Why Effective Analytics Requires Partnerships

The word analytics means many things to many people. For the purposes of this article, we define it as “the availability of data to make strategic, tactical, and operational decisions.” The lens that some in higher education use is student success analytics. This comes principally in two flavors: success over a career or program, and success within a course. Another lens used is “business intelligence,” which can include our prior two examples but most often refers to the use of data to better understand the financial health of operations, departments, schools, programs, and just about anything else that can be measured and analyzed.

We are not here to debate what analytics is or to make the case for why it is important. Others have already done so. We are here instead to say that data is a critical component in the definition of a system (people, processes, tools, and data) and that it is worth understanding how an institution can best position itself to secure value from data (analytics). We are also here to explain why we believe that a partnership between the Chief Business Officer (CBO) and the Chief Information Officer (CIO) is foundational and why we would add the provost as well.

Provosts are the keepers of the academic mission, and it is this mission that CBOs and CIOs are supporting. Deans and faculty need analytics they can depend on so that they, in the spirit of shared governance, can better manage and accomplish their mission. So although this article is geared to the importance of the CIO and CBO partnership, we should first acknowledge that those charged with the execution of the academic mission must trust that the CIOs and CBOs have their best interests and those of the mission in mind. CIOs and CBOs must understand what the provost considers to be critical success factors and must transparently draw these out into the open. The starting point is to ensure that the provost agrees and stays integrally connected.

Far too many institutional leaders believe that IT systems are primarily about tools. Purchase a service from (name your company), and a campus will leapfrog years of data neglect. License tools from (name your company), and the college/university will instantly become a data-driven institution. Neither of these approaches will work unless significant additional investments are made. Remember, people, processes, tools, and data form the tetrahedron of a system and its value. In addition, proper data management should cross, not be bound by, IT systems.

From our diverse perspectives, we believe that each of these four system areas needs to be addressed—not just tools. People must possess up-to-date skills and have the time available to devote their skills to analytics. These skills vary, and they are not the same as the skills required to be proficient either functionally or technically with enterprise systems, which produce the data on which analytics depends. Enterprise systems themselves are important sources of data, but those sources require consistent definitions, and they need to be staged correctly to be of most value. Processes also must be defined in consistent ways to ensure that data quality is protected, and data should be housed in ways that optimize it for analytics outside of the enterprise systems. Each of these points requires that CBOs (the keepers of many of human resources, finance, and other functions and processes) and CIOs (the leaders of systems architecture) work together. CBOs are responsible for college/university budgeting, capital planning, and other finances, and they need to understand why the correct investment in and positioning of people, processes, tools, and data are critical to the quality of the analytics capabilities.

This quality thus depends on a partnership between those with functional expertise and those with technical expertise, even “embedding” those with technical expertise in functional areas. As Keith McIntosh, vice president for information services and CIO at the University of Richmond, noted at the recent EDUCAUSE/NACUBO Enterprise IT Summit: “Technology is a team sport.” It is a departure from the silo tendencies of many higher education institutions. We must move to a culture of data-informed decision making, and that can happen only with the effective use of data to provide actionable information. Other key partnerships are also needed to progress this move, particularly in achieving agreements on and acceptance of data definitions, data governance, and data usage. Institutional research officers, for instance, typically work in these realms but are not always brought into the mix. We also believe that this “team sport” could be positively impacted by partnerships between higher education professional associations such as NACUBO, EDUCAUSE, and...
AIR (Association for Institutional Research), each of which has identified effective analytics as a strategic focus in support of its members.

All higher education institutions are under fiscal distress. Every dollar used for making an institution “analytics-ready” is a dollar not available for faculty hires, for student support, for facility needs, or for the programs that form the reputation and strategic direction of the college or university. So we have to make sure that we balance our spending—not underspend and not overspend. Partnerships ensure that we have a fighting chance, for the long haul, to find the sweet spot. Some level of investment is needed, and this does not happen by magic, nor does it happen on the cheap. Nor is it a one-time occurrence, since IT systems require periodic refreshing. We would also argue that it does not happen by wishing that a service outsourcer or software company could solve our problems for us.

**What does this mean for CIOs?**

1. Understand that infrastructure for comprehensive data initiatives truly requires that CIOs and CBOs be on the same page for architecture, goals, requirements, risks, and costs. People, processes, tools, and data are part of systems. The best systems cannot be developed by CIOs alone but must be developed in partnership. And that this is a long-term investment decision if you have not already addressed this (and most of us haven’t, fully).

2. Remember that both the CIO and the CBO are serving the institutional missions and that academic initiatives are the primary drivers. Do all you can to learn what the provost needs, and work backward, together, to put together a system that addresses institutional needs and the critical success factors related to the missions.

**What does this mean for CBOs?**

1. Ask for the CIO’s perspective on the data systems that are in place. Take funding off the table at first so that you do not limit the conversation at the earliest stage. Come to a common understanding of the choices and tradeoffs in investments.

2. Understand that effective analytics requires an investment plan, with many participants contributing to the new system. Employees will need the skills and the time to engage. Fully fund the project, the transition, and the resulting operation. This will likely require both one-time and ongoing funding.

3. Hold the CIO accountable for the success of the service you funded (assuming the CIO is the person responsible overall). Do not hold the CIO accountable for risks you agreed together to take. Hold yourself accountable for the business and functional processes required to make analytics effective. Work with the CIO to establish and maintain data governance that instills a culture of trust in the results of these initiatives.

**What does this mean for the CBO/CIO team?**

1. Engage and lead other key leaders in developing plans for effective analytics.

2. Partner in championing analytics projects that focus on strategic objectives for the institution to meet its mission. What will make a difference for its success and sustainability?

People, processes, tools, and data are critical to effective analytics—as are business, technology, and academic leaders who can partner to find the right balance. It is important to the long-term viability of our higher education institutions that we get this right.

Bruce Maas [bruce.maas@wisc.edu] has just concluded 43 years of service to higher education, retiring as the Vice Provost for IT and CIO at the University of Wisconsin-Madison. Michael Gower [michael.gower@rutgers.edu] is Executive Vice President for Finance and Administration and University Treasurer at Rutgers—The State University of New Jersey.