Background Information &
Key Questions for Group Discussion
Higher Education Roundtable

Bismarck, North Dakota
October 8, 2008

National Center for Higher Education Management Systems
3035 Center Green Drive, Suite 150
Boulder, Colorado 80301
EDUCATION ATTAINMENT
Percent of Adults with an Associate Degree or Higher by Age Group - U.S. & Leading OECD Countries, 2006

Source: OECD, Education at a Glance 2008
Educational Attainment and Rank Among States, North Dakota, 2005

- **Age 18-24 with HS Diploma**: 88.1%, 2nd place
- **Age 25-64 with HS Diploma**: 94.1%, 1st place
- **Age 25-64 with Associate Degree**: 13.2%, 1st place
- **Age 25-64 with Bachelor's or Higher**: 29.2%, 19th place
- **Age 25-64 with Graduate/Prof. Degree**: 7.6%, 43rd place

Source: U.S. Census Bureau, 2005 ACS
Projected Change in North Dakota Population by Age and Race/Ethnicity, 2005-25

Source: U.S. Census Bureau
North Dakota Projected High School Graduates
By Race, 2005-22

Source: WICHE High School Graduate Projections; *Knocking at the College Door* 2008
Percent Educational Attainment of Population Age 25-64
By Race/Ethnicity—North Dakota, 2005

Source: U.S. Census Bureau, 2005 ACS PUMS File
Percent of Residents Age 25-64 with at Least an Associate Degree, 2000

Source: U.S. Census Bureau
Discussion Topic: Education Attainment

• Key Questions

1. Is a working age population educated to the level of best in the world appropriate for North Dakota?

2. Where should efforts at improvement be focused?
   • Particular levels
     - Associate or Certificate?
     - Baccalaureate?
     - Other?
   • Particular subpopulation?
     - Native American/Hispanic?
     - Rural?
     - Adults (e.g., 25-44)?
     - Other

3. Most important actions would be________?

4. What specific steps should be taken by:
   • Legislative Assembly
   • State Board of Higher Education
   • Executive Branch
   • Private Sector
Total Headcount Enrollment (NDUS) as a Percent of Population Age 18-24, 2006

Source: North Dakota University System (NDUS); U.S. Census Bureau Population Estimates
North Dakota Counties for Which 2-Year Institutions (NDUS) Are the Primary Institutions, Fall 2006

Source: NDUS
Discussion Topic: Accessibility

• Key Questions
  1. Higher Education would be considered accessible if___________?
  2. The biggest barrier to accessibility is:
     • Geographic?
     • Programmatic?
     • Economic/Financial?
     • Time?
  3. Most important action would be_________?
  4. What specific steps should be taken by:
     • Legislative Assembly
     • State Board of Higher Education
     • Executive Branch
     • Private Sector
Contributions to Economic Development
Per Capita Personal Income as a Percent of U.S. Average—North Dakota, 1960-2005

Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce
Per Capita Personal Income, 2005

Source: Bureau of Economic Analysis
Median Earnings by Degree Level, 2005

Note: Data represent persons age 25-64 with positive earnings working 35+ hours per week.
Source: U.S. Census Bureau, 2005 PUMS
## North Dakota Strengths
### (Top 10 Rankings)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>High School Completion</td>
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<tr>
<td>1</td>
<td>Affordable Urban Housing</td>
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<td>1</td>
<td>Involuntary Part-Time Employment</td>
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<td>1</td>
<td>Highway Performance</td>
</tr>
<tr>
<td>1</td>
<td>Air Pollution</td>
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<td>1</td>
<td>Crime Rate</td>
</tr>
<tr>
<td>2</td>
<td>Unemployment Rate</td>
</tr>
<tr>
<td>2</td>
<td>Graduate Students in Science and Engineering</td>
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<tr>
<td>2</td>
<td>Change in Average Annual Pay</td>
</tr>
<tr>
<td>3</td>
<td>Academic Research and Development</td>
</tr>
<tr>
<td>3</td>
<td>Change in High School Attainment</td>
</tr>
<tr>
<td>4</td>
<td>Change in Poverty Rate</td>
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<td>4</td>
<td>Voting Rate</td>
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<td>4</td>
<td>Income Distribution</td>
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<tr>
<td>4</td>
<td>PhD Scientists and Engineers</td>
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<tr>
<td>5</td>
<td>Loans to Small Businesses</td>
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<td>5</td>
<td>Five Year Change in New Companies</td>
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<td>5</td>
<td>Change in Private Research and Development</td>
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<tr>
<td>7</td>
<td>Income Distribution Change</td>
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<td>7</td>
<td>Average Annual Pay Growth</td>
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<tr>
<td>8</td>
<td>Teen Pregnancy</td>
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<td>8</td>
<td>Conversion of Cropland to Other Uses</td>
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<td>8</td>
<td>Energy Costs</td>
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</tbody>
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## North Dakota Weaknesses
### (Bottom 10 Rankings)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Measure</th>
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</thead>
<tbody>
<tr>
<td>42</td>
<td>Change in Health Professional Shortage Areas</td>
</tr>
<tr>
<td>43</td>
<td>Employment Growth: Long Term</td>
</tr>
<tr>
<td>43</td>
<td>Job Creation by Start-Up Businesses</td>
</tr>
<tr>
<td>43</td>
<td>Net Migration</td>
</tr>
<tr>
<td>44</td>
<td>Health Professional Shortage Areas</td>
</tr>
<tr>
<td>44</td>
<td>Business Created Via University R&amp;D</td>
</tr>
<tr>
<td>44</td>
<td>Change in Business Closings</td>
</tr>
<tr>
<td>45</td>
<td>Disparity between Rural and Urban Areas</td>
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<td>45</td>
<td>Strength of Traded Sector</td>
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<tr>
<td>46</td>
<td>SBIC Financing</td>
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<tr>
<td>47</td>
<td>Broadband Access</td>
</tr>
<tr>
<td>47</td>
<td>Change in Toxic Release Inventory</td>
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<tr>
<td>47</td>
<td>Average Annual Pay</td>
</tr>
<tr>
<td>47</td>
<td>Per Capita Energy Consumption</td>
</tr>
<tr>
<td>47</td>
<td>Venture Capital Investments</td>
</tr>
<tr>
<td>47</td>
<td>Change in Homeownership Rate</td>
</tr>
<tr>
<td>49</td>
<td>Charitable Giving</td>
</tr>
<tr>
<td>49</td>
<td>Greenhouse Gas Emissions</td>
</tr>
</tbody>
</table>

Source: Development Report Card for the States, CFED
North Dakota Rank—Federal Research and Expenditures, 2005

(Values in Thousands of $)

- **Total**: 78,337 (46th)
- **Medical Science**: 11,587 (44th)
- **Life Science**: 25,436 (46th)
- **Computer/Math Science**: 969 (46th)
- **Physical Science**: 12,801 (36th)
- **Engineering**: 23,774 (34th)

Source: National Science Foundation
Discussion Topic: Contribution to Economic Development

Key Questions

1. The most important contribution to higher education could make to economic development in North Dakota is__________?

2. Where is the biggest gap between state needs and higher education’s current contribution:
   - Research?
   - Developing Entrepreneurs?
   - Training a workforce?
   - Helping parts of the state with greatest need?

3. Most important action would be__________?

4. What specific steps should be taken by:
   - Legislative Assembly
   - State Board of Higher Education
   - Executive Branch
   - Private Sector
MEETING WORKFORCE NEEDS
North Dakota Change in Total Population
By County, 2005-2030

Change in State Population = 11,091

Source: North Dakota State Data Center
Percent of Civilians Age 25-64 Participating in the Workforce by Education Attainment, 2005

<table>
<thead>
<tr>
<th>Education Attainment</th>
<th>United States</th>
<th>North Dakota</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than High School</td>
<td>63.0</td>
<td>78.7</td>
</tr>
<tr>
<td>High School</td>
<td>75.3</td>
<td>81.3</td>
</tr>
<tr>
<td>Some College</td>
<td>79.0</td>
<td>85.5</td>
</tr>
<tr>
<td>Associate Degree</td>
<td>82.6</td>
<td>87.0</td>
</tr>
<tr>
<td>Bachelor’s Degree</td>
<td>83.5</td>
<td>89.2</td>
</tr>
<tr>
<td>Graduate/Prof. Degree</td>
<td>86.1</td>
<td>89.2</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, 2005 American Community Survey PUMS File
Net Migration by Degree Level and Age Group, North Dakota

22- to 29-Year-Olds

- Less than High School: -9,590
- High School: -5,812
- Some College: -1,091
- Associate: -1,158
- Bachelor’s: -902
- Graduate/Professional: -298

30- to 64-Year-Olds

- Less than High School: 205
- High School: -1,443
- Some College: -2,374
- Associate: -2,26
- Bachelor’s: -2,398
- Graduate/Professional: -2,543
- Total: -8,779

Source: U.S. Census Bureau, 2000 Census; 5% PUMS Files
Annual Demand and Awards Produced in Key Occupational Fields

- Teachers, Elem. & Secondary (Bachelor's)
  - Annual Demand: 230
  - Annual Awards: 613
- Engineering (Bachelor's)
  - Annual Demand: 10
  - Annual Awards: 391
- Nursing, Registered (Bachelor's)
  - Annual Demand: 280
  - Annual Awards: 302
- Engineering Tech (Certificates, Associates)
  - Annual Demand: 40
  - Annual Awards: 286
- Computer Science (Bachelor's)
  - Annual Demand: 140
  - Annual Awards: 174
- Nursing, LPN & LVN (Certificates, Associates)
  - Annual Demand: 70
  - Annual Awards: 141
- Computer Science (Certificates, Associates)
  - Annual Demand: 30
  - Annual Awards: 107

* Annual average 2003-05

Source: State Employment Projections 2004-14; NCES, IPEDS 2003-05 Completions File
Difference in Median Earnings Between a High School Diploma and an Associate Degree, 2005

Source: U.S. Census Bureau, 2005 ACS PUMS File
Difference in Median Earnings Between a High School Diploma and a Bachelor’s Degree, 2005

Source: U.S. Census Bureau, 2005 ACS PUMS File
Discussion Topic: Meeting Workforce Needs

• Key Questions
  1. The North Dakota University System would be viewed as being responsive to employers’ workforce needs if__________?
  2. What are the workforce requirements versus what the North Dakota University System is providing?
     • Right programs but too few graduates (or too little student interest)?
     • Programs missing in key areas (types of programs or geographic areas)?
     • Key skills missing?
  3. Most important action would be________?
  4. What specific steps should be taken by:
     • Legislative Assembly
     • State Board of Higher Education
     • Executive Branch
     • Private Sector