

Competing for Quality: The Public Flagship Research University

John V. Lombardi
University of Massachusetts Amherst
Reilly Center Public Policy Fellow, February 26-28, 2003

The Reilly Center for Media & Public Affairs
Louisiana State University

Every American public research university of significance, and especially every flagship institution, finds itself committed to the competition for the best faculty, the smartest students, and the most capable staff. This commitment to competitive excellence, once confined to a few public universities has now reached institutions in almost every state in the nation. Part of this stems from the recognition that first rank research universities provide a major boost to the economic fortunes of the states that support them, providing a reason for corporate locations, high wage rate manufacturing activities, and high tech industrial expansion. Such activity raises the standard of living within states and generates significant tax revenue to permit the improvement of public services and infrastructure from education to roads.

Part of this drive also comes from the American spirit of competition in which every state wants to have at least one university whose academic achievements approximate its intercollegiate sports standing. Legislators, alumni, potential students, staff, the media, business interests all focus on the comparative excellence of universities, and make much of the endless and often spurious rankings that flourish in the popular press.

Flagship universities represent a special case. Many states with multiple public university campuses organize them into systems and then designate or at least recognize the largest and most competitive research institution as the Flagship for the state. This status implies that the flagship university will compete on behalf of the state in the national marketplace of premier public research universities. In some states, more than one university will be nationally competitive in this marketplace, but in many, only one flagship serves this function. States often expect their flagship institutions to improve their standing relative to the national competition, and it is this drive for improvement that prompts this Reilly Center conversation.

For the public research university itself, however, the attention given a flagship and the comparative ranking of institutions is gratifying in that it provides an opportunity to talk about academic quality, but it is also frustrating because so many of those interested in the result have no idea what it takes for a university to succeed in this competition. Familiar as many people are with the sports drenched rhetoric of American higher education, the notions of rankings and standings, competition to win, and the instant feedback of won-loss records and statistical measures of athletic performance, the

translation of these metaphors to the academic environment often distorts reality and inhibits accurate academic measurement and investment.

Boards of trustees make pronouncements that, in their grandeur inspire awe, but in their practicality inspire disbelief: “We’ll be in the top ten of American public research universities with five or ten years,” some will say. Of course the distance from where they are to where the top ten exist is on the order of academic light years, and traveling that distance would require an investment of such magnitude that the Apollo program would pale in comparison. Never mind, the rhetoric serves the same purpose as the football coach talking about next season’s outstanding prospects. It gets everyone through the press conference into the next season, but no one takes it seriously. Yet for universities, research and teaching performance are serious concerns, the work of the faculty, staff and students matters in ways unrelated to the instant triumph and defeat of sports, and the misrepresentation of the reality of university achievement does actual damage to the university’s ability to improve.

We who stand as voices in the wilderness, preaching the gospel of university improvement within the context of America’s public research universities must resist these popular notions and give our institutions, their leadership, and their faculty the opportunity to improve and the tools to measure change. We must explain clearly how the university works and what will help it improve. Nothing hurts improvement more than unrealistic expectations that guarantee failure and the resulting cynicism born of repeated disappointment.

The Business Model: Research University Organization

In today’s public university world, our constituents often talk about universities in terms reminiscent of a business school exercise. While universities are not exactly businesses in the traditional sense, they are, of course, economic enterprises. The danger comes not from applying business principles to the university but from misunderstanding the business model that drives the university enterprise. The better we explain the actual business model of the university, the better we can mobilize our friends to support principles of funding and economic reward that enhance the university’s performance.

First we look at the organizational model. We, of course, are partly responsible for many misconceptions about universities. We respond to our legislatures and governing boards with organizational charts that, while familiar to them, misrepresent the organization of the university. We offer them a hierarchical tree-like structure, an organizational plan that flows from President to Vice Presidents, from Deans to Department Chairs, that implies a clear and unambiguous chain of command and authority, of responsibility and accountability. We offer this to our constituencies not because we believe it to be an accurate reflection of how we operate but because we know they want to see it in this form, so we give it to them as they want to see it. Every one of us knows that the university does not work in such a structured fashion. The starting point for a real conversation about university improvement needs to begin with our organization.

Research universities actually operate with two connected but separate organizational structures. The university itself, when viewed from outside, begins

with a shell, an encasing structure of administrators and other service personnel whose purpose in life is to manage the relationship between the outside external world and the productive university within. The shell deals with legislators and trustees, with federal and state agencies, with donors and foundations, with corporations and accrediting associations. The shell gets the money and handles the formal accountability that the providers of funds require. As the process of getting the money grows ever more complex, the shell bureaucracy required to manage these relationships also grows. Federal and state agencies have different rules, foundations and corporations want different accounting standards, donors and commercial ventures want separate accountability, accreditation and regulatory agencies want complex reports, each one different.

The shell manages all this along with whatever other legal, regulatory, or political issues arise. The shell protects the academic enterprise from inappropriate intrusions from the outside world, whether political or otherwise, and ensures that the academic enterprise meets its obligations to serve its many constituencies. This shell operates much like any modern corporate home office, and to the uninitiated, it appears that this is the university.

The shell, however, does no academic work. It does not produce the quality, it does not teach the students, it does not do the research, and in the end, it is not really responsible for the quality or improvement of the academic enterprise that is the university.

The second organizational structure of the university exists inside the shell as a linked collection of academic guilds. We call them guilds because they most resemble the medieval guilds from which they descend. Each guild, whether for history or chemistry, business or medicine,

operates in accord with a set of specific and unique principles that apply to its guild nationally. The history guild has a method for determining the quality of the historical work of teaching and research done under its auspices and this method, perfect for history, does not serve to identify first rate work in chemistry. The chemists evaluate the academic work done in their guild using methodologies much different than those used in the music guild. Yet chemists in Massachusetts and chemists in Louisiana use the same guild methodologies to determine quality.

This is a fundamental concept for the research university because it reminds us that quality originates in the guild, and if the guild does not enforce and ensure quality, none will appear. Similarly, productivity is also a guild activity. If we want more research and more teaching, it is the guild that must organize and deliver this enhanced performance.

The curriculum of a research university is, then, an intellectual artifact created by a process of negotiation among the guilds to produce a course of study that meets common standards for undergraduates as defined by accreditation and other agencies. The content of that undergraduate curriculum is itself defined by various forms of guild negotiation, often conducted in national associations related to accreditation. Legislators and others can influence this process, but in the end, the content belongs to the guilds, and the guilds ensure that the content is correct, relevant, and appropriate.

The guilds primarily govern themselves. They have different traditions for this, some with democratic processes, others with more authoritarian practices, but while the university shell can impose some standards on this self governance, in the end, the faculty in the guild determine

what the guild can and will do in teaching and research.

If, for a moment, we accept this rather simplified understanding of the organization of the university, we can see immediately that the link between the outside world and the guilds is the shell, and that the substance of linkage is primarily money. To understand university improvement, we have to pay attention to the money.

The Business Model: Money and the University

The most important ingredient for a great research university is money. Not genius, not leadership, not ivy covered halls, not tradition, but money. There are no examples of poor great research universities. Not all rich universities are great, but there are no poor ones with superb academic programs. Quality and performance cost money. Universities do not exist to make money, they exist to spend money.

Here lies the important truth about the university business model. Universities do not have a bottom line, they do not produce increased stock prices, they do not seek a financial return on investment, and they do not maximize their asset value. Neither do universities operate as charities. Although universities provide services to various external and internal constituencies, these services do not define the research university's success.

Instead, research universities exist to accumulate quality. The university bottom line is not money, but the quality money can buy. Universities acquire and spend money to engage the highest quality students and faculty in the work of the institution. The higher the quality of the students and faculty, the more successful the university is. The measure we seek is the total quality of a university's students

and faculty; not the jobs the students get when they graduate, not the services provided by the university to its community, not its economic impact on its state, but the total faculty and student quality that the university accumulates inside its shell.

If a university succeeds on these terms, its students will get good jobs, it will provide excellent services to the community, it will have a major and positive economic impact on its state, but these benefits come because the university has accumulated quality, they are not the university's primary product nor does the competitive research university exist to do these things.

The fundamental business model of the research university is very simple. Accumulate money; spend it to acquire quality students and faculty. While this is simple to say, it is not simple to do, which of course is why the research university business is so highly competitive.

The Business Model: University Competition

In this business model, we compete for the scarce resources of smart students and smart and highly productive faculty. Whatever else we know, we know that the world does not produce enough of these people to sustain every university that seeks their quality. As a result, universities compete intensely and often ferociously for these people in the marketplace for talent. Our academic distinction is the result of success in this competitive pursuit of talent.

To get the best students, we have to spend money. Good students want many things from their universities. They want good faculty, high quality facilities, engaging student activities and recreation, winning intercollegiate sports programs, high quality living space, extensive service oriented libraries and computer support,

and most of all; they want to be with other good students. None of this comes cheap. Universities accumulate money to buy these things to attract the outstanding students. The outstanding students know they are a scarce commodity, and they enter the marketplace in search of the highest value for the lowest cost that their personal credentials will command.

This element of the competition may confuse the casual observer who harbors the illusion that the student is a customer. The student is not a customer; the student is an employee of the university. With rare exceptions, the university pays the student to attend the university. This payment may appear disguised in the form of a discounted tuition and fee bill that charges the students only a fraction of the true cost of the educational opportunity offered. The higher the students credentials the more the university will pay for that student to attend. At any high quality university, however, all students receive a payment to attend since tuition and fees do not cover the cost of college. This helps explain the complex relationship between students and their universities. They feel like customers because they do pay money for the privilege of attending, but we and they know they do not pay the full cost; someone else also pays for student participation in the life of the university.

Equally complicated, the student does not consume education. We may say that the student “Gets a degree,” or that the student “Got an education,” this is not quite accurate. Students construct and build their own education out of the guided and supported opportunity created by the university’s guilds. Each student’s education differs from the next student even if their courses are identical. This is obvious because what a student learns depends as much on what the student chooses to learn or is able to learn as it does

on what the faculty teach. Students are the architects of their own education.

As a consequence of this, the university’s function is to construct an opportunity for education and then select the highest quality group of students it can to participate in this opportunity. It charges the students a fee of varying size but it pays for a substantial part of the cost of this opportunity on behalf of the student, and in most cases, it also pays an extra subsidy to the students of highest quality to entice them to participate.

The competitive business model for students is simple. We pay the lowest price possible to acquire the highest quality student available. Since this is a very competitive market, we must pay a high price to engage a high quality student in the educational process. The shell part of our university enterprise devotes time and energy to the acquisition and expenditure of the money necessary to create the high quality environment that in competition with other research universities will attract the high quality students. The shell then needs to find the money needed to subsidize the cost of quality students’ participation in competition with all other quality institutions. The measure of our success is the average level of quality each university can achieve in its undergraduate student population.

The faculty marketplace is equally competitive, although the marketplace works somewhat differently from the student market. All research universities want the highest quality faculty they can find. High quality faculty want universities with excellent facilities, extensive libraries and modern well equipped laboratories, financial support for research, and low teaching loads. They want universities that provide assistance for research achievement, that pay good salaries, and that have strong programs for graduate

student support. They want local guilds with many high quality colleagues, they want to teach very smart undergraduates in small numbers, and they want funding to allow them to present their work at conferences.

None of this comes cheap, and universities that want good faculty must provide these benefits to attract good faculty. Good research faculty who have the ability to be productive throughout their careers are quite scarce, and universities bid against each other for their talent and services. The cost of acquiring and supporting faculty talent is substantial, and the successful institution must meet the competition or the faculty will go elsewhere. Key to this is the recognition that the scarcity for faculty talent is only a scarcity for research faculty talent. Teaching talent is widely available and good teaching is abundant. The ability and talent to make continuous contributions to research in any field over a period of 25 to 30 years is rare, and as a result commands a high price in the marketplace.

The shell has the responsibility to get the money to hire and support first rank research faculty. The guild has the responsibility to find them, recruit them, and ensure their nationally recognized quality. This primary responsibility of the guild is absolutely critical. Guilds have three quality control points. First, when they hire new faculty members at any level they certify that the faculty members are first rate, that their work is good, and that they will continue to be productive after being hired. Second, when they make a decision to promote and especially to tenure existing faculty members they have to decide whether the candidates for tenure will indeed continue to remain research productive for the rest of their careers. That is a difficult decision and requires great care and attention. Third, when another

university makes a competitive bid for a currently employed faculty member, the guild needs to decide whether to let the faculty member go or meet the outside offer.

The quality and productivity evaluations of the guild determine whether the university's money spent on acquiring and retaining faculty actually delivers a first rank university. If the guild hires people less able than themselves, then the university will decline. If the guild hires people better than themselves, the university will improve. Shell administrators pay close attention to the success of the individual guilds in identifying and attracting these scarce first rate people.

Although highly simplified, this quick review makes clear the underlying business and competitive model of the university. The research university has two primary products: quality students and quality faculty. It generates the maximum amount of revenue to purchase the elements that allow it to attract the most high quality students and high quality faculty possible. The success of the research university in competition with other research universities is measured by the relative quality of students and faculty that work within the university's structure.

This leaves us with two remaining issues: Measuring the Quality and Improving University Performance.

Measuring the Quality

The abstraction of quality defies in most instances direct measurement. We cannot pass students or faculty through a Q-Ray machine and get an indicator of intrinsic quality. Instead we look for indicators of quality and productivity, results of activities that indicate high quality performance. In theory we could identify any number of indicators, but in

practice today we have relatively few indicators at the national level that allow us to identify the competitive success of institutions. At the guild level, the indicators tend to be much more specific and clear, but at the institutional level we have only a few.

Many organizations attempt to rank and quantify university quality, but most of these efforts produce results that prove more remarkable for their inventiveness than for their accuracy. Indicators that produce rapid changes in ranking year to year should be suspect, indicators combined into a single number that ranks institutions of widely differing type imitate sports rankings but do not offer much help for universities in search of reliable measurement. Most universities interested in their comparative performance look at a relatively small number of indicators for which we have reasonably reliable national data. We look generally at three types of data: student quality data, faculty quality data, and institutional characteristic data.

Good comparative data on student quality is limited. The best indicator we have is the median SAT of the entering freshman class. This indicator is important not because it measures some fundamental student quality but because the students themselves follow the indicator and use it as a surrogate for their own relative competitiveness as candidates for admission. We can find lots of reasons to not like the SAT as a measure but as an indicator of the competitiveness of any university in attracting students, it is probably the most consistently and reliably reported indicator available. Most universities track this number to know whether they are doing well in the competition for the best undergraduate students.

For faculty, however, we have many more indicators. The most followed and

often the most significant for classifying research universities is the amount of the university's federally funded research expenditures. This number serves as a surrogate for the success of faculty in acquiring research grants from the highly competitive programs of the NSF, NIH, DOE and other agencies of the federal government that use competitive peer review processes. While most of this funding is for science based projects, universities with high levels of success in these competitions usually have the resources to also provide strong support for programs in the social sciences and humanities. Nonetheless, while this is a necessary indicator of competitiveness, alone it is not sufficient.

There are a range of faculty awards in the sciences, humanities, and social sciences as well as memberships in the national academies. By counting the number of awards of this type we can get another view of the ability of a university to accumulate highly recognized faculty in a wide range of disciplines.

Many universities also have grants and contracts for research from other sources in addition to the competitive federal programs. Some of these come from specific programs of the federal government such as those in agriculture or they represent research investment in the university from state agencies and other sources. If we add expenditures of this type to the federal dollars we get the university's total research expenditures that serve as another indication of the ability to accumulate research resources in the competition.

Data on institutional characteristics includes research universities' production of PhDs and their ability to support post doctoral fellows. We include the institution's endowment and annual giving in our measures to give an indication of the

institution's competitiveness in acquiring private dollars in support of institutional quality.

Taken together, these indicators give us a reasonable perspective on university competitiveness. However, they do not tell the whole story. Universities vary by size. They vary in the number and type of disciplines they support. Universities have different funding structures. Given these variables, it is never possible to provide a precise ranking of universities, but it is possible to see which universities compete successfully in every marketplace we can measure, which ones do well in some but not so well in others, and which ones do not compete at all.

As a point of reference, about 2,500 public and private institutions in the United States offer four-year degree programs. Of these, about 650 report any federally funded research at all. Of these 650, about 165 spend \$20 million or more of federal research money a year and these 165 institutions control about 90% of the federal funds competitively awarded. As a result, the group of institutions that constitute the competitive market is quite small relative to the total number of institutions. This is the context for the research university competition. Within this context the university seeks to improve its performance.

Improving University Performance

A program for university improvement requires a clear understanding of the structure of universities, their competitive business model, and the elements that determine institutional success. As outlined above, these elements give us a framework for the improvement process. However, improvement requires clarity. Universities do so many things and serve so many different constituencies in so many ways

that it is easy to become confused about what needs improvement and what improvement actually matters.

The first decision a university makes is whether to participate in the main research competition, the context described above of the 160 institutions that engage at the top level. If the answer is yes, the many concerns that occupy other institutions or state agencies cease to be relevant. This is not because the concerns are unimportant; it is because the concerns will either be addressed indirectly as a consequence of succeeding in the research competition or because the concerns are not relevant to the high quality research university.

A case in point is the employment history of recent graduates. This is an indicator that is of great interest to many people. For the high quality institution, this indicator is irrelevant, not because employment is irrelevant but because their students are of such quality that they will either get a good job or go on to graduate or professional schools, and hence their employment outcomes are almost uniformly good. No one goes to Harvard, Michigan, Yale, Berkeley, or Princeton based on some statistic about immediate post undergraduate employment. They attend because the places are of such quality that just about everyone who attends will do well.

Improving research university performance requires two related activities: a set of values made explicit through indicators and a budget that rewards performance based on improvement measured by the indicators. If the values are unclear or the incentives confused, then the university will not improve quickly. The values that matter for university performance are research quality and productivity and student quality, and the university that chooses to improve will identify a small set of indicators that track

the research productivity and competitiveness of its faculty and the quality of its students. It will then reward those units within the institution that show the greatest improvement.

This is simple to say but difficult to do. Each university is different in detail if not in business model or competitive context. Each university, especially public universities, lives within a context constrained by rules, regulations, limitations that inhibit the university's ability to maximize its performance. Private and public universities have different revenue structures, even if they compete directly in the same marketplaces for faculty and students. Public universities differ significantly in the structure of their state funding, although they too compete directly against each other and their private counterparts in the faculty and student markets.

Successful research universities nonetheless implement incentives that encourage and reward competitive behavior in the marketplace, some more explicit than others. Unless successful competition finds a reward, the university stagnates and falls out of competition. Universities with uniformly high performance tend to already have reasonably effective incentive systems and tend to reproduce themselves at high levels of performance. Their guilds, having highly competitive people, attract equally or more competitive people, and continue their dominance of the research marketplace. Success breeds success when the incentives line up with the values of the institution.

For universities farther down the scale of competitiveness, the challenge is much greater. They need to change an internal culture that tends to reward stability, community, engagement, and service into a culture that rewards the external competitiveness required for

research university success. This is a choice institutions must make. If they choose stability, community, engagement, and service as the highest values and reward behavior that produces these things, then that is what the university will do well. If they want to improve their performance in research and in the acquisition of high quality students, they must reward competitive success in attracting students and performing research.

When we seek to create incentives for research performance, for example, we need to be very clear about what we want. To do this we can follow some principles:

1. The unit of responsibility and reward is the college or school, the college or school is responsible for incentives for departments and programs.
2. The measure of success is always improvement.
3. We measure improvement against the unit's performance last year
4. We measure improvement against the best of the unit's type nationally.
5. We never compare different units within the same institution.
6. We always measure improvement for both quality and productivity.
7. Rewards for improvement must transfer money to the improved unit.
8. Charity gifts to failing units defeat good incentive systems.
9. Continued failure to improve must produce a change in unit leadership
10. Measures of improvement must be explicit, visible, stable and externally validated

Implementing these principles is both difficult and painful. Implementation requires strong leadership, good data, and a shared commitment to nationally

competitive behavior. If the university says it believes in nationally competitive behavior but rewards locally competitive, cross campus lobbying, the improvement program will fail. If the university rewards units that perform badly by providing them with money in hopes they will improve, then the program will fail. If the university rewards low performers with funds and expects high performers to fend for themselves, then the program will fail. If the university rewards political behavior, personal favorites, trustees or friends, the program will fail.

In all this, there is no substitute for money. Money makes success possible, money creates powerful incentives for colleges, departments, and programs to work harder, and money buys the chance to accelerate change. Everyone in a university is an expert on money. All university people watch where the money goes and then try to do whatever they observe attracts the money. Consequently, the alignment of expressed values (research competitiveness for example) with the distribution of money produces a powerful impact.

Process and Performance

While the principles described above work effectively, if not easily, the process and performance of improvement is neither theoretical nor rhetorical. It is practical. For improvement to happen, people in the shell and in the guilds have to behave in competitive ways and focus on the issues that lead to competitive performance. In many public universities this is difficult because those institutions in the most need of changed behavior to be competitive are usually universities that have processes that reward non-competitive behaviors. Moreover, most public universities have less explicit incentives to drive performance than their private counterparts because

many private universities find themselves by necessity focused on revenue generation.

The public university may receive most of its funding from regular legislatively approved funds from the state or tuition, and it may have budgets that consolidate and centralize revenue and expenditures so that the units producing the work do not have direct responsibility for most of their revenue or expenditures. In such cases, the institution's ability to motivate improvement is limited.

What follows here is a relatively broad stroke review of processes that assist in developing an internal structure to improve university performance. Every public university has different contexts and these contexts create different opportunities and constraints. Nonetheless, some combination of these processes will help every university succeed.

Make a Global Budget. A global budget brings together all the university's income and expenses from all sources, and allows the participants in the process to understand that money is money. Money that comes in from endowment earnings, from tuition and fees, and from grants and contracts all can buy quality. While some funds have restrictions, the restrictions simply tell us what part of our total competitive activity we can pay from any particular source. Since the key is to get the most competitive activity possible we need to be aware of how every dollar is spent to achieve that quality. In addition, a global budget contains all the expenses for whatever purpose, making explicit the university's choices about where to spend its income.

Often universities use incremental budgets, focusing individually on how to spend changes in state dollars, tuition dollars, annual giving dollars, and the like. This inhibits successful institutional

improvement. What matters is spending the money effectively to achieve improvement, and if we do not manage all the income against all the possible expenditures we fall into a sub-optimizing trap. We think we can only spend the tuition money on one thing, the indirect cost revenue on something else, and the annual giving money on another thing. This focuses on the source of money, not on the effective use of the money, which in the end is all that matters.

Drive Decisions to the Lowest Level. Public universities often like to manage money at the highest level, at the provost or the vice-presidential level. They have bureaucrats and systems and other forms of control that review the decisions of deans, department chairs, and program directors. If we want to spend dollars on a secretary rather than an administrative assistant many universities have levels of approvals. If we want to spend money for a lecture rather than copy paper, we require another series of approvals. If we want to postpone hiring a faculty member for a year and use the money to fund an equipment purchase, we find endless levels of approvals.

Given the limits on time, managers take the line of least resistance on one side, or on the other they engage in elaborate bureaucratic warfare. A better method is to give each unit its money (its budget), let the unit spend the budget as it sees fit (within the law to be sure), and have the university measure whether the unit got better (improved). If it improved, the university should give the unit more money; if it got worse the university should reduce the unit's budget and get a new leader.

Require Quality and Productivity Indicators. As mentioned above, success at improvement requires that we measure what we did last year, what we did this year, and what our competitors outside the university did. Then we can know if we

improved, we can know if we improved faster than the competition. If we do not measure, we cannot know. We can hope, we can assert, we can believe, but we cannot know. Every unit in the university can measure its performance in terms of quality and productivity. Every unit in the university can track its performance. If a unit can not do this, the university has a unit that does not know what it is doing.

Measure the Performance not the Process. To prevent the measurement process from costing too much in time and effort, insist on only a few measures for each unit. Indicators of productivity and quality in teaching and research need not be complete. Useful indicators in the guilds often turn out to be highly inter-correlated. If we know the grants and the publications of the faculty, we have most of what we need to evaluate research performance in many units. If we know the credit hours and the number of majors we may know enough to evaluate teaching performance.

Other things may be important to the department in achieving increases in credit hours (good teaching, good support for teaching, programs to enhance the value of the major), but these are instrumental for producing the result that we measure. Similarly, we do not need to measure the number of square feet of laboratory space or the inventory of equipment; we need to know the publications and the grants from the laboratory. If the performance of a unit does not improve, the diagnostic may require us to know these other things that may explain a failure to perform, but the performance itself is the result, not the process that produces the result.

Reward Performance with Money. The incentive that works best is money. Glory, gratitude, recognition, and fame all help, but money matters. As a result, measurable performance improvement must receive a reward. The reward should be to the unit

that delivers the performance. The reward should be in the form of budget increases that the unit can use to reinvest in more quality, not personal bonuses for individuals. The reward of individuals is a different process. The goal here is guild performance improvement; we want to reward the guild for its success.

Agree on the Indicators. As a final caution, these methods only work if the university agrees that it wants to improve its competitive standing, if the university agrees about the indicators that define that competitive standing, and if the commitment of the leadership from the Board through the shell and including the guilds accept the premise of improvement. Everyone talks about improvement, everyone wants to move up in the competition among research universities, but not everyone, when confronted with the behavior required to succeed, accepts the challenge. Graceful ambiguity is not helpful in these circumstances. It is better to be clear and discover that the university is not yet ready to compete than to imagine commitment that does not exist.

Competition and the Alternatives

This short summary highlights some important elements of the high stakes

competition among American public and private research universities. Institutions that choose to compete at these levels need to be clear about the competitive business model that drives success, they need to understand the competitive universe, and they need to recognize what behaviors produce highly competitive institutions.

While we can argue philosophically about the validity of this construct, we can decry the brutal market competitiveness described here, and we can wish for a gentler and more humane higher education environment, the data unambiguously demonstrate the validity of this model. Universities can choose whether to participate in the competitive part of the research and quality student marketplace. They can choose different values and different perspectives. If they choose to be a competitive research university, however, this short summary will help orient their competitive strategy.

Note: For a review of the data and more detail on the characteristics of competitive institutions see: The Top American Research Universities, published by *TheCenter* at the University of Florida in 2000, 2001, and 2002. All available online at: <http://thecenter.ufl.edu/research2002.html>