The Role of the University of Wisconsin System in Workforce Development

Board of Regents
July 9, 2009
Overview of Presentation

1. Meeting immediate workforce needs:
   – College as a basic building block
   – JoAnna Richard, Deputy Secretary of the Department of Workforce Development

2. Economic development & the workforce
   – Kim Kindschi, Division of Entrepreneurship and Economic Development, UW-Extension

3. Developing the workforce of the future
   – Carl Gulbrandsen, Wisconsin Alumni Research Foundation
College degree as basic building block

- Key component in an economically robust Wisconsin
- Underlying purpose of the Growth Agenda
- Direct relationship between the percentage of baccalaureate degrees in a state and the per capita income of its citizens
More graduates, more jobs

• More than 32,000 graduates in 2008 (highest ever)
• More than 175,000 students in 2009 (highest ever)
• 80% of UW students who are Wisconsin residents when they start at the university are living and working in Wisconsin five years after they graduate
Baccalaureate Degree for the 21st Century

What employers want:
- Knowledge of human cultures and the physical and natural world
- Intellectual and practical skills
  - Critical thinking
  - Creativity
  - Written and oral communication
- Personal and social responsibility
- Integrative learning
UW System Shared Learning Outcomes

• Knowledge of human cultures and the natural world
• Critical and creative thinking skills
• Effective communication skills
• Intercultural knowledge and competence
• Individual, social and environmental responsibility
STATEWIDE PERSPECTIVE

Deputy Secretary JoAnna Richard

Department of Workforce Development
Building the 21st Century Workforce Wisconsin

University of Wisconsin System Board of Regents
Policy Discussion
UW System Role in Workforce Development

Secretary Roberta Gassman
Department of Workforce Development

July 9, 2009
Overview

- Economic Update
- Workforce Challenges
- Projected Workforce Needs
- Governor Doyle’s Workforce Agenda
- American Recovery & Reinvestment Act
- Role of UW System
ECONOMIC UPDATE
Challenging Economic Times

• National recession affecting all states
  – Impacting employment, dislocations

• Greater focus on workforce development
  – Education & training
  – New partnerships
  – Emerging industries
  – High-demand sectors
Impacts on Unemployment

• National May ’09 unemployment = 9.1%
  – up from 5.2% in May ‘08

• State May ’09 unemployment rate = 8.7%
  – up from 4.2% in May ’08
Economic Update

Plant Closings & Mass Layoffs

- 2007: 7,448 Workers (87 Notices)
- 2008: 17,633 Workers (148 Notices)
- 2009: 12,119 Workers (to date) (165 Notices)
WORKFORCE CHALLENGES
ALL STATES FACE CHALLENGE: TRANSFORM WORKFORCE SYSTEM

- Shrinking federal resources
- Changing demographics - exploding labor shortages
- Profound technological changes impacting skill needs
- Limited student, parent, school knowledge about labor force
- Poverty, high drop-out rates
- Employers can’t find skilled workers
- Changes happening fast
- Increase worker productivity to grow economy
  - Training
  - Education
  - Skills
Workforce Challenges

**WISCONSIN’S WORKFORCE GROWTH BECOMES FLAT**

Source: Bureau of Labor Statistics, OEA
Workforce Challenges

Dramatically growing demand for higher worker skills
40% of Workforce: HS Diploma or Less

- High School Grad, 35%
- Some College (no degree), 16%
- Associate Degree, 15%
- Four-year College Degree or more, 29%
- High School Drop Out 5%

Wisconsin workers Age 26 & older

Source: UW-Madison COWS, 2008
## Education Level and Median Wages, 2007

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Wisconsin</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>No high school degree</td>
<td>$9.08</td>
<td>$9.41</td>
</tr>
<tr>
<td>High school degree or GED</td>
<td>$12.97</td>
<td>$12.65</td>
</tr>
<tr>
<td>Some college, no degree</td>
<td>$13.62</td>
<td>$13.70</td>
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<tr>
<td>Associate degree</td>
<td>$17.51</td>
<td>$17.22</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>$20.80</td>
<td>$22.05</td>
</tr>
<tr>
<td>Master’s degree</td>
<td>$25.78</td>
<td>$28.67</td>
</tr>
<tr>
<td>Doctorate degree</td>
<td>$32.10</td>
<td>$35.03</td>
</tr>
<tr>
<td>Professional degree</td>
<td>$40.51</td>
<td>$39.31</td>
</tr>
</tbody>
</table>

Source: U.S. Census, ACS PUMS File, 2007
PROJECTED WORKFORCE NEEDS
## Workforce Needs

**MOST OPENINGS, HIGHEST PAYING OCCUPATIONS
NEED HIGHER EDUCATION**

<table>
<thead>
<tr>
<th>Occupational Title</th>
<th>Average Annual Openings</th>
<th>2006 Empl</th>
<th>2016 Empl</th>
<th>% Change</th>
<th>Typical Education and Training Path</th>
<th>Average Annual Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered Nurses</td>
<td>2,180</td>
<td>51,130</td>
<td>64,550</td>
<td>26.2%</td>
<td>Bachelor's degree</td>
<td>$57,376</td>
</tr>
<tr>
<td>Customer Service Representatives</td>
<td>2,100</td>
<td>43,840</td>
<td>52,640</td>
<td>20.1%</td>
<td>Moderate-term on-the-job training</td>
<td>$31,243</td>
</tr>
<tr>
<td>Drivers, Heavy and Tractor-Trailer</td>
<td>1,520</td>
<td>53,700</td>
<td>59,440</td>
<td>10.7%</td>
<td>Moderate-term on-the-job training</td>
<td>$38,070</td>
</tr>
<tr>
<td>Sales Representatives, Wholesale</td>
<td>1,100</td>
<td>37,320</td>
<td>40,150</td>
<td>7.6%</td>
<td>Work experience in related occupation</td>
<td>$60,390</td>
</tr>
<tr>
<td>Elementary School Teachers</td>
<td>960</td>
<td>32,790</td>
<td>35,150</td>
<td>7.2%</td>
<td>Bachelor’s degree</td>
<td>$45,857</td>
</tr>
<tr>
<td>Exec Secretaries and Admin Assists</td>
<td>880</td>
<td>31,660</td>
<td>35,460</td>
<td>12.0%</td>
<td>Work experience in related occupation</td>
<td>$35,322</td>
</tr>
<tr>
<td>Engineers</td>
<td>870</td>
<td>27,310</td>
<td>29,760</td>
<td>9.0%</td>
<td>Bachelor’s degree</td>
<td>$67,374</td>
</tr>
<tr>
<td>Accountants and Auditors</td>
<td>770</td>
<td>23,810</td>
<td>27,290</td>
<td>14.6%</td>
<td>Bachelor’s degree</td>
<td>$58,374</td>
</tr>
<tr>
<td>Secondary School Teachers</td>
<td>730</td>
<td>24,380</td>
<td>24,290</td>
<td>-0.4%</td>
<td>Bachelor’s degree</td>
<td>$47,019</td>
</tr>
<tr>
<td>Carpenters</td>
<td>700</td>
<td>30,230</td>
<td>33,130</td>
<td>9.6%</td>
<td>Long-term on-the-job training</td>
<td>$38,760</td>
</tr>
</tbody>
</table>

Source: Bureau of Labor Statistics, OEA
## FASTEST GROWING, HIGHEST PAYING OCCUPATIONS

**NEED HIGHER EDUCATION**

<table>
<thead>
<tr>
<th>Occupational Title</th>
<th>% Change</th>
<th>2006</th>
<th>2016</th>
<th># Change</th>
<th>Typical Education and Training Path</th>
<th>Average Annual Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Systems and Data Analysts</td>
<td>43.5%</td>
<td>5,150</td>
<td>7,390</td>
<td>2,240</td>
<td>Bachelor's degree</td>
<td>$58,042</td>
</tr>
<tr>
<td>Computer Software Engineers, Applications</td>
<td>37.8%</td>
<td>8,830</td>
<td>12,170</td>
<td>3,340</td>
<td>Bachelor's degree</td>
<td>$69,811</td>
</tr>
<tr>
<td>Physician Assistants</td>
<td>33.3%</td>
<td>1,110</td>
<td>1,480</td>
<td>370</td>
<td>Master's degree</td>
<td>$78,373</td>
</tr>
<tr>
<td>Radiation Therapists</td>
<td>32.7%</td>
<td>490</td>
<td>650</td>
<td>160</td>
<td>Associate degree</td>
<td>$67,848</td>
</tr>
<tr>
<td>Personal Financial Advisors</td>
<td>32.2%</td>
<td>3,170</td>
<td>4,190</td>
<td>1,020</td>
<td>Bachelor's degree</td>
<td>$74,784</td>
</tr>
<tr>
<td>Dental Hygienists</td>
<td>31.2%</td>
<td>4,170</td>
<td>5,470</td>
<td>1,300</td>
<td>Associate degree</td>
<td>$55,069</td>
</tr>
<tr>
<td>Respiratory Therapists</td>
<td>26.8%</td>
<td>1,790</td>
<td>2,270</td>
<td>480</td>
<td>Associate degree</td>
<td>$48,842</td>
</tr>
<tr>
<td>Computer Software Engineers, Systems</td>
<td>26.8%</td>
<td>2,840</td>
<td>3,600</td>
<td>760</td>
<td>Bachelor's degree</td>
<td>$74,640</td>
</tr>
<tr>
<td>Financial Analysts</td>
<td>26.6%</td>
<td>2,140</td>
<td>2,710</td>
<td>570</td>
<td>Bachelor's degree</td>
<td>$64,017</td>
</tr>
<tr>
<td>Registered Nurses</td>
<td>26.2%</td>
<td>51,130</td>
<td>64,550</td>
<td>13,420</td>
<td>Bachelor's degree</td>
<td>$57,376</td>
</tr>
<tr>
<td>Physical Therapists</td>
<td>25.1%</td>
<td>4,060</td>
<td>5,080</td>
<td>1,020</td>
<td>Master's degree</td>
<td>$64,087</td>
</tr>
<tr>
<td>Marriage and Family Therapists</td>
<td>25.0%</td>
<td>720</td>
<td>900</td>
<td>180</td>
<td>Master's degree</td>
<td>$54,128</td>
</tr>
<tr>
<td>Medical Equipment Repairers</td>
<td>24.6%</td>
<td>690</td>
<td>860</td>
<td>170</td>
<td>Associate degree</td>
<td>$46,212</td>
</tr>
<tr>
<td>Veterinarians</td>
<td>24.0%</td>
<td>1,750</td>
<td>2,170</td>
<td>420</td>
<td>First professional degree</td>
<td>$77,803</td>
</tr>
<tr>
<td>Mental Health and Abuse Social Workers</td>
<td>22.9%</td>
<td>2,230</td>
<td>2,740</td>
<td>510</td>
<td>Master's degree</td>
<td>$49,021</td>
</tr>
<tr>
<td>Engineers</td>
<td>9.0%</td>
<td>27,310</td>
<td>29,760</td>
<td>870</td>
<td>Bachelor's degree</td>
<td>$67,374</td>
</tr>
</tbody>
</table>

Source: Bureau of Labor Statistics, OEA
OCCUPATIONS MAKING TWO LISTS
FAST GROWING AND MOST OPENINGS

Fastest Growing

• Computer Software Engineers
• Financial Analysts and Advisors
• Mental Health Counselors

Most Openings

• Teachers
• Engineers
• Accountants and Auditors

Workforce Needs
OCCUPATIONS MAKING TWO LISTS
FAST GROWING AND MOST NEW JOBS

Fastest Growing

- Financial Analysts and Advisors
- Mental Health Counselors

Most New Jobs

- Nurses
- Computer Software Engineers
- Teachers
- Accountants and Auditors

Workforce Needs
OCCUPATIONS MAKING TWO LISTS
MOST OPENINGS AND MOST NEW JOBS

- Nurses
- Computer Software Engineers
- Teachers
- Auditors and Accountants
OCCUPATIONS MAKING ALL LISTS
HIGH GROWTH, MOST OPENINGS, MOST NEW JOBS

- Nurses
- Computer Software Engineers
- Teachers
- Auditors and Accountants

Fastest Growing

Most Openings

Most New Jobs
GOVERNOR DOYLE’S WORKFORCE AGENDA
Governor’s Workforce Agenda

1. Invest in people
   • Qualified workers for quality jobs
   • Address skill shortages
   • Raise wages
   • Deploy training funds strategically

2. Invest in business

3. Create competitive business climate

4. Reform regulation, make government responsive
Career Pathways

Joyce Foundation

• $1M Shifting Gears grant
• $600,500 Shifting Gears 2 grant

Lifelong Learning

• Bridge / pathways model
Governor’s Workforce Agenda

- $18,720/yr
  - H.S. Diploma
  - GED

- $18,720 – $24,960/yr
  - Associate Degree
  - Apprenticeship
  - Industry credentials

- $24,960 – $37,400/yr
  - MSSC/other industry cert
  - Journey Card
  - Occupational License
  - Bachelors +

- $37,400+/yr

K-12
Econ Disadv
Low Skilled
Dis Workers
TANF

K – 12 Tech College UW
New Worker Training Package

- Sector Strategies, $3M
- Opportunity Grants, $1.5M
- Skills Jump Start, $300,000
- Emerging Industries Skills Partnership, $700,000
  - biotechnology, biofuels, advanced manufacturing
- Manufacturing Skill Standards Certification, $85,000
- Skills Assessment & Work Readiness, $175,000
- Career 101 Pilots, $140,000
Governor’s Workforce Agenda

Sector Strategies Initiative

Government

Industry

Labor

Education

21ST CENTURY WORKFORCE WISCONSIN
Governor’s Workforce Agenda

Sector Strategies Initiative

Key partners
- Education leaders
  - UW System
  - UW Extension
  - WAICU
  - DPI
  - WTCS
- Govt, workforce, econ development, philanthropy, business & industry leaders

New approach to worker training
- Form regional, industry-led partnerships
- Identify training needs
- Align training resources to employer needs
- Ensure seamless system
- Grow economy
Governor’s Workforce Agenda

Sector Strategies Initiative

$3M grant program, targeting

- Health care / life sciences
- Information technology
- Renewable energy
- Next generation agriculture
- Advanced manufacturing
- Building & construction
Select Committee on Health Care Workforce Development

- 33 members representing DWD, DHS, DR&L, OSER, DPI, WTCS, workforce development boards, labor, WNA, WMS, WAICU, rural health, long-term care, hospitals, nursing homes & UW System:
  - Kris Andrews, Asst VP, UWS
  - Laura Dresser, Assoc Dir, COWS, UW-Madison
  - Sally Lundeen, Dean, UW-Milwaukee Nursing School
  - Katharyn May, Dean, UW-Madison Nursing School
  - Nancy Sugden, Dir, WI Area Health Education Centers; Asst Dean, UW Med School
  - Dr. Mary Zwygart-Stauffacher, Interim Dean, College of Nursing & Health Sciences, UW-Eau Claire
Select Committee
Sub-Committees & Strategies

• Workplace issues
  - recruitment
  - retention
    ▪ no lift
  - apprenticeship career path for long-term care workers

• Education capacity & clinical sites
  - Summit
    ▪ expand sites
    ▪ regional matching
  - DOL $1.3M nursing educator grant
  - WTCS/UW RN career ladder

• Wisconsin Health Care Workforce Data Collaborative
  - DWD Wisconsin Health Care Workforce Reports
  - strengthened data collection – regional & statewide
    ▪ determine employer needs through regional health alliances (demand side)
    ▪ survey workers (supply side)
  - MCOW $300,000 grant
  - state budget nursing survey
  - UW System support (handout)
AMERICAN RECOVERY & REINVESTMENT ACT
American Recovery & Reinvestment Act

Opportunities for Growth

$7.6B for Wisconsin recovery
- Create/save 70,000 jobs

Workforce programs & services
- Put people to work
- Rebuild Wisconsin
- Get the economy moving
Wisconsin workforce investments

• Dislocated worker & adult services
  - $16M dislocated worker
  - $5M adult

• Youth
  - $13.8M, 14-24 yrs old, summer employment & services

• Re-employment services
  - $7M+ connecting UI claimants to employment & training

• Vocational rehabilitation
  - $10M to serve people with disabilities

• Unemployment services
Recovery Act

Helping emerging, demand & high-growth sectors

- Energy & green jobs
- Health care
- Biotechnology / bio industry
- Advanced manufacturing
- Information technology
Recovery Act

Competitive Grants

- High growth & emerging industries ($750M, U.S.)
  - Renewable energy & energy efficiency ($500M, U.S.)
  - Health care sector ($250M, U.S.)
Role of UW System
Building the Skilled Workforce for Wisconsin’s Future

UW System key to success

- Address workforce development data in planning needs
- Address workforce development capacity needs
- Align education with regional workforce & economic development needs
- Provide well-educated workforce for tomorrow
- Provide opportunities for research, spin-offs, new careers
- Ensure seamless system for lifelong learning
Thank you
Meeting Immediate Needs: Health Care

- 45 undergraduate programs
- 52 graduate programs
- 9 new programs approved in last 3 years, such as
  - Applied Health Sciences
  - Doctor of Nursing Practice
- 3 extended locations for existing nursing programs
- Online degree completion program in nursing
- 16 articulation agreements with WTCS
Engineering

- 30 undergraduate programs
- 20 graduate programs
- 4 new programs approved in last 3 years, such as
  - Computer Engineering
  - Plastics Engineering
- 2 new locations for the UW-Platteville engineering degrees
- 5 articulation agreements with WTCS
Technology

- 20 undergraduate programs
- 7 graduate programs
- 12 new programs approved in last 3 years, such as:
  - Game Design & Development
  - Information & Communication Technologies
- 19 articulation agreements with WTCS
Teacher Education

- 59 undergraduate programs
- 52 graduate programs
- 4 new programs approved in the last 3 years, such as
  - Technology & Science Education
  - Educational Psychology
- 21 articulation agreements with WTCS
- New funding in last biennium to recruit prospective teachers in high demand fields
Degree Completion Programs

• 2 programs building directly on WTCS associate’s degrees:
  – UW-Green Bay, UW-Oshkosh
• 15 flexible bachelors’ programs aimed at returning adult students
• Adult Student Initiative
Policy Question

In this time of budgetary constraints, how do we balance core academic programs with the challenge of meeting emerging needs?
ECONOMIC DEVELOPMENT & ENTREPRENEURSHIP

Kim Kindschi

Division of Entrepreneurship and Economic Development, UW-Extension
UW System Structure

University of Wisconsin Board of Regents

University of Wisconsin System

2 Doctoral Universities (UW-Madison, UW-Milwaukee)

11 Comprehensive Universities

13 Freshman/Sophomore Colleges

UW-Extension
UW-Extension Structure

Conference Centers

Cooperative Extension
- Agriculture & Natural Resources
- Community, Natural Resources & Economic Development
- Family Living
- 4-H & Youth Development
- Wisconsin Geological & Natural History Survey
- Leadership Wisconsin

Broadcasting & Media Innovations
- Wisconsin Public Television
- Wisconsin Public Radio
- Instructional Communication Systems
- National Center for Media Engagement

Continuing Education, Outreach & E-Learning
- Continuing Education, Credit Outreach, & Distance Education at 26 UW campuses
- School for Workers
- Higher Education Location Program (HELP)

Entrepreneurship & Economic Development
- 12 Small Business Development Centers (SBDC) at the 4-year campuses, including 4 specialty centers:
  - Center for Advanced Technology & Innovation
  - Center for Innovation & Development
  - Wisconsin Business AnswerLine
  - Wisconsin Innovation Service Center Wisconsin Entrepreneurs’ Network (WEN)

Wisconsin Humanities Council
Two critical areas of focus:
  Small Business Development Centers (SBDCs)
  Wisconsin Entrepreneurs’ Network (WEN)

Services include:
  - Business counseling
  - Product engineering and design
  - Feasibility, new product and invention assessments
  - Market expansion studies
  - Grant and loan assistance
  - Management training
  - Programming
  - Entrepreneurial Training Program (ETP)
More than 1,300 entrepreneurs have participated in business planning courses since 2003.

- Over 500 have either started or expanded a business.

Eight (8) Peer-to-peer learning groups for high growth companies exist across the state.

Wisconsin Business Answer-Line provides free business consulting to more than 2,500 current and future business owners annually.

- Awarded the SBDC Service Excellence Award.
More than $7 million for research and development was awarded to WEN clients (2007-08).

**239 grant applications** approved since 2005.

Numerous clients have been placed in the top ten of the **Governor’s Business Plan contest** including Graphene Solutions (2008 winner) and Eso-Technologies (2009 winner).

Over **40 communities with Inventors & Entrepreneurs (I & E) clubs** around the state can point to new businesses, new jobs, new products and business development.
Last Impact Study (2007) indicated:

Over 1500 estimated new jobs were created

Over 2200 estimated jobs were saved/retained

In conclusion

We are increasing access and building expertise to improve the economic well-being and quality of life for a vibrant Wisconsin.
Policy Questions

• How can the UW System support a coordinated and comprehensive workforce development structure for Wisconsin?

• What is our role within the landscape of workforce development organizations and interests across the state?
DEVELOPING THE WORKFORCE OF THE FUTURE

Carl Gulbrandsen

Wisconsin Alumni Research Foundation
Developing Wisconsin’s Workforce of the Future

Economic Development through UW-Led Research and Technology Transfer

Carl Gulbrandsen
Managing Director, WARF
July 9, 2009
Positive Impact of Research of the UW System

Economy
Growth of knowledge-based economy through start-up companies and growth of mature business

Jobs
High-paying jobs in UW labs and companies

Student benefit
Competitive advantage to students for jobs and higher education

Reputation
Life-enhancing discoveries, retention of highly-skilled faculty

Higher quality
Recruitment of motivated national and international students and faculty

Public relations
Better political and public support for the UW System

UW research benefits the entire state
University Technology Transfer is Crucial for Knowledge-based Business Growth

• WARF, WiSys and UW Milwaukee Research Foundation together manage the intellectual properties of 6,500 faculty and 170,000 students.

• WARF processes 300-400 scientific discoveries per year from the UW-Madison campus, which is the main driver of the state’s technology.

• WiSys, founded by WARF in 2000 in collaboration with UW-System to manage the intellectual property of the comprehensive campuses, is a growing influence on the economic growth of the state.
Wisconsin Alumni Research Foundation (WARF)

Overview

- Established in 1925 by Professor Harry Steenbock
- 1st organization of its kind
- A tax exempt, not-for-profit corporation
- Independent Board comprised of highly successful UW alums

“Consistently among top ten universities in intellectual property production”
Wisconsin Alumni Research Foundation (WARF) Overview

• Exclusive Patent Licensing organization for the University of Wisconsin – Madison

• Maximizing research grants to the UW-Madison

• Contributed $990 million to research at the UW
WARF’s Mission is to support scientific research at the UW-Madison primarily by:

- Moving inventions arising from UW-Madison research to the marketplace, for the benefit of the UW-Madison, the inventor and society;
- Investing licensing proceeds to fund further research at UW-Madison;

“Consistently among the top license income earners – Ranked 3rd in 2004 with $47.5 million”
2003 National Medal of Technology

- Support of UW-Madison research
- Its pioneering role in the patenting and licensing of university ideas for the public good
- Its partnerships with many of the nation's leading companies
- Its work to ensure passage of the 1980 Bayh-Dole Act
WARF Home Runs

- 1925  Vitamin D by Irradiation   Steenbock
- 1952  Blood Anticoagulants      Link
- 1953  Pharmaceutical Coating Process Wurster
- 1971  Vitamin D Derivatives      DeLuca
- 1980  Digital Subtraction Angioplasty Mistretta
- 1985  MRI Imaging Techniques    Moran
- 1989  Organ Transplant Solution Belzer/Southard
- 1993  EXO-Poly Seq./Gene Therapy Wolff
- 1995  Tomotherapy                Macke
- 1997  Human Embryonic Stem Cells Thomson
- 2000  Maskless DNA Chips        Cerrina/Blattner/Sussman
- 2001  MRI TRICKS                 Mistretta
- 2003  Diffusion Barrier         Wiley
- 2005  Reverse genetic vaccines  Kawaoka
- 2006  ?????????                UW Faculty
WARF Start-up Formation

- 4 -12 start-ups formed annually over the last 9 fiscal years
- Average of 7 start-ups per year
Current WARF Start-up Portfolio

56 Active Start-up Licensees

- Therapeutics: 15
- High Tech: 13
- Tools: 10
- Biotech: 8
- Stem Cell: 5
- Medical Devices: 4
- Clean Tech: 1

Sponsors: TomoTherapy, NimbleGen, StrataTECH
WiSys Mission

- Support research at the UW System through patenting and licensing
- Returning the proceeds to fund further developments

Subsidiary of WARF
WiSys 4 year campuses

~400 faculty members with technical expertise, capable of developing IP
Encouraging Entrepreneurship: Start-Up Companies Based on WiSys Technologies

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NovaScan LLC, Milwaukee</td>
<td>Milwaukee</td>
<td>Non-invasive cancer screens</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Positive early human trials results</td>
</tr>
<tr>
<td>Mycophyte Discovery LLC, La Crosse</td>
<td>La Crosse</td>
<td>Therapeutic compounds from native plants</td>
</tr>
<tr>
<td>Graphene Solutions LLC, Platteville</td>
<td>Platteville</td>
<td>Breakthrough technology in nanomaterials, poised to become a leader in</td>
</tr>
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<td>emerging nanotechnology</td>
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<td>Oshkosh Nanotechnology LLC, Oshkosh</td>
<td>Oshkosh</td>
<td>Nanophosphors for solid state lighting</td>
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<td>In final round of 2009 WI Governors Business Plan</td>
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Emerging Technology Research Centers: Comprehensives are Moving Ahead with Focused Research

- **UW-River Falls Tissue and Cellular Innovation Center**
  - Opened: 3-9-2009

- **UW-Stout Discovery Center**
  - Opened: 7-1-2009

- **UW-Stevens Point Wisconsin Institute of Sustainable Technologies**
  - Planned for 2009

- **UW-Whitewater Game & Interactive Media Center**
  - Planned for 2010

Centers Opened; Centers Planned for 2009-10
Wisconsin Institutes for Discovery
Project Basis

Promise of the Project

Program

Site

Funding Partnership

State of Wisconsin

WARF

The Morgridges
A 150 million dollar public-private partnership to keep Wisconsin as a leader in life enhancing technology development.

- Inter-disciplinary research
- National and international alliances
- Science education programs for K-12 students and teachers
- Distance-learning services to UW System campuses
Further ideas on job and economic growth will come from the work of “Research to Jobs” taskforce appointed by Dr. Kevin Reilly
Expert committee represents broad sectors of education and business. The taskforce’s focus includes:

- Job creation through start-ups or growth of mature businesses
- Job creation through increasing research within system schools
- Industry sponsored research as well as government sponsored research
- Effective ways to communicate the role of UW research to the public and industry

Recommendations must be:

- Practical and implementable in the near future
- Applicable to all UW institutions
- Quantifiable with benchmarks
- Roles of UW, industry and government to be defined
Salient Points of Taskforce Work

• Extensive discussions with business, educational and community leaders

• Review of nationally acclaimed model systems for job creation and business growth
  - Review process will continue until final report is completed

• Identification of hurdles and potential solutions

• Special attention to cost effectiveness of recommendations

• Recommendations with state-wide implications

Full report to Regents planned for September 2009
• UW-led research will be critical for job creation and the economic growth of the state.

• Research at the university results in high-paying jobs, both at the university and at private companies.

• Wisconsin Institute for Discovery, the Morgridge Institute for Research, the UW-Madison campus, and the Emerging Technology Centers of the comprehensives are all organizations that successfully promote the UW System’s mission on education and economic growth.
Policy Questions

• How might we develop the resources necessary to support the research to jobs pipeline?

• How does workforce development relate to the unique mission of the UW System?

• How do we expand the statewide approach to workforce development to be more inclusive of the UW System’s contributions?