Executive Summary

What return has higher education received for its sizeable investment in improving its business processes? That was the core question this study set out to answer. Further, have all the gains been wrung out of administrative process improvements, or are there higher levels of process performance that can and should be attained? Should investments continue to be made in administrative technologies to create process improvements? Which technologies have the greatest promise and impact on process performance? And are there additional gains to be had from existing technology, and how can they be harvested? Our answers are based on quantitative and qualitative data provided by respondents at 335 higher education institutions in the United States and Canada.

Since the 1990s, higher education has invested heavily in business process reengineering supported by new technologies—hardware and software—with the objective of improving services and reducing costs. It was expected that the investments would be repaid in short order through administrative and purchasing efficiencies. However, the savings never materialized. Process improvement efforts grew both in their promise and their cost, reaching an apex with ERP implementations. ERP implementations combine a wide-scale deployment of new technology with the redesign of business processes.

Now that we are arguably on the trough side of the enterprise resource planning (ERP) wave, we can look at the results. On first read, the findings of this study of business process performance in higher education appear disappointing at best. For most business processes, institutions report that their performance is somewhere between adequate and satisfactory. Very few report process performance that is exemplary.

Is this what higher education expected of its investment in process performance—process performance that is only adequate? Certainly, that was not the goal articulated by many institutions on their ERP planning documents or reengineering Web sites. Is Nicholas Carr right that IT doesn’t matter? Is it possible that for higher education administrative processes do not matter? Is it that university administrators and staff are uninterested or resist change? Or, is there another explanation?

Optimizing Versus Satisficing

In designing this study, we sought guidance in literature on business process performance and innovation. One objective was...
to identify and catalog exemplary practices and explain where and how improvement of business processes takes place. Appendix D provides references for further reading on innovation and business process performance. A brief review of the literature is found in Chapter 3.

In the study, we looked for both technological and administrative innovation and optimization of business process performance. Technological innovation includes the adoption of new technologies such as ERP systems or course management systems (CMSs). Studies of technological innovation focus on which technologies are adopted, rejected, or accepted within organizations and reasons or processes that influence successful or failed adoption (see Chapter 6). The study of administrative innovation is similar, but focuses on the adoption of new business processes or new ways of doing business (see Chapter 7). Typically administrative innovation lags behind technological innovation, which we have repeatedly learned in ECAR studies of ERP, IT security, and classroom technologies. As John Curry (2002) aptly notes: efforts to improve business process performance was a “technological rather than organizational triumph, more a testimony to the skill and tenacity of programmers and information technology staff members than to the change management prowess of us leaders and managers.”

The initial focus on maximizing business process performance and innovation, while not wrong, masked a bigger story—satisficing. In all candor, we did not start this study with Herbert Simon’s concept of satisficing in mind but after looking at the data and analyzing it, it became very clear very quickly that Simon’s Nobel Prize–winning theory applies squarely to the behavior of higher education and business process performance. (Simon, 1965). Satisficing describes a situation where people accept a solution to a problem that is “good enough.” Decision makers do not seek the best possible solutions to problems because they necessarily operate within what Simon calls bounded rationality, which is attributed to uncertainty about the future and the costs of acquiring information in the present. Under these circumstances, rather than seeking an optimal or maximum solution, decision makers settle for one that is satisfactory.

Simon argues that individuals assess whether the benefits promised by the optimal solution outweigh the costs of discovering it. If not, they settle for a solution that meets their basic needs. They satisfice! Simon argues that it is often rational to satisfice because the process of looking for better solutions expends resources without a certainty of outcome. Pursuing a better solution must justify the extra costs incurred in trying to find it.

Does higher education “satisfice,” e.g., accept what it determines to be good enough, as opposed to finding the best possible solutions to problems? Under what circumstances and with which processes do they seek to optimize or satisfice?

**Processes Studied**

The activities of a college or university can be broken down into hundreds of individual business processes. Some business processes are narrow and localized in a single department or even one individual’s job. Others cut across organizational boundaries and can involve the work of many employees and students.

The full range of higher education processes were too broad for us to study. Also, higher education has not invested equally in the improvement of all of its processes. For those reasons, we selected a subset of higher education processes using three criteria for inclusion:
◆ Processes that have been recipients of significant process improvement attention;
◆ Processes that have been impacted by higher education’s investment in ERP, the Web, and other enabling technologies; and
◆ Processes that are used by most if not all institutions.

The processes reviewed and levels of performance are described in Chapter 4.

What we found about business process performance can be summarized as follows:
◆ Respondents report that their process performance overall ranges between adequate and satisfactory.
◆ Respondents achieved higher levels of performance with their transactional processes than with monitoring or managerial processes.
◆ Respondents report the highest level of performance for student processes and the lowest for grants management and management information and analysis.
◆ Three of five grants management processes were reported “at risk” by at least 20 percent of respondents.
◆ Nine student processes of 20 were reported as “leading” or “exemplary” by at least 10 percent of institutions in this study.
◆ Institutions have sought to be leaders most frequently in the student services area, and especially with processes that impact recruitment and retention.
◆ Respondents are most satisfied with reporting for enrollment management and least satisfied with reporting to support management of the workforce.

**Process Framework**

In the context of this study and in the light of these findings, we believe we are observing the application of Simon’s theory to process improvement. Institutions have determined that for many, if not most, business processes, satisfactory performance is the appropriate goal. For many respondents in this study, administrative excellence is achieved by putting in place commodity processes that perform satisfactorily and are not at risk. Raising the floor, usually with new software enhancements, rather than raising the ceiling constitutes improvement. Concomitantly, it is prudent not to over invest in nonstrategic processes but rather to invest in a targeted way in strategic processes.

To further illustrate this concept, we plotted the processes in this study along two dimensions. The first dimension or continuum is the breadth of political engagement in the process. In other words, the potential resistance to change. Processes with low levels of political engagement are typically controlled locally. A senior administrator such as the chief financial officer normally manages many business processes that involve little or no political engagement outside of his or her office. His or her office manages the processes. High political engagement usually accompanies processes with diffuse ownership. For these processes, many units or individuals have or perceive ownership or control. Diffusion is typical of many universities, and the problems that come with it are well described by John Curry (2002). “Within every business process lurked personal territories, local traditions, someone’s meaning of life, and bragging rights. For every new professional expectation envisioned by central administrators, there seemed to be a dissonant departmental service expectation defined by faculty members. With each new touted capability of an enterprise system came defenses of…shadow systems for their unique service to a unique clientele.” To create change in a process where the community is highly engaged is by definition difficult and costly, both financially and in terms of political capital.

The second dimension pertains to the strategic value of the process. At one end of the spectrum are processes for which external...
bodies mandate or prescribe how the process should be performed. These processes are like commodities. At the other end are processes that offer an institution a potential for strategic differentiation among competing institutions if they can achieve high levels of process performance.

Together these two axes produce the two-by-two matrix presented below (see Figure 1-1). We used the matrix to formulate our hypotheses regarding the process performance we would expect to see in each quadrant of the matrix.

**Adequate Is Appropriate**

We found that many institutions were more likely to achieve process performance that was satisfactory or adequate in Quadrants 1 and 2. For these processes, the incremental benefits of achieving further process improvement were deemed low or nonexistent. Conversely, the incremental cost of further improvement either in dollars or political capital (especially for Quadrant 2) could be high. Satisficing rather than optimizing is a rational decision.

Many institutions report that their processes are adequate and that they have no intention of further improvement. For the most part, these are commodity processes that offer an institution little opportunity for differentiation even if they are executed optimally. In many cases, the performance of the process is significantly constrained by a regulatory environment that constrains the opportunity to innovate. For such processes, achieving adequate performance is a highly rational decision.

Few would argue that it would be beneficial for their institution to have a process to create new accounts that would be an exemplar for the industry. In fact, no institution in the study reports having an exemplary process in this area. For this process and others like it the vast majority of institutions have satisficed.

Some noteworthy findings include:

- Transactional processes especially in HR and finance had the least variability among respondents.
- Grants management and management information and analysis processes are
undergoing the greatest amount of change.

- Despite the low rankings respondents gave to their grants management processes, only one grants management process (track budgets) was in the top six processes undergoing change.

In a regression analysis, the factors that stand out across the board and for all areas are diminishing returns and lack of alignment of technology and business processes. This may confirm why so many respondents cluster in the middle of a normal curve ranging from being at risk to exemplars, indicating a level of satisfaction with a majority of the business processes at their institutions.

Selective Excellence

Conversely, processes in Quadrants 3 and 4 demand a different solution. For these processes, there are further benefits to be harvested from being a leader or exemplar. We found that processes in these quadrants had both higher levels of performance and more variability among institutions. The processes in these quadrants are mostly student services, which were among the highest performing in the study.

Processes that have a direct impact on revenue and reputation also received much attention. Student advising, degree audit, and recruiting applicants were among the highest performing processes with relative more institutions reporting that they were leaders. The perceived benefits of optimal performance justified the increased cost of pursuing an optimal solution.

We also found that some institutions did not always try to optimize or even satisfice. For example, the grants management area achieved the lowest process performance scores despite its strategic importance to many institutions. In fact, a significant number of institutions reported that their grants management processes were at risk. Note that by at risk we mean a sign of trouble ahead and not a conclusion that the institution is currently in trouble. Presumably, the difficulty of changing these processes is so great that many institutions have not achieved a desired level performance, and very few have achieved optimal performance.

Rationalizing Technology Investments

Whether optimizing or satisficing, we found that technology does matter. Respondents identified ERP systems and the Web as significant contributors to process improvement. The tools used varied by functional area. Financial processes tend to benefit most from an ERP system. Student processes followed closely by grants management and HR benefit most from Web self-service technology. As expected, business intelligence tools are most important to management reporting processes.

Some key findings include:

- An ERP system (80.5 percent) and Web self-service (68.1 percent) were used most often to improve process performance by institutions that reported themselves as leaders or exemplars.
- ERP systems are used most to improve business processes for finance (more than 33 percent), followed by HR (27.7 percent), and student (27.5 percent).
- The Web was used most often to improve student processes, followed closely by grants management and HR processes.
- A regression analysis across all process areas reveals that use of the Web was overall the most significant technology factor.

Technology does in fact matter. However, if we view technology investment decisions through the lens of satisficing and the business process framework, we see different investment guidelines. For commodity processes, institutions must have in place a core technology capability that supports
basic business requirements (e.g., an ERP). There is little to be gained by investing in additional technology to optimize these processes. Institutions should employ the minimally required technology and implement at minimal cost.

Conversely, strategic processes offer incremental benefits that likely justify greater investment in technology. One of the three most important factors in differentiating institutions with high process performance was technology, but alone it is not enough. Institutions also require leadership and a service culture that enables them to change their business practices. An institution that invests in technology capabilities that outpace its determination or capability to alter its business processes will have overspent on technology.

We found that:

- Leadership, planning, and technology were the top three factors that respondents report contribute most to process innovation at their institution.
- The ability to leverage employee suggestions was the most significant factor in determining institutions’ process performance.
- The effective use of technology and the ability to forge improvements across functional areas and measurement were the most important factors in differentiating process performance among institutions.
- Carnegie class is not a significant factor in differentiating institutions’ process performance.

In conclusion, leadership and culture seem to exert more influence on process performance than do technology and process management. Interestingly, listening to staff recommendations seems to be a particularly efficacious leadership strategy or cultural value.

**A New View of Higher Education’s Process Portfolio**

Colleges and universities are under unremitting pressure to behave like businesses. Many institutions have at one point articulated a goal of achieving administrative excellence. Often, this goal is defined as the need to achieve excellence in all administrative activities. This may be a misplaced and unnecessary goal for higher education. What this study shows is that the quest for administrative excellence is more complex.

We offer a multifaceted definition of administrative excellence. Institutions that achieve high levels of process performance combine the following strategies:

- Optimize the performance of business processes that make a strategic impact on the institution;
- Conserve resources by maintaining adequate performance for processes that are commodity processes;
- Ensure that no process is at risk;
- Recognize that what is required to be adequate or optimal is not static, and commit to continuous improvement usually by raising the floor with new software improvements;
- Foster a culture of improvement by engaging employees in the process of identifying and implementing process improvements; and
- Rationalize technology investments by:
  - Supporting commodity processes with commodity technology; and
  - Making targeted investments in differentiating technologies in areas that offer strategic benefits.