Higher Education Construction: Key challenges facing college and university capital investment

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Introduction

In an ever more competitive global marketplace, the need for a quality education has never been greater; yet, colleges and universities face numerous challenges including providing world-class facilities to attract and retain students. To remain competitive in a shrinking pool of sought-after institutions, college and university administrators are focused on improving dormitories, faculty offices, dining halls, academic buildings, laboratories, engineering buildings, athletic facilities, and other campus infrastructure.

Whether developing new facilities or expanding existing ones, capital spending at colleges and universities represents a significant allocation of finite resources. Strong oversight and controls over the development and execution processes can help institutions enhance the value of those resources and help ensure industry-leading facilities for future generations.

Capital investment challenges

Median state support for higher education declined 21% between 2009 and 2013. Although not all colleges are impacted equally by this decline, many colleges and universities are looking for ways to reduce costs and address this funding shortfall. KPMG LLP’s (KPMG) 2014 Higher Education Industry Outlook Survey found that 22% of survey respondents were planning on delaying capital projects to address the cuts in federal and state funding for higher education and research. While delaying a capital project can save money in the short term, maintaining an outdated facility often results in additional incremental costs compared to the development of a new facility or the decision to move forward with a major renovation.

Colleges and universities on the other end of the spectrum, with large endowments and adequate capital funds, are looking to make sure they are selecting the right projects that align with their strategic goals and long-term vision. While their ability to spend and invest in capital projects may not be limited by funding, there are other factors including project prioritization, resource constraints, or external factors that may impact their capital construction decision making.

Whether they face funding challenges or not, colleges and universities need to improve decision making, and better leverage capital funds by implementing strong controls over their capital planning and execution processes, combined with the ability to closely monitor and report on the progress of large capital projects.

Q: As a result of cuts in federal and state funding for higher education and research, which of the following measures have you adopted or are you considering?

- Increasing tuition 44%
- Offering more online courses 43%
- Eliminating programs/disciplines that reflect less demand 28%
- Freezing of salaries of faculty 24%
- Delaying capital projects 22%
- Replacing full-time faculty with part-time and adjunct professors 19%
- Privatizing campus services 18%
- Offering accelerated degree programs 18%
- Layoffs of faculty and staff 17%
- Focusing on programs that reflect effective outcome-based results 7%
- Don’t know/not applicable 5%
- Other 3%

Source: 2014 KPMG Higher Education Industry Outlook Survey

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Long-range planning and project prioritization: Are we doing the right projects?

Long-range capital planning is a complex process that requires input from all levels of the institution, including senior administrators, project management staff, and end users. Institutions must take a long-term approach to capital planning while making sure that short-term needs are adequately addressed.

Capital planning includes having clearly defined goals, understanding demographic and environmental trends impacting the institution, and creating a complete inventory of capital assets to identify the needs of existing facilities. The capital planning process should include the following key components.

**Project identification.** Projects are recommended for a number of reasons. Existing facilities may need repair, or current capacity may be insufficient to meet existing or future demands. Some parts of the campus infrastructure may not conform to sustainability, safety, or other regulatory requirements, while government funding schemes sometimes provide unexpected opportunities. Decision making is aided by the following:

- Assigning projects to categories such as preservation and repair, modernization, and expansion for comparison against peer projects
- Reliable asset management database
- Software and tools to capture the range of projects
- Documented project identification process
- Complete and consistent project information for all options (e.g., rationale, budget, completion date).

**Project screening.** It is vital that project screening be as objective and quantitative as possible through the use of standard scoring criteria. The screening process should include financial analysis (including return on investment), quantitative risk analysis, and evaluators must assess any internal resource constraints for managing large projects or programs. They should also factor in issues such as local opposition, environmental concerns, and land purchase requirements.

**Project prioritization.** This is the most critical, challenging, and time-consuming part of the selection process. There is no standard scoring criteria that works across all institutions, but the approach needs to be consistent and repeatable, including:

- A capital planning team with personnel from various disciplines, roles, and responsibilities within the institution
- A structured system of governance over capital projects (e.g., executive, planning, design, construction, finance, and operations)
- A tiered approach (e.g., tier 1 = high priority, tier 3 = low priority) to add greater focus
- A continual assessment of lower-tiered projects for future consideration or cancelation.

**Project selection and budgeting.** With the aid of scored criteria, tiered options, and strong oversight, the capital planning committee can review and approve projects with maximum impact. Face-to-face meetings play an important role, involving committee members, project advocates, and capital planning specialists. Financial viability should not be underestimated, to help ensure adequate funding is in place, along with contingent sources of capital.

**Key questions for project owners:**

- Do we understand the state of our existing asset portfolio?
- Can we justify projects from past capital plans?
- Do we have a clearly defined framework for prioritizing and selecting projects?
- How do we screen projects to identify those delivering the greatest benefits?
- Are we factoring return on investment into our decision?
- Are we confident in our budgeting and forecasting processes?
Oversight and control environment: Do we have the right infrastructure our place to manage our planned projects?

Having the right oversight and control environment is key to the delivery of any successful capital program. The purpose of having industry standard project management controls is to reduce project risks by taking a proactive management approach and meeting the expectations of developers, contractors, and suppliers in the marketplace. However, processes and controls alone won’t ensure that the objectives of a capital facilities plan will be achieved. The components discussed below should also be in place for managing major capital projects.

Processes and controls: Do we have strong capital project controls?

Many facilities management teams strive to develop and implement good project management controls. Even so, administrators should consider conducting an independent review of these controls to determine if they adequately address the risks associated with projects in the current funding cycle.

Processes and controls should be:
- Formally documented
- Fully implemented and standardized
- Adequately monitored
- Continuously reviewed and improved upon

Project or program management controls can be divided into five main process areas as follows:

1. **Program strategy, organization, and administration**
2. **Cost management**
3. **Procurement management**
4. **Project controls and risk management**
5. **Schedule management**

An example of a good project management control in each of the main process areas is highlighted below.

1. **Program strategy, organization, and administration.**

   Fully developing the project or program strategy helps ensure that limited resources (both dollars and personnel) are deployed in an effective manner and that projects authorized for funding align with the long-term plan of the institution.

   **Example control:**
   *Project management reporting:* Accurate and timely reports of the entire project portfolio are generated and supplied to management on a regular basis. Periodic reporting highlights the risks and issues affecting the project. Senior management relies on the information contained in project reports to make required decisions in a timely manner.

2. **Cost management.** Establishing a budget, tracking actual costs, forecasting costs during the project, and controlling costs throughout the project life cycle allows for the appropriate deployment of institutional resources.

   **Example control:**
   *Project budgeting:* Once a project’s baseline budget is set, all budget revisions are tracked and approved through a documented approval process. Costs should be tracked continually against the baseline budget throughout the project life cycle. Variances should be reported and justified.

3. **Procurement management.** Utilizing repeatable processes and standard forms creates a positive environment in which contractors and suppliers respond with competitive bids and are treated fairly and consistently by the institution.

   **Example control:**
   *Contracting and contract standards:* Standard forms and templates for contracts are utilized for all contractors and consultants. These forms are continually reviewed and updated by the institution’s legal team. When appropriate, master agreements are executed with key contractors to ensure consistency and secure favorable terms.

4. **Project controls and risk management.** Tracking scope changes, permits, regulatory requirements, environmental compliance, quality, and project risks in a consistent manner helps the project team to address project needs in a timely manner and mitigate potential risks that might threaten project success.

   **Example control:**
   *Contract compliance:* The project owner schedules and performs regular contract compliance assessments to verify that terms and conditions of construction and supply contracts are being followed.

5. **Schedule management.** The purpose of schedule management is to help ensure that projects are completed on schedule and that all dates reported to management are grounded and reasonable. Typically, this can be done by implementing scheduling standards that dictate how schedules are created, managed, and upheld.

   **Example control:**
   *Schedule management process:* The contractor submits a formal baseline schedule for review and acceptance before on-site work is started. The baseline schedule is updated on a biweekly or monthly basis, and progress reports are distributed to the owner and other stakeholders.
**Organizational structure and resource needs: Are we adequately staffed?**

The right organizational structure can help create an environment for project success. Not all capital programs are large enough to justify the employment of outside project managers and construction specialists. For large and complex projects, however, resources must be dedicated on a full-time basis. Administrators must determine if they are going to staff projects with internal resources, contract with an outside owner’s representative, or use a hybrid approach to managing the project or program. If a construction manager will deliver the project, carefully consider the contracting strategy to enhance the construction manager’s effectiveness and attention.

Strong project management controls require that all resources staffed on the project have significant construction experience. Staffing the project with resources who are unfamiliar with contracting procedures, contract administration, construction inspection, and acceptance of construction deliverables exposes the institution to significant risk.

**Project delivery strategies: Are we using the right approach?**

As established funding sources for capital projects are being reduced or repurposed, institutions are beginning to move away from their traditional project delivery strategies. For example, the design-bid-build strategy is used less frequently now than it was in the past, especially in the college and university setting.

Many institutions are considering nontraditional models such as partnerships with third-party developers and financial institutions. To mitigate financing, construction, and operating risks, colleges and universities are developing relationships with outside entities, particularly for their largest capital projects and programs. A developer-financed dormitory construction project on institution property may have been rare 15 years ago—in today’s marketplace; however, it is becoming ever more common. When executed correctly, these partnerships allow institutions to save capital costs and still acquire industry leading facilities meeting their needs.

Because all projects are unique, the project delivery method selected by administrators should be matched to each project’s specific needs. The project delivery model should meet specific financial targets and risk tolerances of the institution.

**Systems and tools: Do we have the right systems and tools in place to manage a multiyear program?**

As projects increase in scope, value, and complexity, tracking projects in stand-alone documents on the project manager’s desktop is no longer a viable solution. Institutions should consider using a single system across its entire portfolio of projects to allow easier reporting and oversight.

Colleges and universities should consider implementing a Project Management Information Systems (PMIS) to increase their reporting abilities on key performance metrics. The proper PMIS tool can give management better insight into project performance through the use of dashboards and other reporting tools.

In today’s technology-driven environment, institutions should also consider leveraging the power of data analytics in the project planning and delivery processes. Data analytics can assist institutions in selecting the right project for their needs and can be used to drive efficiencies in their estimating processes.

### Leading Practices

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<th>Long-range planning:</th>
<th>Long-range plans should be continually reviewed and assessed to address current issues and future needs.</th>
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<tr>
<td>Controls assessment:</td>
<td>Project management groups can partner with their internal audit groups or third-party vendors to assess the adequacy and completeness of their existing controls.</td>
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<tr>
<td>Contract compliance assessment:</td>
<td>Project managers can work with internal audit or third-party vendors to determine if contractors, vendors, and suppliers are complying with the key provisions of their agreements.</td>
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<td>Knowledge sharing:</td>
<td>Institutions can share leading practices with comparable institutions to develop and improve the processes for managing its capital projects and programs.</td>
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**Conclusion**

Up-to-date campus facilities and infrastructure provide a strong attraction to recruit and retain high-quality students and faculty. To remain competitive, colleges and universities must implement both long-range planning and project management control processes. Prioritizing projects helps to ensure that completed facilities meet the institutions’ evolving needs. Controlling projects helps to reduce risks on projects that have been authorized and are in progress. When combined, these capital project techniques focus the attention of college and university administrators on getting the right projects done—the right way.
About KPMG’s Major Projects Advisory practice
Our professionals understand the unique risks of planning and executing capital projects at colleges and universities. Our skilled professionals have extensive experience providing higher education organizations in managing both financial and technical aspects of major capital programs. We are routinely exposed to billions of dollars in capital projects each year. We learn from these projects and apply our skills and experience to help public and private institutions improve project delivery, reduce risk and cost, and successfully meet stakeholder needs. In addition to evaluating projects, our practice has significant experience proactively evaluating the effectiveness, strategies, controls, accounting, and organizational capabilities of some of the largest capital programs in the world. This experience provides our clients with direct access to national and international “leading practices” in all areas of construction project delivery.

About KPMG’s Higher Education, Research & Other Not-for-Profit (HERON) practice
KPMG’s commitment to higher education, research, and other not-for-profit organizations began shortly after the firm was established. In fact, KPMG was the first major professional services firm to develop a HERON practice. For decades, our dedicated HERON practice has served the higher education and not-for-profit organizations as audit, tax, and business advisers. Our Higher Education practice constitutes one of our significant industry practices, with more than 1,500 professionals nationally. We serve more than 200 colleges and universities across the country, and our professionals have been educated throughout their careers on the issues and challenges of higher education. Our deep experience provides our professionals with valuable insights to help higher education leaders address the critical issues they face in a rapidly changing industry.

About the KPMG Government Institute
The KPMG Government Institute was established to serve as a strategic resource for government at all levels, and also for higher education and nonprofit entities seeking to achieve high standards of accountability, transparency, and performance. The Institute is a forum for ideas, a place to share leading practices, and a source of thought leadership to help governments address difficult challenges such as effective performance management, regulatory compliance, and fully leveraging technology. For more information, visit us at: www.kpmginstitutes.com/government-institute/.

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