

Data-Driven Decisions: Using Data to Inform and Influence Decisionmakers

by Janet Ward

As enrollment professionals begin to climb the leadership ladder and move from assistant to associate to departmental director to dean/vice-president, the ability to provide and effectively interpret the data will increase. To achieve institutional business objectives, senior administrators depend on receiving reliable information from which to make critical decisions. This article is designed to provide an overview on the ways enrollment professionals (admissions, registrar, financial aid, advising, research, etc.) may inform and influence decisionmakers by taking data, turning it into information, and placing it into context to provide meaningful insights relevant to answering strategic business questions.

Why is data, its analysis, and interpretation important to your higher education organization?

Our campuses are flooded by data—by data stored in our legacy systems, data warehouses, as well as external sources, such as comparative statistics provided by NCEs and IPEDS. What administrators seek from enrollment leaders is their ability to utilize relevant data, and place it in context in order to create meaningful connections between the institution's current state and its business objectives. From an enrollment perspective, a thoughtful analysis that considers both internal (institutional) and external (competitors, local economy, etc) factors would shift the focus from data to creating meaning that actually informs decisions. Here is an example that shows the continuum from data to meaning.

■ **Providing Data**—35 percent of the new students are men.

This data point on its own, while interesting, does not help administrators understand why this fact is important.

■ **Providing Information Which Combines Sets of Data**—

While 35 percent of the new students are men, a shift has

occurred in their program of interest; men have shifted their preference from business to preparing for medical school.

Information is the result of combining several sets of data and begins placing the data point into context.

- **Providing Meaning**—If this trend continues, additional entry-level and advanced science courses will be needed in the curriculum to meet emerging student demand, which may require additional faculty FTE and other resources.

It is at this stage when information may be used to influence key institutional decisions. When funding is involved, which may either be new investments or re-allocated resources, the following discussion should be considered a strategic business decision.

What institutional environmental factors contribute to using data to drive decisions?

Several institutional traits, if in place, are more likely to create an environment where data-driven decisions are the norm, rather than the exception. Among the desired institutional traits are that:

- *A clear institutional mission statement and strategic plan has been adopted and embraced by the leadership.* To understand what internal and external data points may be relevant for strategic planning, it is important to understand both a) the institution's aspirations and future goals, by first understanding b) the current state of specific key performance indicators. Without a strategic plan that charts the institution's course, it is difficult to determine what information needs to be gathered to support decision-making.

- *A comprehensive enrollment management plan has been adopted and goals approved.* The enrollment departments each provide goals and strategies that support the attainment of

the enrollment plan's goals. Typically, an enrollment management plan outlines the goals, strategies, and tactics related to:

- ▶ **Enrollment Size:** Total headcount; headcount by type of student; etc.
- ▶ **Enrollment Mix:** Gender; ethnicity; resident vs. non-resident students; undergraduate vs. graduate students; full-time vs. part-time students; etc.
- ▶ **New Student Profile:** For the entering class of undergraduates and/or graduate students, type of mix (see above) and student quality measures (*e.g.*, entering high school or transfer GPA; average entrance test scores, such as ACT, SAT, GRE, GMAT; etc.)
- ▶ **Enrollment Outcomes:** Based on students' experiences and interactions with the institution, the factors that demonstrate a level of learning achievement or student success.

- *An assessment process occurs routinely (annually and/or per term) and the information is used to inform and/or revise goals and strategies.* The key for assessment is selecting the most crucial elements within the plan that will influence goal attainment. Key performance indicators within the enrollment plan are monitored and improvements are shared with leadership and the community. Celebrate your achievements and refocus efforts to improve areas of weakness.

To support data-driven decisions, what are the strategic business questions that should be addressed?

While each campus has a unique mission statement and organizational structure, the strategic business questions that connect the institution's strategic plan with the enrollment plan are similar among institutions. It is the answers to the questions that will be unique for each campus.

The institution's strategic plan centers on five- and ten-year goals for the learning and business enterprise. The *learning enterprise* includes educational programs, research and scholarship, student learning outcomes, changes to technology and facilities to support the current and future learning environment, as well as student body composition. The *business enterprise* focuses on the elements that contribute to the institution's financial viability, which is demonstrated by overall student credits generated, the revenue generated by student enrollment (may be program specific), the financial aid discount (the percentage of tuition revenue used to fund institutional financial aid), plus services and facilities required to support the enrollment (*e.g.*, disabled student services, campus dining and housing, parking, etc.). A comprehensive enrollment management plan bridges these two enterprises, so it is important to understand where enrollment, learning, and business questions intersect.

Whether developing an institutional strategic plan or enrollment management plan, it is important to first identify and answer the business questions before focusing on the

data. The following questions are presented in hierarchical order; therefore, the answer to #1 must be understood before moving to #2. In question #1, the word "enrollment" may be substituted with various words, *e.g.*, institutional strategic plan, academic affairs, student life, facilities, etc.

STRATEGIC BUSINESS QUESTIONS

- 1 What kinds of decisions are made related to enrollment?
- 2 What information is needed to make good decisions?
- 3 What data are needed to create good information?
- 4 What is the best way to obtain the data?
- 5 Who should receive the information and in what format?

Table 1 provides an example of how these five questions may be addressed during the development of an enrollment management plan for admissions, registration and records, and financial aid. While the format might suggest that the individual departments develop responses to the questions in isolation from one another, this is furthest from the truth. In reality, the most effective plan will rely on building understanding about each department's unique contribution, along with identifying specific points where collaboration across departments will be required to achieve the enrollment plan's goals. This understanding will not occur unless the process for developing and annually reviewing the plan is a joint venture shared among enrollment leaders who are invested not only in their individual department's success, but are committed to the success of their colleagues.

It takes time to create a shared understanding of the strategic business questions related to enrollment—across enrollment departments and across administrative units. Throughout the process, a wise chief enrollment officer shares the contours of the emerging enrollment management plan with senior administrators from academic affairs, finance, and student life as each will have a unique perspective that the plan should take into consideration. These considerations will help identify other business questions and information that the enrollment plan may need to address to more fully support data-driven decisions from a broader institutional perspective.

The following illustration takes the first strategic business question, and looks at the question from multiple perspectives. The decision under discussion: whether or not to recruit and enroll more students with a stronger academic profile:

What kinds of decisions are made related to *enrollment*?

- ▶ **Chief Academic Officer** may say "Our faculty wants better academically-prepared students in the classroom, so increasing the student academic profile is highly desirable. This may result in changes in the learning environment, with a potential revision in our program for faculty development so we keep these students 'challenged.'"
- ▶ **Chief Finance Officer** may say "If we dramatically increase the academic ability of our new student profile, we need to have the financial aid resources to com-

Table 1: Strategic Business Questions—Enrollment

(Identify your strategic business questions, then determine what information needs to be gathered.)

Admissions	Registrar	Financial Aid
What kinds of decision do we make for enrollment? (Include student service/satisfaction)		
<ul style="list-style-type: none"> ▶ Student profile for incoming class ▶ Admission decisions—Who to admit, deny, or place on a wait list (selective admissions) ▶ Where to spend resources connected to marketing and recruiting decisions to achieve enrollment goals 	<ul style="list-style-type: none"> ▶ Class sections offered to meet new and continuing student demands ▶ Where to spend resources to improve services and to support student retention and graduation goals 	<ul style="list-style-type: none"> ▶ Financial aid awarding strategy based on student need ▶ Scholarship strategy to attract and retain new students ▶ Where to spend resources to improve services and to support student retention and graduation goals
What information do we need to make good decisions? (Determine what to measure)		
<p>For student profile decisions:</p> <ul style="list-style-type: none"> ▶ What has been the academic quality/strength of the incoming class? ▶ What other factors are key to consider—<i>e.g.</i>, gender, ethnicity, socio-economic status ▶ Based on the key factors, is there a distinction based on entrance information about a) who persists to their second year and b) graduates? 	<p>For class section decisions:</p> <ul style="list-style-type: none"> ▶ Based on the curriculum, are their specific courses which have a waiting list? ▶ Based on major, are there any sub-set of students finding it difficult to complete degree requirements on time due to lack of specific course offerings? ▶ Based on the class schedule, are there times when either a) rooms or b) seats in specific rooms are not fully utilized? 	<p>For financial aid decisions:</p> <ul style="list-style-type: none"> ▶ For the new student strategy, is it competitive such that the institution is able to attract and enroll students that meet student profile goals? ▶ Does the financial aid strategy support the first year retention goals? Graduation goals? ▶ Based on lower than projected new student yield rates or first-year retention rates, what areas of the strategy should be explored further?
What data is needed to create good information? (Need to consider data integrity—is it good data? Need to provide historical perspective [3–5 years] for your institution; Need to consider whether comparative data with national norms or key competitors is essential to improve understanding)		
<ul style="list-style-type: none"> ▶ New student funnel (numbers and conversion rates)—prospects, applications, admitted students and enrolled ▶ Entrance test scores and entering grade point averages: <i>e.g.</i>, SAT, ACT, GRE, GMAT, TOFEL, etc. ▶ Results from student satisfaction surveys ask questions tied tie specific departmental service goals. Are there changes in recent trends? If so, why? 	<ul style="list-style-type: none"> ▶ Term specific registration statistics by multiple variables (by class level, full-time vs. part-time, by regular tuition vs. special tuition), etc. ▶ What is the drop out rate by various student factors (<i>e.g.</i>, freshmen, sophomore, etc.) from the term's census date until the end of the quarter. Are there any changes in past trends? If so, why? ▶ Results from student satisfaction surveys ask questions tied tie specific departmental service goals. Are there changes in recent trends? If so, why? 	<ul style="list-style-type: none"> ▶ New student data that combines entering student profile with institutional financial aid (need based aid; scholarship; etc.). Are there any sub-set of students that did not yield as expected? ▶ Student data on loan defaults and average debt load per graduating class. Consider further detail by major, time to degree, etc. ▶ Results from student satisfaction surveys ask questions tied tie specific departmental service goals. Are there changes in recent trends? If so, why?
What is the best way to obtain the data? (Identify how to measure and how frequently)		
<p>There are basically four types of measurement to consider; dependent on the strategic question:</p> <ul style="list-style-type: none"> ▶ Effectiveness: Outcomes relative to purpose and mission ▶ Efficiency: Amount of output per resource expended ▶ Reliability/Satisfaction: Consistently produce quality ▶ Utilization: Amount of activity in business; consider volume or frequency a service is used 		
Who should receive the result? In what format? (Determine when and how to deliver results)		
<p>There are basically five factors to take into consideration when constructing a report:</p> <ul style="list-style-type: none"> ▶ Audience: Tailor the report to audience. Executives prefer a high level summary; have detailed documentation ready to respond to specific questions. ▶ Purpose: Will the report be used to inform, influence or both inform and influence others? ▶ Message: What do you want to say? What are the most important points? Prioritize. Deliver your message clearly and succinctly. The skill level of your audience will determine the delivery as you may need to avoid complex charts and jargon. ▶ Medium: Options: written report; power-point presentation; information on the web; combination. ▶ Timing: Determine best moment to deliver the report. Timing is sometimes the most critical factor on whether or not your message will be heard. 		

pete for the students. Can our institution afford to increase its financial aid expenditure in order to attract better students?"

- ▶ **Chief Student Life Officer** may say "While supporting the goal to admit and enroll better academically-prepared students, this is a longer term goal. In the short term we need to focus on improving the learning environment and learning support services to improve our

learning outcomes, student retention, and graduation rates."

- ▶ **Chief Enrollment Officer** may say "To attract higher academic ability students will require revisions to the enrollment plan and strategies. To attract better students will require new messages, a more selective admissions process, and improved merit and need-based aid if we want a chance to compete for them."

What do all the perspectives have in common? While all are supportive of the potential decision at the decision-making table, to choose this direction will require additional resources in some areas of the institution. The choice on where to invest or re-allocate resources will be one outcome connected to the decision. Hopefully, by understanding the strategic questions related to the business and learning enterprise, enrollment leaders will be able to provide the relevant information within an appropriate context that would both inform and influence campus decisions. It begins first by understanding the strategic business questions for your depart-

ment or institution, and then determining what information is needed to support meaningful and informed dialogue.

ABOUT THE AUTHOR

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