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## Revitalizing the Program Portfolio

*Aligning Program Performance with Institutional Goals*



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*Aligning Program Performance with Institutional Goals*



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## Top Lessons from the Study

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### *Aligning Program Performance with Institutional Goals*

1. **A growing frustration with traditional program reviews.** Academic Affairs Forum conversations with more than one hundred academic administrators found consensus that academic program review, as commonly practiced, requires significant time and effort but typically has little positive impact on resource allocation or performance improvement. Most program review self-studies are simply check-the-box exercises or based on the premise that the only way to improve performance is to increase funding.
2. **The rising bar for performance assessment.** While the “request for resources” approach may have been effective when college and university budgets were growing, in the current environment of limited resources, institutions are forced to make difficult tradeoffs among competing priorities. At the same time, pressure to improve institutional performance—on student outcomes, research excellence, fundraising, student recruiting, and other areas—has intensified dramatically due both to increasing competition and greater regulatory scrutiny.
3. **A political problem, not a mathematical one.** Many administrators hope that better data will solve the problem by allowing them to measure program performance more precisely, identify better benchmarks, and analyze the underlying causes of performance issues. While most colleges and universities could certainly do a better job measuring, comparing, and evaluating performance, ultimately we found that most administrators have a good sense of which programs are strong, and which are weak, and where resources are most needed. What they lack is a process to build consensus across largely autonomous departments to support targeted investments in areas of institutional priority.
4. **The tension between disciplinary autonomy and institutional priorities.** The fundamental reason that academic program review so often fails is that departments are organized to support disciplinary objectives and are typically only loosely accountable for broader institutional goals. Faculty are trained, recruited, tenured, and promoted based primarily on their scholarly contributions to the discipline and the quality of their teaching within the discipline. The natural desire to excel within their discipline drives departments to build administrative silos as they attempt to maximize resource levels and autonomy. The result is often a proliferation of specialized academic units driving higher administrative costs, lower overall instructional productivity, student success challenges, and barriers to collaborative research.
5. **Adopting a portfolio perspective.** To a large extent, institutional performance is the aggregate of individual academic program performance, and performance (on research, enrollment growth, graduation rates, etc.) often varies significantly from program to program. Investing in programs with greater potential to support institutional goals can often be more effective than attempting to enhance every individual program. The relative autonomy of individual programs, however, makes it difficult for them to subordinate their goals to the institution’s goals.
6. **A narrow focus on disciplinary excellence.** The traditional approach to academic program reviews makes a portfolio approach impossible. It focuses on a single academic unit, evaluating its performance against other peer and aspirant programs at other institutions. By narrowly scrutinizing how the program contributes to its discipline, it makes it impossible to assess the program’s current or potential role in the institution’s mix of academic programs.

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7. **A better way forward.** Academic Affairs Forum research identified five critical approaches to managing performance across a portfolio of academic programs:
- **Securing faculty trust in metrics.** Building consensus around a standard set of program performance data
  - **Measuring performance against priorities.** Evaluating programs by their contribution to the institution's strategic goals
  - **Setting new program viability hurdles.** Ensuring that new programs are financially sustainable
  - **Improving signature programs.** Identifying opportunities to enhance the impact of already strong programs
  - **Maximizing resource flexibility.** Reallocating resources to higher priority programs

### *Securing Faculty Trust in Metrics*

8. **The Problem: No “single version of the truth.”** Most institutions lack comparable data on the performance of individual academic programs, making it impossible to identify opportunities for improvement or to prioritize resources.
9. **Program-level data is inaccurate.** At almost every institution (but especially at larger, more decentralized universities), data exists in numerous, sometimes conflicting, databases or is riddled with inaccuracies. Overlapping resources also make it difficult to disaggregate the performance of individual academic programs.
10. **Faculty question the validity of proposed metrics.** On many campuses, faculty are skeptical of or openly hostile to administrative attempts to measure academic performance at the individual level, the department, or the college. Beneath their criticisms of specific metrics is often a deep concern for how limited or inaccurate data will be used to make important administrative decisions. Differences in goals and structures lead programs to advocate for a unique set of performance metrics. Programs resist metrics that link to institutional objectives rather than program-specific goals.
11. **Reports do not provide useful information.** Institutional research offices at most institutions are already overburdened with growing accreditation, state, and federal reporting requirements, leaving little time for the ad hoc requests of academic administrators. Moreover, deans and department chairs often do not know precisely what data will be useful for them. So even when the IR office does create a special report, it is typically a static spreadsheet that does not perfectly match the requestor's need. This leads to additional requests, an increasing burden on IR, and frustration on the part of administrators.
12. **Current program review reports have little impact.** Too often, academic program review is a check-the-box activity, executed to fulfill the requirements of some external body with little thought to how the results might be used. And at many institutions, there is no explicit link between program review outcomes and budgeting decisions. In the absence of any clear impact, faculty and department chairs have few incentives to take the process seriously.
13. **Best practitioner approach: Standardized reporting around a small set of faculty-approved program performance metrics.** Overcoming the above challenges requires organizing the data in a single central location, resolving conflicting data or definitions, asking faculty to correct inaccuracies, and, most importantly, actually using the data to make consequential decisions. Moving faculty from resistance to data through to acceptance is a process that often takes two to three years and can be easily derailed.

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14. **Centralize and standardize data and reporting.** Resolving conflicting data sets and managing alternative definitions and metrics is essential. Even if the office of institutional research does not house all of the data, it should be responsible for managing a “single version of the truth” for the campus. It can then also prepopulate much of the program review data, saving department chairs time and reducing disagreements over measurement.
  15. **Solicit faculty input to improve metrics and correct data.** It is critical that faculty play a role in defining program performance metrics and also in correcting problems with the data. The only way to achieve faculty acceptance of any assessment system is for them to feel a sense of ownership and control.
  16. **Build interactive decision-support tools for deans and chairs.** Rather than expecting data to dictate decisions to deans and department chairs, best practice institutions empower them by providing them with data to inform those decisions. They overcome the limitations of static IR reports by designing interactive reports based on the specific decisions that deans and chairs regularly make. They spend more time designing the reports so that they can reduce the amount of time spent creating one-off reports and therefore reduce the burden on IR.
  17. **Leverage data to inform resource allocation decisions.** Ultimately, demonstrating that data will actually be used to make resource allocation decisions is the fastest and surest method for engaging faculty in improving the data. Putting data to use will create concrete examples where the data improves decision making, and will help faculty understand that working within the performance management system is the only way to secure additional resources.
  18. **The pros and cons of program prioritization.** Over the past few years, many institutions have implemented program performance metrics based on the process and criteria defined by Robert Dickeson in his book, *Prioritizing Academic Programs and Services* (Jossey-Bass, 2010). Dickeson proposes eight major categories of metrics—centrality to mission, cost effectiveness, internal demand for the program, external demand for the program, impact, productivity, quality, and size. Many institutions embark on a program prioritization process in the hopes of recognizing significant cost savings. In practice, however, most institutions find that cost savings are relatively small. The real value of the prioritization process is often to make transparent which programs are underperforming and to generate consensus that those programs need to improve or face a reduction in resources.

### *Measuring Performance Against Priorities*

19. **The problem: Program priorities do not align with institutional priorities.** Colleges and universities are under increasing pressure from regulation, competition, and tighter resources to improve their performance on student learning outcomes, graduation rates, research productivity, and overall efficiency. Academic programs, however, are typically more focused on how they compare to peers within their discipline.
20. **Program reviews exclusively focused on disciplinary excellence.** Academic program reviews are typically designed around disciplinary standards. They utilize discipline-specific metrics, compare programs with peers and aspirants, and invite outside reviewers from peer departments.
21. **Long review cycles frustrate efforts at continuous improvement.** Program reviews are typically scheduled on five-, six-, or seven-year cycles, in large part due to the significant effort required to complete the self study and external review. While many institutions include some form of status report between reviews, programs can go for years without significant oversight.

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22. **Program metrics fail to acknowledge different ways that programs can contribute to institutional goals.** While holding each program to unique disciplinary standards is a problem, so is the attempt to hold every program to the same standards. A common approach is to evaluate every program on the number of majors, yet there are many programs with few majors that contribute to the institution in other important ways (through research or service courses, for example).
  23. **Lack of clear performance benchmarks for each program.** Ultimately, evaluations of programs depend on the existence of some standard that indicates whether the program's performance is acceptable or not. Programs will argue that lack of resources or other circumstances are hampering their performance, but without benchmarks (either internal or external) it is difficult to indicate what level of performance is possible given existing constraints.
  24. **Best practitioner approach: Categorize and evaluate academic programs based on their contribution to institutional priorities.** Improving overall institutional performance depends on setting targets for individual academic programs that link to institutional goals. Rather than simply ask how a program compares to its peers, one asks how the program contributes to the overall strategic plan. To do this effectively, it is important to differentiate the roles that different programs play and to set acceptable targets.
  25. **Link program performance metrics to strategic plan goals.** Each program is required to report on metrics (such as enrollment, retention, job placement) that link directly to the strategic plan. Converting strategic plan priorities directly into performance goals for individual programs builds an explicit link between program performance metrics and overall institutional goals. The result is a concise review process that requires little effort to implement and aligns unit goals with institutional strategy.
  26. **Review performance against critical targets annually.** As an alternative to comprehensive multi-year reviews, some institutions have created an annual process to set targets for each program and to hold them accountable for performance against those targets. Each department chair or program head works with the dean to set appropriate goals. They develop an action plan for achieving those goals, and assess performance versus goals at the end of each year.
  27. **Categorize programs according to their primary institutional contribution.** Different programs contribute to the institution's goals in different ways. Some programs drive enrollment, attracting large numbers of majors and bringing high-quality students to the institution. Other programs are research drivers, attracting top faculty and external funding. Some programs may have neither large numbers of majors nor significant research funding but play a crucial role in supporting other programs through service courses. And finally, some programs (particularly masters and professional programs) are revenue generators that help to subsidize the rest. Programs may fall into more than one category at the same time.
  28. **Establish benchmarks to identify program strengths and opportunities.** Once an institution defines the various sets of metrics that will be used to evaluate performance, the next challenge is to set appropriate targets. There are four basic approaches to goal setting: annual improvement, internal benchmarks, external benchmarks, and externally-imposed standards.

### *Setting New Program Viability Hurdles*

29. **The challenge: New programs become an unexpected drag on institutional resources.** Historically, many institutions were lax about approving new programs, but in the current environment of restricted resources and intense competition, they are finding that the high costs of program failure warrant increased upfront investment in program evaluation. Better estimates of program costs and projected enrollment support not only better screening of bad ideas, but also improvement of marginally viable programs.

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30. **Administrators fail to account for all program costs before launch.** When it comes to understanding the resource implications of new programs, faculty are often ill equipped to draw up detailed budgets. Faculty tend to underestimate the costs of new programs because they are not familiar with all of the factors that drive costs. They may not be aware of the library or IT costs for specialized programs, they do not know how to estimate staffing costs or projected salary and benefits increases, and they rarely appreciate how the timing of expenses (e.g., hiring a program director in the third year rather than the first year) can significantly impact a program's viability in the first five years.
  31. **Programs launched without accurate estimates of student demand.** While estimating program costs is relatively straightforward, projecting student demand for new programs remains a challenge. In the past, many institutions took a flexible "let's try it and see" approach to new programs, but with tighter resources and higher risks for failed programs they are now looking for more rigorous methods to gauge demand. Faculty are not prepared to realistically estimate program demand. They tend to overestimate student interest based on their personal experience and lack tools to test whether demand will be sufficient to cover program costs. They may also miss important differences between full-time and part-time enrollment or ignore the impact of retention rates on overall program enrollment.
  32. **Program costs exceed revenues after initial start up period.** While many programs at a university require subsidies to operate, more and more institutions are recognizing that they cannot afford to launch new programs that will not be at least self-sustaining. They cannot take the risk that new programs will further dilute resources.
  33. **Institutions make large investments in new programs before testing the market.** Even with multiple sources of data to validate market demand, there is always a risk that students simply will not materialize. Yet many institutions move forward with long-term investments in new faculty or facilities well before a program has proven its ability to attract students.
  34. **Best practitioner approach: Rigorously evaluate program viability before launch.** Faculty typically propose new programs based on their expertise and experience within their field. But now those proposals should be supported and scrutinized by an array of support professionals. The same percentage of proposals may be approved, but the proposals will have been significantly strengthened by the process, leading to greater long-term sustainability.
  35. **Provide decision-support tools to help faculty model often-overlooked costs.** The process begins with a faculty member building a curriculum: listing out the courses that will be included in the program, the number of credit hours, and the discipline of the instructor for each. Data on instructional costs by discipline and capacity breakpoints transform the proposed course list into a set of costs. The faculty member is also required to consult the library director and IT director to get validated estimates for additional resource costs for the program.
  36. **Match sophistication of demand estimates to type of program.** The three key factors for estimating enrollment in a new program are student demand, employer demand, and the level of competition. If students are not interested, the program will fail to meet enrollment targets. If students are interested, but employers will not hire program graduates, the program will not be viable in the long term. And even if there is strong student and employer demand, competitors may make it impossible for an institution to attract significant numbers of students. In each of these three areas, there are a number of data sources to estimate potential demand, ranging from general data on student demographics, occupational projections, and number of existing programs in a given area, to more sophisticated sources of information on student and employer preferences or program market share.

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37. **Adjust program proposals to reach breakeven in five years.** Often the first attempt at a new program proposal will fail the financial viability test, i.e., its costs will exceed projected revenues in the first five years. The detailed model, however, allows a faculty member to adjust various aspects of the proposal to bring costs into line with expected demand. Delaying the hiring of a program director, for example, can have a significant impact on program costs in the first five years. Shifting the projected balance between full-time and part-time students can also improve the program's financial viability.
  38. **Create staged market testing for professional and online programs.** Even the best estimates of new program demand can be wrong. One risk mitigation strategy is to launch new programs in phases, testing the market and scaling investments gradually as evidence for demand develops. A single new course can be launched quickly and can serve as a bellwether for student interest. If the course succeeds, adding additional related courses within an existing program can be launched without the need for multiple levels of approval. From there it is a relatively small step to a new certificate program which can ultimately help build the case for a new degree program if sufficient enrollment materializes.

### *Improving Signature Programs*

39. **The challenge: Narrow focus on disciplinary excellence fails to identify broader opportunities to enhance program impact.** Every institution has a handful of signature programs that disproportionately attract students, faculty, or resources. These programs contribute to the institution precisely because they embody disciplinary excellence, yet a narrow focus on their disciplinary contribution will miss opportunities to align them more with institutional goals.
40. **Arbitrary program review schedule determines focus areas rather than strategic prioritization.** At most institutions, program reviews are scheduled simply based on how much time has elapsed since the last review. In any given year, reviews of low priority or high performing programs might dominate the agenda, making it difficult to focus on strategically important or struggling programs that simply are not on the schedule.
41. **Related programs reviewed separately and often in different years.** Closely related programs (particularly if they happen to be housed in different schools) might be reviewed in different years, limiting the chance to identify opportunities for improvement across programs. Narrow disciplinary perspectives are emphasized rather than broader strategic discussions of program interdependencies.
42. **Review effort wasted on broad coverage of performance rather than focused analysis of critical program issues.** The check-the-box approach to program review emphasizes compliance with a standard set of program metrics. Significant effort is spent collating what may run to hundreds of pages of program information. In the effort to be comprehensive, little time is spent identifying or analyzing the critical issues faced by the program.
43. **Review committees dominated by disciplinary experts.** Signature programs require the scrutiny of disciplinary experts to maintain and enhance their status, but if outside reviewers from peer and aspirant programs dominate the review process, the result is likely to be a long list of potential program enhancements rather than a strategic consideration of how the program relates to others at the institution.
44. **Best practitioner approach: Narrow the focus of the review while broadening participation in the review.** Program reviews should be designed to enhance these programs by focusing on opportunity identification. Agreeing in advance on strategic questions to resolve in the review, clustering related programs, and involving non-disciplinary reviewers can prevent reviews from falling into a narrow disciplinary focus.

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45. **Shift from calendar-driven review cycle to ad hoc opportunity analysis.** Changing from a passive approach to reviews (“who’s next on the calendar?”) to a more active approach (“what are our institutional priorities this year?”) changes the roles of faculty review committees, provost, and deans, and increases the value of the review process for all of them. The new approach empowers the program review committee to play a more directive role in framing strategic questions.
  46. **Concurrently review related programs to surface collaborative opportunities.** Reviewing related programs together makes it possible to identify opportunities for joint hires, shared equipment, program consolidation, or new interdisciplinary programs. Rather than being overwhelmed as in the past by waves of resource requests from unrelated programs, the new process allows the provost to work with the faculty and with deans to frame a handful of critical issues and focus their attention on strategic issues. For deans and department chairs, the new approach provides a better platform to make a strong case for new resources. If their program is part of the cluster, they are already spotlighted as a strategic priority. And by working together with the other programs they can show how joint investments can be leveraged across multiple programs.
  47. **Agree upfront on narrowly defined scope for review.** Rather than simply require programs to cover a broad set of standard metrics, the provost, dean, and department chair agree in advance to focus on a specific question, such as, should this department launch a doctoral program, or, does this program need new facilities. The questions then shape the self-study document and even guide the selection of external reviewers.
  48. **Engage trustees for “real-world” perspective and fundraising advice.** Including non-academic institutional supporters can ensure that program reviewers remain cognizant of the broader institutional perspective rather than focusing excessively on purely disciplinary perspectives. The goal instead is to bring intelligent and engaged institutional supporters into the process to broaden the discussion and ensure accountability. The review process also represents an important means for keeping these supporters engaged in the institution and builds their understanding of the institution’s strengths and challenges.

### *Maximizing Resource Flexibility*

49. **The challenge: Few mechanisms to reallocate resources across academic programs.** Even institutions that have developed comprehensive and effective program review processes often fail to link budgeting to review outcomes. In part due to the cyclical nature of the review process that fails to match annual budgeting, resource decisions are made in the absence of timely data on program performance.
50. **Annual budget dominated by “non-discretionary” spending, leaving few resources for strategic investments.** University budgets resemble the U.S. federal budget in that annual budget negotiations typically only touch a small fraction of total spending. The vast majority of expenditures are “non-discretionary.” University budgets are dominated by faculty and staff salaries and facilities costs, all essentially fixed.
51. **Faculty hired based on departmental prerogatives rather than institutional needs.** At the vast majority of institutions, faculty lines are “owned” by departments, and when a line comes open, that department has the right to fill it regardless of other institutional needs. As a result, some departments maintain their faculty complement even as enrollments drop, while others struggle to add faculty as student numbers swell.

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52. **Very difficult to take resources from one department and reallocate them to another.** The most common budget model is to give every department largely the same funding it had the previous year, plus or minus the overall institutional change. This approach makes it extremely difficult to reallocate resources from one program to another or to support new strategic priorities.
  53. **Best practitioner approach: Make institutional priorities a consideration in every resource allocation decision.** In order to make progress against focused strategic initiatives, colleges and universities need mechanisms for allocating resources to those strategic priorities (and away from lower priority programs). Reallocating faculty lines across units, or combining units into larger schools to facilitate internal reallocation and collaboration, allow universities to better match resources to priorities.
  54. **Require departments to reallocate 3%–5% of operating budgets to institutional priorities.** Given the relatively small amount of institutional funding allocated to strategic initiatives (typically 3%–5%), another way to align resource allocation with institutional priorities is to require each department to allocate some percentage of its annual budget with strategic initiatives. These budget items will ideally match both departmental needs and institutional goals.
  55. **Recapture open faculty lines and reallocate based on strategic goals.** The ability to shift faculty resources from one program to another dramatically increases the institution's ability to support strategic goals. Adding additional resources is always politically easier than reallocating existing resources. Provosts can incentivize departments to hire for institutional priorities by providing financial incentives for joint hires that span multiple departments. Those institutions with the funding to create new faculty lines have tremendous flexibility in where they allocate those lines. Much harder (except at a few institutions) is mandating that open faculty lines revert back to the provost for reallocation to other departments. Yet the opportunities opened up are significant.
  56. **Consolidate departments into divisions to facilitate flexible hiring.** In certain circumstances, consolidating smaller departments can solve the problem of academic and bureaucratic silos. The combined unit has a larger pool of resources that can be easily reallocated across the faculty, it can often attract better faculty, and it can generate economies of scale around administrative support. It can also support more collaborative research and teaching.

## Understanding Your Current Practice

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The following questions are designed to guide member evaluation of their current academic program reviews. These categories should be used to spotlight tactics that map to institutional challenges.

<b>I. Securing Faculty Trust in Metrics</b>	<b>Yes</b>	<b>No</b>
1. Does the institution have “a single version of the truth” with respect to program performance data rather than multiple, conflicting data sources?	<input type="checkbox"/>	<input type="checkbox"/>
2. Is there consensus across the faculty on the key metrics that all programs should track?	<input type="checkbox"/>	<input type="checkbox"/>
3. Do departmental staff have an opportunity to correct data before it is used in centralized decision-making processes?	<input type="checkbox"/>	<input type="checkbox"/>
4. Does the institutional research office pre-populate program self-study templates with most of the relevant program-level data?	<input type="checkbox"/>	<input type="checkbox"/>
5. Do deans and department chairs receive timely reports with usable data?	<input type="checkbox"/>	<input type="checkbox"/>
6. Do senior administrators use data from program reviews to allocate resources?	<input type="checkbox"/>	<input type="checkbox"/>

*If you answered “no” to any of the above questions, please turn to I. Securing Faculty Trust in Metric on page 15.*

<b>II. Measuring Performance Against Priorities</b>	<b>Yes</b>	<b>No</b>
1. Are programs assessed annually on performance against a small number of critical metrics?	<input type="checkbox"/>	<input type="checkbox"/>
2. Do program performance metrics assess contributions to overall institutional goals?	<input type="checkbox"/>	<input type="checkbox"/>
3. Are programs categorized by type of institutional contribution (enrollment driver, research leader, service program, or revenue generator)?	<input type="checkbox"/>	<input type="checkbox"/>
4. Are internal or external benchmarks used to set appropriate performance expectations or identify performance outliers?	<input type="checkbox"/>	<input type="checkbox"/>

*If you answered “no” to any of the above questions, please turn to II. Measuring Performance Against Priorities on page 35.*

<b>III. Setting New Program Viability Hurdles</b>	<b>Yes</b>	<b>No</b>
1. Are faculty supported to account for all costs for a proposed new program?	<input type="checkbox"/>	<input type="checkbox"/>
2. Do administrators evaluate the potential impact of a new program on capacity in existing programs?	<input type="checkbox"/>	<input type="checkbox"/>
3. Do faculty use multiple data sources to validate estimates of student demand?	<input type="checkbox"/>	<input type="checkbox"/>
4. Are program proposals improved so as to reach financial breakeven within five years?	<input type="checkbox"/>	<input type="checkbox"/>
5. Are new program investments staged so that more significant investments happen only after some evidence of student demand?	<input type="checkbox"/>	<input type="checkbox"/>

*If you answered “no” to any of the above questions, please turn to III. Setting New Program Viability Hurdles on page 57.*

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#### IV. Improving Signature Programs

	Yes	No
1. Are reviews scheduled based on the institution's current priorities rather than how many years since the program was last reviewed?	<input type="checkbox"/>	<input type="checkbox"/>
2. Are related programs reviewed concurrently to surface collaborative opportunities?	<input type="checkbox"/>	<input type="checkbox"/>
3. Do the provost, dean, and department chair all agree upfront on a narrowly defined scope for the review?	<input type="checkbox"/>	<input type="checkbox"/>
4. Are trustees or other non-academic institutional supporters engaged in the program review process?	<input type="checkbox"/>	<input type="checkbox"/>

*If you answered "no" to any of the above questions, please turn to IV. Improving Signature Programs on page 67.*

#### V. Maximizing Resource Flexibility

	Yes	No
1. Are new faculty lines allocated based on institutional priorities?	<input type="checkbox"/>	<input type="checkbox"/>
2. Are open faculty lines recaptured and reallocated to other programs based on a strategic goals?	<input type="checkbox"/>	<input type="checkbox"/>
3. Are departments required to reallocate 3%–5% of operating budgets annually to institutional priorities?	<input type="checkbox"/>	<input type="checkbox"/>
4. Have opportunities to consolidate smaller departments into divisions to facilitate flexible hiring been considered?	<input type="checkbox"/>	<input type="checkbox"/>

*If you answered "no" to any of the above questions, please turn to V. Maximizing Resource Flexibility on page 81.*





## Aligning Program Performance with Institutional Goals

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Conversations with more than one hundred academic administrators found consensus that academic program review, as commonly practiced, requires significant time and effort but typically has little impact on important resource allocation or performance improvement decisions.

## The Provosts' Charge to Us

### "Help Us Find a Better Approach to Program Review"

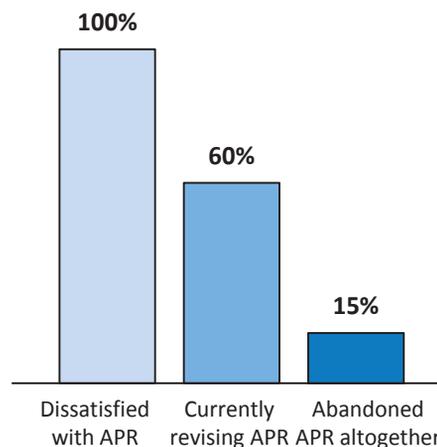
#### The Provost's Frustration

"I can tell you what every single one of those program reviews is going to say before I've even read it. 'This program is doing great, it just needs more resources.' Or, 'This program is struggling, it just needs more resources.' The problem is, I don't have any more resources to give, and so the whole exercise feels pretty pointless."

#### Widespread Frustration

Perspective on Academic Program Review

n = 110 administrators



#### The Chair's Complaint

"Our department spent weeks documenting our performance in excruciating detail. We collected reams of data, brought in respected reviewers, and crafted a strong case for more resources. But it doesn't seem to make any difference when it comes to budgeting. I'm not sure that anyone else has even read the full report."

Source: Education Advisory Board interviews and analysis.

While all colleges and universities practice some form of review of academic programs, all of the administrators that we interviewed were dissatisfied to some degree with their current approach. A majority were in the process of revising or updating their process, typically through a faculty-led task force. A small minority had temporarily suspended their general program review process (leaving in place only what was required by professional accrediting bodies) because they felt that the results of the traditional process were not worth the effort.

The most common complaint from provosts and other top administrators is that the results of program reviews had become predictable and unhelpful. Nearly every program reports back that they need additional resources in order to make progress. Weak programs point to the need for resources to raise themselves up to minimum standards, and strong programs argue that more resources would enable them to better stand out among their peer and aspirant programs. While provosts agreed that almost every program could make good use of additional resources, a lengthy wish list is not a helpful tool for prioritizing scarce resources or focusing on quality improvement.

At the same time, department chairs and deans complained about the enormous amount of effort expended in writing up self-studies (which in some cases run to hundreds of pages) and hosting outside reviewers. Their perception was that despite all of the effort and the carefully justified resource requests, the final reports largely sat on a shelf unread and had little connection to the budget process.

Early research indicated that administrators were looking for new ways to analyze program-level performance, hoping that data-informed decision making would enable more sophisticated and objective resource allocation decisions.

## Our Initial Hypothesis

### *Find the “Moneyball” Metrics*

#### In Baseball, New Metrics Replace Intuition with Data

$$\text{On-Base Percentage} = \frac{\text{Hits} + \text{Walks} + \text{Hit by Pitch}}{\text{At Bats} + \text{Walks} + \text{Hit by Pitch} + \text{Sac Flies}}$$

#### While Academic Administrators Dream of an Equation That Solves All of Their Problems

- Sophisticated new program performance metrics
- Previously hidden correlations between multiple factors
- Algorithms for optimal resource allocation
- Dramatically improved performance

Source: Education Advisory Board interviews and analysis.

A number of research contacts used the analogy of “moneyball” metrics from the Michael Lewis book (and the movie) of that name. Lewis tells the story of how the manager of the Oakland A’s baseball team used sophisticated data analysis (rather than the intuitions of experienced talent scouts) to pick players. Statistics such as “on-base percentage” enabled him to identify athletes who were undervalued and to build a winning team on a limited budget.

Many administrators held out hope for “a magic equation” that would leverage sophisticated new program performance metrics to identify previously hidden correlations between multiple factors that could serve as the basis for algorithms for setting optimal resource allocations to dramatically improve program performance. The goal would be to turn academic program review into a rigorous and fully quantitative science. Unfortunately we did not discover such a magic equation.

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While data-driven approaches to university administration are growing in popularity (and much touted in the press), it is important to differentiate the distinct ways that data can support administrative decisions. Some of the most important uses are often overlooked or conflated with others.

## The Uses of Data

### *Thinking About How and Why Data Makes a Difference*

#### Four Different Ways to Use Data

<b>Assessment</b>	Compare performance to clearly defined goals	<b>Automation</b>	Remove the need for human judgment in repetitive tasks
<b>Analysis</b>	Find the correlation or causation behind an observed trend	<b>Validation</b>	Justify a decision on the basis of mechanical objectivity

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Most commonly, data is used for assessment—quantifying the performance of an individual, an academic unit, or an institution so that it can be compared to previous performance or to the performance of other similar individuals, units, or institutions. Data can also be used for analysis—diving deeper to discover the underlying causes of performance. In the context of a large organization, data can be used to automate decision making, setting up rules to allocate resources according to specific criteria. And finally, data can be used to justify the objectivity of a decision. Decisions made on the basis of data gain authority by being impersonal, transparent, and precise.

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Advocates of data-driven management often overlook the political nature of decision making, particularly in decentralized, consensus-driven organizations like colleges and universities. In this context, quantification may be valuable in large part because of its ability to depoliticize controversial decisions.

## Uncovering Truths or Providing Cover for Decisions?



### Trust in Numbers

“The appeal of numbers is especially compelling to bureaucratic officials who lack the mandate of a popular election, or divine right. Arbitrariness and bias are the most usual grounds upon which such officials are criticized. A decision made by the numbers (or by explicit rules of some other sort) has at least the appearance of being fair and impersonal. Scientific objectivity thus provides an answer to a moral demand for impartiality and fairness. Quantification is a way of making decisions without seeming to decide. Objectivity lends authority to officials who have very little of their own.”

Theodore Porter, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life* (Princeton: Princeton University Press, 1995)

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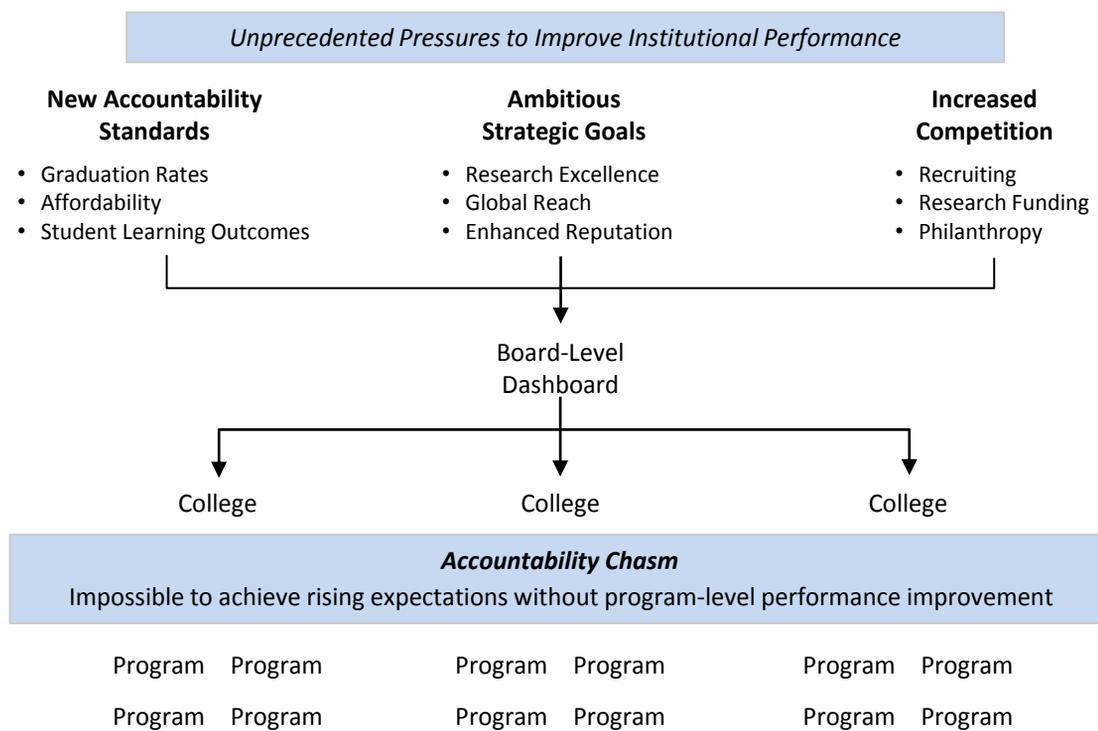
As the history of statistical evidence in government bureaucracies illustrates, quantification provides a certain kind of authority to administrators who lack the power to compel others to follow their recommendations. In the university environment, where little can be done without the consent of skeptical factions of faculty, a quantitative approach to program review can (if executed well) build consensus around controversial decisions to fund or defund specific academic programs through appeal to objective standards.

A data-driven approach, however, does not remove the need for human judgment. In the context of highly complex organizations where good decisions cannot be reduced to data analysis, judgment must come first, but it must then be justified in the light of data.

Our research discovered that improvements in program performance measurement, while helpful, would not address the fundamental reason that academic program review in its common form was failing. The deeper challenge is an imperfect alignment between institutional goals and more narrow departmental goals.

## The Real Challenge

### *Achieving Performance Improvement in a Decentralized Environment*



Source: Education Advisory Board interviews and analysis.

Senior administrators are exposed to a growing and perhaps unprecedented range of institutional challenges. New accountability standards have put a spotlight on accessibility, affordability, student learning outcomes, and graduation rates. Ambitious strategic goals around scholarly excellence, student selectivity, or global reach have increased pressure to perform at a higher level. And growing competition for students, for research funding, and for philanthropy further challenge top administrators.

At most institutions, presidents, provosts, and deans are focused daily on these broad institutional challenges and are painfully aware of the gaps between current performance and strategic goals. At the departmental chair and faculty level, however, there is what might be called an “accountability chasm.” This is not to say that department chairs and faculty are not accountable for their performance, but they are accountable for different kinds of performance—primarily their teaching performance and their scholarly contribution to the discipline. Departments are organized to support disciplinary objectives and are typically only loosely accountable for broader institutional goals such as completion rates, fundraising, or internationalization. While departments are essential for realizing these goals, their priorities are not always aligned with them.

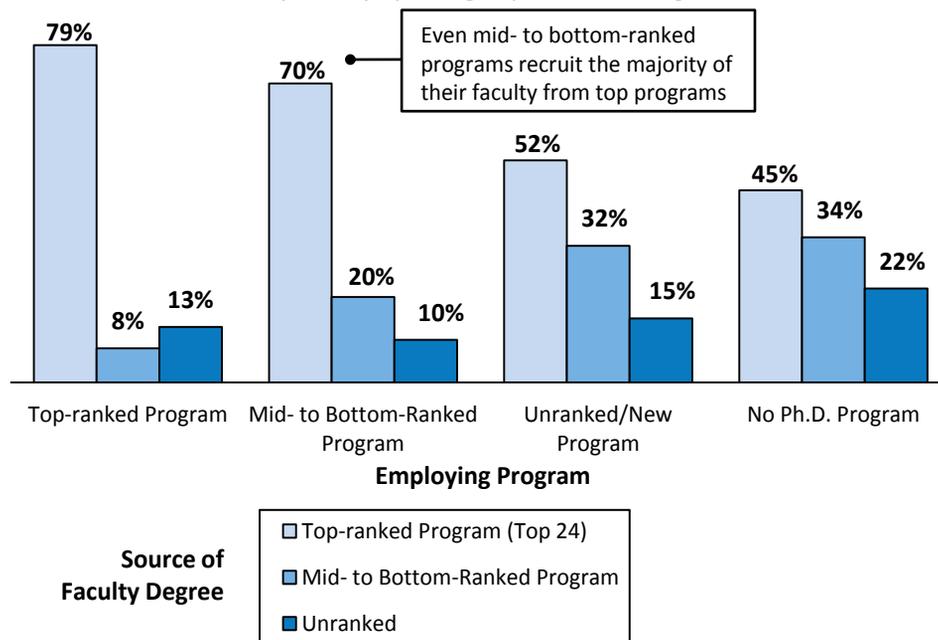
The lack of alignment between institutional goals and departmental goals results from the system of incentives built into faculty hiring and promotion. Faculty are trained, recruited, tenured, and promoted based primarily on their scholarly contributions to the discipline and the quality of their teaching within the discipline rather than their alignment with broader institutional goals.

## Aiming for a Different Target

### *Faculty Recruited and Promoted on the Basis of Disciplinary Excellence*

#### Not Just a Problem at Research Universities

*History Faculty by Hiring Dept and PhD Program*



Source: Anthony Grafton and Robert B. Townsend, "The Parlous Paths of the Profession," *Perspectives on History* (September 2008); Education Advisory Board interviews and analysis.

Even at more teaching- and mission-focused institutions, many of the faculty were trained at elite research universities. Data from the American Historical Association shows that, not surprisingly, 79% of faculty at the top 24 history departments (as ranked by *U.S. News*) had been trained at those same top 24 history departments. Perhaps more surprisingly, 70% of the faculty at mid- to bottom-ranked programs, 52% of the faculty at unranked or new programs, and 45% of the faculty at departments with no PhD programs also came from those same top 24 programs.

Recruiting from top PhD programs makes sense; they consistently produce highly qualified candidates. But students trained at elite research universities are more likely to be focused on their research contribution to the discipline. Provosts from teaching-focused and access-focused institutions told us that while they hire from top research programs, they find that they have to retrain these candidates who have not been prepared to teach the types of students they will encounter outside of elite research universities.

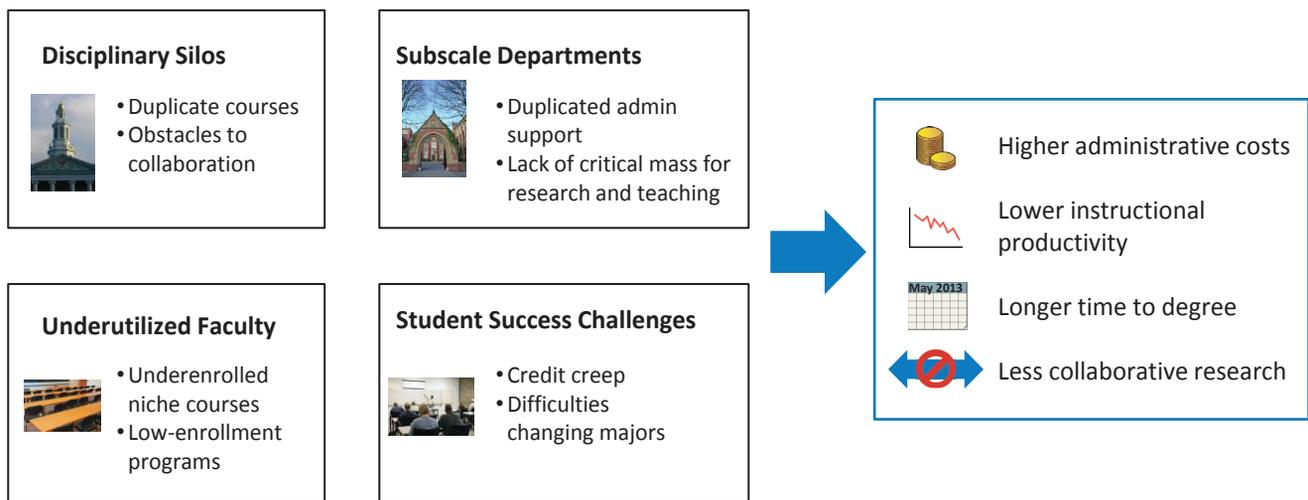
Administrators also note that faculty from elite research programs are sometimes more motivated by moving up to higher ranked programs within their discipline rather than contributing to a specific institution.

The natural desire to excel within their discipline drives departments to build administrative silos as they attempt to maximize resource levels and autonomy. But as many commentators have pointed out, these silos can have a range of negative consequences for the institution, increasing costs, reducing productivity, and limiting collaboration.

## We Can't Afford What We've Become

### *The High Cost of Disciplinary Aspirations*

#### The Impact of the Drive for Disciplinary Autonomy



Source: Education Advisory Board interviews and analysis.

Overly rigid or narrow administrative units often develop as a protective mechanism for disciplinary research and teaching, but they create a range of negative consequences for the institution. They may lead to duplication of effort as each department seeks to teach its own courses despite similar curricular needs across some programs (statistics and research methods courses are common examples). Barriers to course sharing across related programs (e.g., different majors within engineering) can lead to delays or repeated courses for students who switch between majors.

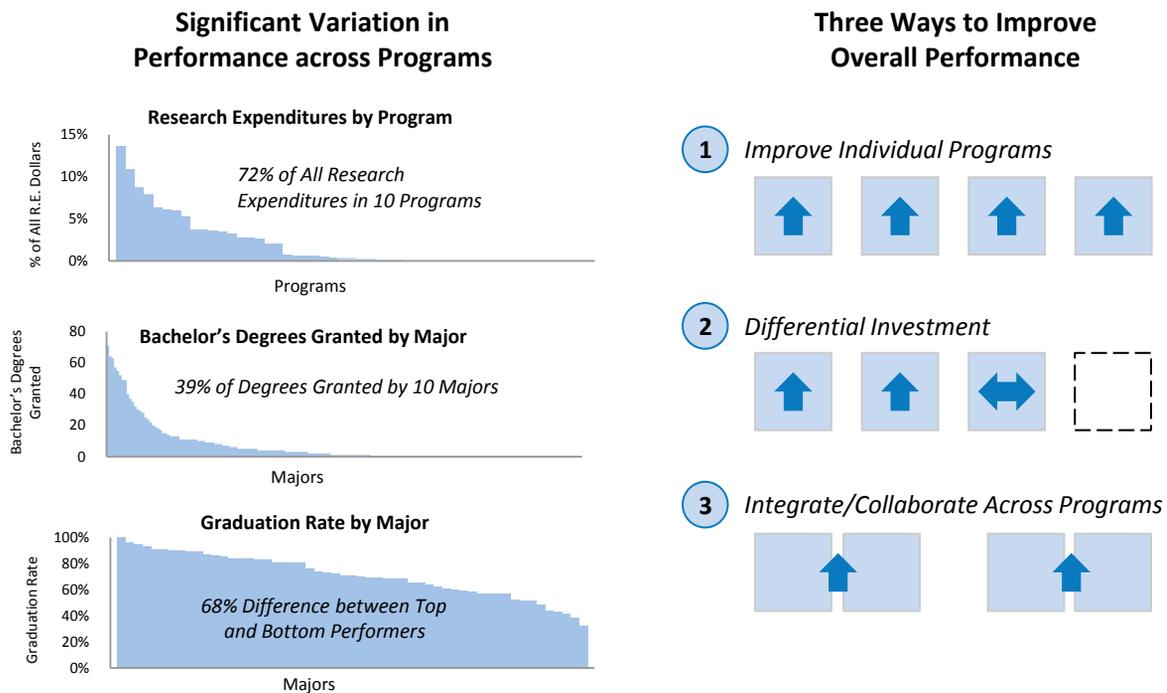
Administrative support may be duplicated as well if each department has its own chair and administrative support staff regardless of size. A department that represents an important intellectual discipline may not be a viable administrative unit, particularly if faculty numbers or student numbers fall too low. Low student numbers can lead to under-enrolled courses or low enrollment majors, reducing faculty utilization.

All institutions need to find the right balance between economies of scale and scope versus specialized academic units that represent similar research and pedagogical interests. Faculty interest and pressure to extend their own disciplines, however, has led to the proliferation of an increasing number of specialized academic units on many campuses, driving higher administrative costs, lower overall instructional productivity, student success challenges, and barriers to collaborative research.

To a large extent, institutional performance is the aggregate of individual academic program performance. Achieving institutional goals depends on improving performance within individual programs. But across all institutions, performance (on research, enrollment growth, graduation rates, etc.) often varies significantly from program to program.

## A Portfolio Approach

### Three Ways to Improve Institutional Performance



Source: Education Advisory Board interviews and analysis.

Most institutions have strategic goals around enrollment growth, student success, or research excellence. The data above from three typical institutions shows that performance on each of these metrics can vary significantly across programs. On most campuses, a handful of majors enroll the great majority of students, a few departments are responsible for most research funding, and graduation rates may vary significantly across programs. In many cases, these differences stem from natural differences across disciplines. Some majors are simply more popular nationally. Some disciplines have access to more externally funded research. Some programs attract a greater share of students who are less likely to complete their degree within six years. If program performance drives institutional performance, then there are three basic ways to improve overall performance. One could attempt to bring all programs up to a higher standard. This is the most expensive approach and one that may conflict with “natural” constraints on student demand, research funding, or student preparedness in specific disciplines. One could invest more in the programs with greater potential for improvement and potentially even disinvest in programs with less potential to support institutional goals (often referred to as “program prioritization”). Or one could attempt to integrate programs in new ways to leverage joint opportunities for efficiencies or for performance improvement. Unfortunately, the traditional approach to academic program review only supports the first approach, arguably the least effective.

Academic program reviews typically focus on a single academic unit, evaluating its performance against other peer and aspirant programs at other institutions. By narrowly scrutinizing how the program contributes to its discipline, it becomes impossible to take a broader portfolio approach of the program's current or potential role in the institution's mix of academic programs.

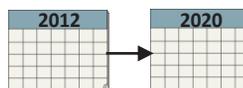
## The Wrong Tool for the Job

### *Program Reviews Reinforce Disciplinary Standards, Not Institutional Priorities*

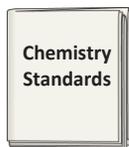
#### Why Program Reviews Fail to Improve Performance



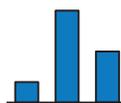
**Reviewed in Isolation**



**Long Cycle Time**



**Disciplinary Standards**



**Program-Specific Metrics**

Source: Education Advisory Board interviews and analysis.

Academic program reviews typically consider a single academic program or department at a time. They bring in external reviewers from peer and aspirant programs within the same discipline and focus their analysis on how, say, our chemistry program compares to other similar chemistry programs. Performance standards are defined by the discipline both in terms of what matters and what level of performance is to be expected. Performance metrics, therefore, are often unique to each program. And given the time and effort required for the review, they are often scheduled every five or more years.

While program review is often framed as a mechanism for administrators to hold programs accountable for their performance, in practice external reviewers representing disciplinary standards often see their role as holding administrators accountable for their support of the program. Reports often conclude that maintaining a program at the level of peers will require significant new resources.

## Who's Being Reviewed Here?

### *Program Reviews Designed to Hold Institutions Accountable for Supporting Disciplines*

#### External Review Committee



“We bring in eminent faculty from our peer and aspirant institutions, and not surprisingly they always end up recommending that we need to invest more in their discipline.”

#### Professional Accrator



“In theory, these standards... ensure a certain level of quality by requiring every law school to be run like an expensive research university—limiting, for instance, the use of adjuncts and teachers on contract. In practice, however, by imposing a “one-size-fits-all” template, these standards ensure that there is little differentiation.”

Source: [http://www.nytimes.com/2012/06/01/opinion/how-to-make-law-school-affordable.html?\\_r=1](http://www.nytimes.com/2012/06/01/opinion/how-to-make-law-school-affordable.html?_r=1); Education Advisory Board interviews and analysis.

Discipline-specific accreditors (ABET, NCATE, AACSB, etc.) as well as disciplinary peer program review teams play an essential role in defining and maintaining national standards in specific disciplines. Their exclusive focus on disciplinary concerns, however, means that they will always advocate for more resources for a specific program. In the case of the professional accrediting bodies, they can even require certain levels of resources (student to faculty ratios, percentage of tenure track faculty, library investment, etc.) or threaten to revoke accreditation.

Senior academic administrators express frustration that these organizations do not always understand or appreciate the tradeoffs that are necessary across academic programs within an institution. Some feel that accrediting bodies push all institutions to live up to the standards of large research universities, even when resources are scarce. Some even spoke about abandoning certain specialized accreditation because they felt that the level of resources required was not possible or that the benefit of accreditation was not worth the cost. Other administrators noted, however, that the accrediting bodies are often more flexible than many think and that faculty and chairs may use the threat of the accreditors to demand additional resources.

Our research indicates a number of contrarian findings. While academic administrators may not have access to all of the data they would like, in most cases, they already know enough about the fundamentals of program performance. Their challenge is balancing competing demands for resources, and no simple equation can solve that.

## Our Contrarian Findings

- 1 There are no new “moneyball” metrics
- 2 You already know which of your programs are strong performers and which are not
- 3 Mathematical rigor is important only to the extent that it helps to generate consensus
- 4 Data does not make decisions for you, it helps to justify decisions made on the basis of judgment
- 5 You cannot afford to have all of your programs be leaders in their disciplines; you need a portfolio of programs to achieve your institutional goals

Source: Education Advisory Board interviews and analysis.

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When we began our research, we assumed that the solution to the challenge of academic program review was better data—more sophisticated metrics, more rigorous evaluation criteria, more appropriate benchmarks. While most colleges and universities could certainly do a better job measuring, comparing, and evaluating performance, ultimately we found that most administrators have a good sense of which programs are strong and which are weak and where resources are most needed. What they lack is a process to build consensus across largely autonomous departments in order to enable targeted investments in areas of institutional priority.

## Revitalizing the Program Portfolio

### *Aligning Program Performance with Institutional Goals*



#### Securing Faculty Trust in Metrics

- Centralize and standardize data and reporting
- Solicit faculty input to improve metrics and correct data
- Build interactive decision support tools for deans and chairs
- Leverage data to inform resource allocation decisions



#### Measuring Performance Against Priorities

- Link program performance metrics to strategic plan goals
- Review performance against targets annually
- Categorize programs according to their primary institutional contribution
- Establish benchmarks to identify program strengths and weaknesses



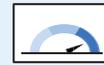
#### Setting New Program Viability Hurdles

- Provide decision-support tools to help faculty model often-overlooked costs
- Match sophistication of demand estimates to type of program
- Adjust program proposals to reach breakeven in five years
- Create staged market testing for professional and online programs



#### Improving Signature Programs

- Shift from calendar-driven review cycle to ad hoc opportunity analysis
- Concurrently review related programs to surface collaborative opportunities
- Agree upfront on narrowly defined scope for review
- Engage trustees for “real-world” perspective and fundraising advice



#### Maximizing Resource Flexibility

- Require departments to reallocate 3-5% of operating budget to institutional priorities
- Recapture all open faculty lines and reallocate based on strategic goals
- Consolidate departments into divisions to facilitate flexible hiring





## I. Securing Faculty Trust in Metrics

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While our review of more than 40 dashboards uncovered hundreds of program performance metrics, ultimately we found a broad consensus on the most important (and easiest to measure) aspects of academic programs. But while the types of metrics were relatively standard, the precise methods for defining and measuring them can be quite complex.

## What Most Are Measuring

### *Common Metrics for Academic Program Review*

Enrollment	Research	Instructional Productivity	Revenue/Expenses
<ul style="list-style-type: none"> <li>• Headcount (undergrad and grad, FT/PT, first-time/transfer, gender, ethnicity)</li> <li>• % in-state, by region, out-of-state, international</li> <li>• Average SAT/ACT/HS Rank</li> <li>• % receiving financial aid</li> <li>• Top majors</li> <li>• Degrees awarded</li> </ul>	<ul style="list-style-type: none"> <li>• Publications</li> <li>• Grants</li> <li>• Faculty awards</li> <li>• R&amp;D expenditures</li> <li>• Patents</li> </ul>	<ul style="list-style-type: none"> <li>• # of sections taught</li> <li>• # of student credit hours taken</li> <li>• Average class size</li> <li>• Average teaching load</li> <li>• Classroom utilization rate</li> <li>• Sections with less than 30 students</li> <li>• Student/faculty ratio</li> <li>• Cost per SCH</li> </ul>	<ul style="list-style-type: none"> <li>• Net tuition</li> <li>• Operating expenditures</li> <li>• Expenditures for administration as % of total</li> <li>• Miscellaneous revenue (licensing, startups)</li> </ul>
Student Success	Faculty Demographics	Facilities	
<ul style="list-style-type: none"> <li>• First-year retention rate</li> <li>• Six-year graduation rate</li> <li>• % study abroad</li> <li>• Job placement rate</li> <li>• Licensure pass rate</li> <li>• Average debt load at graduation</li> </ul>	<ul style="list-style-type: none"> <li>• Headcount (T/TT, FT/PT, gender, ethnicity, age)</li> <li>• Average salary/benefits, by rank</li> <li>• % with terminal degree</li> <li>• Alma mater</li> </ul>	<ul style="list-style-type: none"> <li>• % teaching/classroom space</li> <li>• % research/lab space</li> <li>• Space utilization</li> <li>• Average room capacity</li> <li>• Deferred maintenance cost</li> </ul>	

Source: Education Advisory Board interviews and analysis.

On many campuses, faculty are skeptical of or openly hostile to administrative attempts to measure academic performance, at the individual level, the department, or the college. Beneath their criticisms of specific metrics is often a deep concern for how limited or inaccurate data will be used to make important administrative decisions. But without a set of agreed-upon metrics, however imperfect, the institution will be mired in unproductive debates about data quality.

## The Problem Is a Lack of Trust, Not a Lack of Data

### *Faculty Criticism of Metrics Based on Concerns About Accountability*

#### Faculty Critique of Data

-  **Incomplete**  
“You’re only measuring half of my activity.”
-  **Inappropriate**  
“You can’t hold me accountable for something I don’t control.”
-  **Incommensurable**  
“You can’t compare biology and English lit.”
-  **Inaccurate**  
“That’s just plain wrong.”
-  **Irrelevant**  
“We’re not making widgets here, we’re educating students.”

Source: Education Advisory Board interviews and analysis.

Faculty in some disciplines are more comfortable with performance measurement and quantitative evaluation than others, but across the board, faculty tend to be skeptical of administrative attempts to measure and evaluate their efforts. A common complaint is that many important faculty activities cannot be or are not currently measured (such as advising or outreach), leaving important aspects of the faculty role undervalued. Another concern is that certain metrics might be out of a faculty member’s control (e.g., incoming student test scores or six-year graduation rates) and therefore they should not be held accountable for them. Others emphasize the differences between disciplines and fear that the values of one discipline will be imposed inappropriately on their own.

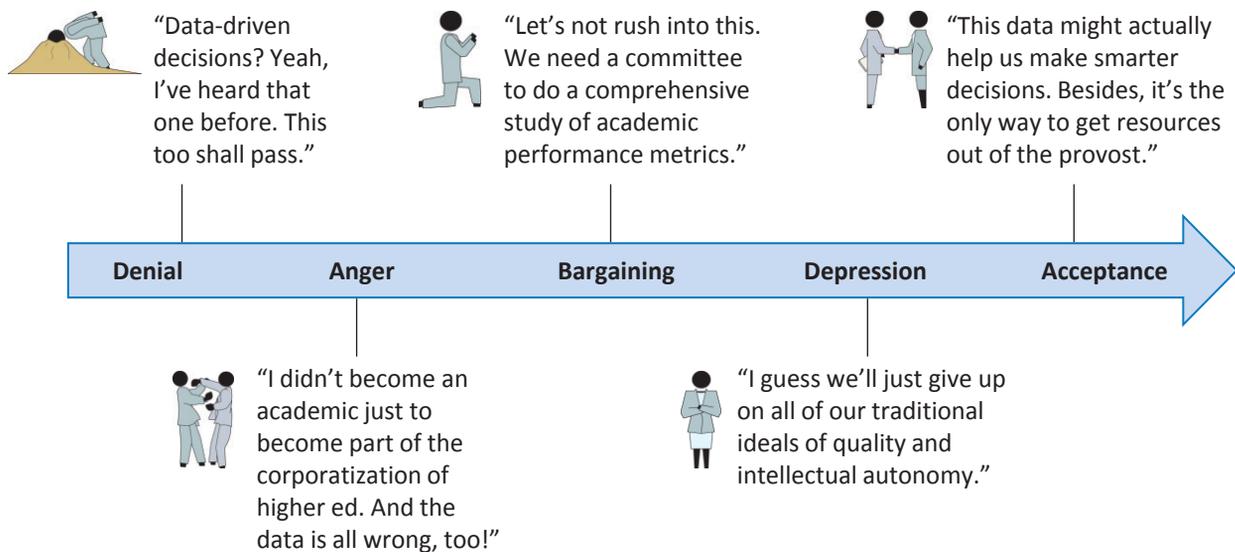
At almost every institution (but especially at larger, more decentralized universities), data exists in numerous, sometimes conflicting, databases or is riddled with inaccuracies. Faculty are rightfully concerned about inaccurate data being used to make important decisions. Some faculty, however, are simply opposed to the idea that colleges and universities should be run “by the numbers,” seeing this as the corporatizing of academia and fearing that unquantifiable values will be lost in the face of complete focus on “hitting the numbers.” Such a numbers-driven approach also threatens the tradition of faculty autonomy, implying a labor-management relationship rather than faculty governance and scholarly independence. The rising demands for external accountability and internal performance improvement, however, require an accommodation between faculty concerns and administrative needs.

Moving faculty from resistance to data through to acceptance is a process that often takes two to three years and can be easily derailed. A useful (if somewhat flippant) analogy is the Kübler-Ross five stages of grief model.

## Five Stages of (Data) Grief

*Gaining Data Acceptance a Process, Not a One-Time Dictate*

### Faculty Objections to Data Take Time to Overcome



Source: Education Advisory Board interviews and analysis.

Faculty skepticism of performance assessment often leads to a belief that it is another managerial fad that will soon pass. And too often, administrators give up in the face of faculty resistance, dooming not only the current initiative but also future attempts to return to the topic. If administrators persevere, they often find anger, as faculty point out problems with the proposed metrics and potential negative consequences of using imperfect metrics. As faculty begin to acquiesce to the idea that more rigorous performance metrics will be used, some will attempt to delay implementation by subjecting the proposal to round after round of review. If administrators continue to press for the new plan, faculty will gradually come to accept that they will have to participate. At first some will experience this as a capitulation, but eventually more and more will come to recognize that there are benefits to the new system. They will see concrete instances where the data improves decision making, and they will also understand that working within the performance management system is the only way to secure additional resources. This entire process, however, typically takes two to three years at a minimum, and any interruption can set the process back to the beginning.

Even apart from faculty resistance, there are significant obstacles to overcome when launching a new set of program metrics. Existing data is typically incomplete, incorrect, dispersed, and in conflict. Fixing it requires organizing the data in a single central location, resolving conflicting data or definitions, asking faculty to correct inaccuracies, and, most importantly, actually using the data to make consequential decisions.

## Data Improves with Use

*Require Programs to Use Central Data and Allow Them to Correct It*

### Numerous Real Problems with Data Integrity



Central data doesn't match departmental or program data



Hard to disaggregate program-level data



Need to manage conflicting definitions for different stakeholders



### Centralization with Flexibility

- **Centralize** management of data
- **Collaboratively resolve** problems of definition and data integrity/consistency with individual units
- **Allow trial period** for corrections and feedback
- **Deploy data in programmatic** decisions to establish ongoing relevance

Source: Education Advisory Board interviews and analysis.

Even at small and mid-sized colleges and universities, data is often kept within individual units leading to incomplete or conflicting data sets. Different offices may use different definitions of the same metric, sometimes due to differing requirements across disciplinary accreditors, regional accreditors, or state or federal regulators. Data is often tracked at the college or department level, making it difficult to disaggregate information on individual programs within a single department.

The result is that even when all parties accept the need for performance measurement, they may sit down at the table with conflicting or incomplete data. Getting beyond arguments about whose data is right typically requires designating a central authority (usually the office of institutional research) to manage data and data definitions. The IR office does not necessarily collect or even house all of the data, but it becomes the sole authority on what data can be used in program reviews. (This also allows for the automation of the many of the most time-intensive data collection activities.) While the IR office may make the final decision on data quality, it works closely with department chairs, deans, and their staff to resolve conflicts and allows them to review and correct centrally held data until consensus is reached.

Ultimately, demonstrating that data will actually be used to make resource allocation decisions is the fastest and surest method for engaging the faculty in improving the data.

At the Graduate School at Northwestern University, annual quality assurance reviews struggled at first because every conversation was derailed by arguments about the proper metrics or problems with the data. It took them two years to get beyond arguments about the data before they could finally begin to talk seriously about program performance.



#### **Light at the End of the Tunnel**

“The first two years we did QA reviews, every single meeting got derailed by arguing about the data. We’ve worked hard to get the data totally reliable. Now people talk about what the data means, and the contentiousness is about program issues rather than data quality.”

*Simon Greenwold  
Senior Associate Dean, The Graduate School  
Northwestern University*

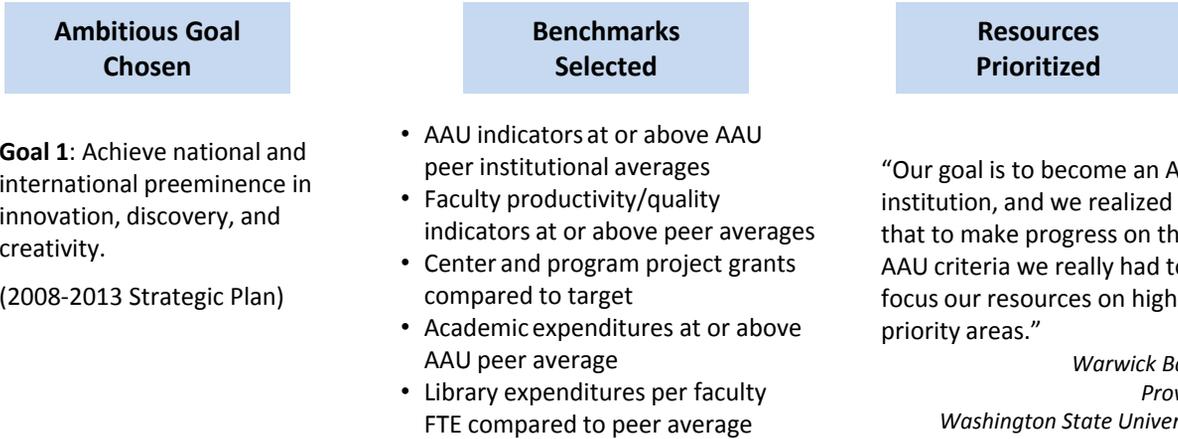
Source: Education Advisory Board interviews and analysis.

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The case of Washington State University (WSU) illustrates some of the motivations and challenges in moving to a more rigorous approach to performance management. WSU launched a comprehensive review and prioritization of academic programs in response to a strategic goal to significantly improve their research profile. Making progress on key metrics, they realized, would require a much more rigorous evaluation of program performance.

## A Need for Focus

### WSU Launches Prioritization to Support Strategic Goals



**Academic Affairs Program Prioritization (A2P2)**

- 1 *House cleaning*—Reduce excess courses and excess majors; improve quality by reducing dependence on adjuncts
- 2 *Prioritization*—Identify programs to invest in, maintain, downsize, or eliminate

Source: Education Advisory Board interviews and analysis.

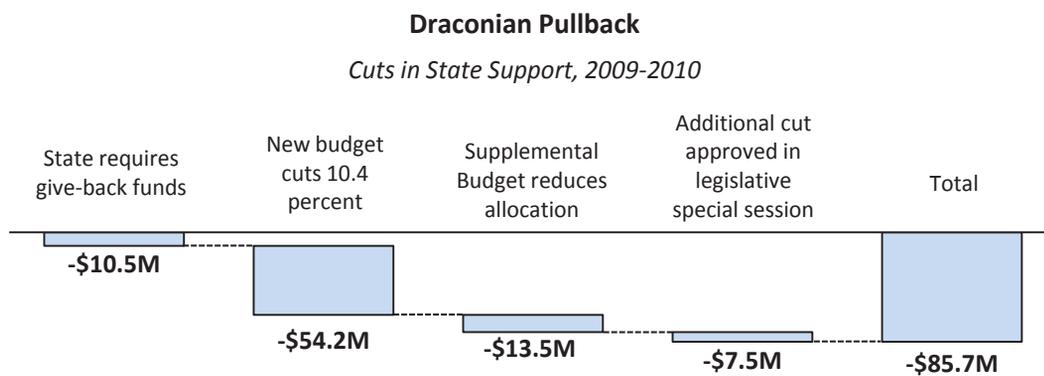
In their 2008–2013 strategic plan, Washington State University (like many research universities) set a goal to achieve national and international preeminence in research. They defined preeminence as exceeding peers and, ultimately, reaching the performance levels of AAU universities.

WSU recognized that simply setting broad institutional targets would not be sufficient to make real progress. They would need to concentrate resources in the areas most likely to improve performance. To achieve this, they launched an Academic Affairs Program Prioritization (A2P2) process that included cutting underutilized courses and underenrolled majors and performing a comprehensive program prioritization exercise.

While the Academic Affairs Program Prioritization initiative was intended to be a road map for increased investment in high performing programs, almost immediately after it was launched, WSU faced significant state cuts to its funding, resulting in a 30% reduction in the operating budget.

## From Investment to Preservation

### *State Budget Cuts Shift the Focus of Prioritization at WSU*



### Dramatic Action Required

*WSU loses approximately 30% of operating budget*

- ❌ 16 degrees or programs phased out
- ❌ 3 academic program areas eliminated
- ❌ 8 degrees consolidated or reduced
- ❌ 1,080 courses removed from catalogue
- ❌ 7 academic units consolidated, reduced, or phased out
- ❌ 517 FTE's eliminated

Source: <http://budget.wsu.edu/budget-reduction-efficiency-actions/>; Education Advisory Board interviews and analysis.

As the state of Washington went into the recession of 2009–2010, it required universities to return some of their funding and then began a series of steep cuts to public higher education, resulting in a 30% reduction in operating funds at Washington State University.

The strategic plan, which had been created as a template for investment in research excellence, became instead a road map for cost cutting. WSU ultimately phased out 16 degrees and programs and consolidated, reduced, or phased out seven academic units. Over 1,000 courses were removed from the catalogue and more than 500 FTE's were eliminated. The program prioritization project, however, was critical in identifying which areas to preserve and which to cut.

In many ways, the process at Washington State was a textbook example of program prioritization as described by Robert Dickeson in his popular book *Prioritizing Academic Programs and Services*. They began by defining a broad set of criteria that could be used to evaluate and ultimately rank every single one of their academic programs.

## Not Rocket Science

### *Listing Program Prioritization Metrics Straightforward*

#### Prioritization Criteria

#### Productivity Metrics

Centrality		<b>Teaching and Learning</b>	<b>Scholarship and Research</b>	<b>Outreach and Engagement</b>
Cost Effectiveness		<ul style="list-style-type: none"> <li>• Credit hours taught</li> <li>• Degrees granted</li> <li>• Student retention</li> <li>• Time to degree</li> <li>• Number of majors, minors</li> <li>• Student faculty ratio; Faculty advising within and outside of program</li> <li>• Ratio of credit hours offered to majors versus non-majors</li> </ul>	<ul style="list-style-type: none"> <li>• Grant expenditures</li> <li>• Awards</li> <li>• Publications, works, performances</li> <li>• Citations</li> </ul>	<ul style="list-style-type: none"> <li>• Number of events (workshops, conferences, field days, etc.)</li> <li>• Number of persons reached</li> <li>• Caseloads</li> <li>• Number of scholarly products</li> </ul>
Demand- External				
Demand- Internal				
Impact				
<b>Productivity</b>				
Quality				
Size				

Source: Education Advisory Board interviews and analysis.

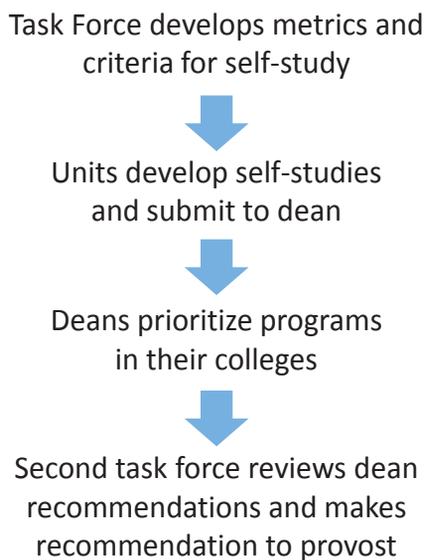
Like many institutions going through a program review process, Washington State began with the process and criteria defined by Robert Dickeson in his book, *Prioritizing Academic Programs and Services* (Jossey-Bass, 2010). Dickeson proposes eight major categories of metrics—centrality to mission, cost effectiveness, internal demand for the program, external demand for the program, impact, productivity, quality, and size. Each category contains multiple metrics, with the precise number and definitions depending on the needs of the specific institution. WSU chose to divide each category into three sets of metrics representing the three components of the institution’s mission: teaching and learning, scholarship and research, and outreach and engagement. The result was a template with hundreds of metrics to be applied to the institution’s more than 200 academic programs.

The sheer volume of metrics and programs at Washington State necessitated a transparent quantitative process. A faculty task force developed the set of metrics and the criteria for evaluation. Multiple approaches to weighting different criteria were tested. Yet ultimately, administrators found that the very strong and the very weak programs stood out clearly, regardless of small changes in weighting.

## It's Not Just About the Numbers

### *Key Is Building Consensus Around Difficult Decisions*

#### Collaboration, Not Calculus



#### Don't Overthink It

“We tried to pick metrics around teaching, research, and outreach that would account for different program roles. We even tried a few different approaches to weighting the different criteria, but it didn't make much of a difference. The weak units always came out at the bottom, and the high-performing units always came out at the top.”

*Larry James*  
Associate Executive Vice President  
Washington State University

Source: Education Advisory Board interviews and analysis.

A faculty task force at Washington State was responsible for developing the list of metrics and the criteria for program evaluations. Every single academic unit was responsible for creating a self-study based on these metrics. Deans were then asked to prioritize all of the programs in their college. Ultimately, they found that a second task force was necessary to prioritize programs across all of the colleges. The ultimate goal was to create a ranking of all academic programs across the entire university.

In the prioritization approach used by Washington State (based on the Dickeson model), all programs are evaluated according to the same criteria and then ranked against all other programs. The position of each program depends not only on its performance on all of the metrics but also on how various metrics are weighted in the calculation. In practice, however, they found that strong programs tended to be strong across all or most metrics, while weak programs tended to be weak across all or most metrics. Small changes to the weighting system (and they tried a number) ultimately did not affect the prioritization significantly.

Many institutions that complete this kind of prioritization exercise find that it validates their existing perceptions of program strength and weaknesses rather than revealing significant new information. Provosts and deans often have a clear sense of which programs are struggling and which are excelling. The prioritization process serves to make performance more transparent and to build consensus across the university community as a preparation for difficult resource reallocation conversations.

Faculty are often concerned that a prioritization process that compares all academic programs using the same metrics will end up disadvantaging some programs based on the details of the calculation rather than the program's fundamental performance. At Washington State, they found that performance gaps were so large for some programs that it was clear the problem was not an artifact of the methodology.

## Getting Past “But We’re Different!”

*Incontrovertible Evidence Helps Overcome Departments’ Resistance to Attempts to Measure or Compare Performance*

### Underperformance Even Your Friends Can’t Defend

“The faculty will want to argue about decimal points. We said, ‘It doesn’t matter whether it’s 10.3 or 10.9, it should be 40.’ Ultimately, you need their peers to say, ‘The data really demonstrates that your program is underperforming compared to other programs.’”

Warwick Bayly  
Provost  
Washington State University

Source: Education Advisory Board interviews and analysis.

Despite the complexity of the prioritization process—the range of metrics, the detailed criteria, the multiple weighting systems—a number of programs were such clear outliers (on the positive or the negative side) that it was difficult to argue that their performance was an artifact of the specific methodology.

In many cases, senior administrators already knew that these programs had problems (or significant strengths), but faculty within the program were not always aware how far their performance had fallen below standards. By collecting a common data set and comparing their performance with other programs within the university, the prioritization process forced them to acknowledge publicly that their performance was below par. This was a painful realization for members of the program, but a critical one at a time when the university faced unprecedented budget cuts. The value of the prioritization process was to make transparent which programs were underperforming and to generate consensus that those programs needed to improve or face a reduction in resources.

Another institution encouraged to take a data-informed approach to program management as a result of heightened research ambitions was the University of North Texas (UNT). UNT was one of eight universities designated in 2009 by the state of Texas as “emerging research universities,” making them eligible for significant new state funds if they could achieve specific benchmarks set by the state.

## A Regional Competition for National Status

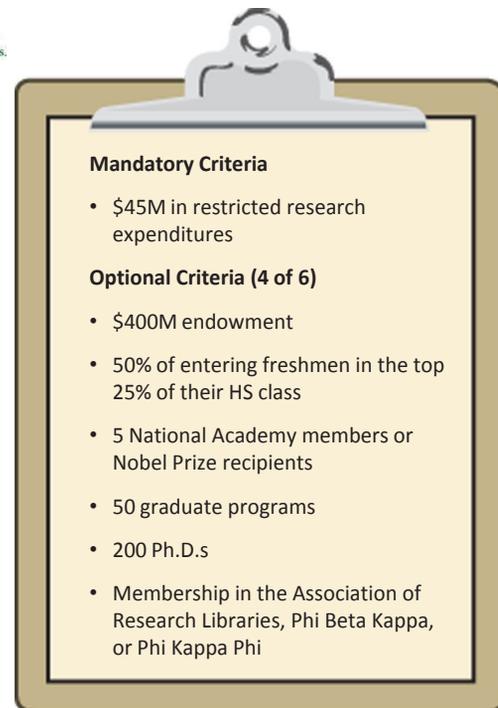
*Texas Stimulates Investments in Research*



### National Research University Fund (Established 2009)

Designated emerging research universities:

- Texas State University
- Texas Tech University
- University of Houston
- University of North Texas
- University of Texas at Arlington
- University of Texas at Dallas
- University of Texas at El Paso
- University of Texas at San Antonio



Source: Education Advisory Board interviews and analysis;  
<http://www.thecb.state.tx.us/reports/PDF/2444.PDF?CFID=29039827&CFTOKEN=82921537>.

In order to encourage performance improvement across some of the more research intensive universities in Texas, the state designed eight universities as “emerging research universities.” If these institutions could achieve a set of research performance benchmarks (around restricted research expenditures, endowment, student quality, graduate programs, etc.) they would be eligible to receive significant additional state funding.

Just as Washington State University realized that achieving its research ambitions would require measuring program-level performance and prioritizing resource allocation decisions, administrators at the University of North Texas recognized that they would need a more sophisticated and data-rich approach to administration in order to hit the state-mandated targets.

The Dean of Arts and Sciences at UNT was in many ways the ideal person to solve this problem. His background in statistics and operations research meant he was familiar with a range of tools for leveraging data to improve performance.

## The Perfect Person for the Job

### *A Dean with a Background in Applied Statistics*

**Michael Monticino**



- Dean of the College of Arts & Sciences
- Former Dean of the Graduate School
- Professor in the Department of Mathematics and Institute for Applied Science
- Expert in statistical analysis, probability models, operations research, and environmental modeling

#### The Need for Data-Driven Decisions

“You can’t really answer the question of where you should invest without the data.”

*Michael Monticino  
Dean of Arts & Sciences  
University of North Texas*

Source: Education Advisory Board interviews and analysis.

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Montecino and his team found that the existing model for providing data to “academic managers” (deans and department chairs) failed to meet their needs, while at the same time overwhelming an already overburdened institutional research office.

## A Failure to Communicate

*Not Getting the Right Data to the Right People at the Right Time*



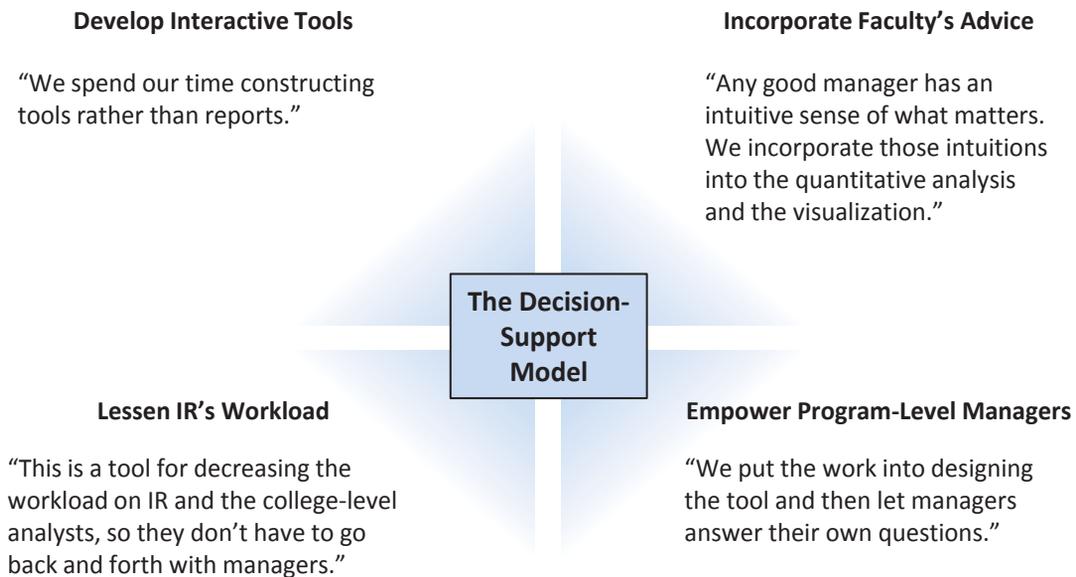
Source: Education Advisory Board interviews and analysis.

At UNT, as at many institutions, decision makers struggle to get accurate, timely, and usable data. Data is often collected and stored in multiple locations around the institution. Conflicting definitions and out-of-sync databases make it extremely time consuming to create reports. Institutional research offices at most institutions are already overburdened with growing state and federal reporting requirements, leaving little time for the ad hoc requests of academic administrators. Moreover, deans and department chairs often do not know precisely what data will be useful for them. So even when the IR office does create a special report, it is typically a static spreadsheet that does not perfectly match the requestor’s need. This leads to additional requests, an increasing burden on IR, and frustration on the part of administrators.

The team at UNT addressed this challenge by focusing on decision support tools rather than simply additional reporting. They developed interactive tools that reduced the burden on IR, allowed administrators to manipulate the data directly, and more clearly addressed the questions that decision makers needed to answer.

## From Reporting to Decision Support

### *Building Tools to Support Academic Managers*



Source: Education Advisory Board interviews and analysis.

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UNT shifted from a reporting model to a decision support model. Their premise was that rather than dictate decisions to deans and department chairs, they needed to empower them to make better decisions by providing them with data to inform those decisions. They overcame the limitations of the static IR reports by designing interactive reports (using software called Tableau) based on the specific decisions that deans and chairs regularly make. A key goal of their work was to spend more time designing the reports so that they could reduce the amount of time spent creating one-off reports and therefore reduce the burden on IR.

A data-driven approach does not mean that decisions are reduced to algorithms. UNT recognized that the judgment of deans and department chairs was irreplaceable and reassured them that the data was intended to serve as an input to their thought process, not to supplant it.

## Equations Don't Make Decisions, People Do

### *The Limits of Data-Driven Decision-Making*

#### Using Multiple Metrics

"You need to emphasize clearly and repeatedly that this is just one metric. We won't make any allocation decisions based on a single metric. People are afraid of being judged by a single number. Then they push back on the fairness of the weightings."

*Matt Cooper, Analyst  
University of North Texas*

#### Using Data to Inform

"Many managers have a keen intuitive sense of what works and what doesn't, what's important and what's not. Credible resource allocation decisions must incorporate this intuition *alongside* quantitative evidence to create a holistic picture of a unit and how it supports the institution's broad goals."

*Matt Cooper, Analyst  
University of North Texas*

Source: Education Advisory Board interviews and analysis.

Administrators and faculty often worry that a data-driven approach to decision making will reduce important administrative decisions to equations and fail to account for the complexities of institutional and individual differences. UNT reassured everyone that no decision would be made on the basis of a single metric and that human judgment would always be the ultimate arbiter. Their goal was to better support the judgment of experienced administrators with additional information, formatted in an intuitive and easy-to-use manner.



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Before an institution can evaluate and improve program performance, it is essential to develop a set of acceptable metrics supported by robust data. This process can take a number of years, but it is a prerequisite for all that follows.

## Securing Faculty Trust in Metrics

### *Results*

- Institution has “a single version of the truth”
- Faculty (grudgingly) accept metrics
- Debates are about performance not metrics
- Time is spent analyzing data, not generating reports
- Metrics inform resource allocation decisions, but do not determine them

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Institutions that have successfully secured faculty trust in metrics have accomplished a number of milestones. They have overcome distributed databases, inaccurate data, and conflicting definitions to build “a single version of the truth,” a common data set accepted by all parties on campus. While faculty may still feel that the official metrics fail to capture important aspects of their work, they acknowledge that performance measurement is important, they accept that the metrics used are reasonable, and they understand that performance metrics will impact resource allocation and other important decisions. They may argue about the causes of program performance, but they no longer argue that the data are incorrect or irrelevant. By centralizing data and automating report generation, deans and department chairs can spend their time analyzing the data rather than collecting or cleaning the data. And they can use the data to inform their decisions, without reducing decisions to a simple equation that fails to take into account the complexities of a given situation.





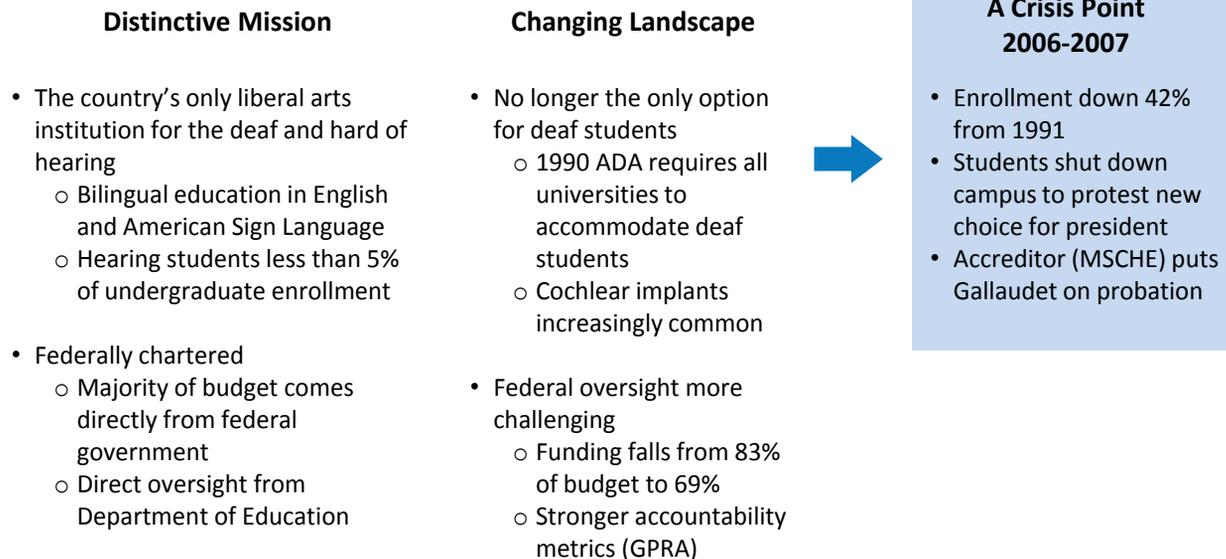
## II. Measuring Performance Against Priorities

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As a result of changing student demand and regulatory shifts, Gallaudet University reached a crisis point in 2006–2007 that forced them to develop a new and rigorous approach to academic performance measurement and improvement.

## Unique Institution, Familiar Challenges

### *A Changing Landscape Leads Gallaudet to a Crisis Point*



Source: Education Advisory Board interviews and analysis.

Gallaudet University in Washington, D.C. is a unique institution. The only liberal arts university for the deaf and hard of hearing in the U.S., it was federally chartered and most of its funding comes directly from the federal government. It has direct oversight from the U.S. Department of Education as well as regional accreditation through MSCHE.

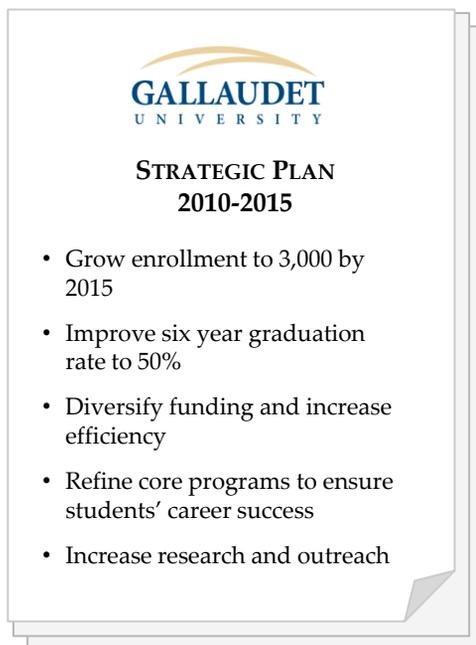
Two trends forced Gallaudet to focus on performance improvement. First, the growing number of options for deaf and hard of hearing college students led to declines in enrollment, which fell 42% between 1991 and 2006. At the same time, more aggressive federal accountability initiatives and cutbacks in federal funding put an emphasis on transparency and continuous improvement.

The situation reached a crisis in 2006–2007 when protesting students took over the campus and their accreditor put them on probation. The message was clear—Gallaudet had to dramatically improve its performance.

Gallaudet took four major steps to pull itself out of the crisis and set a path for sustainability. They defined and measured student learning across all programs. They launched a program prioritization process to reallocate resources. They instituted annual effectiveness reviews for all academic programs, and in 2012–2013, they began to link budgeting directly to their performance improvement process.

## A Plan for Reform

### *Holding Everyone Accountable for Meeting Critical Targets*



- |                 |   |  |
|-----------------|---|--|
| <p><b>1</b></p> | <p><b>Student Learning Outcomes Assessment (2007-)</b></p>          | <p>Define and assess programmatic learning outcomes</p>                                      |
| <p><b>2</b></p> | <p><b>Academic Program Prioritization (2009-2010)</b></p>           | <p>Identify high priority programs for investment and cancel low priority programs</p>       |
| <p><b>3</b></p> | <p><b>Annual Unit Effectiveness Review (2011-)</b></p>              | <p>Hold individual academic units accountable for performance against the strategic plan</p> |
| <p><b>4</b></p> | <p><b>University Planning and Budget Committee (in process)</b></p> | <p>Link budgeting process to performance review process</p>                                  |

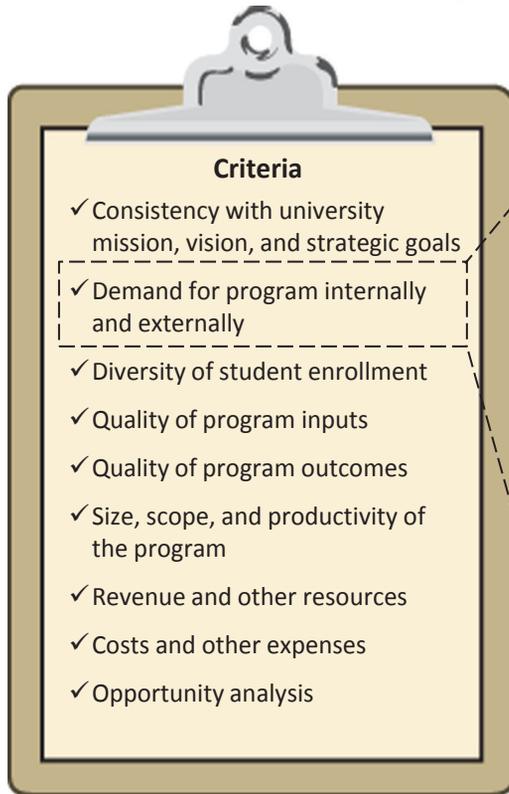
Source: Gallaudet Strategic Plan 2010-2015, Goals and Strategies, [http://www.gallaudet.edu/Office\\_of\\_the\\_President/Strategic\\_Plan/Goals\\_and\\_Strategies.html](http://www.gallaudet.edu/Office_of_the_President/Strategic_Plan/Goals_and_Strategies.html); Education Advisory Board interviews and analysis.

The road map for Gallaudet's recovery was a strategic plan that set concrete and actionable goals for the institution: growing enrollment to 3,000, improving the six-year graduation rate to 50%, ensuring students' career success, and growing research. Then came the hard work of turning these goals into a reality. Four interrelated approaches supported the implementation of the plan. The first step was to define and assess student learning outcomes across all programs. All of the regional accreditors have emphasized the importance of learning outcomes assessment over the past five to ten years, and many institutions have made progress on this. (Though many told us that despite progress in defining and measuring outcomes, few institutions have successfully leveraged this data to make improvements to academic programs.) The second approach was a program prioritization process (using the Robert Dickeson model). The intention was to identify high priority programs and to support them with additional investment, while cancelling low priority or significantly underperforming programs. Gallaudet has maintained some of the discipline of the program prioritization process with streamlined annual effectiveness reviews in which each program is held accountable for a small set of objectives defined in the institution's strategic plan. Finally, Gallaudet is now in the process of linking these performance evaluation systems to the budgeting process, so that resources can be directed to where they are most needed on an annual basis.

Gallaudet’s approach to program prioritization, based on the Dickeson model, involved generating a broad range of comparable metrics for every academic program.

## Creating a Yardstick to Measure All Programs

### *Operationalizing the Program Prioritization Process*



**Template for Assessing Program Demand**

Criteria	Indicators	Information Sources
Internal and external demand for the program	Number of students in program	OIR
	Number of students who applied to or declared for a program	OIR/ Program
	Number of students admitted to the program	OIR
	Number of students in program taking classes	OIR
	Number of credit hours taught	OIR
	FTE taught	OIR
Future outlook/ trends for graduates	Describe future outlook/ job trends. Data sources could include US Job Opportunities Outlook, professional organizations, program networks, etc.	Program

Source: Education Advisory Board interviews and analysis.

Gallaudet ultimately grouped all of its academic programs into five categories based on their overall performance on the prioritization metrics. The top performers were designated “retain and enhance if feasible,” while the bottom performers were scheduled for replacement or elimination.

## Implementing the Prioritization

*Prioritization Process Guides Critical Investment and Organizational Decisions*

Proposed Program Changes		Results
Resource Ranking	Programs	
Retain and enhance if feasible	19	
Monitor and address identified issues	29	
Realign, reorganize, or integrate	12	
Close in current form and replace	2	
Eliminate	20	

Source: Gallaudet University, Annual Report of Achievements, FY2011, [http://www.gallaudet.edu/Documents/Academic/121265\\_Gallaudet\\_Annual\\_Report\\_Web\\_2\\_.pdf](http://www.gallaudet.edu/Documents/Academic/121265_Gallaudet_Annual_Report_Web_2_.pdf); Education Advisory Board interviews and analysis.

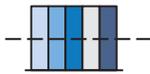
In a typical program prioritization process, academic programs are grouped into quintiles based on their overall score. Gallaudet placed all programs into five groups. The top 19 programs were retained with few changes and enhanced where possible. The next 29 (the largest group) focused on minor issues identified in the review. The next category of 12 programs were reorganized to improve performance. In art and physical education, for example, multiple programs were consolidated. The final two categories included programs that required more radical changes. Some were closed in their current form and replaced (Home Economics, for example, was transformed in Family and Child Studies), while others were eliminated completely. Ultimately, 11 degree offerings and six minors were closed.

Gallaudet, like many institutions that go through program prioritization, found the process difficult and frustrating, but ultimately worthwhile. The benefits of the process, however, came not from significant costs savings but rather from building a robust performance measurement system and creating a consensus that objective metrics should be used to make critical decisions.

## The Most Important Result: Building Trust in the Data

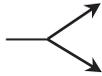
### *Lessons Learned from Program Prioritization at Gallaudet*

#### Benefits of the Prioritization Process



##### Data Standardization

“The program prioritization process forced us to use standard metrics. And if a program disagreed with our data, we asked them to help us fix it.”



##### Data Relevance

“People only started caring about the data after we began using it to make decisions.”



##### Data Trust

“The prioritization did not achieve the cost savings that people wanted (because we chose not to eliminate faculty positions, and the programs that were closed were small), **but what it did achieve was an agreement that, going forward, data matters and everyone needs to be on board.**”

Source: Education Advisory Board interviews and analysis.

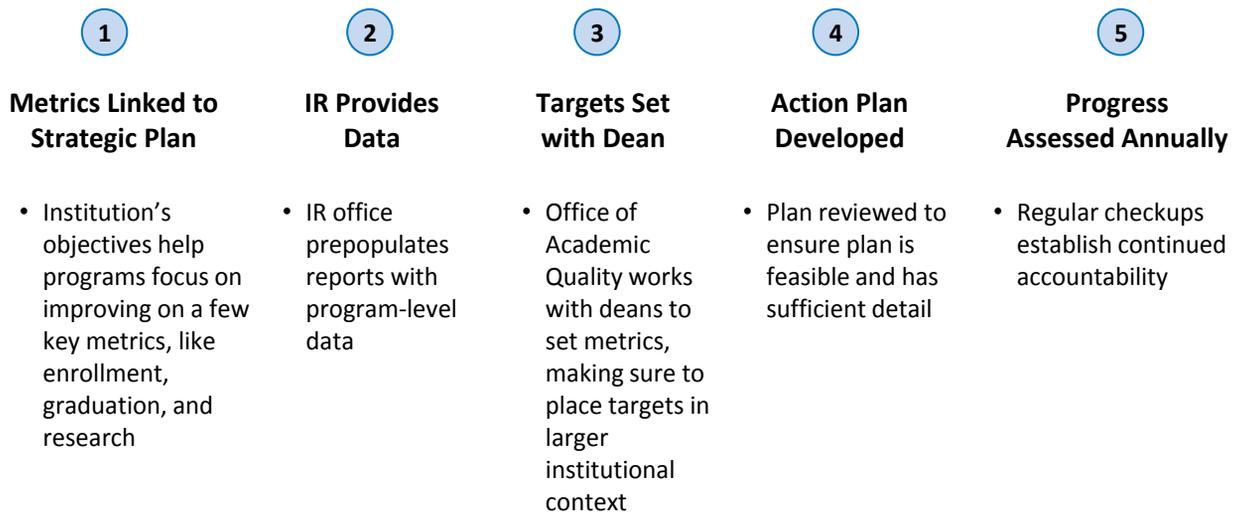
Many institutions embark on a program prioritization process in the hopes of recognizing significant cost savings. In practice, however, most institutions find, as Gallaudet did, that cost savings are relatively small. Typically the programs slated for closure are the smallest on campus. In some cases they do not have any enrolled students but simply exist “on the books.” Moreover, the vast majority of the costs associated with any academic program are faculty salaries, and few institutions are willing to reduce faculty ranks, even when terminating entire academic programs. Closing programs can reduce some administrative and adjunct costs and can refocus faculty efforts on other, higher priority programs. It can also reduce instructional costs if faculty are not replaced when they ultimately leave the institution. That process, however, can take many years.

Despite the relatively small cost savings, Gallaudet did realize a number of significant benefits from the process. In the course of a year, they built a dependable, centralized set of program performance metrics and convinced faculty that the metrics were critical to their institution’s future performance.

The level of effort (and anxiety) involved in a comprehensive program prioritization means that they are almost always one-time events. Institutions still require a regular process to track progress against goals. Gallaudet created a simple annual unit effectiveness process to encourage each program to make regular progress against strategic goals.

## Annual Unit Effectiveness Reviews

### *Linking Unit Performance to Institutional Goals*



Source: Education Advisory Board interviews and analysis.

While typical program review processes compare program performance to peers within the discipline, Gallaudet needed to align the efforts of each program with the broader institutional targets that were essential to their success. To achieve this, they created an annual process to set targets for each program and to hold them accountable for performance against those targets.

Each program is required to report on metrics (such as enrollment, retention, job placement) that link directly to the strategic plan (see next page for a complete list of metrics). The institutional research office, which developed a comprehensive set of performance metrics in preparation for the program prioritization exercise, provides information on current levels of performance, and each department chair or program head works with the dean to set appropriate goals. They develop an action plan for achieving those goals, and assess performance versus goals at the end of each year. This approach was a radical departure from earlier program reviews that emphasized different sets of discipline-specific metrics for each program.

Gallaudet converted their strategic plan priorities directly into performance goals for individual programs, building an explicit link between program performance metrics and overall institutional goals. The result is a concise annual review process that requires little effort to implement and aligns unit goals with institutional strategy.

## A Small Set of Straightforward Metrics

### *Annual Review in Action*

Gallaudet Strategic Plan Objective	Program Strategic Planning Goal <sup>1</sup>
A.5 Increase and broaden accountability for enrollment	<ul style="list-style-type: none"> <li>• The program will enroll ___ students for matriculation in 2012</li> </ul>
B.4 Increase and broaden accountability for student retention and graduation	<ul style="list-style-type: none"> <li>• The program will retain ___% of the students who enter its program and do not graduate from Fall 2011 to Fall 2012</li> <li>• The program will graduate ___% of the students who entered its program in AY 2011-12</li> </ul>
D.3 Strengthen students' preparation for employment and career success	<ul style="list-style-type: none"> <li>• ___% of the students in the program will successfully complete an internship during AY 2011-12</li> <li>• ___% of the students who graduated from the program will be employed one year after graduation</li> <li>• ___% of students who graduated from the program will be in advanced education one year after graduation</li> <li>• Fewer than ___% of the students who graduated from the program will be neither employed or in advanced education one year after graduation</li> </ul>
E.1 Establish Gallaudet's research agenda and set targets for externally-funded research proposal submission, funding, and completion by 2015 and beyond	<ul style="list-style-type: none"> <li>• ___% of the faculty in the program will have submitted proposals for externally funded research</li> <li>• ___% of the faculty in the program will have received funding for externally funded research</li> </ul>
E.2 Create the infrastructure needed to support a world-class research enterprise	<ul style="list-style-type: none"> <li>• ___% of faculty in the program will have submitted manuscripts to peer-reviewed journals and/or creative activities to juried venues</li> <li>• ___% of faculty in the program will have had manuscripts published in peer-reviewed journals and/or creative activities shown in juried venues</li> </ul>

<sup>1</sup> Examples are illustrative.

Source: Education Advisory Board interviews and analysis.

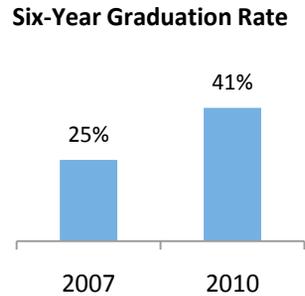
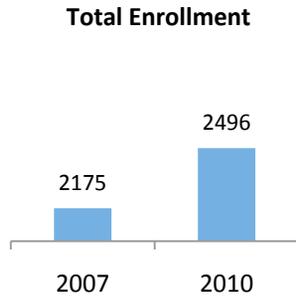
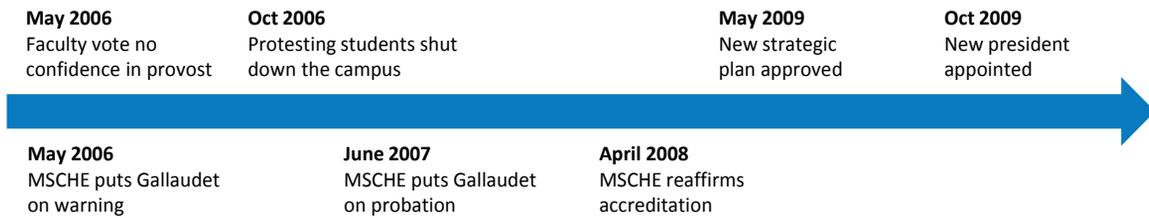
The template pictured above represents the entirety of the annual unit effectiveness review. It fits on a single page, pulls goals verbatim from the strategic plan, and asks programs to set explicit goals in each of the strategic plan categories. Departments must explain, for example, how many students they plan to enroll, how many they will retain and graduate, how many students will complete an internship, and how many will find employment or enroll in a graduate program within a year of graduation. They also have targets for the number of faculty who will submit proposals or receive grants for externally funded research or submit or publish research in peer reviewed journals. Each category represents concrete evidence of progress toward the strategic plan goals.

Setting specific targets for each program is still more of an art than a science. Department chairs and deans know the current level of performance, but no one was sure how much improvement they could expect from year to year. They set mutually acceptable targets and refine them each year.

The steps that Gallaudet took in response to their crisis quickly bore fruit. Their accreditation was reaffirmed in record time, enrollment has increased, and six-year graduation rates are up. While they still have more work to do, the process they created supports sustained annual improvement.

## A Rapid Turnaround

*A Concerted Response Reassures Accreditor and Improves Performance*



Source: Education Advisory Board interviews and analysis.

The program prioritization approach and the annual unit effectiveness approach both apply the same metrics to all academic programs. It is important to recognize, however, that different programs contribute to the institution’s mission in different ways.

## Acknowledging Programmatic Diversity

### *Programs Contribute to Institutional Success in Different Ways*

**Measurement Should Follow Mission**  
*Four Program Types and Key Metrics to Watch for Each*

Enrollment Driver	Research Leader	Service Unit	Revenue Generator																
<ul style="list-style-type: none"> <li>• Enrollment</li> <li>• Application Volume/ Yield</li> <li>• Retention Rate</li> <li>• Six-Year Graduation Rate</li> </ul>	<ul style="list-style-type: none"> <li>• Publications</li> <li>• Citations</li> <li>• Awards</li> <li>• Grants</li> </ul>	<ul style="list-style-type: none"> <li>• Student Credit Hours/FTEs</li> <li>• Total SCH</li> <li>• Drop/Fail/Withdraw Rate</li> </ul>	<ul style="list-style-type: none"> <li>• Net Tuition Revenue</li> <li>• Instructional Costs per Student</li> <li>• Miscellaneous Revenue (licensing, startups)</li> </ul>																
<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small; margin-right: 5px;">External/Market Potential</div> <table border="1" style="border-collapse: collapse; text-align: center; font-size: x-small;"> <tr> <td style="padding: 2px;">Monitor</td> <td style="padding: 2px;">Grow</td> </tr> <tr> <td style="padding: 2px;">Reduce/ Cut</td> <td style="padding: 2px;">Monitor</td> </tr> </table> </div> <p style="text-align: center; font-size: x-small;">Enrollment by Major</p>	Monitor	Grow	Reduce/ Cut	Monitor	<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small; margin-right: 5px;">Growth in Research</div> <table border="1" style="border-collapse: collapse; text-align: center; font-size: x-small;"> <tr> <td style="padding: 2px;">Monitor</td> <td style="padding: 2px;">Grow</td> </tr> <tr> <td style="padding: 2px;">Reduce/ Cut</td> <td style="padding: 2px;">Monitor</td> </tr> </table> </div> <p style="text-align: center; font-size: x-small;">Research Expenditures</p>	Monitor	Grow	Reduce/ Cut	Monitor	<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small; margin-right: 5px;">D/F/W Rate</div> <table border="1" style="border-collapse: collapse; text-align: center; font-size: x-small;"> <tr> <td style="padding: 2px;">Monitor</td> <td style="padding: 2px;">Grow</td> </tr> <tr> <td style="padding: 2px;">Improve</td> <td style="padding: 2px;">Monitor</td> </tr> </table> </div> <p style="text-align: center; font-size: x-small;">SCH per FTE</p>	Monitor	Grow	Improve	Monitor	<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg); font-size: small; margin-right: 5px;">Gross Revenue</div> <table border="1" style="border-collapse: collapse; text-align: center; font-size: x-small;"> <tr> <td style="padding: 2px;">Monitor</td> <td style="padding: 2px;">Grow</td> </tr> <tr> <td style="padding: 2px;">Reduce/ Cut</td> <td style="padding: 2px;">Monitor</td> </tr> </table> </div> <p style="text-align: center; font-size: x-small;">Contribution Margin</p>	Monitor	Grow	Reduce/ Cut	Monitor
Monitor	Grow																		
Reduce/ Cut	Monitor																		
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Reduce/ Cut	Monitor																		
Monitor	Grow																		
Improve	Monitor																		
Monitor	Grow																		
Reduce/ Cut	Monitor																		

Source: Education Advisory Board interviews and analysis.

The program prioritization model creates a single yardstick against which all programs are judged, ultimately ranking them to determine priority. This approach may miss the fact that different programs contribute to the institution’s goals in different ways. Some programs drive enrollment, attracting large numbers of majors and bringing high-quality students to the institution. Other programs are research drivers, attracting top faculty and external funding. Some programs may have neither large numbers of majors nor significant research funding but play a crucial role in supporting other programs as service courses. And finally, some programs (particularly masters and professional programs) are revenue generators that help to subsidize the rest. Programs may fall into more than one category at the same time.

While such an approach may appear reasonable, few institutions explicitly put programs into these categories. No program wants to be told that they are just a service program or a revenue generator. Even programs with few majors or limited research funding aspire to grow in both areas and may be offended if senior administrators try to limit their ambitions.

A number of institutions that we interviewed focused on program enrollment as the key measure of program viability. As a result, some have adopted a matrix (sometimes referred to as the BCG matrix after the consulting firm that first developed it) to compare programs based on current enrollment and potential for enrollment growth. Plotting all programs on this matrix, however, (as some institutions do) overlooks the other types of contributions that programs make. On the slide above, we hypothesize how one might measure these other contributions.

Once an institution defines the various sets of metrics that will be used to evaluate performance, the next challenge is to set appropriate targets. There are four basic approaches to goal setting: annual improvement, internal benchmarks, external benchmarks, and externally-imposed standards.

## Setting Appropriate Expectations

### *Four Basic Approaches to Target-Setting*



#### **Outliers / Annual Improvement**

*Spotlight clearly subpar performance, set improvement targets*



#### **Internal Benchmarks**

*Compare programs internally*

#### **Externally Imposed Standards**

*Meet requirements from accreditor, state legislature, union*



#### **External Benchmarks**

*Compare to peer institutions*



Source: Education Advisory Board interviews and analysis.

The simplest approach to target setting (used in the case of Gallaudet) is to look for simple improvement over current levels. The goal is simply to do better by 5%, or 10%, or 20%. A more sophisticated approach is to compare programs within the institution to identify reasonable levels of performance. Washington State University, for example, compared humanities programs to other humanities programs to identify outliers that either represented significant overperformance or significant underperformance. Other institutions, such as Northwestern University, emphasize external benchmarks. In the case of their doctoral program quality assurance reviews, it was essential for them to set benchmarks based on the peer and aspirant programs with which they compete for students.

Finally, those programs with external accreditation are often subject to required performance targets in areas such as student to faculty ratio, percentage of instructors on the tenure track, or faculty time devoted to research. Administrators told us, however, that accreditors are often less rigid in these restrictions than many believe.

A wide range of benchmarking data sets are available across each of the different categories of program contribution, both from public data sources and from association-based data exchanges. One exception is the case of revenue generating programs, where identifying comparable data on program profitability is quite difficult.

## Addressing Incommensurability

### *Finding Usable Program-Level Benchmarks*

Enrollment Driver	Research Leader	Service Unit	Revenue Generator
 <p><b>IPEDS</b> Degree completions</p>	 <p><b>National Science Foundation</b> Reports on research funding</p>	 <p><b>Delaware Cost Study</b> Instructional costs and productivity</p>	
 <p><b>SAT/ACT</b> Application/admissions data</p>	 <p><b>National Research Council</b> Doctoral program rankings</p>	 <p><b>NSSE</b> Student engagement</p>	

### Higher Education Data Sharing Groups

- AAU Data Exchange (AAUDE)
- Southern Universities Group (SUG)
- Higher Education Data Sharing Consortium (HEDS)
- Consortium on Financing Higher Education (COFHE)
- Committee on Institutional Cooperation (CIC)
- Council of Independent Colleges (CIC)
- Western Interstate Commission for Higher Education (WICHE)
- Consortium of Student Retention Data Exchange (CSRDE)

Source: Education Advisory Board interviews and analysis.

Offices of institutional research regularly use a range of sources for program-level comparative data. IPEDS, for example, allows for the comparison of degree completions across different program types. The National Research Council project on doctoral education offers a broad range of metrics on doctoral education at hundreds of institutions and across a wide range of specific programs. And even service units can be benchmarked using data on instructional costs and productivity or student engagement.

Academic Analytics, a company that provides benchmarks on faculty research productivity, offers a particularly sophisticated example of how benchmarks can allow for comparison across programs while still acknowledging the significant differences across disciplines or institutions.

## Creating a Comprehensive Set of Benchmarks

### *Covering All Major Variables Across 9,000 Doctoral programs*

#### Broad Coverage of Metrics and Programs



#### 32 Variables in Six Areas

171

**Disciplines**

#### Journal Articles

- Publications per author
- Publication weight

#### Books

- Number of books per faculty
- Ranking for number of books

383

**Institutions**

#### Citations

- Total citations
- Number of faculty cited

#### Awards

- Number of faculty with awards
- Ranking for number of awards

9,000

**PhD Programs and  
Departments**

#### Grants

- Percentage of faculty with grants
- Total grant dollars

#### Conference Proceedings

- Percentage of faculty with proceedings
- Total number of proceedings

280,000

**Faculty**

#### Limitations

- Only covers faculty in Ph.D. programs
- No data on Co-PI's or subawards
- Data lags by approximately two years
- Currently tracks only scholarly productivity, not graduate education or teaching productivity

Source: Education Advisory Board interviews and analysis.

The Academic Analytics data set covers about 280,000 individual faculty and includes metrics on publications, citations, grants, awards, and conference proceedings. By linking individuals to the academic programs to which they belong, their database can compare research productivity across more than 9,000 Ph.D. programs and departments.

Academic Analytics has carefully constructed their tool to address many of the common objections that faculty have to productivity measurements and comparisons. They allow each program to weight the metrics according to their own preferences, and they generate an overall faculty scholarly productivity index that enables comparisons across different disciplines.

## Overcoming Faculty Concerns

### *Customizing Benchmarks to Account for Real Disciplinary Differences*

Faculty Complaint	Academic Analytics Solution
"You're not counting what's important."	Broad range of research productivity metrics
"Those factors don't matter in my discipline."	Programs can set weights for each metric
"Other programs look better because they're bigger."	All metrics are on a per-faculty basis
"Those aren't my peers."	Programs pick peers from over 9,000 Ph.D. programs at 383 institutions—or use peer-picking tool
"No other program looks like me."	Data categorized at the individual faculty level—can be cut in different ways
"Rankings are uni-dimensional."	Focus on comparisons across multiple factors, not a single ranking
"It's not fair to compare me to other disciplines."	Overall productivity index presented as standard deviations from the national mean in each discipline

Source: Education Advisory Board interviews and analysis.

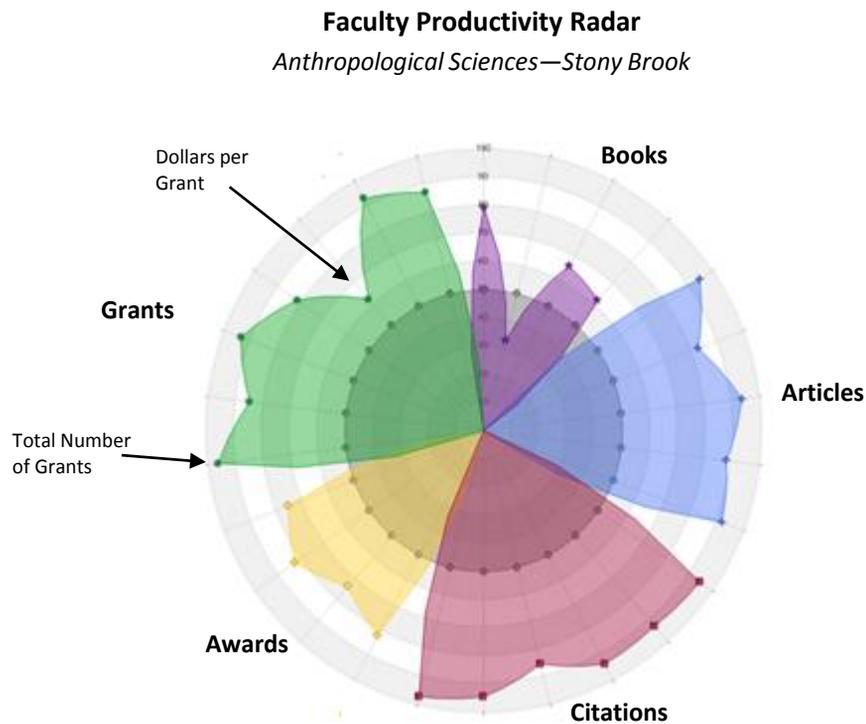
Many faculty see external benchmarks as problematic for a range of reasons, but Academic Analytics has designed their data set to overcome those objections. For example, faculty object to any "one size fits all" metric. Some disciplines value books more than articles. The Academic Analytics tool enables each department to set their own weighting for the different components of research productivity and to use that weighting as the basis for comparison with other programs.

Because the data are linked to individual faculty, the database can calculate productivity on a per faculty member basis, allowing appropriate comparisons regardless of program size. It also enables administrators to regroup faculty in the event that the sub-disciplines grouped in a specific academic program are not comparable to those in peer or aspirant programs.

Perhaps the strongest faculty objection to research productivity comparisons is the belief that any comparisons across disciplines are useless or misleading. An attempt to compare research output in English versus chemistry, for example, would be specious due to the enormous differences in research methods, available funding, and disciplinary incentives. Academic Analytics solves this problem by comparing each program to the performance of its disciplinary peers and converting that difference into a metric. It might not make sense to compare English with chemistry, for example, but one can compare the difference between the English program's productivity and its peers with the difference between the chemistry program's productivity and its peers (even while weighting the different components of research differently within each discipline).

Rather than focus on ranking programs, Academic Analytics has developed tools to analyze the components of program performance in order to highlight areas of relative strength or weakness.

## Identifying Program Strengths and Weaknesses



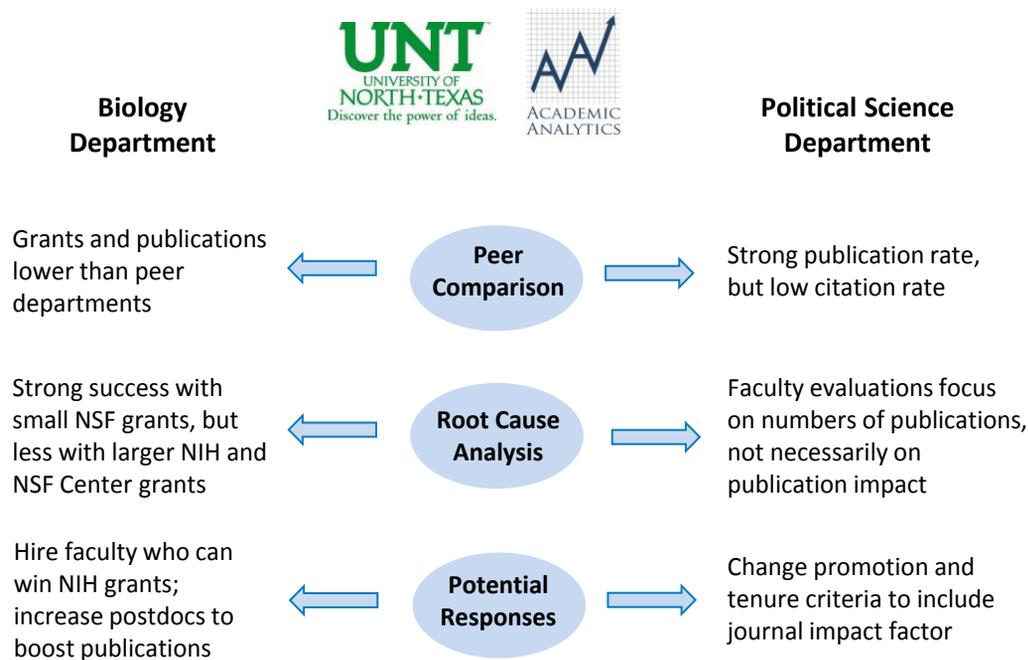
Source: Academic Analytics; Education Advisory Board interviews and analysis.

The chart above compares the research productivity of the Anthropological Sciences program at SUNY Stony Brook with the performance of other anthropology programs across the entire set of metrics tracked by the database. The chart indicates, for example, that while Stony Brook's program is very strong on the total number of grants received, it is relatively weaker on the size of the grants. This graphic quickly indicates areas for potential improvement.

The University of North Texas has used the Academic Analytics database to identify areas for improvement. Uncovering gaps between their programs' performance and their peers has suggested specific areas for additional investment or for policy changes.

## Using Data to Diagnose Underperformance

*Peer Benchmarks Identify Performance Improvement Opportunities*



Source: Education Advisory Board interviews and analysis.

An analysis of the biology department at UNT found that their overall grant funding was lower than peer programs. Further investigation indicated that faculty in the department had strong success with NSF grants but less success with (typically larger) NIH grants. In fact, Academic Analytics enabled them to compare their portfolio of research funding with peer departments, suggesting that they were missing out on some of the most important funding sources in the discipline. One clear response was to emphasize hiring faculty with a track record of winning large NIH grants.

In political science, UNT's data showed a strong publication rate but lower citation rates than their peers. They found that faculty in the program were being evaluated based on their number of publications but not on the impact of those publications. As a result, they adjusted tenure and promotion criteria to stimulate faculty to try for more prestigious journals (even at the risk of reducing their total number of publications).

Northwestern University has taken a different approach to doctoral program evaluation, focused not simply on faculty research productivity but also on student success metrics. Their approach was motivated by the intense competition for top graduate students among elite research universities.

## A Moneyball Approach

### *Northwestern Leverages Analytics to Allocate Graduate School Resources*



#### Strategic Plan

“TGS Office of Research and Analysis aims to become a national leader in analysis of doctoral education and support of evidence-based decision-making; statistical reports and critical analysis on each graduate program will be delivered annually to the program, school, and central administration...”

“We often liken ourselves to the Oakland A's. We are in the major leagues with the Ivies, Stanford, and MIT, but are often at a competitive disadvantage to these ‘bigger market’ teams.”

*Simon Greenwold*  
*Senior Associate Dean, The Graduate School*  
*Northwestern University*

Source: [http://www.tgs.northwestern.edu/documents/about/N\\_W\\_G\\_S\\_strplan09F1.pdf](http://www.tgs.northwestern.edu/documents/about/N_W_G_S_strplan09F1.pdf); Education Advisory Board interviews and analysis.

Northwestern University’s graduate school competes with graduate programs at more prestigious and wealthier institutions. They compare themselves to the Oakland A’s in the book *Moneyball*, who leveraged sophisticated analytics to compete against better funded opponents.

Northwestern's approach has been not only to measure a broad range of doctoral program performance indicators from admission to completion to placement to student satisfaction, but also to make the majority of that data public so that potential students can see Northwestern's strengths and compare them to other institutions.

## Creating a Culture of Measurement

### *Annual Program Progress Reviews*

#### Detailed Data for All Graduate Programs

<b>Admissions and Enrollment</b>	<ul style="list-style-type: none"> <li>• Admissions</li> <li>• Selectivity</li> </ul>	<ul style="list-style-type: none"> <li>• Yield</li> <li>• Demographics</li> </ul>
<b>Attrition and Completion</b>	<ul style="list-style-type: none"> <li>• Cumulative attrition</li> <li>• Cumulative completion rate</li> </ul>	<ul style="list-style-type: none"> <li>• Transfers</li> </ul>
<b>Ph.D. Outcomes</b>	<ul style="list-style-type: none"> <li>• Student Outcomes</li> <li>• Time to degree</li> <li>• Total graduates</li> </ul>	<ul style="list-style-type: none"> <li>• Demographics</li> <li>• Survey of earned doctorates</li> </ul>
<b>Placement</b>	<ul style="list-style-type: none"> <li>• First placement</li> <li>• Placement by institutional ranking</li> </ul>	<ul style="list-style-type: none"> <li>• Most frequent employers</li> <li>• Alumni database</li> </ul>
<b>NRC Data</b>	<ul style="list-style-type: none"> <li>• Rank on individual NRC variables</li> <li>• R-ranking</li> </ul>	<ul style="list-style-type: none"> <li>• S-ranking</li> </ul>
<b>Student Satisfaction</b>	<ul style="list-style-type: none"> <li>• Student satisfaction survey</li> </ul>	<ul style="list-style-type: none"> <li>• Early exit survey</li> </ul>
<b>Competitive Positioning</b>	<ul style="list-style-type: none"> <li>• Survey of admitted students who enrolled elsewhere</li> </ul>	

#### An Exercise with Consequences

- The Graduate School is centralized and holds the vast majority of the financial resources that programs then receive
- Controls graduate student lines
- Can suspend poor-performing programs

Source: Simon Greenwold and Lisa Metzger-Mugg, "Developing Measures of Doctoral Program Effectiveness for Annual Assessment and Improvement"; <http://www.tgs.northwestern.edu/academics/academic-programs/program-statistics/index.html>; Education Advisory Board interviews and analysis.

On the graduate school's website, Northwestern University posts dozens of metrics for each of its doctoral programs, charting data on admissions, completion rates, time to degree, placement, and NRC rankings. The public nature of the data enables potential graduate students to evaluate the quality of Northwestern programs compared to other, more prestigious peers.

Northwestern also tracks data internally on student satisfaction and competitive positioning, allowing them to constantly improve programs to better recruit and retain top students.

Northwestern uses these benchmarks not only to persuade students to attend, but also to convince program directors of the need for continuous improvement. Their annual quality assurance process holds program directors to high standards.



### Hard to Argue

“We don’t have a single standard for time-to-degree. We know it varies by discipline. But our national statistics show us the norms for each discipline, and faculty have a hard time arguing with that.”

*Simon Greenwold*  
*Senior Associate Dean, The Graduate School*  
*Northwestern University*

Source: Education Advisory Board interviews and analysis.

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Improving overall institutional performance depends on setting targets for individual academic programs that link to institutional goals. Rather than simply ask how a program compares to its peers, one asks how the program contributes to the overall strategic plan. To do this effectively, it is important to differentiate the roles that different programs play and to set acceptable targets.

## Measuring Performance Against Priorities

### *Results*

- Each program has metrics that link directly to the strategic plan
- Each program has a defined institutional role with performance metrics appropriate to that goal
- Each program has identified relevant peer programs





### III. Setting New Program Viability Hurdles

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Program reviews are typically backwards looking, evaluating the past performance of existing programs. New program launches offer the opportunity for forward looking reviews, focusing on expected performance. In an era of constrained resources, when institutions cannot afford to launch unsustainable new programs, rigorous review of new programs is a necessity.

## Assessing New Program Viability

### *The Necessity of Getting New Programs Right*



#### Typical Approach

- Faculty propose new programs
- Check for minimum quality
- Approve most proposals



- Unchecked programs proliferate
- Many programs fail to break even
- Increasing draw on institutional resources



#### New Approach

- Faculty propose new programs
- Examine income and expenses with specialists
- Improve proposals
- Approve same percentage or more



- New programs at break-even or better
- Higher quality proposals lead to higher quality programs

Source: Education Advisory Board interviews and analysis

Like many institutions, Philadelphia University increasingly relies on new programs to bring in new students and new revenues. It recognizes that many existing programs require subsidies and that new programs must be launched to provide those subsidies. For this reason, it now requires that all new programs have a plan to break even within five years.

In the past, Philadelphia University launched new programs in a relatively haphazard way. Faculty proposed new programs, the administration did a rudimentary check for quality, and then most proposals were approved. The result was that many new programs had higher costs or lower revenues than anticipated, creating an even greater drag on institutional resources.

The new approach at Philadelphia preserves critical aspects of the old approach. Faculty still propose new programs based on their expertise and experience within their field. But now those proposals are both supported and scrutinized by a wider array of support professionals. The same percentage of proposals are approved, but the proposals have been significantly strengthened by the process, leading to greater long-term sustainability.

While faculty are essential in proposing and designing new programs, they typically lack the expertise to comprehensively estimate program costs or project student demand.

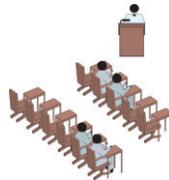
## Recipe for a Failed Program Launch

### *Faculty Are Curricular Experts, Not Program Design Experts*



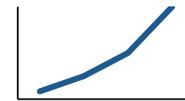
#### Underestimate Costs

- Ignore library and IT costs
- Exclude support staff costs
- Ignore annual salary and benefits cost increases
- Use inaccurate discount rates
- Fail to understand the importance of the timing of expenses



#### Ignore Capacity Constraints

- Fail to factor in new program's impact on existing programs, esp. general education courses
- Unaware of capacity step functions—when a new section will be necessary



#### Overestimate Demand

- Lack experience in estimating program demand
- Estimate using headcounts, not student credit hours
- Fail to differentiate the needs of full-time vs. part-time students
- Ignore impact of retention rates

Source: Education Advisory Board interviews and analysis.

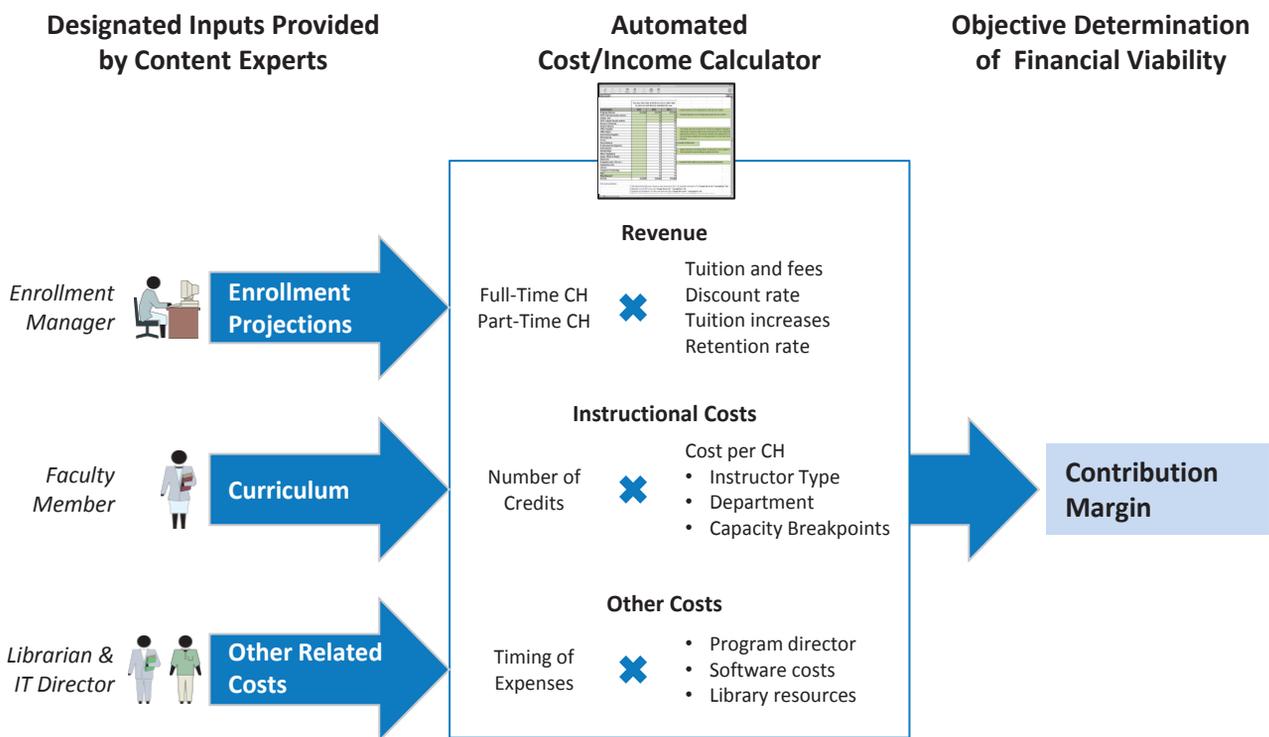
At every institution that we contacted, faculty are the primary source of new program ideas and are responsible for designing curricula. When it comes to understanding the resource implications of new programs, however, faculty are often ill equipped to draw up detailed budgets. Faculty tend to underestimate the costs of new programs because they are not familiar with all of the factors that drive costs. They may not be aware of the library or IT costs for specialized programs, they do not know how to estimate staffing costs or projected salary and benefits increases, and they rarely appreciate how the timing of expenses (e.g., hiring a program director in the third year rather than the first year) can significantly impact a program's viability in the first five years.

At the same time, faculty struggle to model the impact that a new program will have on existing programs. A new program in biology, for example, will add demand for courses in mathematics, chemistry, and physics. At some point that demand will require new sections to be added, significantly increasing costs once student demand goes beyond a certain breakpoint.

And finally, faculty are not prepared to realistically estimate program demand. They tend to overestimate student interest based on their personal experience and lack tools to test whether demand will be sufficient to cover program costs.

Administrators at Philadelphia University developed a sophisticated spreadsheet to support faculty as they develop proposals for new programs. Faculty create a curriculum, and the spreadsheet calculates the full costs. It also asks for inputs from the enrollment management team and estimates revenue in order to generate an estimated “contribution margin” for the program.

## Building a Business Plan *Factoring in All Determinants of Viability*



Source: Education Advisory Board interviews and analysis.

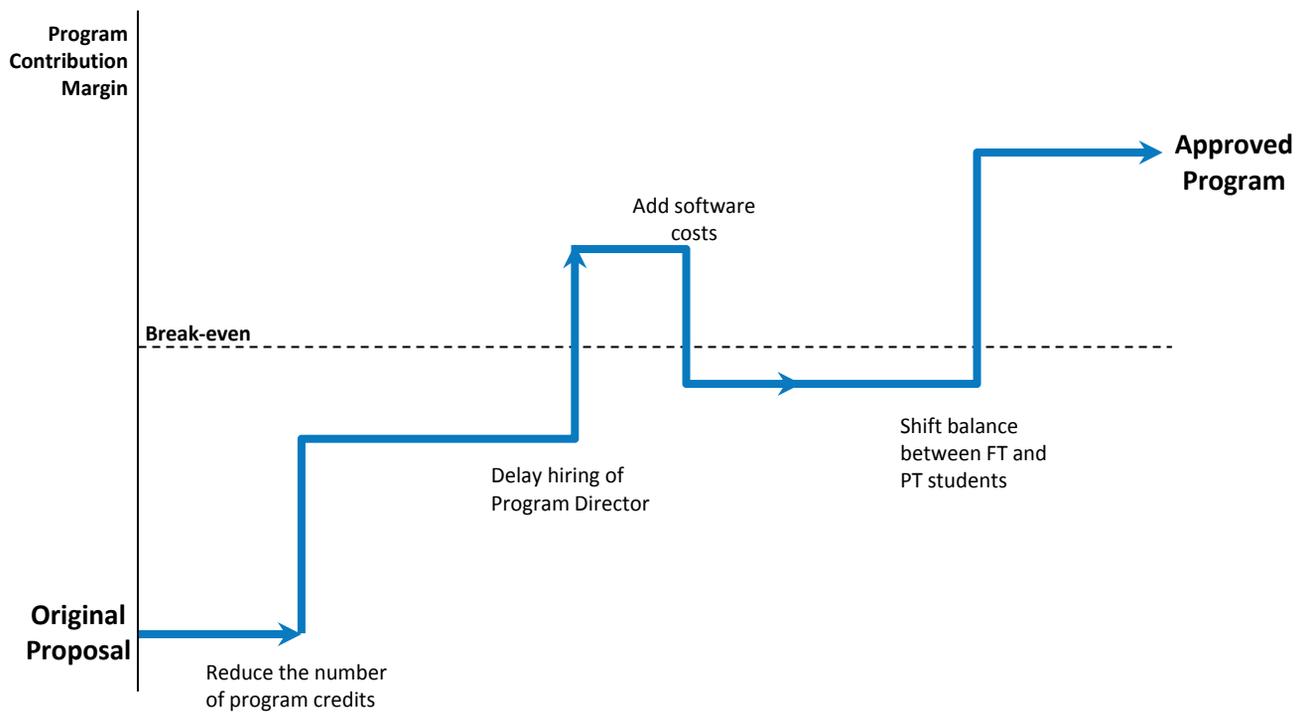
The process begins with a faculty member building a curriculum: listing out the courses that will be included in the program, the number of credit hours, and the discipline of the instructor for each. Built into the spreadsheet are data on instructional costs by discipline and capacity breakpoints which transform the proposed course list into a set of costs. The faculty member is also required to consult the library director and IT director to get validated estimates for additional resource costs for the program. Finally, the enrollment management team enters projections for student numbers, both full time and part time. The spreadsheet uses data on tuition and fees, typical discount rates, planned tuition increases, and even retention rates to generate the estimated revenue stream given the expected student demand.

The result is a break-even analysis that compares projected costs to revenues over the first five years of the program.

In order to maintain the institution's overall financial viability, Philadelphia University looks for new programs that will at least break even in the first five years. The program cost and revenue estimator enables faculty to experiment with different potential program configurations until they find one that is likely to be financially viable. It is not just a screen to reduce the number of program launches, but a tool to improve proposals so that more are successful.

## Getting to Yes

### Helping Faculty Design More Viable Programs



Source: Education Advisory Board interviews and analysis.

Often the first attempt at a new program proposal will fail the financial viability test, i.e., its costs will exceed projected revenues in the first five years. The detailed model in the spreadsheet, however, allows a faculty member to adjust various aspects of the proposal to bring costs into line with expected demand. Delaying the hiring of a program director, for example, can have a significant impact on program costs in the first five years. Shifting the projected balance between full time and part time students can also improve the program's financial viability.

While estimating program costs is relatively straightforward, projecting student demand for new programs remains a challenge. In the past, many institutions took a flexible “let’s try it and see” approach to new programs, but with tighter resources and higher risks for failed programs they are now looking for more rigorous methods to gauge demand.

## If We Build It, Will They Come?

### *Estimating Demand for New Academic Programs*

#### “Gut” Doesn’t Cut It

“We need more than an internal hunch. Our people may know the regional market, and their hunches are a good place to start, but we need to validate them.”

*Associate VP for Academic Affairs  
Private Master’s University*

#### Student Demand

- Number of degrees granted annually (IPEDS)
- Student expressions of interest (ACT/ SAT, custom surveys, focus groups)
- Student demographics (Census, College Board, GMAC)

#### Employer Demand

- Number of jobs (EMSI, BLS, Monster, NACE)
- Occupational projections (BLS, employer surveys)
- Number of businesses (Nielsen Claritas, Dunn & Bradstreet)
- Job qualifications (industry associations, licensing bodies, employer surveys)

#### Competition

- Recently launched programs (accreditors)
- Market share by institution (IPEDS)
- Number of programs vs. job openings in region
- Cross-application rates (ETS, GMAC)

Source: Education Advisory Board interviews and analysis.

The three key factors for estimating enrollment in a new program are student demand, employer demand, and the level of competition. If students are not interested, the program will fail to meet enrollment targets. If students are interested, but employers will not hire program graduates, the program will not be viable in the long term. And even if there is strong student and employer demand, competitors may make it impossible for your institution to attract significant numbers of students.

In each of these three areas, there are a number of data sources that institutions can use to estimate potential demand, ranging from general data sources on student demographics, occupational projections, and number of existing programs in a given area, to more sophisticated sources of information on student and employer preferences or program market share.

As institutions become more rigorous in their analysis of demand data, many have found that the most common sources have significant drawbacks. Surveyed students may indicate interest in a program, for example, but will they really sign up? Government data may indicate growing employer demand, but is the data too old or too broad to track demand for specialized programs?

## Wanted: Richer Employer-Side Market Intelligence

### *Conventional Market Research Ill-Suited to Discover Breakthrough Opportunities*

#### Typical Program Market Research



##### Student Surveys

- Schedule and delivery preference
- True labor market demand



##### Employer Advisory Boards

- Local employer perspectives
- Thought leadership and national perspectives



##### Bureau of Labor Statistics

- It's free?
- Data too old

#### Wishing for Better Answers



##### ***Will Employers Hire Our Students?***

“Surveys show what students will take, but not what companies will hire”



##### ***Where Will a Field Be in Five Years?***

“Program advisors know what’s going on in their world, but not across the world”



##### ***What New Professions and Credentials are Coming?***

“Government statistics show where the puck is, not where it’s going”

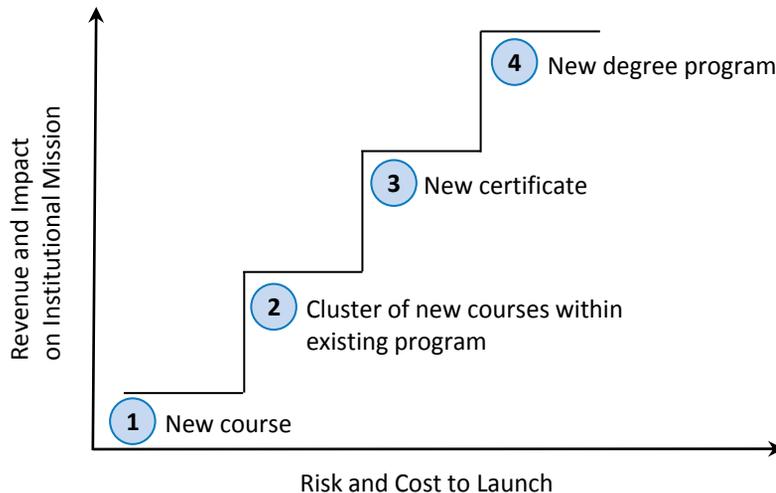
Source: Education Advisory Board interviews and analysis.

Even the best estimates of new program demand can be wrong. One risk mitigation strategy is to launch new programs in phases, testing the market and scaling investments gradually as evidence for demand develops.

## Getting New Programs Off the Ground

### *Reducing the Risk of Roadblocks*

#### Staged Program Launch



#### Key Ingredients:

- Leverage existing resources as much as possible
- Test demand at each stage before further investment
- Change program features in response to student/ employer suggestions
- Stop program development before major investments if problems appear

Source: Education Advisory Board interviews and analysis.

Particularly in the more volatile market for revenue-generating masters programs, a number of institutions have found that staging new program launches can significantly reduce the risk of overinvestment. A single new course can be launched quickly and can serve as a bellwether for student interest. If the course succeeds, adding additional related courses within an existing program can be launched without the need for multiple levels of approval. From there it is a relatively small step to a new certificate program which can ultimately help build the case for a new degree program if sufficient enrollment materializes.

Historically, many institutions were lax about approving new programs, but in the current environment of restricted resources and intense competitions they are finding that the high costs of program failure warrant increased upfront investment in program evaluation. Better estimates of program costs and project enrollment support not only better screening of bad ideas, but also improvement of marginally viable programs.

## **Setting New Program Viability Hurdles**

### *Results*

- New program proposals include full projected costs
- More proposals meet breakeven targets
- Demand estimates are evidence based
- All critical parties are aware of implementation needs
- New programs launched with less risk





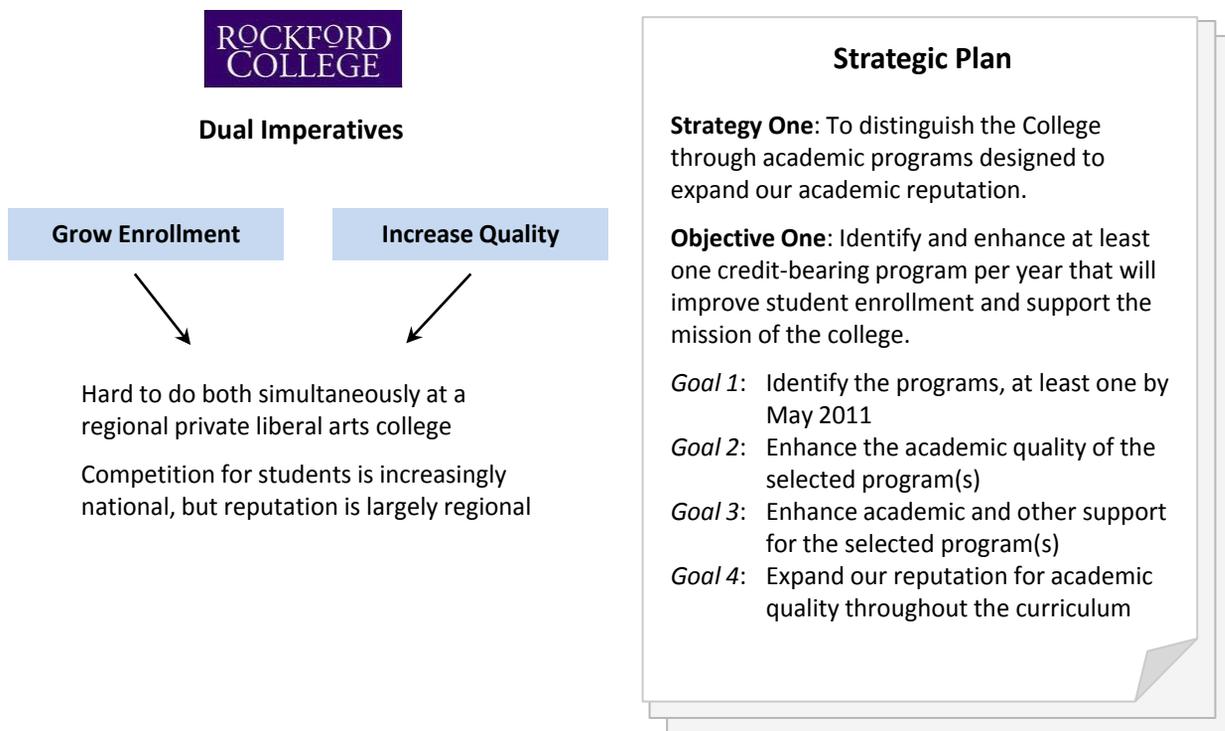
## IV. Improving Signature Programs

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In order to attract more students from out of their region, Rockford College invested in selected academic programs as vehicles to expand their reputation.

## Differentiating a Liberal Arts College

### *Building Programs with National Reputation*



Rockford College was struggling to maintain enrollment as the number of high school students within their region declined. But at the same time, they were concerned that a broader national recruiting initiative was cost prohibitive. Their strategic plan proposed identifying and enhancing a few specific academic programs as a more cost effective means to improve their reputation and to attract better students from out of the region.

Rockford created a set of criteria for selecting “growth leader” programs. To qualify for additional investments, programs had to show evidence of potential for enrollment growth, as well as a record of student success, fundraising, and collaboration. The most important factor, however, was the commitment of the program’s faculty to growth and improvement.

## Looking for Volunteers

### *Identifying Programs with the Potential (and the Desire) to Become Growth Leaders*

#### Selection Criteria for Growth Leaders

- ✓ Support of the college’s mission and vision
- ✓ Evidence of potential for enrollment growth/sources of new students.
- ✓ Track record of recent program growth in new or retained students.
- ✓ Evidence of the program’s success academically or in placement of students
- ✓ Potential to involve other parts of the curriculum and faculty in the program
- ✓ Evidence of planning for future needs to support growth and quality
- ✓ Potential for fund-raising, through either grants or gifts
- ✓ Five year plan that indicates interdependencies with other programs
- ✓ **Most critical (and often overlooked)—program faculty’s desire to grow**

Source: Education Advisory Board interviews and analysis.

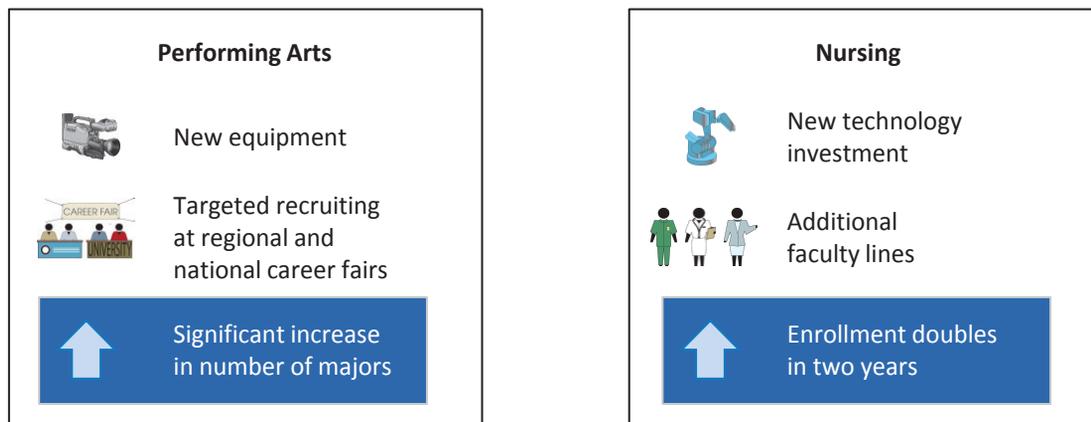
Rockford encouraged academic programs to apply to become “growth leaders” with the potential for new resources and an improved national profile. Most of the selection criteria were straightforward: alignment with the college’s mission, potential for enrollment growth, success in placing students, collaboration with other parts of the college, experience with program planning, and potential for fundraising. Even with all of these factors, however, they found that programs could not be successful without the broad support of the program’s faculty. Much of the work would fall to them, and without their commitment, the programs were unlikely to be successful.

Two of the first programs selected as growth leaders were performing arts and nursing. In each case, relatively small, targeted investments led to significant increases in enrollment.

## Investing in Targeted Excellence

*Strategic Investments in Niche Areas Yield Desired Enrollment Boosts*

### Early Results from the First Two Growth Leaders



- *Strategic investments range from \$5,000 to \$250,000*
- *Other selected areas include Psychology and Math/Science*

Source: Education Advisory Board interviews and analysis.

Struggling with the potential costs of increased national marketing, Rockford realized that certain academic programs offered cost-effective opportunities for more targeted recruiting. In performing arts, for example, regional and national career fairs offered an ideal venue to send faculty to engage with potential students. A small investment in new equipment enhanced these efforts and led to a significant increase in majors.

In the high demand field of nursing, investments in new technology and additional faculty lines enabled them to double their enrollment in the major in just two years.

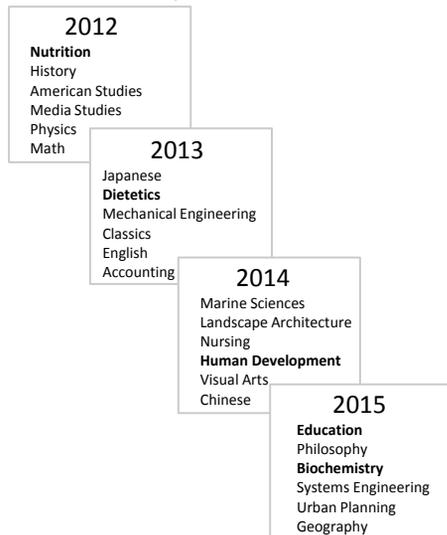
The typical calendar-driven approach to program reviews results in closely related programs being reviewed in different years. Rutgers University decided to proactively cluster the reviews of similar programs, enabling them to better identify opportunities for collaboration or shared investments.

## Identifying Strategic Opportunities

*Reviewing Related Programs Together<sup>1</sup>*

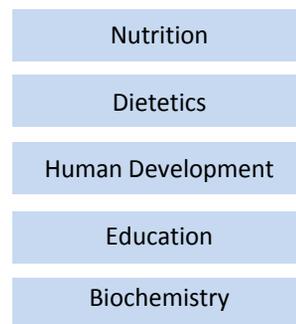
**RUTGERS**

### The Typical Approach Determined by the Calendar



### The Strategic Approach Cluster Related Programs

#### Nutrition Science Cluster



### The Benefits Identify Joint Opportunities

- Hire joint faculty
- Share equipment
- Share lab space
- Launch new interdisciplinary programs
- Consolidate programs
- Differentiate programs

Note: Hypothetical example

Source: Education Advisory Board interviews and analysis.

At most institutions, programs reviews are scheduled simply based on how much time has elapsed since the last review. Closely related programs (particularly if they happened to be housed in different schools) might be reviewed in different years, limiting the chance to identify opportunities for improvement across programs.

Recognizing this, the administration at Rutgers adopted a model where clusters of related programs are reviewed together. To take one hypothetical example, there may be five programs that relate to nutrition science across different academic units. Reviewing them together makes it possible to identify opportunities for joint hires, shared equipment, program consolidation, or new interdisciplinary programs.

Clustering does more than group similar programs together, it also shifts from a passive approach to reviews (“who’s next on the calendar?”) to a more active approach (“what are our institutional priorities this year?”). The approach changes the roles of faculty review committees, the provost, and deans, and increases the value of the review process for all of them.

## Triggered Reviews

### *A Shift from Passive to Proactive Program Reviews*

#### Committee on Academic Planning and Review



#### Provost / President



#### Dean / Department Chair



<b>Before</b>	Passively received program reviews and transmitted to provost	Overwhelmed by an endless parade of resource requests from individual programs	Saw reviews as a bureaucratic hassle that rarely led to additional resources
<b>Now</b>	Proactively request reviews and launch more detailed studies	Works with Committee and Deans to focus review on institutional priorities	See clustered reviews as an opportunity to make the case for strategic investment
<b>Key Questions</b>	Which programs are on track to achieve excellence?	How can we go after large interdisciplinary opportunities?	How can I make the most effective use of limited resources?

Source: Education Advisory Board interviews and analysis.

Rutgers, like most universities, had a faculty review committee that received program reviews and forwarded them on to the provost. And like most universities, this committee played a largely passive role. The new approach has empowered this committee to play a more directive role in proposing clusters, framing strategic questions, and even launching their own more detailed studies.

The provost and president had been overwhelmed in the past by waves of resource requests from unrelated programs. The new process allows them to work with the committee and with deans to frame a handful of critical issues and focus their attention on strategic issues.

For deans and department chairs, the new approach provides a better platform to make a strong case for new resources. If their program is part of the cluster, they are already spotlighted as a strategic priority. And working together with the other programs they can show how joint investments can be leveraged across multiple programs.

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Shifting from a calendar-driven, check-the-box approach to program review to strategically clustered reviews can significantly enhance the value of program reviews for the institution.



### The Benefits of Cluster Reviews

“The five-year cycle of program reviews created an avalanche of reviews, many of which resulted in unfulfilled resource requests. The cluster reviews promote strategic thinking about how a new initiative could fit into the overall mission of the university.”

*Rob Heffernan,  
Director of Institutional Research and Planning  
Rutgers University*

Source: Education Advisory Board interviews and analysis.

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Boston University has recently launched an ambitious strategic plan to significantly increase its profile, bringing in new leadership from MIT and USC, setting bold fundraising goals, and planning to hire 100 new faculty in Arts and Sciences. Implementing the plan, they recognize, will require concentrating investments in areas with the greatest potential.

## Choosing to Be Great

### *Raising Aspirations at Boston University*



#### **New President 2005**



**Bob Brown**  
(Formerly at MIT)

#### **New Provost 2011**



**Jean Morrison**  
(Formerly at USC)

#### **A New Strategic Plan "Choosing to Be Great"**

- 10-year plan, \$1.8B cost
- 100 new tenure-track faculty in the College of Arts and Sciences
- "We must make selective investments that will give us the biggest impact and which will do the most to improve the University's overall standing in the years to come."

Source: <http://www.bu.edu/phpbin/news/releases/display.php?id=1439>  
<http://www.bu.edu/president/documents/Strategic-Plan.pdf>; Education Advisory Board interviews and analysis.

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To achieve their goals, Boston University has adapted program review practices from more research intensive universities. One practice adapted from USC involves framing each program review around a specific question.

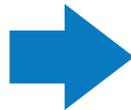
## Starting with the End in Mind

### *Setting the Terms of the Review Upfront*



#### Program Review MOUs

- All program reviews begin with an explicit agreement (MOU) on the goals and scope between the Dept. Chair, Dean, and Provost
- Focuses the review on key strategic issues
- Self-study addresses MOU questions
- External reviewers receive MOU charge



#### Agreement on Scope of Review

- Focuses the reviewers' attention on the critical challenges facing the unit
- Guides the selection of appropriate external reviewers
- Helps to ensure that review provides useful information at the levels of the department, dean, and provost

Source: Education Advisory Board interviews and analysis.

This practice (referred to as a memorandum of understanding at USC and an agreement on scope of review at BU) is an explicit agreement between the provost, dean, and department chair on the purpose of the review. Rather than simply require programs to cover a broad set of standard metrics, they agree in advance to focus on a specific question, such as, should this department launch a doctoral program, or, does this program need new facilities. The questions then shape the self-study document and even guide the selection of external reviewers.

Boston University has also adapted a practice from MIT where members of the board of trustees play an active and regular role in academic program reviews.

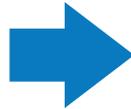
## Getting an Outside Perspective

*Including Non-Academic Institutional Supporters in the Review Process*



### Visiting Committee Includes Trustees

- MIT Corporation members participate in program reviews
- Industry leaders valued for their deep knowledge of trends in technology, business, and workforce development



### Overseers Join Review Committees

- No disciplinary knowledge—value is in their outsider perspective and commitment to BU
- Industry connection not necessary
- Just finished first round; still in the experimental stage

Boston University believes that including non-academic institutional supporters can ensure that program reviewers remain cognizant of the broader institutional perspective rather than focusing excessively on purely disciplinary perspectives.

At MIT, members of the board have played a central role in program reviews since the nineteenth century. Their involvement is natural at MIT given the alignment between MIT's teaching and research goals with the expertise and needs of board members, most of whom work in the industries that rely on MIT graduates and MIT research.

At Boston University, by contrast the connections between the Board of Overseers and specific academic programs is looser. The goal instead is to bring intelligent and engaged institutional supporters into the process to broaden the discussion and ensure accountability.

Program reviews at Boston University still include a set of three external reviewers, invited from peer and aspirant programs. They supplement these external reviewers with an internal expert (a faculty member from a related discipline) and a member of the Board of Overseers.

## A Balanced Review Committee

### *Introducing an Institutional Advocate to Program Reviews*

**External  
Disciplinary Experts**  
(Faculty from Peer/Aspirant  
Departments)



How does this program  
compare to other leaders in  
the discipline?

**Internal  
Expert**  
(Faculty Member from  
Related Discipline)



How does this program  
relate to other initiatives at  
the university?

**Non-Disciplinary  
Member**  
(Institutional  
Supporter)



Are graduates of this  
program well-prepared  
for jobs?

Source: Education Advisory Board interviews and analysis.

External disciplinary experts still play a critical role in program reviews at Boston University. They hold the program up to the standards of the discipline and can identify areas of strength and opportunities for improvement. At many institutions their perspective is the sum total of the program review. Boston University supports and supplements their perspective with two other participants. A faculty member from outside of the program helps to guide the external experts on issues of program history and BU culture, ensuring that the advice they offer is relevant and implementable. The non-disciplinary expert (included for the first time in 2012) is expected to provide an even broader institutional and community perspective.

Including members of the Board of Overseers is still in its very early stages at Boston University, but results from the first round of reviews indicate that these institutional supporters can offer valuable perspectives. The review process also represents an important means for keeping these supporters engaged in the institution and builds their understanding of the institution's strengths and challenges.



### The Benefits of Including Outsiders

"We don't expect the overseers to bring subject-matter expertise. Their distance from the field provides them with an interesting viewpoint and affords them relative freedom to pursue alternate lines of inquiry. They're not so deeply embedded, so they can ask the obvious but critical questions.

This is a great way to engage the University's board leadership in the academic mission, but even more importantly, it gives them a real feeling of confidence in the institution's leadership around accountability and transparency."

*Nicole Hawkes  
Associate Provost for Strategic Initiatives  
Boston University*

Source: Education Advisory Board interviews and analysis.

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Every institution has a handful of signature programs that disproportionately attract students, faculty, or resources. Program reviews should be designed to enhance these programs by focusing on opportunity identification. Agreeing in advance on strategic questions to resolve in the review, clustering related programs, and involving non-disciplinary reviewers can prevent reviews from falling into a narrow disciplinary focus.

## Improving Signature Programs

### *Results*

- Program reviews focus on narrowly defined opportunity assessment rather than basic compliance
- Opportunities assessed stretch across multiple related programs
- While disciplinary experts play a crucial role, they do not define the terms of the review
- Reviewers from outside the discipline ensure that the review committee considers the program's broader implications and opportunities





## V. Maximizing Resource Flexibility

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University budgets resemble the U.S. federal budget in that annual budget negotiations typically only touch a small fraction of total spending. The vast majority of expenditures are “non-discretionary,” leaving few resources for strategic priorities.

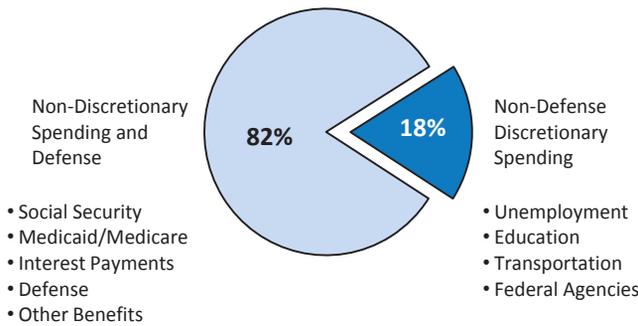
## An Entitlement Mentality

### Few Flexible Funds to Dedicate to Strategic Investments



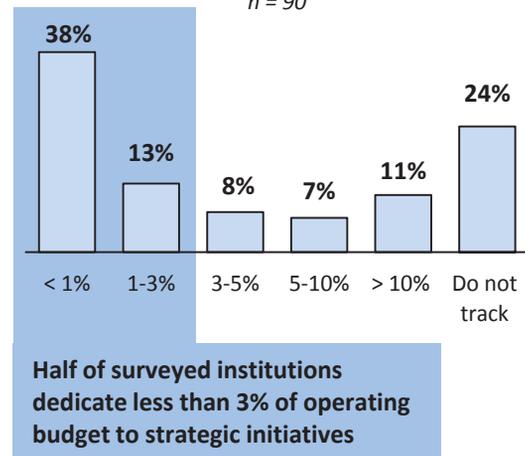
#### The Federal Government’s “Entitlement Crisis”

Federal Spending, FY 2011



#### Higher Ed’s Strategic Squeeze

Percentage of Operating Budget Dedicated to Strategic Initiatives<sup>1</sup>  
n = 90



<sup>1</sup> Education Advisory Board survey of university and college chief business officers, conducted in early 2012.

Source: Congressional Budget Office, “The U.S. Federal Budget—Infographic” <http://www.cbo.gov/publication/42636>; Education Advisory Board interviews and analysis.

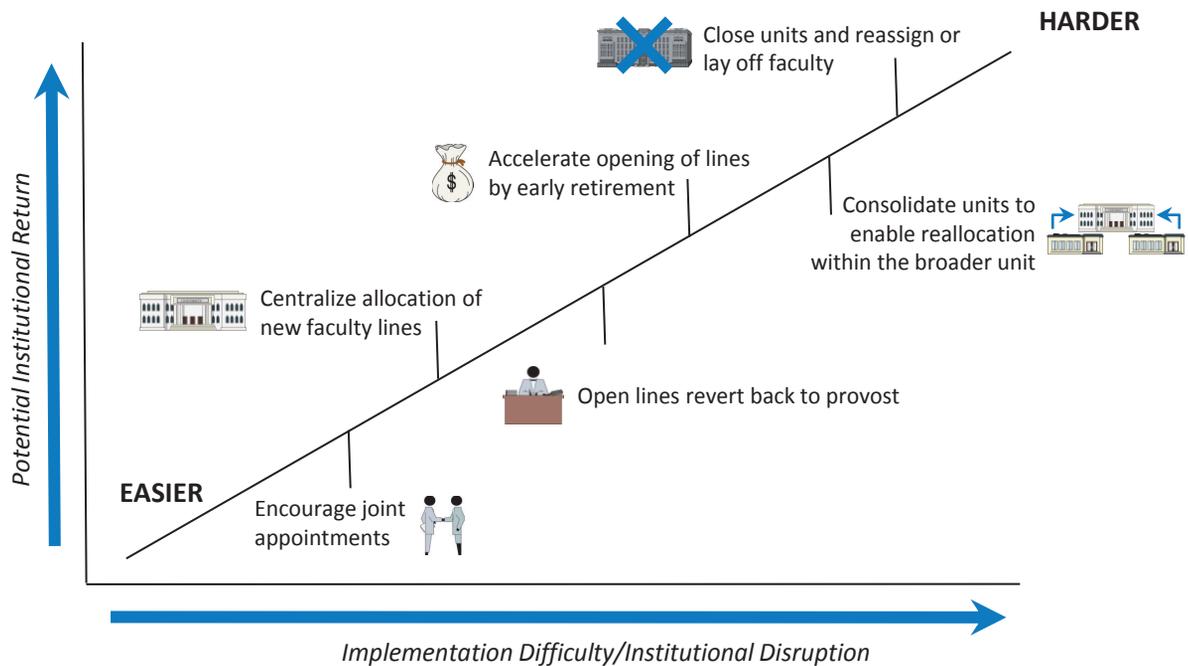
An EAB survey of university business officers found that at most institutions, less than 3 percent of the operating budget is allocated to strategic initiatives. University budgets are dominated by faculty and staff salaries and facilities costs, all essentially fixed. The most common budget model is to give every department largely the same funding it had the previous year, plus or minus the overall institutional change. This approach makes it extremely difficult to reallocate resources from one program to another or to support new strategic priorities.

When it comes to supporting academic programs, faculty lines are the most critical resource. Departments typically measure their value by the number of their faculty lines, and they hold on to them not only for the 20 to 40 years that a specific individual holds the line but often in perpetuity.

## A University's Most Valuable Resource: Faculty Lines

*Hiring for Institutional Rather than Departmental Needs*

A Menu of Options from Simple to "Nuclear"



Source: Education Advisory Board interviews and analysis.

At the vast majority of institutions, faculty lines are “owned” by departments, and when a line comes open that department has the right to fill it regardless of other institutional needs. As a result, some departments maintain their faculty complement even as enrollments drop, while others struggle to add faculty as student numbers swell.

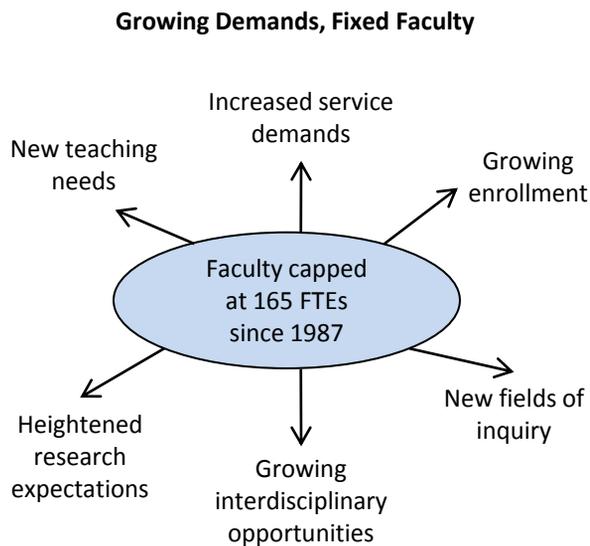
The ability to shift faculty resources from one program to another dramatically increases the institution’s ability to support strategic goals, and the chart above lays out a spectrum of options for doing so ranging from the least to the most aggressive.

Adding additional resources is always politically easier than reallocating existing resources. Provosts can incentivize departments to hire for institutional priorities by providing financial incentives for joint hires that span multiple departments. Much harder (except at a few institutions) is mandating that open faculty lines revert back to the provost for reallocation to other departments. Once faculty lines become flexible, some institutions have accelerated the rate of turnover by offering incentives for early retirement. Other institutions have created flexibility by consolidating smaller academic units, since it is easier to shift resources within a single large unit than across multiple small units. By far the most aggressive (and most rare approach) is to close entire units and forcibly reassign or fire their staff.

After almost two decades with a cap on the size of the faculty, Amherst College decided that it needed to grow. They wanted to avoid, however, growing simply by adding new specializations and sought an approach that would allow them to add faculty who would support institution-wide objectives rather than simply departmental needs.

## Centrifugal Forces

*How Can a Small College Meet Expanding Needs in Teaching and Research?*



*Toward Amherst's Third Century: Report to the Faculty of the Committee on Academic Priorities (January 2006)*

- "We must find new ways to innovate without incurring unsustainable costs."
- Historically, innovation has come "largely through academic departments' exclusive attention to their own needs."
- "Amherst can expand our range of ideas by integrating and coordinating, not merely adding new specializations..."

Source: [https://www.amherst.edu/media/view/68403/original/CAP\\_report\\_Jan06.pdf](https://www.amherst.edu/media/view/68403/original/CAP_report_Jan06.pdf); Education Advisory Board interviews and analysis.

Amherst decided to allocate new faculty lines to departments in exchange for commitments from the department to teach courses that met institutional objectives such as global studies, intensive writing, or quantitative literacy.

## Aligning Interests

### Allocating New Faculty Lines to Support Institutional Goals

**Amherst Uses Authority over New Faculty Lines to Advance College’s Strategic Plan...**

**...Fostering Innovative Program-Level Proposals That Align with Institutional Objectives**

**Targeting Our Growth**

“The [Committee on Academic Priorities] therefore recommends that growth in the faculty occur primarily, though not exclusively, in response to college-wide needs and that departments receive added staffing in return for the commitment to provide courses that meet these needs.”

Toward Amherst’s Third Century  
*Committee on Academic Priorities*

#### Selected Institutional Objectives



New Interdisciplinary Ventures



Global or Transnational Studies



Intensive Writing Courses



Quantitative Literacy

#### Sample Proposal for a New Faculty Lines

**Department Receives**

1 FTE in Music (Jazz and Popular Music)

**Department Allocates**

.25 for global studies  
.25 for intensive writing  
.25 for interdisciplinary courses with Black Studies  
.25 to existing needs

Source: Education Advisory Board interviews and analysis;  
[https://www.amherst.edu/media/view/68403/original/CAP\\_report\\_Jan06.pdf](https://www.amherst.edu/media/view/68403/original/CAP_report_Jan06.pdf).

Amherst’s goal was to add faculty in such a way that they would be better able to support institutional instructional goals. At the same time, they understood that departments had an interest in hiring disciplinary experts. Departments could apply for a new position if they committed to teaching an equivalent number of courses that met college-wide goals. For example, the music department might receive a new faculty member in jazz and popular music if as a department they agreed to teach one quarter of an FTE load across four different institutional initiatives. The new faculty member might not personally be the one teaching all of those courses, it was up to the department to determine how best to support them.

When Shirley Ann Jackson became president of Rensselaer Polytechnic Institute in 1999, she spearheaded the creation of a strategic plan that set out bold goals, including dramatic expansions in research expenditures, doctoral students, and endowment support. She also pledged to develop new strengths in areas such as biotechnology and information technology.

## A New Leader, a New Plan

### *Rensselaer Sets Bold Goals*

**Shirley Ann Jackson**



Appointed  
President 1999



**Rensselaer**

#### THE RENSSELAER PLAN APPROVED BY TRUSTEES IN 2000

- Expand research funding from \$40M to \$100M
- Double the number of doctorates, from 125 to 250
- Grow the endowment to support 20% of the budget (now 10%)
- Build new strengths in biotechnology and information technology

Source: <http://www.rpi.edu/president/plan/index.html>;  
Education Advisory Board interviews and analysis.

Administrators at Rensselaer recognized that meeting these strategic objectives would require a radically new approach to resource allocation. A new budget model was created that tightly linked budgets to strategic goals.

## A Mechanism for Accelerating Change

### *Reallocating Resources to Support Strategic Goals*

***The Rensselaer Plan*** has substantial implications for financial resources...

#### We will:

- Derive Performance Plans and then annual operating plans (budgets) from The Rensselaer Plan.
- Refine or reinvent the budgetary model to focus resources for maximum strategic impact, while maintaining appropriate institutional flexibility.
- Provide managers at every level with accurate, timely, and relevant performance and management information.

#### **Mandate Unit-Level Reallocation to Strategic Priorities**

All units required to reallocate 3% of budget to strategic priorities annually

#### **Centralize Staffing Decisions**

All open faculty and staff positions revert to the provost

#### **Leverage Program-Level Data To Determine Resource Needs**

Positions allocated based on strategic priorities and data on the resource needs of individual programs

Source: <http://www.rpi.edu/president/plan/index.html>; Education Advisory Board interviews and analysis.

Three changes aligned resources with strategic priorities. First, each unit was required to reallocate 3% of its budget to strategic initiatives annually. This forced department chairs to make explicit how they were supporting the Institute's overall plan. Second, all open faculty and staff positions reverted back to the provost who could decide whether they would remain with their original unit or be allocated to another unit. Finally, staffing and other resource allocation decisions were based on a new centralized faculty productivity database.

Simply allowing the provost to reallocate open positions freed up about 5% of the operating budget for strategic initiatives due to regular turnover. The resources were then allocated based on performance thresholds and alignment with the strategic plan.

## Growing Strategically

### *Two Separate Allocation Pathways Guide Faculty-Line Decisions*

**Open Faculty (and Staff) Lines  
Revert to Provost (and CFO)**

~\$5M of faculty and staff turn  
over every year (about 5  
percent of operating budget)

**Provost Reallocates Faculty Lines to  
Programs That Meet One of Two Criteria**

**1** Program Meets Key Performance Threshold



- Metrics examined include student demand, research volume, and advising load
- Committee of deans define key concepts like faculty workload

**2** Program Aligns with Strategic Growth Area



- Strategic priorities for the coming year, and three- to five-year horizon
- Deans included in discussion
- External environment examined to identify relevant trends and opportunities, which are matched to signature strengths or areas of desired growth

Source: Education Advisory Board interviews and analysis.

Open positions were reallocated in two ways. The first priority was to ensure that programs had sufficient resources to maintain their commitments to research and teaching without increasing faculty course loads or dramatically increasing class sizes. Secondly, positions were allocated based on strategic priorities set by the deans and central administration.

Note that departments will not lose faculty lines if they open up due to tenure denial. That threat could potentially cause departments to offer tenure to less than optimal candidates just to prevent the loss of the line.

Ensuring that resources were allocated where needed required better insight into faculty productivity. Rensselaer developed a faculty activity dashboard to enable administrators to quickly gauge teaching and research output within and across each academic unit.

## Faculty Activity Dashboard

### A Schoolwide View of Teaching Loads and Research Expenditures

#### Faculty Activity Dashboard

*Number of Faculty by Research Expenditures and Number of Courses Taught*

Fiscal Year:

Term:

School:

Depts:

Type:

Expenditures	Courses Taught								
	0	1	2	3	4	5	6	10	TOTAL
\$0	75	112	94	17	5	1	2	0	306
\$1-\$100K	18	40	21	7	1	0	0	1	88
\$100-\$200K	9	34	20	2	0	0	0	0	65
\$200-\$300K	3	16	7	1	0	0	0	0	27
\$300-\$400K	5	8	2	1	0	0	0	0	16
> \$400K	14	36	6	0	0	0	0	0	56
<b>TOTAL</b>	124	246	150	28	6	1	2	1	558

Includes administrators with faculty status (such as the president), plus all academic deans, chairs, and faculty on leave and on sabbatical

There are 20 faculty with research expenditures between \$100k and \$200k who taught 2 courses in Fall 2009

Source: Education Advisory Board interviews and analysis.

The faculty activity dashboard is a matrix that shows the number of faculty by number of courses taught and by total research expenditures. (The faculty in the cell that indicates no teaching and no research are administrators with faculty status or faculty on leave.) Clicking on the number in the cell brings up the names of the individual faculty members as well as information on courses taught and grants won. The dashboard can also be filtered to show faculty in a specific school or department.

Rensselaer has made significant progress against its strategic plan. A string of fundraising successes has enabled them to build innovative new facilities to support various strategic plan components.

## **Measuring Progress Against Plan** *Significant Progress 12 Years into the Plan*

### **Fundraising Successes**

- Secured a \$360 million unrestricted gift to the university and completed the \$1.4 billion campaign
- Invested approximately \$700 million in new and renovated facilities for research, teaching, and student life
- Curtis R. Priem Experimental Media and Performing Arts Center (2008)
- Computational Center for Nanotechnology Innovations, a \$100 million partnership involving Rensselaer, IBM, and New York state
- Center for Biotechnology and Interdisciplinary Studies (2004)

Source: <http://rpi.edu/president/accomplishments.html>;  
Education Advisory Board interviews and analysis.

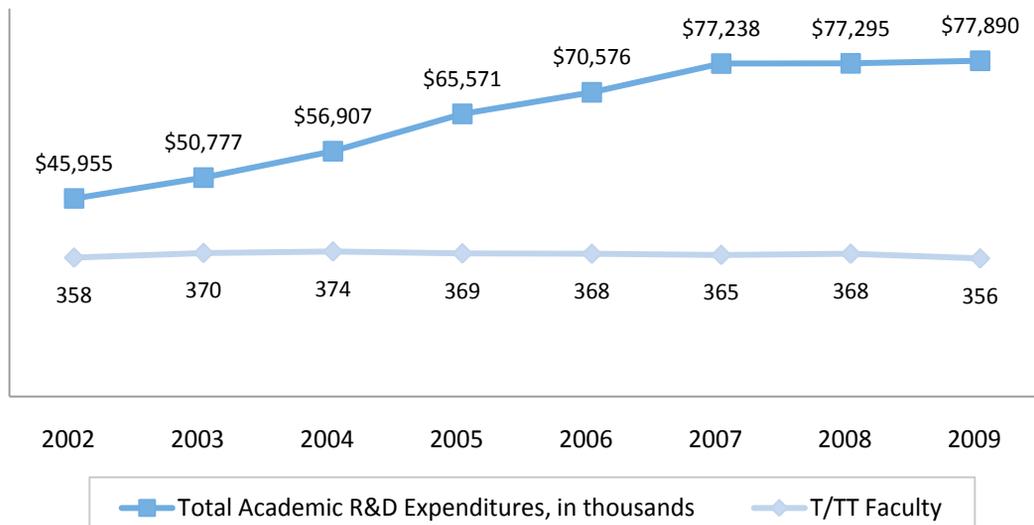
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Even more impressive is the dramatic gain in research productivity over the strategic planning period. While maintaining a constant number of tenure stream faculty, Rensselaer has dramatically increased its research expenditures, demonstrating the benefits of aggressively reallocating open faculty positions to align with strategic goals.

## The True Measure of Productivity

### *Growing Research Output While Holding the Size of the Faculty Level*

**Number of Faculty vs. Research Expenditures**



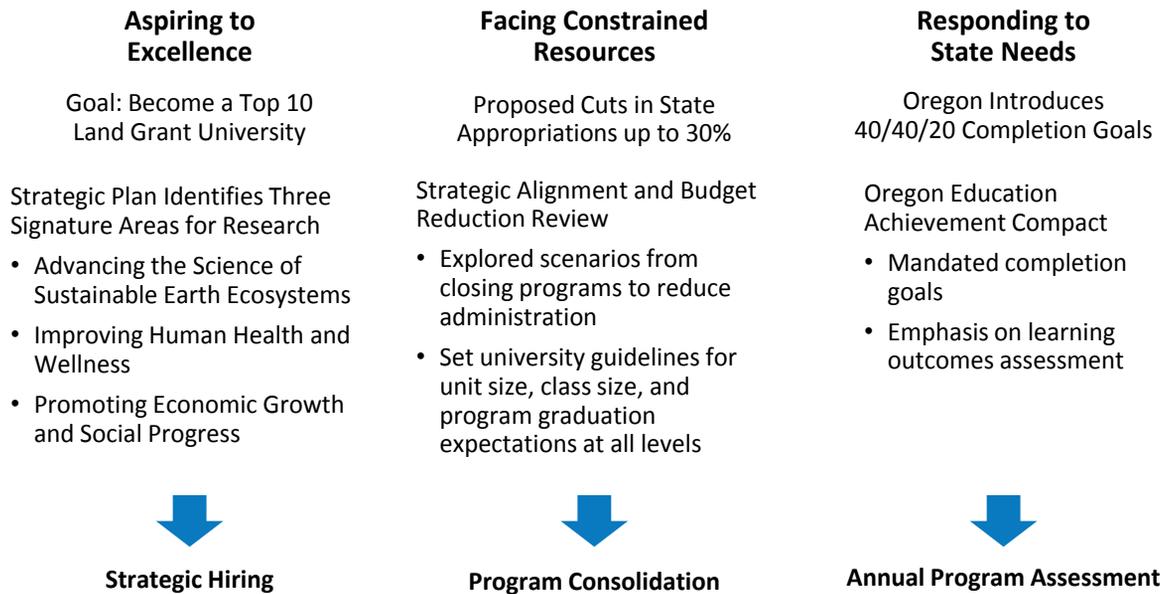
Source: NSF WebCASPAR; Education Advisory Board interviews and analysis.

Between 2002 and 2009, Rensselaer maintained essentially the same number of tenured and tenure track faculty (about 360). Of course, the actual individuals changed, with faculty in some units leaving and new faculty being added to other units to better match external opportunities and strategic priorities. As a result, Rensselaer was able to increase its research expenditures from \$46M to \$78M over this same period.

Oregon State University (OSU) faced a need to more strategically allocate resources in response to three major trends: a strategic plan that highlighted three areas for research growth, significant proposed state budget cuts, and new mandated targets on completion rates from the state.

## Excellence, Efficiency, and Accountability

*Three Reasons to Improve Resource Allocation*



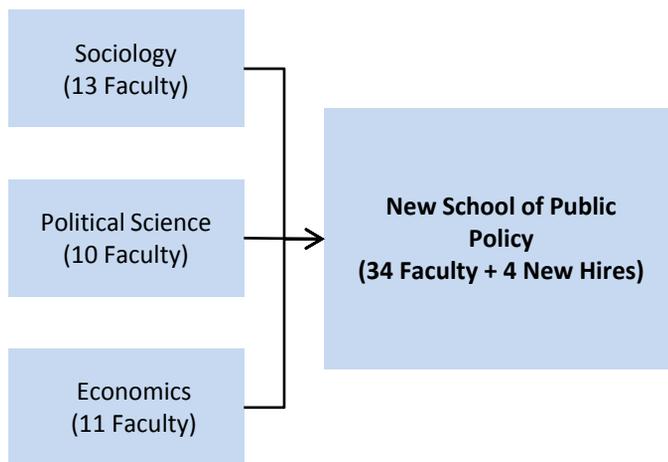
Source: Education Advisory Board interviews and analysis.

Like many research universities, Oregon State aspired to enhance its research rankings and identified three multidisciplinary thrusts to guide research investments. At the same time, they were threatened with significant state budget cuts that would require them to eliminate or consolidate programs in order to dramatically increase efficiency. And finally, the Oregon Education Achievement Compact mandated an increase in student completion rates and improvement in student learning outcomes assessment. These factors required OSU to rapidly improve performance, through strategic hiring, program consolidation, and a new annual program assessment process.

One strategy that OSU used to better leverage resources in support of strategic goals was program consolidation. Three smaller departments—sociology, political science, and economics—were consolidated into a new School of Public Policy.

## More Than the Sum of Its Parts

### *The Benefits of Academic Consolidation*



#### Advantages

- Aligns with strategic plan: “Promoting economic growth and social progress”
- All three disciplines support the largest master’s program in public policy in Oregon
- Launching a new Ph.D. program in public policy
- Replaces three department chairs with one School Director
- Meets student concerns about siloed courses; advancing interest in interdisciplinary programs
- Individual undergraduate majors remain
- Improved ability to hire top scholars

Source: Education Advisory Board interviews and analysis.

The new School of Public Policy had a number of advantages over the status quo. First of all, it aligned with one of the strategic plan objectives focused on promoting economic growth and social progress. Also, combining the three small programs created the largest master’s program in public policy in the state and provided the foundation to launch a new Ph.D. in public policy. Moreover, students in the school were better able to explore multidisciplinary programs while still maintaining access to the older undergraduate majors. Finally, there were some administrative cost savings as the three department chairs were replaced by a single school director.

Administrators also found that the larger scale of the new school made it more attractive to potential hires, enabling them to recruit higher quality applicants than the smaller departments could have done on their own.



### **Bigger Is Better**

“We asked our colleges if they could align the different departments in ways that could help them reach a critical mass that advances something they could not do as small units... When they recruited faculty for the new program ... they found that they were recruiting the top faculty in all three disciplines. The strategy attracted many Ph.D. graduates coming out of elite institutions because they noticed that the university was being innovative in how it developed its programs...You are not joining a department within a university as a sole individual, you're joining as part of a cohort.”

*Becky Warner  
Senior Vice Provost for Academic Affairs  
Oregon State University*

Source: <http://chronicle.com/article/Its-a-Buyers-Market-for/130249/>

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The proposed budget cuts in Oregon did not materialize, and in the end OSU was able to expand the faculty and make a large number of new hires. They created a set of criteria to determine which programs would get the new faculty lines.

## Matching Our Mission

### *Requests for New Faculty Positions Judged by Alignment with Strategic Criteria*

#### *Provost's Rubric for Faculty Investments*



**Advances one or more of the three signature areas of excellence:** Advancing the Science of Sustainable Earth Ecosystems, Improving Human Health and Wellness, and Promoting Economic Growth and Social Progress



**Is collaborative and integrative** involving multiple colleges within a division or across divisions



Enables the University's ability to successfully **compete for large center-level federal grants and build collaborations with industry and business**



Enables the University to **deliver effectively its educational mission**, including making substantial progress in its student retention and success goals



**Leverages existing resources** demonstrating a high level of commitment from divisions, colleges, and units (e.g. cost share on start-up funds, redirecting existing available lines to complement requests)



Strengthens and **reinforces recent directional and realignment changes** and initiatives in colleges and programs



Advances University's goal to enhance and **promote faculty diversity**

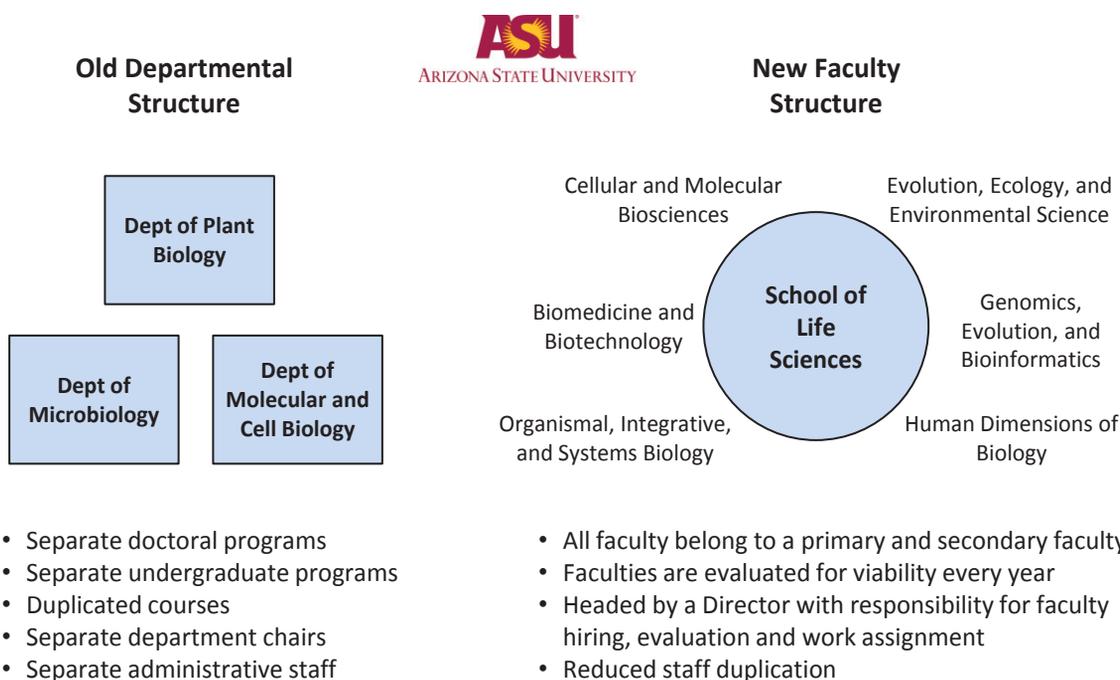
Source: Brenda Medina, "It's a Buyer's Market for Colleges Hiring Junior Faculty" (January 8, 2012), <http://chronicle.com/article/Its-a-Buyers-Market-for/130249/>; Education Advisory Board interviews and analysis.

The most important criteria for allocating the new lines was that the new hires had to advance one or more of the signature areas laid out in the strategic plan. Beyond that, they should also link multiple colleges and divisions, helping the university build the capacity for large-scale collaborative research and improving OSU's ability to compete for large center grants.

Another example of the benefits of consolidating smaller academic units is the creation of the School of Life Sciences at Arizona State University. Three departments and some faculty from a fourth department were brought together to create a single larger unit allowing for more flexible combinations of faculty and greater administrative efficiencies.

## Reorganizing for Success

### *Generating Flexibility by Abandoning Departmental Silos*



Source: Elizabeth Capaldi, "Intellectual Transformation and Budgetary Savings Through Academic Reorganization," *Change Magazine* (July/August 2009)

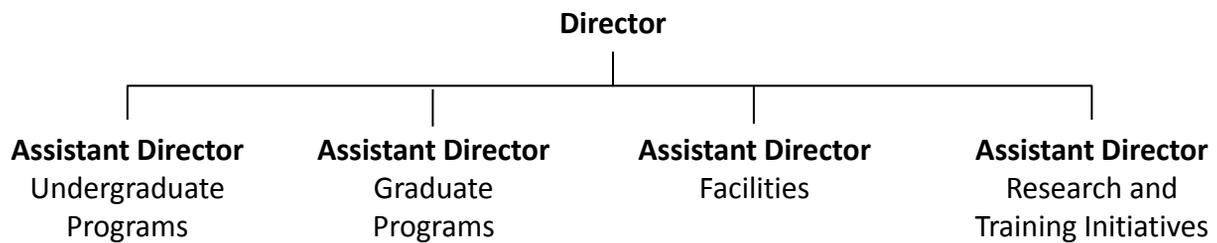
Originally, Arizona State University had three separate departments doing work in biology—one for microbiology, one for molecular and cell biology, and one for plant biology—each with separate undergraduate programs, separate doctoral programs, as well as separate department chairs and administrative staff.

All of the faculty in those three departments as well as some additional faculty in history and philosophy of science were brought together in a new school. Faculty within the school are grouped into six different "faculties" focusing on different aspects of biological science. All faculty have their tenure home in a single cluster but also belong to at least one other. All staff and budget resources are centralized with the director of the school. While it was extremely difficult to reallocate resources across units in the old departmental model, the new model creates a larger resource pool that can be more flexibly allocated across more faculty.

The new administrative structure of the School of Life Sciences preserves faculty control over tenure and promotion in each cluster while creating a team of assistant directors responsible for coordinating and integrating across all of the clusters.

## Moving Beyond Silos

### *New Structure at ASU's School of Life Sciences*



Faculty Leader	Faculty Leader	Faculty Leader	Faculty Leader	Faculty Leader	Faculty Leader
Cellular and Molecular Biosciences	Biomedicine and Biotechnology	Organismal, Integrative, and Systems Biology	Evolution, Ecology, and Environmental Science	Genomics, Evolution, and Bioinformatics	Human Dimensions of Biology

Some of the duties that were previously performed by the department chairs now fall to the faculty leaders of the six faculties. Their primary responsibility is tenure and promotion of faculty within their clusters. Other chair duties are now distributed across four assistant directors who coordinate undergraduate programs, graduate programs, facilities, and research and training initiatives across the entire school. Not only does this allow for greater administrative efficiencies, it also promotes collaboration across the faculties. Just after the formation of the school, they continued to teach the old separate curricula from the original three departments, but over time curricula have blended with more course sharing and more collaboration both within the school and across other schools as well.

Our research uncovered other departmental consolidations that were not successful, typically due to irresolvable cultural conflicts between faculty from different disciplines. The director of the School of Life Sciences at ASU had two pieces of advice. The first director of the new school must not be from one of the departments. It is critical to have a neutral party to negotiate among the older factions. And second, it is important to grow after the consolidation. Some faculty will never give up their allegiance to their old department, but a growing school can bring in more faculty who never had an allegiance to the older departments and can offer new opportunities that faculty would not have had in the smaller units.

The provost at Arizona State argues that breaking the link between disciplines and administrative units and organizing instead around multidisciplinary areas can benefit research and teaching while at the same time reducing administrative costs.



### The Benefits of Flexibility

Changing the traditional departmental structure to an organizational model focused on individual faculty grouped into easily modified clusters that match academic and intellectual interests will facilitate education and research and, at the same time, save a lot of money.

*Elizabeth Capaldi, Provost  
Arizona State University*

Source: Elizabeth Capaldi, "Intellectual Transformation and Budgetary Savings Through Academic Reorganization," *Change Magazine* (July/August 2009).

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In order to make progress against focused strategic initiatives, colleges and universities need mechanisms for allocating resources to those strategic priorities (and away from lower priority programs). Reallocating faculty lines across units, or combining units into larger schools to facilitate internal reallocation and collaboration, allow universities to better match resources to priorities.

## **Maximizing Resource Flexibility**

### *Results*

- Departments compete for funds by contributing to strategic goals
- Open faculty lines are filled based on institutional priorities
- Up to 5% of institutional resources are reallocated from low priority activities to higher priorities every year
- Larger, multidisciplinary academic units support collaborative teaching and research, reduce administrative support needs, and attract better talent

For additional materials related to this research, please visit our Program Review Resource: [eab.com/aaf/apr](http://eab.com/aaf/apr)

## Program Review Resource Center

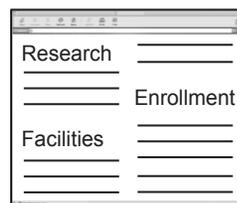
*Supporting Members with Practice Implementation*

### Financial Viability Calculator



- Cost/income calculator
- Templates for new and existing undergrad and grad programs

### Metrics Compendium



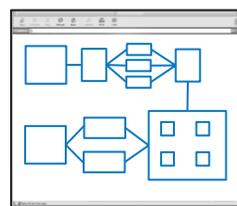
- 100+ metrics
- By category
- More and less commonly used

### Program Review Templates



- Examples of different formats
- Rubrics for evaluating programs

### Review Process Roadmaps



- Sample timelines
- Stakeholder responsibilities