University Research Outreach
Opportunities, Challenges, Strategies, and Roles

Wayne H. Watkins
Associate Vice President for Research The University of Akron
Past-President University Economic Development Association

wwatkins@uakron.edu
330-972-8124
30 March 2011
Selected University Research Outreach Initiatives

1. University Knowledge and Technology Transfer
   • Human training and movement of expertise is perhaps 95% of tech transfer
   • Intellectual property development and commercialization via transfer to the commercial sector – most institutions have technology transfer programs

2. Outreach & Extension Programs
   • Economic Development Offices
   • Industry Liaison Offices (TLO) aka “Corporate Relations Offices”
   • Agriculture, Industrial, and Manufacturing Extension
   • Entrepreneurial Assistance Centers
   • Export Assistance & Procurement Technical Assistance Centers
   • Small Business Development Centers
   • Prototyping, Pilot Plant, and Testing Services programs
   • Community Relations Offices – participate in local, regional, and state economic development organizations

3. University-Related Research Parks
Selected University Research Outreach Initiatives

4. Incubators and emerging enterprise support initiatives
5. Economic and business research centers
6. Asset sharing programs (people, equipment, libraries, facilities, intellectual property, support offices such as human resources & info services)
7. Capital development (angel capital networks)
8. Student internships, mentoring, and placement
9. Multi-university and regional economic development programs
Issues of note

• Executive commitment to an engaged university
• Faculty impact, acceptance, and trust development
  – Office as driver vs. facilitator/supporter
  – “What is in it for me?”
• Value of outreach offices
• Policy development
  – Conflict of commitment
  – Conflict of interest
  – Intellectual property
  – Consulting and extra-contractual services
  – Mixing of public and private resources
    • Public subsidy of private sector issues
• Organization models for university outreach
  – Network model vs. single portal
• It's all about people
• Setting and managing expectations
Assessing Opportunities

- University and community resources
- Challenges and limitations
- How identify?
- How stay current?
The University of Akron in 2000

- Strong ties to the rubber and plastics industry
- Research expenditures of approx $20M
- $289,000 licensing income
- One university spin-out company
- Region of four million people
- Large industrial complex - struggling

- Urban campus adjacent to downtown
- 25,000 students (14% graduate students)
- World class in polymer science and polymer engineering
- Best value public university law school - by *National Jurist*
- Nationally recognized intellectual property law program
- Recognized expertise in science & engineering
Northeast Ohio Industry Research Network
Potential growth impact

High

Information technology
Biosciences
Polymers/advanced materials

Low
Advanced power
Financial Services
Chemicals

High
Instruments, controls, electronics
Motor vehicles
Aerospace
Metalworking

Feasibility
Create appropriate organization structure

- Things Ohio public universities can **not** do
  - Take equity
  - Indemnify
  - Respond quickly to private sector

- What universities need help doing
  - Effectively bridging the public/private interface
  - Taking long-term economic development perspective
Traditional Model

Teaching

Research

Service

Compliance: IRB & IACUC

Grants and Contracts

Technology Transfer

License

Spin-out
2001 formed University of Akron Research Foundation

- Not-for-profit - Tax Exempt / Charitable Status

- Corporate charter is to benefit UA and community
  - Provides current value & invests with expected long-term benefit

- Independent of university and state
  - Provide indemnity to research sponsors
  - Hold and dispose of equity in private companies
  - Respond to faculty and industry on a commercial timeframe and with flexible decision making authority
  - Independence requires that majority of board is not university personnel

- UARF financial statements are rolled up in UA statements (GASB)
UARF Innovation Services (to date)

**Strategic Reallocation of Regional Assets**
- Share resources
  - Libraries
  - Buildings & labs
  - Equipment
  - People
  - Patents

**Regional & Global Initiatives**
- Ohio Research Foundation as multi-institutional innovation service provider
- International training initiatives
- Local & regional economic development

**Industry Sponsored Research**
- 115 projects

**Traditional Licensing**
- 61 active licenses

**University Technology Start-ups**
- 31 start-ups based on UA technology
- 13 start-ups not based on UA technology

**Community Start-ups**

**Host Industry Retirees as Senior Fellows & Entrepreneurship Support**
- Mentoring & networking
  - Strategy & initiatives
  - Executive support
  - Corporate partners
  - Incubator services
  - Incubator facilities

**Student Development**
- Internships
- Industrial assistantships
- Entrepreneurship
- Student venture fund
- IP Management Course

**Industry-Centric Initiatives**
- Joint research
- Testing services
- Executive & innovation services
- Open innovation

**Capital Development**
- Akron Innovation Campus
- University Innovation Ventures
- Akron Academy

**UARF For-Profits**
- ARCHAngel Investor Network
- Lorain Innovation Fund
- ARCHAngel Venture Fund
Emerging Programs – *Limited only by Imagination!*

1. Provide and/or consolidate regional information technology and human resource services

2. University affiliated corporate education provider
   – See also Sophia.org for emerging model

3. Merging portion of corporate research division with university research team

4. Corporate business unit spin-out to a university industry joint venture

5. Austen Bioinnovation Institute in Akron – Founded by three hospitals, UA, and Med school – directed innovation initiatives
Entrepreneurship:
- Vet internal and external technology and business opportunities
- Link start-ups to validation partners, markets, legal, investment
- Student engagements to executive functions
- Government, institution and industry sponsorship
- Create/manage Angel investment network; new VC funds

Innovation:
- Open Innovation creates networks
- Innovation Services creates virtual organizations

Technology Commercialization:
- Market focus for technologies
- Commercial validation partners
- Assemble technologies and resources
- Drive the business in early stage; possible equity stake

National Recognition for Regional Wealth Creation
Corporate Partnering Opportunities

Traditional Engagement

- Consultants and services
- Research
- Consortia
- Students
- Interns
- Training / Workforce Development
- Universities and companies w/ Ohio potential
- Like-minded corporations
- Open Innovation partners
- Strategic Alliances

Strategic

- Joint Ventures
- Spin-In Technology

Enterprise Partnership

Execution!
Overview of Public-Private Partnerships

Public - Private Partnerships

- Learning: Formal Learning, "Hands on" Training
- Production: Knowledge, Technology
- Exchanges: Personnel, Capital
- Structure: Geographical Proximity, Formality
- Context: Scientific Discipline, Tech Transfer Protocols
- Exchanges: Personnel, Capital
Issues of note

• Executive commitment to an engaged university
• Faculty impact, acceptance, and trust development
  – Office as driver vs. facilitator/supporter
  – “What is in it for me?”
• Value of outreach offices
• Policy development
  – Conflict of commitment
  – Conflict of interest
  – Intellectual property
  – Consulting and extra-contractual services
  – Mixing of public and private resources
    • Public subsidy of private sector issues
• Organization models for university outreach
  – Network model vs. single portal
• It’s all about people
• Setting and managing expectations
The University of Akron's technology and invention portfolio includes more than 450 active and pending patents. Compared to the national average, UA has 50 percent more patents and twice the number of invention disclosures per research dollar spent.
UA Technology and Patent Portfolio

- Advanced Materials
- Biotechnology
- Chemical Technology
- Computers, Data & Devices
- Energy
- Environmental
- Medical
- Nanotechnology
- Others
- Polymer Science
- Security
Industrial Grants & Contracts Awarded to UARF
115 active research projects including

- Babcock & Wilcox
- Cummins
- Goodyear
- SPM
- Aircraft Braking
- Caterpillar
- CIBA
- Innovia
- Energy Conservation
- Avtron
- RPM

- Bridgestone
- Proctor & Gamble
- ETH Zurich
- Reforce
- Concurrent
- Repsol
- General Dynamics
- Trafficast
- Lockheed Martin
- 3M
- Bowing
Traditional Start-up Companies based on UA Technology

1. ADAP Nanotech
2. AgileNano
3. Akron Air Materials
4. Akron Coatings Technology
5. Akron Material Concepts
6. Akron Medvision
7. Akron Polymer Systems
8. Akron Research Commercialization
9. Akron Scientific
10. Akron Software
11. Avraam Corp
12. Barefoot Engineering
13. Bauer Research Foundation
14. ChemNano Materials
15. Coal Fuel Cell
16. CO₂ Capture
17. Dynamic Transportation Solutions
18. E3 Materials
19. Flexible Functional Film Tech
20. KenCak
21. Kidnyx
22. Mempro/MaxoSurface
23. NGJ
24. Novacek
25. Polysmart
26. Research Products Corp
27. SeeSmall
28. SNS Nanofiber Technology
29. TCS Polymers
30. ZnErgy

26 active – 4 inactive – 13 UARF equity
Start-up Companies - Cumulative

FY 2002
FY 2003
FY 2004
FY 2005
FY 2006
FY 2007
FY 2008
FY 2009
FY 2010
Total Start-up Companies - 43

1. ADAP Nanotech
2. AgileNano
3. Akron Agility LLC
4. Akron Air Materials
5. Akron Coatings Technology
6. Akron Device Technology
7. Akron Material Concepts
8. Akromed
9. Akron Medical Innovations
10. Akron Medvision
11. Akron Polymer Systems
12. Akron Research Commercialization
13. Akron Scientific
14. Akron Software
15. Avraam Corp
16. Barefoot Engineering
17. Bauer Research Foundation
18. Biopolymers International
19. ChemNano Materials
20. CO2 Capture
21. Coal Fuel Cell
22. Delta-Gamma Technologies
23. Diacure
24. Dynamic Transportation Solutions
25. E3 Materials
26. Flexible Functional Film Tech
27. Integrated Smart Structures
28. KenCak
29. Kidnyx
30. Mempro/MaxoSurface
31. NGJ Inc.
32. Novacek
33. Polysmart
34. Redfish
35. Research Products Corp
36. RooBrew
37. SeeSmall
38. SiCoat
39. SNS Nanofiber Technology
40. TCS Polymers
41. United Polymer Technology
42. University Innovation Ventures
43. ZnErgy

33 are active – 10 are inactive – 14 UARF equity
UARF Fellows

Senior Fellows & Executives:
Wil Hemker, Executive-in-Residence
John Myers, Executive-in-Residence
Barry Rosenbaum, Senior Fellow
Gordon Schorr, Senior Fellow
Ed Weil, Intellectual Property Fellow
Stanley Lang, Project Executive
Howard Wheeler, Project Executive

Student Interns:
Bethany Guegold
Beth Harry
Andy Maas
Joe Rich
UARF Fellows

- The donated time and effort from senior executives is in excess of five full-time equivalents
- UARF Fellows – 513 contacts assisted of which 452 are companies and the others are individual entrepreneurs
- Companies are primarily early stage, but also include more established companies seeking usually Open Innovation assistance, personnel (usually interns), access to UA technologies, and networking contacts
Business growth – connect area entrepreneurs to logical and natural partners
Regional Capital Development Initiatives

• UARF dba ARCHAngels, regional network of investors
  • Supplements Jumpstart and other regional partners
  • UARF acts as host of event and counsels presenters
  • Over 280 projects considered by the ARCHAngels Deal Flow Committee
  • Contacted by hundreds of companies annually
  • Presented 65 companies to investors at quarterly events since November 2005
  • 30 reported follow-on funding of $55.5 million
  • Ca. 550 active members
• Innovation Fund – up to $100K grant – donations
• Northeast Ohio Student Venture Fund fka Hop-on Student Venture Fund
Northeast Ohio Student Venture Fund

• Promotes social welfare by encouraging economic development and growth in Ohio

• Is authorized to solicit and accept gifts, grants and contributions for appropriate qualifying purposes including to establish a self-perpetuating capital fund to be used to purchase equity interests in private businesses for the purpose of providing experiential entrepreneurial education and for the purpose of supporting economic development in Ohio
Lorain Innovation Fund

- Awards are made to help early-stage entrepreneurs progress through the business development continuum by providing resources to help validate the technology or prove the business model.

- Funding of pre-seed capital fund does not:
  - Jeopardize its 501 (c)(3) status
  - Foundation status
  - Contributions are tax deductible
  - Must have educational component
# ARCHAngel Presenters
Over 75 Companies, Including:

1. Helios Coatings
2. Healthy Life Screening
3. RSP Tooling
4. Collaborent Group
5. SecuReach Systems
6. Direct Coal Based Fuel Cell*
7. InSeT Systems
8. Sarah Care
9. Sensor Development Corp.
10. HF Foods Technologies
11. Midwest MicroDevices
12. Myriad Health
13. Vadose R&D
14. Dimpledough
15. Great Lakes Pharmaceuticals
16. NeoMed Technologies
17. reXource
18. Analiza Dx
19. Banyan Technology
20. Gecko Adhesives Technology
21. Aria Analytics
22. Keep It Simple Solutions
23. Nanostatics
24. Interscopic analysis
25. Scattering Solutions
26. Stanton
27. Telerad Express
28. Exacter
29. ProScout MVP
30. SMART Link Medical
31. Nan-fiber Reinforced Biomembrane*
32. Charitee
33. Greenkote
34. Includis
35. ProPractica
36. Gauntlet Technology Systems
37. Prestan Products
38. Quick Clinic
39. Advanced Coatings
40. International
41. MemPro Ceramics*
42. OrthoHelix Surgical Designs
43. DelMio
44. I2C Technologies
45. Cervilenz
46. Segmint
47. Wireless Environment
48. NEUROS Medical
49. BSK/StafKnex
50. Fresh Fork Market
51. Inspiron Logistic
52. Vasolux Microsystems
53. Myers Motors
54. FMI Technologies
55. Zethus Software
56. Medinvent
57. OrthoPediatrics
58. CitizenGrove
59. Phycal
60. Treemont Electrics
61. Greenfield Solar
62. MAXEndoscopy
63. AlgySis
64. Thermalin
65. Absorbent Materials

* UA technologies or UA-generated companies
ARCHAngels Follow-on Funding by presentation date

UARF Support of ARCHAngels

Subsequent Investment in ARCHAngel Companies
Open Innovation Seminars

• Stimulated by Proctor & Gamble
  – Corporate culture changed from primarily internal to “proudly invented elsewhere”
• All events sponsored by UARF are free to our community
• Nationally-recognized thought leaders
• 100 community business leaders, policy makers, and innovators attend
• Only event of its kind in Ohio
• Transforming regional companies
UARF money flow for the benefit of UA
July 2003 to Dec 2010

Direct research costs $ 8,630,400
To UA & innovators 7,419,800
Equipment 988,000
Regional support 126,000
Scholarships 52,200
Research support 568,100

$ 17,784,500
UARF invited to testify – U.S. House of Representatives Committee on Science and Technology – June 2010
Awards and Honors

#1 in Ohio in rate of return per research dollar in technology commercialization 2007

Exemplary smaller institution for advanced innovation partnerships 2007

Winner of 2007 Award of Excellence in Technology Commercialization

#1 in patents issued per million research expenditures, 2000-2004

Recognizes contributions to the revitalization of Akron’s University Park 2008
UA: the most productive in the nation—recently released data!

Of the more than 150 U.S. universities:

• #1 in licensing revenue per research dollar among universities without a medical school
• #3 in U.S. patents per research dollar
• #7 in licensing revenue among universities without a medical school
• #1 in Ohio in licensing revenue among public universities

Association of University Technology Managers (AUTM) 2007 Rankings (released in February 2009)
Akron Innovation Campus

- Three buildings adjacent to UA campus on Wolf Ledges
- Purchased 2007 & 2011
- 75,000 sf
- 19 tenants – mix of University spinouts, research partners and community organizations

Akron Innovation Campus LLC holds real property
Sole member is UARF
Innovation Ecosystem
Do Universities have a role?

Based on Council on Competitiveness Graphic – National Innovation Initiative 2006
### United States National Innovation Agenda

**Influence of Universities?**

<table>
<thead>
<tr>
<th><strong>Talent</strong></th>
<th><strong>Investment</strong></th>
<th><strong>Infrastructure</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Build a National Innovation Education Strategy for a diverse, innovative and technically trained workforce</td>
<td>• Revitalize Frontier and Multidisciplinary Research</td>
<td>• Create National Consensus for Innovation Growth Strategies</td>
</tr>
<tr>
<td></td>
<td>• Energize the Entrepreneurial Economy</td>
<td>• Create a 21st Century Intellectual Property Regime</td>
</tr>
<tr>
<td></td>
<td>~ Build 10 innovation hotspots over next 5 years</td>
<td>• Strengthen America’s Manufacturing Capacity</td>
</tr>
<tr>
<td></td>
<td>~ Designate a lead agency and an inter-agency council to coordinate fed econ dev policies to accelerate innovation-based growth</td>
<td>• Build 21st Century Innovation Infrastructures – the health care test bed</td>
</tr>
<tr>
<td></td>
<td>~ Increase the availability of early-stage risk capital with tax incentives, expanded angel networks and state &amp; private seed capital funds</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Reinforce Risk-Taking and Long-Term Investment</td>
<td></td>
</tr>
</tbody>
</table>

- **Empower Workers to Succeed in the Global Economy**
- **Catalyze the Next Generation of American Innovators**
  - Establish innovation curricula for entrepreneurs and small business managers

Based on Council on Competitiveness graphic – National Innovation Initiative
21st century innovation economy: opportunities for universities

• **Talent**
  - Collaborative “industrial assistantships”
  - Professional science masters in industrial innovation – (Aachen)
  - Innovation curricula to optimize the innovation ecosystem

• **Investment**
  - Better align university and commercial interests -- strategic partnerships
  - Help regions and states understand federal and global research economy
  - Incentivize innovation across ALL university disciplines

• **Infrastructure**
  - Expand alliances with other universities and businesses
  - Create knowledge in innovation (understanding the innovation ecosystem)
  - Recommend innovation in health care, education, legal and policy frameworks
  - Link intellectual property sector, science establishment and community

In his 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 ..."
Evolution of University Driven Economic Development

- **2000s** – Innovation initiatives
  - Biotech
  - Global research alliances

- **1990s** - Internet emerges

- **1980** - Bayh-Dole Act – ability to commercialize results of federally funded research (*becomes an inflection point*)

- **1980s** – Current university initiatives emerge including:
  - Technology transfer
  - Incubators & emerging enterprise development
  - Research parks
  - Entrepreneurship programs
  - Centers of excellence & cluster initiatives

- **1970s** - Genetic engineering and molecular biology emerge

- **1957** - Sputnik spurs space race

- **1947** - Transistors initiate the era of microelectronics
- **1944** - GI Bill - pumps talent into economy
- **1940s** - World War II - engineering and physical sciences for war effort

- **1887** - Hatch Act - responsibility for extension in agriculture & mechanical arts
- **1862** - Morrill Land Grant Act - applied agriculture & mechanical arts
Higher Education Roles

- Historical roles: create, store, and disseminate knowledge
- Current roles: teaching, research and service
- Future roles: knowledge creation, skills assessment & credentialing, and community innovation capacity and economic development)
Universities - comparatively new to the world of economic development

and are under tremendous pressure to demonstrate their worth in economic development and wealth creation
Universities create new technologies, which destroy jobs on the trailing edge, while creating jobs on the leading edge
“. . . . 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.

. . . . . we shall 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 good.

. . . . . we shall not be measured by the isolation of our disciplines, but by their integration as applied in solving the problems of today.”  Luis Proenzena, President The University of Akron
MIT Professor Richard K. Lester - key points about universities in economic development:

1. Embracing role as “engines of innovation”
2. Conventional view of universities and technology is too narrow
3. No one-size fits all approach for universities in the economy
4. Universities should act more strategically
• “. . . there is an appetite out there for attuned universities, truly engaged with their communities. Call it a market, if you like. It’s new, it’s different, and my bet is it can only grow.”

Commercialization and Entrepreneurial Support through UARF

Focal point for business start-up and commercialization services for emerging technology-based enterprises:

- Needs and opportunity assessment
- Business and entrepreneurship assistance
- Access to research expertise, technology and facilities
- Opportunities for student interns and recent graduates
- Space for offices and labs
- Connection to Angel investors and other funding sources
ARCHAngels - Akron Regional Change Angels

- UARF dba ARCHAngels
- Regional network of investors
- Contacted by hundreds of companies annually
- Provide business assistance
- Select best to present to ARCHAngels network
  - Quarterly events since Nov. 2005
  - Presented 65 companies to investors
  - Approximately half received funding
  - Presented three UA-developed technologies: coal fuel cell, artificial pancreas, carbon nanotubes
Open Innovation

• Stimulated by Proctor & Gamble
  – Corporate culture changed from primarily internal to “proudly invented elsewhere”
• Events sponsored by UARF
• Nationally-recognized thought leaders
• 100 community business leaders, policy makers and innovators
• Only event of its kind in Ohio
• Transforming regional companies
Higher Education

• an essential resource for Promoting Technology and Innovation in the Global Economy

Consider:

• Strategies and roles for universities
• Empowering universities to create wealth
“Should Universities Be Agents of Economic Development”
Robert E. Litan and Lesa Mitchell – Kauffman Foundation

• . . . . by definition universities impact economic development via dissemination . . . as for role in developing products, the issue is not if but how . . .

• . . . competition requires entrepreneurial behavior . . . one of the more effective mechanisms is star scientists

• . . . other means of university economic development include, entrepreneurship incubation (mentors, angel and VC networks), operating secondary education schools, health care to neighborhoods, real estate – research parks

• Universities located in distressed areas may need to invest in surrounding areas in order to enhance their attractiveness to faculty students who have other options

• “In sum Universities in the United States and elsewhere around the world clearly are in the “Economic Development” arena. They are likely to be most successful, . . . . . if they play to their strengths, and if they permit and ideally encourage the “bottom up” entrepreneurial endeavors that may come from their faculty, students, alumni, and other supporters.”
1. **Educational services**
   - Transfer of codified, or explicit, knowledge in return for tuition payments generating direct and indirect demand for local goods and services

2. **Cultural products: quality of life**

3. **Transferring tacit knowledge**
   - Create localization economies
     - Create specialized labor pools, highly skilled labor that is locally thick and globally thin, attracts potential employers & diffuses technology
     - Diffuse technology through faculty consulting
     - Diffuse technology into the regional economy through locally contracted research

4. **Contract research**
   - Export knowledge through external contract research

5. **Create new technology-based products or industries**

---

The University of Akron
Strategic Plan 2010 – 2020

Strategic Goals

1. Strengthen Akron’s historical commitment to inclusive excellence to enhance student access, transformation and success.
2. Create vibrant, healthy and diverse campuses that are deeply engaged with their surrounding communities.
3. Establish selected cross-disciplinary clusters of academic distinction that are recognized nationally and internationally.
4. Achieve national recognition for a curriculum in which entrepreneurship and 21st century global competitiveness skills are comprehensively embedded.
5. Be a primary driver of economic competitiveness in northern Ohio and a leading contributor in the state.
Strategic Goal 5: Be a primary driver of economic competitiveness in northern Ohio and a leading contributor in the state.

Potential Initiatives

1. Be recognized nationally for technology transfer and commercialization of research; outperform national benchmarks for the number of start-up companies and the number of companies attracted to the area.

2. Partner with businesses, organizations, and industries to advance Akron’s research and technology transfer goals, create jobs and increase business profitability.

3. Expand the university’s capacity to form strategic partnerships with industry, other educational institutions, and local government entities to support innovation-capacity development and venture capital investment in the region.
Awards of Excellence

**Excellence in Business Assistance**
- Winner - University of Northern Iowa – Business and Community Services (Regional Business Center): “MyEntreNet”
- Finalist - The Pennsylvania Technical Assistance Program (PennTAP) at Penn State University: “Cluster-Based Information Technology Assistance (CBIT) Initiative, “Increasing the global reach and competitiveness of critical industry clusters”
- Finalist - Maine Center for Business and Economic Research (MCBER) at the University of Southern Maine (USM): “Retail-Sales Forecasting at Hannaford Bros. Co.”

**Excellence in Technology Commercialization**
- Winner - Lehigh University: “Lehigh Nanotech LLC”
- Finalist - University of Hawaii at Manoa-Pacific Business Center Program: “Manoa Biosciences, Inc. (MBI) Business Plan”
- Finalist - The Pennsylvania Technical Assistance Program (PennTAP) at Penn State University: “Technology Innovation Infusion”
Awards of Excellence

- **Excellence in Community Development**
  - Winner - The University of Tennessee, Institute for Public Service: “Municipal Technical Advisory Services Review Leads Way To Development Program”
  - Finalist - The Pennsylvania Technical Assistance Program (PennTAP) at Penn State University: “Pennsylvania Mountains Healthcare Alliance (PMHA) Broadband Network”

- **Excellence in Partnership Development**
  - Winner - Nevada Small Business Development Center (NSBDC), College of Business (COB): “Hands-On Learning Laboratory for Business Students – Port of Subs Franchise”
  - Finalist - Economic Development University Center, University of Puerto Rico: “Puerto Rico TechnoEconomic Corridor (PRTEC)”
Awards of Excellence

- **Excellence in Economic Development Research**
  - Finalist - University of Nevada, Reno-- Center for Economic Development: “Community Business Matching Model”

- **Excellence in Public Policy**
  - Winner - Institute for Policy and Social Research at The University of Kansas: “Evaluation of the Kansas Department of Commerce”
  - Finalist - Pennsylvania Department of Community and Economic Development (DCED): “The Pennsylvania Initiative for Nanotechnology (PIN)”
  - Finalist - The University of Tennessee, Institute for Public Service: “The Regional Importance of Reelfoot Lake”
Entrepreneurship

Open Innovation

Technology

Industry

University

Community

Entrepreneurship
Ohio Research Foundation

The University of Akron

Other regional colleges, universities, hospitals and other research organizations interested in collaborating for technology transfer purposes

UARF
Provides research administration, technology transfer and innovation services

Ohio Research Foundation
Bank

Licensees

Industry Research Sponsors

Public and Private Granting Agencies

$ Services & IP

$ Services & IP

$ & Equity

$ & Equity

$ Services & IP

$ Services & IP
UARF Relationships

- Industry Partner/Donor
- UA Foundation
- UARF
- UA
- 3rd Party Providers
- For-profits
- 3rd Party Providers

Money flow:
- Industry Partner/Donor to UA Foundation
- UA Foundation to UARF
- UARF to 3rd Party Providers
- Services from UARF to UA
- Contract Services from 3rd Party Providers to For-profits
- Business/Tech Assessment from For-profits to UARF
- Contract Services from For-profits to 3rd Party Providers
FOR YEARS, I’ve suspected that universities could and should be a resource, a secret asset, for the health and growth of great cities.”
University Research Outreach

Strategies, Issues, and the Akron Experience

Wayne H. Watkins, Associate Vice President for Research

wwatkins@uakron.edu
330-972-8124
15 March 2011