THINK GLOBALLY ACT LOCALLY

Center of Excellence

In

Information Technology & Telecommunications

Partnership

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Our Vision

Our area will become a ***model*** of

collaboration and innovation between

business, education & government

for economic development in a

Knowledge-Based Economy.

Our Mission

Establish our position

as a destination of choice for

the Information Technology & Telecommunications

industries and professionals

through an industry/higher education partnership

focused on meeting current and future needs

in conjunction with the economic development efforts

of state & local governments

WHY DO WE NEED SUCH A PARTNERSHIP?

- "Communities" must recognize the need for a new knowledge-based, economic development entity

- Every situation is unique but there is a commonality to the process

- None of the people involved have a clear idea of exactly how to accomplish their vision. It is a process of discovery.

WHY DO WE NEED SUCH A PARTNERSHIP?

- Process of exploration, seeking & probing

- Open-minded pursuit yields solutions based on unique culture of leaders AND realities of their "community"

From "The Knowledge Seekers" by
  Dr. W. Arthur (Skip) Porter

1950s Economic Environment in North Carolina

- South had economy of developing nation

- **Raleigh was only state capital without interstate highway running through it**

- **Economy built on tobacco, textile and furniture**

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Late 1950s Vision

- Use combined strengths of Triangle area's three research universities to prime economic development
- Their model - Boston with Harvard & MIT
- Began to recruit science-based industry
- Began to enlist business leaders in effort
- Core group enlisted by 1956

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Ultimate Goal

Create jobs

for universities' graduates,

reversing state's "brain drain"

First Step - January 9, 1959

Governor formally announced creation of

1) Research Triangle Park

2) Research Triangle Foundation

FIRST TENANTS IN 1965

National Institute

of

Environmental Health Sciences (NIH)

IBM

TODAY'S STATUS

- 7,000+ acre community of research and development campuses

- 135 organizations represented from around the world; Half of these have less than 20 employees

- 40,000 employees from around the world

- Nearly $2 billion annual payroll

- One of nation's highest number of PhDs & MDs per capita

- The most stable economy over 25 year period

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WHAT ARE INDUSTRY'S PRIMARY CONCERNS?

- Increased Market Share/Growth

- Increased Profitability

- Innovation of New Products & Services

- Attract & Retain Highly Motivated, Committed Workforce

- Improved Productivity

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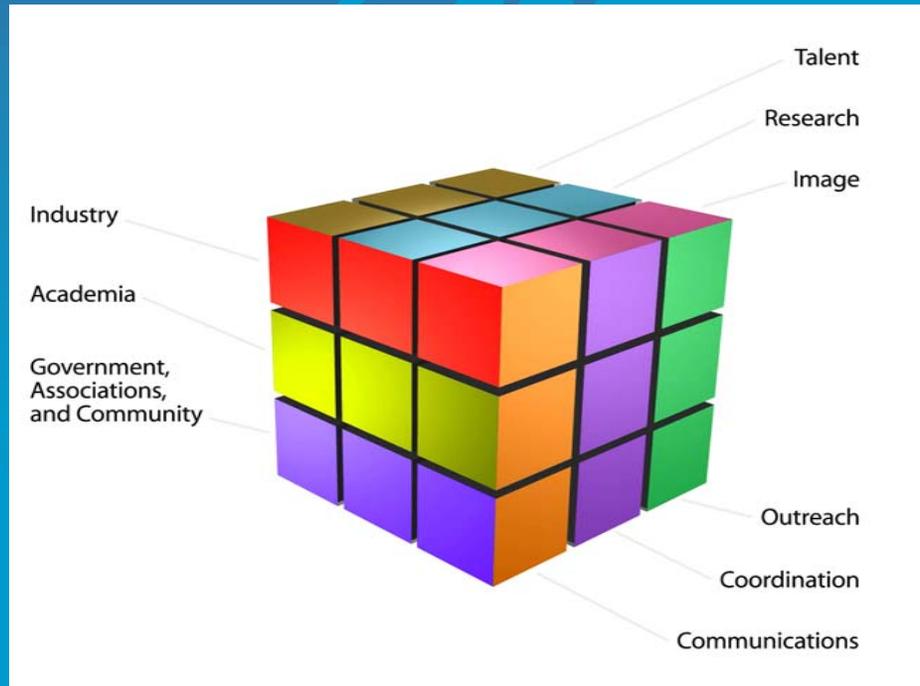# *WHAT ARE HIGHER EDUCATION'S PRIMARY CONCERNS?*

- Delivery of Quality Programs

- Attraction & Retention of Quality Students

- Attraction & Retention of Quality Faculty

- Competitive Research Programs

- Diversity

- Facilities

- Rankings/Recognition

COMMON VISION

What Will Success Look Like?

- **Increased Educational Attainment Levels**
- **Increased Research Dollars for Universities**
- **Increased Number of IT & Telecommunication Companies, Professionals, & Employment Opportunities**
- **Increased Per Capita Income**
- **Improved Competitive Positioning for Oklahoma**
- **More Diversified, Stable Economic Base**

Our Model

Objectives

Partners

Strategies

Core Based On:
- *Trust*
- *Shared Vision*
- *Evolving Relationships*

Center of Excellence in Information Technology & Telecommunications

OBJECTIVES

- **Develop, Retain & Attract Intellectual *Talent***

- **Develop IT/Telecom *Research* Portfolio**

- **Develop World-Class *Image***

- **Partnership Development**

- **Critical Success Factors**

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Develop, Retain & Attract Talent

- **Communication Between Partners**

- **Culture That Values Education & Life-Long Learning**

- **Increase Graduates & Resources for Core Programs**

- **"Action" Research on Processes**

Develop, Retain & Attract Talent Programs

- **Quarterly Industry/Higher Education Workshops**
  - **Identify Issues, Barriers, Results**
  - **Location Rotation for Visibility**
  - **Provide for Continuous Dialog, Special Interest Groups (SIGs)**
- **Engage National Associations & Funding Agencies**
  - **Establish Identity**
  - **Market Our Expertise**
- **Develop / Maintain Map of Area Degree Programs**
  - **Assist in Market Penetration**
  - **Increase Area's Educational Attainment Level**
  - **Identify Areas of Collaboration**

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IT/Telecom Research Focus

Solidify our leadership position in

developing,

building &

managing

intelligent information networks

Why?

- Leverages strengths and assets

- Builds upon existing leadership and is a defensible position

- Supports many other research activities

Implications for Research

- Any research advancing the frontiers of intelligent information networks *should* occur here

- We must collaborate and support these research activities to establish and defend our leadership position

- We must build the research capabilities required to win and successfully complete these research projects

CTO/Faculty Summit

- Held November 2001
- Panel of Faculty/CTO/NSF
- Presentation of Key Business/Technology Issues
- Audience of Cross-Institutional, Cross Disciplinary Faculty
- Breakout Sessions to Match Areas of Expertise with Business Needs

We

have

World-Class

Expertise!

IT & Telecom Academic Centers & Labs at our Research Universities

- *OSU Center for Laser & Photonic Research*
- *OSU Center for Risk Management*
- *OSU Center for Research in Information Technology & Telecom*
- *OSU Center for Sensors & Sensor Technologies*
- *OSU/Dynegy Trading Floor*
- OU Center for Advanced Genome Technology
- OU Center for MIS Studies
- OU Center for the Analysis & Prediction of Storms
  - Williams Fellowships for MS in Professional Meteorology
- OU Intl Center for Natural Hazards & Disaster Research
- OU National Severe Storms Laboratory
- OU Telecommunications Interoperability Laboratory
- *TU Center for Information Security*
- *TU/Williams Fiber Optic Networking Laboratory*
- *TU/Williams Risk Management Center*

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Faculty at Oklahoma's research universities come from universities

in Oklahoma

Oklahoma
Oklahoma City

Oklahoma State
Phillips

Southeastern Oklahoma State
Tulsa

across the country

Akron
Arizona
Arizona State
Arkansas
Arkansas-Fayetteville
Auburn
Brigham Young
California-Irvine
California State-Northridge
Carnegie-Mellon
Case Western Reserve
Chicago
Clemson
Colorado
Colorado College
Creighton
Delaware
Duke
Florida
Florida State
Georgia
Georgia Institute of Technology
Grand Valley State
Houston
Illinois
Illinois State
Indiana
Iowa

Iowa State
Johns Hopkins
Kansas
Kansas State
Kent State
Louisiana State
Louisville
Loyola
Luther College
Maryland
Massachusetts Institute of
   Technology
Mayville State
Memphis State
Miami-Oxford, Ohio
Michigan
Michigan State
Minnesota
Missouri-Columbia
Nebraska
Nebraska-Omaha
North Carolina-Chapel Hill
North Carolina-Wilmington
North Dakota
North Texas
Northern Illinois
Northwestern
Ohio State
Pennsylvania

Pennsylvania State
Pittsburg
Purdue
Sam Houston State
South Carolina
Southern Methodist
Tennessee
Tennessee-Chattanooga
Tennessee-Knoxville
Texas A&M
Texas-Arlington
Texas-Austin
Texas Christian
Texas-San Antonio
Texas Tech
Utah State
Vanderbilt
Virginia
Virginia Commonwealth
Virginia Tech
Washington
Washington-St. Louis
Wayne State
Western Michigan
Wichita State
Wisconsin
Wisconsin-Madison
Yale

and around the world.

Adam Mickiewicz University
   (Poland)
Athens (Greece)
Attila Joszef (Hungary)
Chinese University of
   Hong Kong
Concordia (Canada)
Delhi (India)
Hamburg
India
Indian Institute of
   Technology Kerala

Institut des Hautes Etudes
   Commerciales (Tunisia)
Istanbul Technical
   University (Turkey)
Madras (India)
Manchester
Max Planck Institute (Germany)
Moscow State
National Chiao-Tung
National Polytechnic Institute of
   Lorraine (France)
Queen's at Kingston (Canada)
Singapore

Udaipur
University of
   Edinburgh (Scotland)
University of Reading (England)
University of Wales
   (United Kingdom)
Warsaw
Xian University of
   Technology (China)
Xidian University (China)
Yildiz University (Turkey)
Yonsei (South Korea)

IT/Telecom Research Portfolio Programs

- **Dedicated Faculty Members for Program Development**
  - **Dr. Ramesh Sharda, OSU College of Business Administration**
  - **Dr. Jim Sluss, OU College of Engineering**
  - **TU Invited**
- **AAAS Panel Review / Recommendations**
- **Targeted Faculty Seed Grants**
  - **Travel to Funding Agencies**
  - **Topical Workshops with Guest Lecturers**
- **Industry/University Lab Exchanges**
- **Faculty/CTO Summit Spring 2003**
- **Survey / Increase OK Participation in Review Panels**
- ***INCREASE MARKET SHARE***

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World-Class Image Programs

- **Public Awareness Committee**
- **Engage Organizations That Influence/Publish Rankings**
  - **Milken Institute, ITAA, AeA, Southern Growth Policy Board**
  - **USDOC Office of Technology Development**
- **Present "Big Picture" via Website**
  - **Programs**
  - **Research**
  - **Programs**
  - **Publications**
  - **Events**
- **Create & Capitalize on EVERY Opportunity**
  - **IEEE MWSCAS**
  - **International Opportunities Forum w/ ODOC**
  - **AISES National Convention**
- **Educate/Engage Elected Officials**

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Partnership Development Programs

- **Strategic Planning Board Quarterly Meetings**
  - **Core: Trust, Shared Vision, Evolving Relationships**
- **Partnership Symposium**
  - **UCSD, Upstate Alliance for Innovation, NSF, ITAA**
  - **Spring 2003**
- **"Action" Research on Processes**
  - **"Add to the Body of Knowledge"**
  - **Cross-Institution/Discipline w/ Industry**
- **NSF Partnerships for Innovation Proposal Pending**
- **Broaden / Deepen Participation**

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Disruption Creates Opportunities

- DJIA All-time High
- 9/4/2002

- 11722.98 1/14/2000
- 8322.96 (29% Decline)

- NASDAQ All-time High
- 9/4/2002 Close

- 5048.62 (3/10/2000)
- 1267.54 (75% Decline)

How to we build our future?
One Brick at a Time!

- Leadership
- Vision
- Focus
- Execution

- Persistence
- Attitude
- Consistency
- Broad-based
   commitment