EXPECTATIONS TO ACHIEVE INTERDEPENDENT OUTCOMES**

As stated above, it is important to create an organizational process structure that brings the verticals together on a regular basis to foster daily communications. Having design standards, inviting maintenance technicians to participate in design reviews, and having a formalized turnover process between capital projects and O&M are fairly common practices. Combining these standard existing practices with data utilization and accountability (steps one and two above) can dramatically improve their effectiveness.

Maintenance technicians are busy and do not generally spend enough time reading plans and specifications to become proficient in the systems they operate. Design schedules often do not leave enough time for review, and designed systems can change dramatically from concept through construction docu-

ments. Likewise, design standards often devolve into a "what we like and what we don't like" list that is rigidly applied regardless of individual project goals. Using maintenance data to evaluate systems by type of building use in order to inform preapproved specifications, rather than design standards, ensures an integrated approach. When the maintenance technicians are participating in design reviews, they are reviewing for compliance with a preapproved specification that they had a hand in shaping. This approach promotes a culture of interdependent team success instead of creating a friction point in the form of an approval gate.

Inviting maintenance technicians to participate in the project rather than just being present for major milestones such as groundbreakings and ribbon-cuttings ensures a sense of ownership and accountability. Providing project managers with regular buildings and plant tours or having them participate in "walk in my boots for a day" programs with maintenance technicians not only gives project managers better insight into the campus infrastructure, but allows them to see the challenges that maintenance technicians face daily. This creates an environment where the project and verticals become fully integrated into the campus.

Every institution has examples of project fences coming down when everything that had been inside the fence is bright, shiny, and new, and everything that had been outside the fence doesn't match—new sod next to bare patches, new light posts next to rusted ones, and new sidewalks next to cracked and broken paths. When the verticals are truly interdependent, no one will ever be able to tell where the project fence was after it is removed. The maintenance team can continue putting down the new sod up to some natural point, paint or replace the adjacent rusted light poles, and replace adjacent sidewalks. Although the ribbon-cutting guests are looking at the new building's front entrance, the ceremony participants have their backs to the entrance and are facing the area that used to be outside of the project fence.

Each institution should have a turnover process that fits their culture, but there should be some level of formality. Even though the institution constitutes a single, interdependent team, the team lead should change from capital delivery to O&M. Whatever the point of turnover is, it should be celebrated with a formal ceremony or sign-off so that there is no doubt. A checklist or letter that documents all major systems, manuals, warranties, and unresolved punch list items should be signed by capital delivery and O&M team members.

Finally, the capital delivery team and project manager should continue to be involved in O&M conversations as team members, as this helps increase their understanding of O&M's needs for the next project they build and allows them to contribute a different perspective. Establishing interdependent expectations creates a common team goal.

## BUILD THE PROJECT: REAL-WORLD EXAMPLES

Two of our extremely important and highly visible projects at UChicago are great examples of employing these concepts, then taking them to the next level. The David M. Rubenstein Forum is new construction of a state-of-the-art conference and event center, and the Student Wellness Center is a combination of new and renovated space enabling the university to provide wellness programming and integrated care for students in a single campus location.

UChicago uses the APPA best practice of establishing service level agreements (SLAs) with each user to set clear outcome expectations and to ensure a common understanding of the total cost of ownership. The SLA for the Rubenstein Forum was initiated during concept design, so that building systems and finish selections incorporated perspectives from the capital project team on constructability, and from the O&M team on maintainability. At eight months from project completion, the SLA was signed and included funding for additional O&M staffing to be brought on board for the last six months of construction and to remain with the building once it is open.

The Student Wellness Center's SLA is also fully costed and vetted, and in the process of being signed 12 months before the project's completion. The O&M staff that will be assigned to support the space is part of the project manager's delivery team and has conducted enough site visits to lead a VIP tour of the project if requested. The capital delivery project manager is likewise contributing to the O&M mission by looking outside of her project fence.

Success in closing the gap requires a commitment from the organization from top to bottom, and is achieved when team members understand and value each other's perspectives, and when they work interdependently rather than alone. 💡

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