

University Innovation: How Urban Universities Create a Competitive Advantage

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Thank you, Mitch, for your kind introduction.

And thank you all for the invitation to be with you on this important day in the life of Florida International University. Let me begin by adding my congratulations to the faculty you recognized a few moments ago. These and other fine colleagues have enabled Florida International to make exceptional progress in the 35 years since classes first began – and that should serve as a signal to others of what is possible to achieve as a university in a comparatively short time. Also, it is a proud testament to your diligence and accomplishments. You have my admiration and congratulations!

Convocation is the academy's call to consider and reflect upon some of the critical issues of our time.

And you have asked that I share some thoughts on the challenge of innovation in the academy – ideas on how we better participate in the creation of the success of our universities and the success of America as a society.

I expect you are well aware that this is a daunting task – if for no other reason than this variation of the often asked question:

“How many academics does it take to change a light bulb?”

To which the answer is . . .

Change?

All humor aside, I think you will agree that when we say that we live in interesting times, we are echoing the understatement of our modern age.

To use a phrase coined by MIT's Chuck Vest, 'seismic rumbles of change' are transforming traditional paradigms – to say nothing about the interrelationships among academia, industry and government.

(Massachusetts Institute of Technology News Office, “Vest Urges Continued Support for US Science,” February 15, 1995)

And that is because the primacy that America has long enjoyed around the world is increasingly being challenged by the very same forces of technological innovation that America itself unleashed.

For example, like our industry counterparts, universities are themselves facing increasing challenges of global competition in an environment where flexibility, adaptability and just-in-time delivery of our “products” are imperative.

“Thirty years ago, the United States could lay claim to having 30 percent of the world's population of college students. Today, that proportion has fallen to 14 percent and is continuing to fall.”

(The Report of the New Commission on the Skills of the American Workforce, *Tough Choices or Tough Times*, National Center on Education and the Economy, Executive Summary, P.4)

“Other countries are building world-class research and educational institutions and are graduating increasingly qualified science and engineering students at a faster pace than ever before.”

(Council on Competitiveness, Innovate America, 2005)

We know, for example, that only 10% of U.S. students are pursuing degrees in STEM, whereas comparable numbers in other countries are much higher, 60% of students in China and India are pursuing STEM degrees.

Thus, universities are being challenged like never before and will need to explore opportunities that will create innovative new educational processes and campus cultures that are congruent with the new realities.

Yet, as early as 1995, Raymond Gilmartin, the former chairman, president and CEO of Merck & Company, Inc., wrote about “the Challenge of Change” in higher education, when he cautioned his colleagues at his alma matter that he saw higher education making many of the same mistakes that health care had made in the decade before – in the hope that we could learn from their experience!

(Gilmartin, Raymond V., “The Challenge of Change for the Liberal Arts College – Some Parallels from the Health Care Industry,” Union College, October 16, 1995)

Moreover, you no doubt are aware of various reports such as that of the Spellings Commission on the Future of Higher Education, or of the National Council of State Legislatures, “Transforming Higher Education”, among others.

In short, new realities are forcing us to the inevitable conclusion that higher education is an industry (and I use this word advisedly) . . . that higher education is an industry in transition.

The story is familiar. A long-established industry leader loses ground to overseas competitors or to a few home-grown upstarts who innovate while it continues to stubbornly and senselessly follow its traditional approach deep into the depths of diminishing returns.

And so, what I want to do this morning is to explore with you some questions we should entertain and approaches we might take to ensure the future success of our universities.

If you find yourselves a little nervous about these topics, allow me to remind you that in a shared governance environment all of us are really venture capitalists – academic venture capitalists. Our decisions are the basis for whether or not our universities earn a return on investment and thereby succeed.

Think about it!

To get us started, I first want to outline four basic questions that I think are worth asking in light of the new realities facing the academy.

And, having asked those questions, I then will focus on the special role of urban universities and on an exciting national urban agenda that is emerging for us.

So, let’s ask some questions:

First, since universities presently capture only 13% of the U.S. R&D economy, can we afford to ignore the other 87% of the U.S. R&D marketplace? Can we afford to ignore the even larger global marketplace for research, of which the U.S. is but 44%. In short, universities have significant opportunity to gain market share, and not just in research – remember, we have but a small fraction of the post baccalaureate marketplace; not only are there for-profit providers, industry itself spends significant monies in pursuit of an improved workforce.

Second, if medicine is increasingly focused on evidence-based approaches, shouldn't we seek to have evidence-based educational approaches? If you consider the fact that educational R&D is an infinitesimally small fraction of educational expenditures, you will know that we have not advanced the science of education nearly enough. Clearly, with K-12 education still under attack (reference Nation at Risk, 1983) and in need of reform, you can well imagine the power of *any* knowledge that can demonstrate what *actually* works in education! You can bet that this will be a huge opportunity.

Third, since focus and differentiation are respected elements of competitive strategy, and since no university can afford to be truly comprehensive in today's environment, what opportunities are there for universities to create greater differentiation among themselves, either as individual institutions or through creative alliances that shape new dimensions of competitive and comparative advantages?

And fourth, with so many colleges and universities, over, 3,600 by one recent count, we should not be afraid to ask what will be the academic equivalent of mergers and acquisitions, of managed health care plans, and of the emerging private practice corporations? What new and innovative forms of outsourcing will be considered? What alliances and coalitions will emerge to consolidate and expand market share? And what comparative and competitive advantages will be expressed as a new generation of research universities emerges in the years ahead, as indeed it surely will?

These are basic questions, . . . yet we ignore them all too easily, only at our peril.

Having served for several years on both the Council on Competitiveness and PCAST, the President's Council of Advisors on Science and Technology, let me now take a moment to share a few comments on what many of us are beginning to call "a national innovation ecosystem" . . .

. . . that system of loosely interrelating elements, of which universities are a part, that has enabled us to make new discoveries, capture their value in the marketplace, enhance productivity and thereby increase our standard of living.

The themes of American competitiveness should now be familiar to us. They have been articulated by the Council on Competitiveness in its "Innovate America report", by the National Academies in the "Rising Above the Gathering Storm" report, and by the President's American Competitiveness Initiative, among many others which you can readily find at the Innovate America.org web site.

If for some reason you have missed any of these, I urge you to make them a part of your consciousness because they make a compelling case for the changes we must make as a nation and as universities to better address the challenges which America now faces.

Indeed, the principal finding from the Innovate America report of the Council on Competitiveness is this . . .

"Where we once optimized our organizations around efficiency and quality, today we must optimize our entire society around innovation".

Think about it: "Where we once optimized our organizations around efficiency and quality, today we must optimize our entire society around innovation".

Since universities arguably are barely getting into the efficiency and quality bandwagons now, how can we leapfrog into the innovation agenda? Of course, confronting the four basic questions I raised earlier is a good starting point, . . . but university innovation will not occur in a

vacuum. It requires a close and deep collaboration between universities and industry and it requires a willingness to experiment with new models and new alliances.

Thus, let me now turn to an exciting agenda that has been emerging for many years and more formally in the last three years. It relates to the cities that we live in and the neighborhoods that surround us. What we already do and can yet do with our cities and their larger metropolitan regions can be powerful.

Consider these statistics:

- **Of the more than 3,600 colleges and universities across the nation, ". . .just over 1,900 - more than half of the national total - are located in the urban core."**
(Neal Peirce, "Wake-up Call for Academia." The Washington Post Writers Group, 2002)
- **83% of students nationwide are attending colleges and universities in urban core and fringe areas; and**
(NCES, NSOPF. 2004 Study of Postsecondary Faculty)
- **85% of all jobs are in urban core and fringe areas**
(Cited at Council on Competitiveness Regional Innovation Summit, 2005)

And these urban institutions account for 68% of the economic activity generated by colleges and universities; and if we include those located in the urban fringe of our cities' suburbs, the total rises to more than 87%.
(Peirce, Ibid)

In other words, nearly 90% of the economic power of our colleges and universities is expressed in our cities and their immediately surrounding areas.

There are thousands of universities employing hundreds of thousands of people, educating millions of students, and spending billions of dollars, all in the urban core and fringe.

So it is easy to understand why Neal Peirce said, ". . . universities could and should be a resource, a secret asset, for the health and growth of great cities . . . there is an appetite out there for attuned universities, truly engaged with their communities."
(Peirce, Ibid)

Indeed, urban universities generate the innovations that give cities and regions a competitive advantage, and they do this in several ways.

Urban universities:

- Create new knowledge and economic value through research and tech transfer,
- Develop highly skilled talent, and
- Create environments on and near campus that help attract and retain highly skilled talent.

Quite simply, urban universities are a major economic force in, of and for our cities, . . .

They are key anchors for urban revitalization and regional economic development.

According to a paper published by CEO's for Cities, "...these so-called 'anchor institutions' represent 'sticky capital' in cities. They cannot easily pick up and leave the community. So they have special importance to the re-making of the city and its future, and they have special reason to want to be instrumental in shaping their city's future..."

(Maurasse, David, City Anchors: Leveraging Anchor Institutions for Urban Success, CEOs for Cities, September 2007)

At The University of Akron, we are engaged deeply with our urban environment. Through the National Association of State Universities and Land-Grant Colleges Commission on the Urban Agenda, which I presently chair, and in partnership with my colleague, Nancy Zimpher, president of the University of Cincinnati and chair of the coalition of Urban Serving Universities, we have convened summer workshops designed to create a higher education urban agenda that consists of three strands of activity – 1. Talent development; 2. Strengthening communities; and 3. Health services. Let me focus on just two of these: talent development and strengthening community

As you know, talent development in our inner cities is one of the most pressing national problems; and workforce development is the most often cited priority for business and industry. Our urban agenda would seek to address this issue through the special roles of our urban universities.

Let me suggest an analogy that I think can lead us to explore an almost entirely untapped area. All of us know of the great strides that industry has made by relentlessly focusing on and refining its materials and component supply chains. Yet, although everyone in business will tell you that their most important challenge is that of a skilled workforce, I know of few companies that have discovered the parallel of the human capital supply chain. And I know of even fewer universities that are exploring this obvious opportunity.

Think of it, it is estimated that 95% of all technology transfer happens when people move from one place to another – when the material of human capital arrives at a company! It is further estimated that companies spend an average of \$1,000 per year per person in enhancing the skills of their workers. So what would happen if industry gave as much attention to the human capital side of their supply chain? Quite simply, our economy could save about \$150 billion dollars and increase its return on investment by as much as an order of magnitude.

In fact, at The University of Akron we have a saying: that “our expertise creates the new materials for the new economy” meant to have the double meaning of materials and human capital – and we take both meanings most seriously.

So, I think that we should develop a serious academic approach to the concept of talent supply chain management and I urge you to consider the concept of talent supply chain management as you move forward in your work.

As it pertains to the second strand of our urban agenda, strengthening community, we have devised a new version of the 3 R’s to describe the activities of the new metropolitan university – “Revitalization”, “Relevance,” and “Regionalism”. I will address the first two – revitalization and relevance; regionalism simply refers to the fact that economies are no longer local; they are regional in scope and often transcend state and even national boundaries.

Our own innovative revitalization program, The University Park Alliance, leverages modest funds from the Knight Foundation and already has garnered more than \$200-million from other investors to help create a place to attract and keep innovative talent that we – and Akron – need. In the next 5 years, we hope that these investments will reach between \$500 million to a billion dollars.

Our vision is the create a vibrant mixed use environment that blurs the boundaries between the university and the community, is pedestrian friendly and in which everything that happens is somehow about learning and health and wellness.

As urban universities, we must acknowledge that the competitive and comparative advantages of our campuses are inextricably linked to the vitality of their surrounding communities. We must move beyond the traditional land-grant focus toward the necessary *application of all* disciplinary knowledge for the public good – in other words its relevance!

Let me conclude:

In his new book, "*The Rise of the Creative Class*", Richard Florida refers to colleges and universities as " . . . a huge potential source of competitive advantage." And he says that colleges and universities are today " . . . a basic infrastructure component . . .and far more important than traditional infrastructures such as " . . . the canals, railroads and freeway systems of past epochs . . ."
(p. 292-292)

I suggest that we must engage in relentless innovation, in education generally and higher education in particular. We must do so because in today's knowledge-based economy, education is society's infrastructure. Education unleashes the power of innovation by creating the human capital – the talent supply chain – that shapes our industries and our society.

And I think that to meet the challenges of global competitiveness, we must continually redefine the nature of our universities.

Whether we like it or not, the national call for accountability, affordability and accessibility, as well as the national innovation agenda require that we seek new performance standards for the excellence of our universities – standards that do not presume that only selectivity, size and expense define excellence, . . . something that both Michael Crow at Arizona State University and we at The University of Akron are calling a new gold standard of university performance, a fresh and definitive standard for a new great American university, a university appropriate to our times.

These are its principles:

- Unlike others, we shall not be measured by how many students we exclude, but rather by how much value we add in enabling the success of our students
- Unlike others, we will not be measured by the barriers we erect between ourselves and our communities, but by the collaborative impact that we create for each other and for our common future.
- Unlike others, we shall not be measured by the isolation of our disciplines, but by their integration as applied in solving the problems of today.

In all candor, as I said before, this will not be something that is easy to do.

But if necessity is the mother of invention, then let us begin.

And so I say to you: be cheerful and plunge ahead!

Thank you!