

a cbt study

BUILDING FOR THE FUTURE THE VALUE OF POST OCCUPANCY EVALUATION

//PROJECT DELIVERY NO LONGER ENDS
WHEN THE BUILDING IS COMPLETE



In Spring 2016, CBT organized a roundtable discussion exploring the evolution of spaces after occupancy. Hosting a panel of institution directors and administrators, we listened to the firsthand experiences of end-users, inciting a new conversation on how spaces evolve after occupancy, setting new expectations for effective building performance evaluations, and discussed the value of a Post-Occupancy Evaluation (POE) to determine whether the building or space is functioning as it was meant to. Here is what we learned:

Campus planning and design today require smarter and more efficient methods than ever before. Higher education institutions are challenged with achieving ever higher standards for sustainability, building use, and flexibility over time. Competition for the best students and faculty, changes in technology and social norms, the evolving workplace, and the need to encourage lifelong learning all demand that institutions understand the long-term impacts of their plans and how to leverage new facilities for maximum value. Conceiving and maintaining a new building on campus is an area requiring specialized expertise based on proven experience.

Even the most meticulous plans don't always materialize as expected. Well after the investment has been made, the dust cleared and the paint dried, do new buildings and reconfigured spaces live up to their designed intent?

THE MOST EFFECTIVE PERFORMANCE EVALUATION HAPPENS THROUGHOUT THE LIFECYCLE OF THE BUILDING – FROM INITIAL CONCEPT WELL BEYOND THE BUILDING'S OCCUPANCY.

WHERE DOES A POST-OCCUPANCY EVALUATION COME IN?

Project delivery has become a more complex and demanding process that no longer ends when the building is complete. The traditional phases need to extend beyond the design, construction, and occupancy to now include a thorough Post-Occupancy Evaluation. POEs must become an integral part of the Basis of Design Document at the beginning of a project, as a way of tracking achievable criteria.

All roundtable participants conducted POEs as part of their building program, each focusing on different aspects of the building's performance and actual use by its occupants. All recommend early involvement and conducting evaluations during different phases: design, move-in, and post-occupancy.



WHAT ARE THE CHALLENGES OF CONDUCTING POST-OCCUPANCY EVALUATIONS?



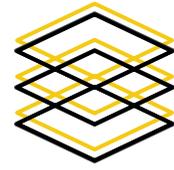
Consistency

The industry lacks standards for POEs



Factors

Defining building performance vs. functional performance



Process

Each layer needs to be identified and then addressed individually



Time

Complaints tend to subside after ten months, so time must pass for the review process to be effective



Responsiveness

When beginning the dialogue about concerns, a budget and plan must be in place to these address concerns



Analysis

The criteria for success must be clearly defined in order to make an objective assessment.

What works in many cases is to build time for post-occupancy observations into the schedule and the consultants' contracts. Periodic check-ins with the design and construction teams are a must. Often, a six- or ten-month walk-through following building completion is essential in determining what works – and what doesn't – in the building design. On the owner's side, it is important to establish best practices to manage the process and to anticipate negative feedback. Being proactive may come with a cost, however: feedback from building users may result in some redesign and thus unplanned additional expense. Satisfaction can be difficult to achieve.

DO YOU FOCUS ON THE **TECHNICAL** SIDE OF THE PROCESS, THE **FUNCTIONAL** SIDE OF THE PROCESS, OR BOTH?

Most institutions conduct both technical and functional post-occupancy evaluations; however, building performance takes precedent. The goal has traditionally been to focus on physical performance to ensure social performance.

Three types of POEs have been identified as the most relevant and useful to institutions:

- operational
- lessons learned (what we can do better next time)
- occupancy and satisfaction.

Sustainable design and performance have become important prerequisites, but different institutions measure levels of "green" differently. As a result, an important metric is becoming increasingly popular (but remains difficult to quantify): the health and wellness of students and employees. More and more institutions are becoming interested in the building's functional performance from a social point of view. Facility planners are searching for tools and performance data to measure and quantify the student experience, and to demonstrate how building design can positively change behavior and contribute to students' success.



THE IDEAL POST-OCCUPANCY EVALUATION PROCESS

It was made clear from the conversation that establishing design and performance goals early on in the process is critical to success. Equally essential is communicating with leadership during major phases of design, construction, and six-to-ten months after occupancy. Following a consistent methodology and developing a comparison matrix will keep evaluation focused and intent clear.

SO, HOW DO WE CREATE A USEFUL, VALUABLE POST-OCCUPANCY EVALUATION?

- Keep the plan formalized, simple, and straightforward.
- State the goals for the building clearly, and consider a broad range of issues.
- The architect and owner must establish clear, shared, and respective goals early in the design process.
- Allow for risk management: plan to navigate change in a competitive, entrepreneurial environment.
- Consider the student experience in developing flexible, relevant systems for a changing world.
- Focus on the right user group: assign the right evaluators and survey the right users.

The POEs conducted today largely neglect one major area of importance for new educational facilities: the users' performance. Some of the areas that need to be reflected are:

- social aspects of the design
- health and wellness
- mindfulness
- student success.

There is clearly a market demand for appropriate tools and processes to quantify a building's success. Expanding the toolkit to include more comprehensive measurements such as heat maps, surveys, or student GPAs would add more refined data to building evaluations.

CBT WOULD LIKE TO THANK THE FOLLOWING DISTINGUISHED PARTICIPANTS IN CBT'S ROUNDTABLE DISCUSSION:

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In a rapidly transforming and highly competitive market, it is critical for institutions to gauge how buildings evolve by adopting models and mechanisms that have not been used before. Developing a strong culture of design feedback among departments and between institutions and design teams is the key to the future of facility design, procurement, and long-term maintenance. Being able to track the social performance – not just physical performance of buildings – will assess the quality of completed projects, and will improve performance of future projects.

The issues identified during our Post-Occupancy Evaluation roundtable have already begun to shape our practice and extend our perceptions. Marking our understanding of how spaces change and evolve, we continue to develop tools to measure the functional performance of the buildings we design, and to enhance how occupants live, study, learn, and grow with and within each space.

CBT will be scheduling future follow-up events to address the standardization of the POE process to improve design and project delivery for facilities on campuses nationwide.

