Investing in Facilities: The People and the Process

Elizabeth S. Boylan

How people are drawn into and engaged with the process of planning new facilities for science has a direct relationship with the quality and character of the spaces that emerge from that effort.

Recently while preparing for a presentation and discussion with our trustees regarding Barnard College's capital building needs, I came across the well-known Winston Churchill quotation that captures my experience: "We shape buildings. Thereafter they shape us." It points to the profound influence that work space has on the workplace, that is on our human capital and their surroundings. Therefore those who have a hand in renovating or planning new facilities must do so with utmost care. It is critical to pay attention to the best prevailing wisdom as to how buildings and interior spaces can contribute to the potential people have to their interactions, creativity, productivity, and capacity to learn.

I have been asked to give my perspective, based on my experience, on how to make the best investment in the facilities used by your students and faculty in the sciences: how to establish working relationships, set expectations, and involve the various constituencies to get the most from the investment in facilities for teaching and research in science.

I have a caveat to trustees, presidents, provosts and deans who are not themselves scientists: if there is in all of us a territorial imperative and a propensity to be consumed by actual or perceived deficiencies with regard to assigned space, such imperatives and propensities are taken to higher orders of magnitude by those in facility-dependent fields such as (but not exclusively) the laboratory sciences. Bright and even lighting, plenty of electrical power, reliable building services and temperature regulation, efficient use of space, and more are high stakes to those whose work depends on the building environment. Do not assume the architects will know everything they need to know about the particularities of the kinds of teaching and research done at the present and planned for the future. Do not assume the faculty and staff know what they will need or what the options are. Do enough research so that you know the questions to ask and how to maximize the likelihood that the building or renovation will achieve its fullest potential.

I have been party to some building projects that have gone smoothly and have come in under budget; they have been few, but they have been enough in number to keep me optimistic that it can be done. Other projects have had devilish lives of their own, and it is hard to figure how many things can go wrong at once or in quick succession, or both. Twenty-twenty hindsight on the good and the bad has allowed me to come up with some working principles that appear to lead toward more satisfactory and satisfying outcomes (though not even the best of plans, planners, architects, and construction folks ensures against things going awry). Here are some thoughts on the process from the point before the architects are selected to during and after moving in; they are lessons learned, some the hard way, written for deans, provosts and presidents who have building projects on the horizon. Attention to these people and process factors is as important in the long run as having the land or space, dreaming the dream, raising the money, and giving the final okay to proceed.

1. *Involve faculty in the architect selection process.* A great deal is at stake in defining the scope and character of a project during the architect selection process: what is in the request for proposals and who is chosen. Having key faculty involved from the start contributes to a sense of buy-in, educates (some of) the faculty as to the opportunities and constraints that will be operating, and helps the architect gain a sense of who the end users will be from the beginning.

2. *Insist that the architects and the departments involved talk early and often as plans develop.* Make sure that the architects listen for variations on a theme, reflections of microclimates from department to department that should be preserved - even enhanced - for their individual optimal functioning. One size does not fit all, no matter how aesthetically pleasing and pure (and cost-effective) it may appear. While it is appropriate to force discussion on this issue of departmental autonomy somewhat, and avoid truly idiosyncratic (and inflexible) structures, trying to force round pegs into square holes is not the way to go. Churchill was right: space can facilitate activity or deform and inhibit it. If the project is to serve many individuals or groups, attention should be paid up front to making the best matches between user preferences and utilitarian pressures.

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3. *Hire competent construction managers who represent the institution's interests in dealing with contractors.* Make sure they know what your institution's interests really are. Have them consult regularly with the faculty and staff who will be occupying the space, so that when changes have to be made on the spot during construction, they have a good sense as to what would be an acceptable deviation from plan, and what will interfere with or prevent the eventual occupants from doing their best work.

4. *Support the involvement of at least one or a few faculty and have them be working partners throughout the planning and building process*. It takes time for faculty [and staff] to learn enough to interpret architectural [plans - electrical] and lighting diagrams, [for example, and placement of] plumbing lines. It takes time to go to weekly sessions where problems are identified and decisions are made on acceptable alternatives. One can free up staff to take on these roles, but for big projects there is a lot to be said for paying faculty - in money [or time, or both to slog through the minutiae and develop the expertise so that they can know firsthand when and why decisions were made and can alert others when seemingly innocuous changes will result in major functional deficits.

5. *Consider carefully how such faculty representatives are selected or appointed and what credibility and standing they have among their peers*. Make sure that the chosen faculty keep in touch with their colleagues as plans and construction proceed. They may be called on to make the case for certain decisions; they may be called to task for their complicity in those decisions.

6. *Prepare the community for change and hardship during the construction process.* Be truly vigilant in preparing for contingencies: communicating broadly what will happen when, how bad and long it will be that way, whom to call if it interferes with planned activity. Ensure that enough serious thought is given to mitigating the effects of noise, dirt, intrusion, and safety and security concerns. Those who will directly gain from the construction will have some greater, but not infinite, acceptance of inconvenience and adversity during the construction. Those who gain little or nothing and still have to be aggravated will have few qualms about expressing their views and airing their gripes. Even a most ardent champion of the building project can be bent into a figure of gloom and doom when apparently random events disrupt work habits, particularly when they detract from the precious time faculty have with their students in class.

7. *Prepare the community for the move-in phase. Be prepared for loose ends, punch lists that grow out of sight, and people who should be feeling happy and grateful for new facilities but are acting as though the sky had fallen.* Change is hard, even when it is for the long-term benefit. No good deed goes unpunished. Prepare to be a sponge, and absorb the frustration, anger, tension, and fatigue that accompany any major move.

8. *Take a vacation. Do this as soon as there is a certificate of occupancy and the air-handling systems are sufficiently balanced so that human comfort is reasonably assured.* Do not stop into an Internet café to check e-mail. Let people feather their new nests, put up family photos and posters, adjust their desk chair heights, sort their new file drawers, figure out the new telephones. Then return for office warmings, and celebrate and toast their good taste. Acknowledge again their pain and suffering and tolerance during the building process. Praise publicly those who helped make it happen. Pay the bills. Enjoy a fleeting moment or two of private satisfaction.

9. Dream about what is next.

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