Arizona State University: A Strategic Perspective

Michael M. Crow
March 2005
Competition
Speed
Adaptability

* Context  * Evolution  * Application  * Conclusions

Competition
• ASU is an enterprise embedded in a competitive arena

An enterprise of:

information
knowledge
understanding
ASU is an enterprise embedded in a competitive arena

As an enterprise we produce goods and services

- Teaching
- Research
- Technology
- Outreach
ASU is an enterprise embedded in a competitive arena

As an enterprise we produce goods and services

We compete for everything

- students
- faculty
- facilities
- resources
- grants
- space
ASU is an enterprise embedded in a competitive arena
- As an enterprise we produce goods and services
- We compete for everything
- We compete with ideas

ideas:
- are nearly limitless
- drive growth
Universities compete with institutional resources

endowment assets and annual giving

indicators of how well universities compete in the marketplace
Universities compete with institutional resources

How do public universities compete with private universities?

- Private institutions’ median endowment is $1.1 billion
- This is 4 times more than public universities’ ($250 million)
• Universities compete with institutional resources
• How do public universities compete with private universities?
• State government support allows public universities to compete

state governments give public universities comparable financial resources to invest in quality
• Endowment equivalency*

amount of endowment required to generate a given annual income stream, assuming a payout of 4.5%

*All subsequent references to endowment equivalency refer to University Organization, Governance, and Competitiveness, The Top American Research Universities An Annual Report from The Lombardi Program on Measuring Performance (August 2002)
• Endowment equivalency

• Calculating endowment equivalency

regular endowment

+ annual giving endowment equivalent

+ state appropriation endowment equivalent

+ tuition and fees endowment equivalent

TOTAL ENDOWMENT EQUIVALENT

Assesses relative economic strength of public and private research universities
• Endowment equivalency
• Calculating endowment equivalency
• Adjusted total endowment equivalency
• Endowment equivalency
• Calculating endowment equivalency
• Adjusted total endowment equivalency
• Calculating adjusted total endowment equivalency

state governments gives public universities comparable financial resources to invest in quality
• ASU ranked 40th in Total Endowment Equivalency (2002)*

• And 68th in Adjusted Total-Endowment Equivalent (2002)*

*$University Organization, Governance, and Competitiveness, The Top American Research Universities An Annual Report from The Lombardi Program on Measuring Performance (August 2002)
(2002 report is the most current available)
Competition
Speed
Adaptability

**Context**

* • ASU ranks 40th in Total Endowment Equivalent (2002)*

* • ASU ranks 68th in Adjusted Total-Endowment Equivalent (2002)*

<table>
<thead>
<tr>
<th>University</th>
<th>Endowment Assets Market Value</th>
<th>Endowment Equiv Annual Giving</th>
<th>Endowment Equiv State Appropriations</th>
<th>Endowment Equiv Tuition &amp; Fees</th>
<th>Total Endowment Equiv</th>
<th>Adjustment for Student Enrollment</th>
<th>Adjusted Total Endowment Equiv</th>
<th>Rank</th>
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<tr>
<td>U Mich</td>
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<td>$7.1B</td>
<td>$410B</td>
<td>$3.0B</td>
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*University Organization, Governance, and Competitiveness, The Top American Research Universities An Annual Report from The Lombardi Program on Measuring Performance (August 2002) (most current available)*
• Even though ASU’s endowment assets are slow to increase, our total endowment equivalency has increased to $14.1 billion (2004)

<table>
<thead>
<tr>
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<th>2002</th>
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<tr>
<td>Endowment assets</td>
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<td>+Endowment equiv. annual giving</td>
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<tr>
<td>+Endowment equiv. state approps.</td>
<td>$5.7B</td>
<td>$7.0B</td>
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<tr>
<td>+Endowment equiv. tuition and fees</td>
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<td>$5.6B</td>
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<tr>
<td>=Total endowment equiv</td>
<td>$10.7B</td>
<td>$14.1B</td>
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</table>
Competition
Speed
Adaptability

Context
Evolution
Application
Conclusions

Speed
• Universities are inherently unable to act quickly

• semester
• academic year
• 6-year PhD programs
• Universities are inherently unable to act quickly
• Globalization has increased the speed of information and competition

• technological innovation
• porous boundaries
• social and economic pressures
• Universities are inherently unable to act quickly
• Globalization has increased the speed of information and competition
• Competition and speed move ideas forward

• biotechnology
• nanotechnology
• informatics
• Universities are inherently unable to act quickly
• Globalization has increased the speed of information and competition
• Competition and speed move ideas forward
• Our peers are moving faster than we are

• University of California, San Diego
• University of Southern California
• Universities are inherently unable to act quickly
• Globalization has increased the speed of information and competition
• Competition and speed move ideas forward
• Our peers are moving faster than we are
• Speed is a lever we can control

• competitive advantage
• counterbalance “smaller, weaker, geographically isolated”
• Improving organizational flexibility

“newness” allows easier changes to structure and governance
• Improving organizational flexibility
• Understanding external forces

• war
• economy
• politics
• Improving organizational flexibility
• Understanding external forces
• Evolving the institution

• changing nature of the arena
• changing demands of funders
• changing characteristics of students
- Improving organizational flexibility
- Understanding external forces
- Evolving the institution
- Finding the best ideas

configure the institution to most efficiently find the best ideas
Evolution of universities
Focus on American universities
The New American University

* Context  * Evolution  * Application  * Conclusions

- Academies: small, isolated, disengaged
- European experience: European universities (guilds), German universities (s&i for industrial development)
- American research universities: open, but narrow access, indirect engagement

We can emerge as a new kind of university:
The New American University: inclusive, engaged, embedded
Evolution of universities
Focus on American universities
The New American University

* Context  * Evolution  * Application  * Conclusions

Focus on American Universities
Evolution of universities
Focus on American universities
The New American University

Context

Evolution

Application

Conclusions

Colonial Colleges
- Harvard (1636)
- William & Mary
- Yale
- Princeton
- Columbia
- U. of Pennsylvania

Endowed by Patrons
- Tulane (1834)
- Emory
- Duke
- Cornell
- Vanderbilt
- Johns Hopkins

State Governments
- U. of Georgia (1785)
- North Carolina
- Vermont
- South Carolina
- Virginia
- Michigan

Morrill Act of 1862
- Land grant universities established in every state
<table>
<thead>
<tr>
<th>Evolution of universities</th>
<th>Focus on American universities</th>
<th>The New American University</th>
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</tr>
</thead>
</table>

**1963**
- MIT
- Columbia
- Michigan
- Berkeley
- Stanford
- UCLA
- Illinois
- NYU
- Minnesota
- Cornell
- Penn.
- Johns Hopkins
- U WI Madison

**1993**
- Johns Hopkins U.
- U. of Washington
- MIT
- Stanford
- U. of Michigan
- UCSD
- Cornell
- U WI Madison
- Penn. State
- UCLA
- Columbia
- Penn.
- U. of Minnesota

**2002**
- Johns Hopkins U.
- UCLA
- U. of Michigan
- U. of WI – Madison
- U. of Washington
- UCSF
- UCSD
- Stanford
- Penn.
- Cornell
- U. of Minnesota
- Columbia
- Berkeley

**AAU***
- Harvard
- Penn.
- U. of WI – Madison
- Stanford
- Columbia
- U. of Michigan
- MIT
- Duke
- U. of Washington
- U. of Colorado
- USC
- UCLA
- UCSD

*Association of American Universities*
### Evolution of Universities

**Focus on American Universities**

**The New American University**

<table>
<thead>
<tr>
<th>1963</th>
<th>1993</th>
<th>2002</th>
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<td>Johns Hopkins U.</td>
<td>Harvard</td>
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<td>Penn.</td>
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<td>Berkeley</td>
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*Association of American Universities*
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The New American University

* Context  * Evolution  * Application  * Conclusions

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Context * Evolution * Application * Conclusions

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- UCSD

*Association of American Universities
The UCSD case

La Jolla was designated a UC campus site one year after ASU became a university (1959). However there is now a large gap between us…
The UCSD case

Focus on American universities
The New American University

* Context  * Evolution  * Application  * Conclusions

enrollment of 24,707
1150-1360 SAT, 25th-75th percentile\(^1\)
4th in public school graduation rates
$639.5 million annual research funding
77 National Academy members\(^2\)
5th in total federal R&D expenditures rankings ($585,008,000)\(^3\)
8th best public university\(^1\)
35th among national universities\(^1\)

enrollment of 58,156
970-1220 SAT, 25th-75th percentile\(^1\)
not in the top 60 in public school graduation rates
$148.2 million annual research funding
11 National Academy members\(^2\)
96th in FY2002 total federal R&D expenditures rankings ($123,016,000)\(^3\)
not ranked in top 50 public universities\(^1\)
not ranked among national universities\(^1\)

\(^1\)America's Best Colleges, US News & World Report (2005)
\(^3\)The Top American Research Universities An Annual Report from The Lombardi Program on Measuring Performance (December 2004). FY2003 unpublished AAU statistics report ASU’s total R&D expenditures at $145,591,000 and UCSD’s total R&D expenditures as $646,508,000 (rankings not yet available)
The UCSD case

How did UCSD get there?

- Center for Human Information Processing (1959)
- Institute for Pure and Applied Physics (1966)
- Center for Research in Language (1969)
- Center for Music Experiment (1973)
- Research Center for Energy and Combustion (1973)
- UCSD Cancer Center (1979)
- Center for Molecular Genetics (1974)
- Center for US-Mexican Studies (1979)
- First endowed chair established (1981)
How did UCSD get there?

- Institute for Research on Aging (1983)
- San Diego Supercomputer Center (1985)
- Center for Magnetic Recording Research (1986)
- Graduate School of International Relations & Pacific Studies (1986)
- Institute for Biomedical Engineering (1994)
- Cross Cultural Center (1995)
- Center for Research in Biological Structures (1996)
- Center for Molecular Agriculture (1998)
- The Preuss School (1999)
- California Institute for Telecommunications and Informational Technologies (2000)
The UCSD case

How did UCSD get there?

- UCSD named to membership in the Association of American Universities (1982)
- UCSD ranked 8th best public university*
- UCSD ranked 35th among national universities*

Evolution of universities
Focus on American universities
The New American University

We have been challenged
Evolution of universities
Focus on American universities
The New American University

But we have potential

• Arizona Biodesign Institute
• Flexible Display Center
• Arts, Media, and Engineering
• ASU Technopolis
• Morrison Institute for Public Policy
• School of Life Sciences
• Arizona Technology Enterprises
• School of Global Studies
• CRESMET
• Decision Center for a Desert City
• Center for Law, Science & Technology
• International Institute for Sustainability
• Phoenix Urban Research Laboratory
• School of Life Sciences
• Leadership Institute for Sport and Humanity
• Decision Theater for the New Arizona
• Center for Leadership through Action
• ASU Scottsdale Innovation Park
• Center for the Study of Religion and Conflict
• Center for Non-profit Leadership and Management
• Institute for Computer and Information Sciences and Engineering
• Consortium for Science Policy and Outcomes
• Stardust Center for Affordable Homes and the Family
• Consortium for the Study of Rapidly Urbanizing Regions
Design imperatives for the New American University

The New Gold Standard

- Leveraging Place
- Transforming Society
- Academic Enterprise
- Use-Inspired Research
- Focus on the Individual
- Intellectual Fusion
- Social Embeddedness
- Global Engagement
The university is many different things to many different people.

We look far into the past and far into the future.

Multiversity
Role of universities
Focus on Arizona
Future of Arizona
Arizona State University

* Context  * Evolution  * Application  * Conclusions

Meeting community needs
Transferring technology

Serving Society
U.S. universities and nonprofit research institutions in 2000:
• 3,598 U.S. patents - one for every $7.8 million of R&D expenditures
• generated $1.24 billion in licensing revenues
• spent $28.1 billion on research — more than five times the $5.1 billion that IBM reported spending on R&D in the same year
• produced 500,000 masters and doctoral students

International Business Machines in 2000:
• 2,886 U.S. patents - one for every $1.8 million of R&D expenditures
• generated $1.4 billion in licensing revenues
• spent $5.1 billion on research

given the purpose of the enterprise, more applied research is conducted
Role of universities
Focus on Arizona
Future of Arizona
Arizona State University

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Focus on Arizona
The state's population increased 40% to 5,130,632.

Arizona recorded the second fastest growth rate among the 50 states in the 1990s.
Arizona’s Hispanic population has grown by 88% since 1990.

Arizona’s population was 16% Hispanic in the 1970s, 25% in 2000, and is projected to be 32% by 2025.

20% of Arizonans speak Spanish at home
The average low temperature in metropolitan Phoenix has increased by 10 degrees over the last 50 years.
The Phoenix metro area ranks 18th-worst in the nation for ozone pollution.

*American Lung Association 2004*
For every 20 students who go to high school...

12 graduate from high school...

5 go to college ...

2.5 graduate from college...
Future of Arizona
Sustaining and Enhancing Social and Economic Development

Innovations in the fields of health, technology and education will be the driving forces to remain globally competitive in today’s world.

Arizona needs

• To be an innovator in the fields of health and technology and an educated and creative community
• Visible networks for the sharing and exchange of knowledge and ideas
• A stronger K-12 system with a direct link to the university for the development of talent
• To draw in national and international talent in the form of thinkers and researchers
• Community building and revitalization to support and enhance the quality of life
Sustaining and Enhancing Social and Economic Development

Innovations in the fields of health, technology and education will be the driving forces to remain globally competitive in today’s world.

As a publicly funded institution and natural knowledge resource, ASU must serve as a:

• Hub for innovations and knowledge creation in the fields of education, technology, health and social development
• Creator and distributor of knowledge in the form of research and ideas
• Magnet for top talent
• Builder of networks
• Producer of high-quality, entrepreneurial and talented students
Role of universities
Focus on Arizona
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The New American University
inclusive, engaged, embedded

The New Gold Standard

- Leveraging Place
- Transforming Society
- Academic Enterprise
- Use-Inspired Research

- Focus on the Individual
- Intellectual Fusion
- Social Embeddedness
- Global Engagement
Advantages

- Newness
- Size
- Diversity
- Location

Role of universities
Focus on Arizona
Future of Arizona
Arizona State University
• Competition
• Speed
• Adaptability
How can you help us to compete?