Escalating Engagement: Connecting Higher Education & Workforce Needs

A Project Funded by the Ford Foundation
September 30, 2008
Renton, Washington
Population Projections—Percent Change, 2000-25

Source: U.S. Census Bureau
Projected Change in Washington Population by Age & Race/Ethnicity, 2005-25 (in Thousands)

- White
- African American
- Hispanic
- Asian
- Other

Source: U.S. Census Bureau
Racial/Ethnic Composition of Public High School Graduates in Washington

Source: WICHE, *Knocking at the College Door*
Differences in College Attainment (Associate & Higher) Between Younger & Older Adults—U.S. & OECD Countries, 2006

Differences in College Attainment (Associate & Higher) Between Younger & Older Adults—U.S., 2006

Source: U.S. Census Bureau, 2006 American Community Survey (ACS)
Percent of Adults with an Associate Degree or Higher by Age Group—Washington, U.S. & Leading OECD Countries

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Washington, U.S.</th>
<th>Leading OECD Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-34</td>
<td>54.8</td>
<td>54.1</td>
</tr>
<tr>
<td>35-44</td>
<td>43.6</td>
<td>42.2</td>
</tr>
<tr>
<td>45-54</td>
<td>41.9</td>
<td>41.5</td>
</tr>
<tr>
<td>55-64</td>
<td>41.4</td>
<td>40.8</td>
</tr>
</tbody>
</table>

Source: OECD, *Education at a Glance 2008*
Percent of Population Age 25-64 with an Associate Degree or Higher, 2006

Source: U.S. Census Bureau, 2006 ACS
Educational Attainment of Population Age 25-64, 2005

Source: U.S. Census Bureau, 2005 ACS Public Use Microdata Samples (PUMS)
Percent Educational Attainment of Population Age 25-64
By Race/Ethnicity—Washington, 2005

- White Non-Hispanic
- Black Non-Hispanic
- Hispanic
- Asian/Pacific Islander
- American Indian/Alaska Native
- Other Non-Hispanic

Source: U.S. Census Bureau, 2005 ACS PUMS
Percent of Population Age 25-64 with No High School Diploma, 2006—PUMAs

Washington = 9.7%

Source: U.S. Census Bureau, 2006 ACS
Percent of Population Age 25-64 with No High School Diploma, 2006 – High and Low PUMAs

Source: U.S. Census Bureau, 2006 ACS
Percent of Population Age 25-64 with an Associate Degree or Higher, 2006—PUMAs

- 49.1 to 77.0
- 40.3 to 49.1
- 33.9 to 40.3
- 17.1 to 33.9

Washington = 42.3%

Source: U.S. Census Bureau, 2006 ACS
Percent of Population Age 25-64 with an Associate Degree or Higher, 2006 – High and Low PUMAs

Source: U.S. Census Bureau, 2006 ACS
Difference in High School Attainment Between Whites and Minorities, * 2006

* Minorities include African-American, Hispanic, and Native American

Source: U.S. Census Bureau, 2006 ACS PUMS
Difference in College Attainment Between Whites and Minorities, * 2006

* Minorities include African-American, Hispanic, and Native American

Source: U.S. Census Bureau, 2006 ACS (PUMS)
Per Capita Personal Income as a Percent of U.S. Average - Washington, 1960-2005

Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Dept. of Commerce
Personal Income per Capita, 2006—PUMAs

Washington = $27,346
Source: U.S. Census Bureau, 2006 ACS
Personal Income per Capita, 2006 – High and Low PUMAs

Source: U.S. Census Bureau, 2006 ACS
Median Earnings of Population Age 25-64 by Level of Education, 2005

Source: U.S. Census Bureau, ACS
Difference in Median Earnings Between a High School Diploma and a Bachelor’s Degree, 2006 - PUMAs

Washington = $19,696

Source: U.S. Census Bureau, 2006 ACS
THE EDUCATION PIPELINE
Public High School Graduation Rate - Percent of 9th Graders Graduating Four Years Later by State (2006)

Source: National Center for Education Statistics, Common Core Data
College-Going Rates—First-Time Freshmen Directly Out of High School as a Percent of Recent High School Graduates, 2004

Source: Tom Mortenson, Postsecondary Opportunity (2004 data update 02-06-07)
Washington Net Migration of First-time College Students by Sector (Fall 2006)

-1,861 Public 4 Year
-808 Private 4 Year For Profit
-693 Private 4 Year Non Profit
-428 Public 2 Year
-103 Private 2 Year For Profit
-640 Private 2 Year Non Profit
-4 Public Less than 2 Year
5 Private Less than 2 Year For Profit
117 Private Less than 2 Year Non Profit

Source: NCHEMS NCES IPEDS Enrollment Survey, Part C, Fall 2006
## Top Out-of-State Institutions Washington Residents Attend, Fall 2006

<table>
<thead>
<tr>
<th>Institution</th>
<th>State</th>
<th>First-Time Freshmen</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Idaho</td>
<td>Idaho</td>
<td>309</td>
</tr>
<tr>
<td>Brigham Young University</td>
<td>Utah</td>
<td>262</td>
</tr>
<tr>
<td>University of Phoenix-Online Campus</td>
<td>Arizona</td>
<td>249</td>
</tr>
<tr>
<td>Apollo College-Portland Inc</td>
<td>Oregon</td>
<td>240</td>
</tr>
<tr>
<td>University of Portland</td>
<td>Oregon</td>
<td>198</td>
</tr>
<tr>
<td>Brigham Young University-Idaho</td>
<td>Idaho</td>
<td>180</td>
</tr>
<tr>
<td>University of Oregon</td>
<td>Oregon</td>
<td>157</td>
</tr>
<tr>
<td>American Intercontinental University Online</td>
<td>Illinois</td>
<td>151</td>
</tr>
<tr>
<td>Arizona State University- Tempe Campus</td>
<td>Arizona</td>
<td>132</td>
</tr>
<tr>
<td>Montana State University-Bozeman</td>
<td>Montana</td>
<td>129</td>
</tr>
<tr>
<td>The University of Montana</td>
<td>Montana</td>
<td>129</td>
</tr>
<tr>
<td>Western International University</td>
<td>Arizona</td>
<td>128</td>
</tr>
<tr>
<td>Mt Hood Community College</td>
<td>Oregon</td>
<td>128</td>
</tr>
<tr>
<td>Santa Clara University</td>
<td>California</td>
<td>110</td>
</tr>
<tr>
<td>University of Arizona</td>
<td>Arizona</td>
<td>103</td>
</tr>
<tr>
<td>Oregon State University</td>
<td>Oregon</td>
<td>101</td>
</tr>
<tr>
<td>Linfield College</td>
<td>Oregon</td>
<td>98</td>
</tr>
<tr>
<td>Willamette University</td>
<td>Oregon</td>
<td>89</td>
</tr>
<tr>
<td>University of Southern California</td>
<td>California</td>
<td>85</td>
</tr>
<tr>
<td>Wyoming Tech</td>
<td>Wyoming</td>
<td>83</td>
</tr>
<tr>
<td>George Fox University</td>
<td>Oregon</td>
<td>73</td>
</tr>
<tr>
<td>Portland State University</td>
<td>Oregon</td>
<td>72</td>
</tr>
<tr>
<td>Boise State University</td>
<td>Idaho</td>
<td>68</td>
</tr>
<tr>
<td>Central Texas College</td>
<td>Texas</td>
<td>66</td>
</tr>
<tr>
<td>Portland Community College</td>
<td>Oregon</td>
<td>65</td>
</tr>
<tr>
<td>Colorado Technical University Online</td>
<td>Colorado</td>
<td>65</td>
</tr>
<tr>
<td>Northwest Nazarene University</td>
<td>Idaho</td>
<td>63</td>
</tr>
<tr>
<td>North Idaho College</td>
<td>Idaho</td>
<td>61</td>
</tr>
<tr>
<td>Stanford University</td>
<td>California</td>
<td>60</td>
</tr>
</tbody>
</table>

Source: NCHEMS NCES IPEDS Enrollment Survey, Part C, Fall 2006
College Participation Rates by State for Students from Low-Income Families, 2006

Source: Postsecondary Education Opportunity #188, February 2008
Change in College Participation Rates for Students from Low-Income Families by State, 1999-2006

Source: Postsecondary Education Opportunity #188, February 2008
Associate Degrees Awarded per 100 High School Graduates Three Years Earlier, 2004

Source: NCES-IPEDS Completions Survey, WICHE
Three-Year Graduation Rates at Two-Year Colleges, 2005 (Percent)

Source: NCES, IPEDS Graduation Rate Survey
Bachelor’s Degrees Awarded per 100 High School Graduates

Six Years Earlier, 2004

Source: NCES-IPEDS Completions Survey, WICHE
Six-Year Graduation Rates at Four-Year Colleges, 2005 (Percent)

Source: NCES, IPEDS Graduation Rate Survey
The Goal: Washington Reaching International Competitiveness by 2025

55% of Population Age 25-64 with College Degrees
### Reaching Top Performance by 2025 (55%) – Washington

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,254,808</td>
<td>Number of Individuals to Match Best-Performing Countries (55%)</td>
</tr>
<tr>
<td>739,976</td>
<td>Number of Individuals (Age 25-44) Who Already Have Degrees</td>
</tr>
<tr>
<td>1,514,832</td>
<td>Additional Production Needed (2005 to 2025)</td>
</tr>
<tr>
<td>889,114</td>
<td>Degrees Produced at Current Annual Rate of Production</td>
</tr>
<tr>
<td>342,848</td>
<td>Additional Residents with College Degrees from Net Migration</td>
</tr>
<tr>
<td>282,870</td>
<td>Additional Degrees Needed</td>
</tr>
<tr>
<td>14,144</td>
<td>Additional Degrees Needed per Year (Currently Produce 47,803 in All Sectors)</td>
</tr>
<tr>
<td>33.8%</td>
<td>Increase in Annual Associate and Bachelor’s Degree Production Needed (in Public Sector Only)</td>
</tr>
</tbody>
</table>
Collective Cost to Washington, Assuming Tuition Stays the Same

$388 Million = Annual Costs of Additional Students at Current $ per Student

$1.5 Billion = Current State Contribution

26% = Percent Increase in Annual State Support Needed
Average Cost to Students, Assuming No Additional State Investment

$ 1,776 = Additional Annual Costs to Students at Public Four-Year Institutions

27% Increase in Tuition & Fees
(Currently $6,538)

$ 1,107 = Additional Annual Costs to Students at Public Two-Year Institutions

52% Increase in Tuition & Fees
(Currently $2,114)
Educational Attainment in Washington (%)

Current, in 2025 with Current Degree Production, and Best-Performing Countries in 2025

- Current % of Adults Age 25-64 with College Degrees, 2005: 41.7%
- Projected % in 2025 with Current Annual Degree Production: 39.7%
- Projected % in 2025 with Current Annual Degree Production and Net Migration: 48.1%
- % Needed to Reach Best-Performing Countries by 2025: 55.0%
How Can Washington Reach International Competitiveness?

Current Degree Production Combined with Population Growth and Migration, and Improved Performance on Student Pipeline Measures

- Degrees Produced 2005-25 with Current Rate of Production: 889,114
- Additional Degrees from Population Growth: 119,509
- Additional Degrees from Net Migration of College-Educated Residents: 342,848
- Reaching Best Performance in High School Graduation Rates by 2025: 19,690
- Reaching Best Performance in College-Going Rates by 2025: 99,710
- Reaching Best Performance in Rates of Degree Production per FTE Student: 83,121
- Total Degrees Produced 2005-25 if All of the Above: 1,553,992
- Degrees Needed to Meet Best Performance (55%): 1,514,832

Source: 2005 ACS, PUMS
Savings if Washington Reaches Top Performance in Degree Production

**Performance:** Undergraduate Degrees Awarded Per 100 Full-Time Equivalent Students

Reduced costs to Washington would be **$285 million** by improving efficiency of degree production to level of top states.

<table>
<thead>
<tr>
<th></th>
<th>Washington</th>
<th>Top States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Two-Year</td>
<td>15.7</td>
<td>22.4</td>
</tr>
<tr>
<td>Public Four-Year</td>
<td>22.4</td>
<td>24.7</td>
</tr>
</tbody>
</table>

Additional Costs Needed to Meet Benchmark (In $ Millions)

<table>
<thead>
<tr>
<th></th>
<th>Cost to State Status Quo</th>
<th>Cost to State Best Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Two-Year</td>
<td>1,503</td>
<td>1,277</td>
</tr>
<tr>
<td>Public Four-Year</td>
<td>388</td>
<td>329</td>
</tr>
</tbody>
</table>

*Additional Costs Needed to Meet Benchmark: Current Budget Costs and Degree Production*
WORKFORCE & THE ECONOMY
Percent of Civilian Population Age 25-64 Participating in the Workforce, 2005

North Dakota > Minnesota > South Dakota > Iowa

Vermont > Nebraska > Wyoming > Wisconsin

Kansas > Colorado > Connecticut > Rhode Island

Alaska > Delaware > New Jersey

Illinois > Utah > Virginia

Maine > Hawaii > Nevada

Missouri > Indiana > Missouri

Delaware > Ohio

Washington > United States

New York > California

Arizona > South Carolina

Michigan > New Mexico

New Mexico > Tennessee

Louisiana > Mississippi

Source: U.S. Bureau of Labor Statistics
Percent of Civilians Age 25-64 Not in the Workforce, 2006
listed by Education Attainment

<table>
<thead>
<tr>
<th>Education Attainment</th>
<th>Washington</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than High School</td>
<td>35.9</td>
<td>39.2</td>
</tr>
<tr>
<td>High School Graduate</td>
<td>25.1</td>
<td>25.1</td>
</tr>
<tr>
<td>Some College, No Degree</td>
<td>23.4</td>
<td>20.9</td>
</tr>
<tr>
<td>Associates Degree</td>
<td>18.5</td>
<td>16.9</td>
</tr>
<tr>
<td>Bachelors Degree</td>
<td>17.3</td>
<td>15.7</td>
</tr>
<tr>
<td>Graduate or Professional Degree</td>
<td>15.1</td>
<td>13.6</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, 2006 ACS PUMS
Washington Net Migration of Residents Age 22-64 by Level of Education, 2005-06

- Less than High School: 5,758
- High School: 7,919
- Some College: 8,124
- Associate: 6,297
- Bachelor's: 25,995
- Graduate/Professional: 14,840
- Total: 68,933

Source: 2006 ACS (PUMS)
Percent of Residents Age 25-64 with an Associate Degree Born In-State, 2005

Source: 2005 ACS
Percent of Residents Age 25-64 with a Bachelor’s Degree or Higher Born In-State, 2005

Source: 2005 ACS
Percent of Total Gross State Product by Industry and Comparison to U.S.

Source: Bureau of Labor Statistics
Percent Change in Gross State Product, 1997-2007

Source: Bureau of Economic Analysis, U.S. Department of Commerce
Change in Gross State Product, 1997-2004

Source: Bureau of Economic Analysis
Gross Domestic Product – Percent Change
1997-2007

Source: Bureau of Economic Analysis, U.S. Department of Commerce

#### Washington Strengths

**Top 10 Rankings**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Technology Industry Employment</td>
</tr>
<tr>
<td>1</td>
<td>Employment Growth: Short Term</td>
</tr>
<tr>
<td>2</td>
<td>Change in Renewable Energy</td>
</tr>
<tr>
<td>2</td>
<td>New Companies</td>
</tr>
<tr>
<td>3</td>
<td>Renewable Energy</td>
</tr>
<tr>
<td>3</td>
<td>Venture Capital Investments</td>
</tr>
<tr>
<td>4</td>
<td>Households with Computers</td>
</tr>
<tr>
<td>4</td>
<td>Urban Mass Transit</td>
</tr>
<tr>
<td>4</td>
<td>Private Research &amp; Development</td>
</tr>
<tr>
<td>5</td>
<td>Energy Costs</td>
</tr>
<tr>
<td>9</td>
<td>Change in Basic Educational Skills Proficiency – Math</td>
</tr>
<tr>
<td>9</td>
<td>Heart Disease</td>
</tr>
<tr>
<td>9</td>
<td>Employment Growth: Long Term</td>
</tr>
<tr>
<td>9</td>
<td>Toxic Release Inventory</td>
</tr>
<tr>
<td>10</td>
<td>Average Annual Pay</td>
</tr>
<tr>
<td>10</td>
<td>Vehicle Miles Traveled</td>
</tr>
<tr>
<td>10</td>
<td>Royalties and Licenses</td>
</tr>
<tr>
<td>10</td>
<td>Greenhouse Gas Emissions</td>
</tr>
<tr>
<td>10</td>
<td>Basic Educational Skills Proficiency – Math</td>
</tr>
<tr>
<td>10</td>
<td>PhD Scientists and Engineers</td>
</tr>
<tr>
<td>10</td>
<td>Strength of Traded Sector</td>
</tr>
</tbody>
</table>

#### Washington Weaknesses

**Bottom 10 Rankings**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>43</td>
<td>Homeownership Rate</td>
</tr>
<tr>
<td>43</td>
<td>Unemployment Rate</td>
</tr>
<tr>
<td>44</td>
<td>Average Annual pay Growth</td>
</tr>
<tr>
<td>44</td>
<td>Graduate Students in Science and Engineering</td>
</tr>
<tr>
<td>45</td>
<td>Involuntary Part-Time Employment</td>
</tr>
<tr>
<td>45</td>
<td>Crime Rate</td>
</tr>
<tr>
<td>47</td>
<td>Change in Poverty Rate</td>
</tr>
<tr>
<td>47</td>
<td>Change in Venture Capital Investments</td>
</tr>
<tr>
<td>47</td>
<td>Change in Uninsured Low Income Children</td>
</tr>
<tr>
<td>47</td>
<td>Five Year Change in New Companies</td>
</tr>
<tr>
<td>48</td>
<td>Manufacturing Investment</td>
</tr>
<tr>
<td>48</td>
<td>Change in New Companies</td>
</tr>
<tr>
<td>48</td>
<td>Job Creation by Start-up Businesses</td>
</tr>
<tr>
<td>49</td>
<td>Change in High School Attainment</td>
</tr>
<tr>
<td>49</td>
<td>Change in Energy Costs</td>
</tr>
<tr>
<td>50</td>
<td>Change in Average Annual Pay</td>
</tr>
<tr>
<td>50</td>
<td>Business Closings</td>
</tr>
</tbody>
</table>

Source: 2006 Development Report Card for the States, CFED
Overall State Scores on Measures of Innovation Assets, 2004

Source: Development Report Card for the States, CFED
Employment in High-Technology Establishments as Share of Total Employment by State, 2004

Percent Employment in Management and Professional Occupations, 2006 - PUMAs

Washington = 36.7%
Source: U.S. Census Bureau, 2006 ACS
Federal Research & Expenditures
Washington, 2006

- Engineering: Rank 16
- Physical Science: Rank 19
- Math & Computer Science: Rank 32
- Life Science: Rank 12
- Medical Science: Rank 10
- Total: Rank 13

Source: National Science Foundation
Federal Research & Expenditures per Capita
Washington, 2006

- Engineering: Rank 24
- Physical Science: Rank 24
- Math & Computer Science: Rank 42
- Life Science: Rank 10
- Medical Science: Rank 7
- Total: Rank 16

Source: National Science Foundation
Projected Percent Change in Occupations Requiring Some Postsecondary Training, 2002-2012

Note: Some college, Associate, Bachelor’s and higher.
Source: ACINet, Career InfoNet
Occupations with Most Average Annual Openings, from 2004-2014, No Post-secondary Education Required, Washington

Cashiers, except gaming
Retail salespersons
Combined food preparation and serving workers, including fast food
Waiters and waitresses
Office clerks, general
Laborers and freight, stock, and material movers, hand
Janitors and cleaners, except maids and housekeeping cleaners
Stock clerks and order fillers
Bookkeeping, accounting, and auditing clerks
Carpenters
Counter attendants, cafeteria, food concession, and coffee shop
Customer service representatives
Teacher assistants
Truck drivers, heavy and tractor-trailer
Child care workers
Sales reps, wholesale/manufacturing, except tech & scientific products
Landscaping and groundskeeping workers
First-line supervisors/managers of retail sales workers
First-line supervisors/managers, office & admin support workers
Secretaries, except legal, medical, and executive
Receptionists and information clerks
Cooks, restaurant
Maintenance and repair workers, general
Personal and home care aides
Counter and rental clerks

Source: ACINET
Occupations with Most Average Annual Openings, from 2004 to 2014 - Some College or Associate Degree Required

- Registered nurses: 2,010
- Nursing aides, orderlies, and attendants: 750
- Computer support specialists: 610
- Hairdressers, hairstylists, and cosmetologists: 520
- Automotive service technicians and mechanics: 500
- Licensed practical and licensed vocational nurses: 410
- Gaming dealers: 330
- Welders, cutters, solderers, and brazers: 310
- Bus and truck mechanics and diesel engine specialists: 280
- Real estate sales agents: 270
- Aircraft mechanics and service technicians: 240
- Fitness trainers and aerobics instructors: 220
- Massage therapists: 200
- Preschool teachers, except special education: 200
- Travel agents: 190
- Legal secretaries: 180
- Medical records and health information technicians: 180
- Dental hygienists: 150
- Radiologic technologists and technicians: 150
- Library technicians: 140
- Architectural and civil drafters: 130
- Medical and clinical laboratory technicians: 130
- Barbers: 110
- Civil engineering technicians: 110
- Electrical and electronic engineering technicians: 110

Source: ACINET
Occupations with Most Average Annual Openings, from 2004 to 2014 - Bachelor’s Degree or Higher Required

- Postsecondary teachers: 1,270
- Elementary school teachers, except special education: 980
- Computer software engineers, applications: 970
- Accountants and auditors: 760
- Computer programmers: 650
- Secondary school teachers, except special and voc. ed.: 630
- General and operations managers: 610
- Computer software engineers, systems software: 570
- Middle school teachers, except special and vocational education: 560
- Civil engineers: 540
- Aerospace engineers: 480
- Management analysts: 460
- Market research analysts: 460
- Rehabilitation counselors: 440
- Computer systems analysts: 430
- Lawyers: 380
- Construction managers: 300
- Network and computer systems administrators: 270
- Financial managers: 240
- Cost estimators: 240
- Mechanical engineers: 240
- Network systems and data communications analysts: 240
- Loan officers: 230
- Computer and information systems managers: 220
- Multi-media artists and animators: 220

Source: ACINET
Washington Supply Gap in High Demand Occupations
(Average Annual Openings Less Average Annual Postsecondary Awards)

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Demand Exceeds Supply</th>
<th>Supply Exceeds Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Programmers and Software Engineers</td>
<td>1,868</td>
<td></td>
</tr>
<tr>
<td>Network and Computer Systems Administrators and Analysts</td>
<td>832</td>
<td></td>
</tr>
<tr>
<td>Rehabilitation Counselors</td>
<td>450</td>
<td></td>
</tr>
<tr>
<td>Adult Literacy, Remedial, and GED Teachers</td>
<td>431</td>
<td></td>
</tr>
<tr>
<td>Business Operations Specialists, All Other</td>
<td>403</td>
<td></td>
</tr>
<tr>
<td>Civil Engineers</td>
<td>356</td>
<td></td>
</tr>
<tr>
<td>Aerospace Engineers</td>
<td>343</td>
<td></td>
</tr>
<tr>
<td>Computer Support Specialists</td>
<td>319</td>
<td></td>
</tr>
<tr>
<td>Adult Literacy, Remedial, and GED Teachers</td>
<td>-24</td>
<td></td>
</tr>
<tr>
<td>Business Operations Specialists, All Other</td>
<td>-164</td>
<td></td>
</tr>
<tr>
<td>Civil Engineers</td>
<td>-193</td>
<td></td>
</tr>
<tr>
<td>Aerospace Engineers</td>
<td>-194</td>
<td></td>
</tr>
<tr>
<td>Computer Support Specialists</td>
<td>-269</td>
<td></td>
</tr>
<tr>
<td>Computer and Information Scientists, Research</td>
<td>-24</td>
<td></td>
</tr>
<tr>
<td>Primary, Secondary Teachers (Except Spec. Ed &amp; Voc)</td>
<td>-164</td>
<td></td>
</tr>
<tr>
<td>Automotive Service Technicians and Mechanics</td>
<td>-193</td>
<td></td>
</tr>
<tr>
<td>Accountants and Auditors</td>
<td>-194</td>
<td></td>
</tr>
<tr>
<td>Nursing Aides, Orderlies, and Attendants</td>
<td>-269</td>
<td></td>
</tr>
<tr>
<td>Lawyers</td>
<td>-480</td>
<td></td>
</tr>
<tr>
<td>Registered Nurses</td>
<td>-493</td>
<td></td>
</tr>
<tr>
<td>Cosmetology and Related Personal Grooming Services</td>
<td>-566</td>
<td></td>
</tr>
<tr>
<td>General and Operations Managers</td>
<td>-593</td>
<td></td>
</tr>
<tr>
<td>Licensed Practical and Licensed Vocational Nurses</td>
<td>-1,154</td>
<td></td>
</tr>
<tr>
<td>Market Research Analysts</td>
<td>-3,484</td>
<td></td>
</tr>
<tr>
<td>Management Analysts</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Gap Between Supply & Demand in Selected Occupations
(Average Annual Openings 2006-16 vs. Current Annual Degree Production)

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Average Annual Openings</th>
<th>Degrees/Certificates Produced Annually</th>
<th>Gap Between Supply &amp; Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Programmers and Software Engineers</td>
<td>2,735</td>
<td>867</td>
<td>1,868</td>
</tr>
<tr>
<td>Network and Computer Systems Administrators and Analysts</td>
<td>1,686</td>
<td>854</td>
<td>832</td>
</tr>
<tr>
<td>Rehabilitation Counselors</td>
<td>472</td>
<td>22</td>
<td>450</td>
</tr>
<tr>
<td>Adult Literacy, Remedial, and GED Teachers</td>
<td>767</td>
<td>336</td>
<td>431</td>
</tr>
<tr>
<td>Business Operations Specialists, All Other</td>
<td>664</td>
<td>261</td>
<td>403</td>
</tr>
<tr>
<td>Civil Engineers</td>
<td>675</td>
<td>318</td>
<td>356</td>
</tr>
<tr>
<td>Aerospace Engineers</td>
<td>425</td>
<td>82</td>
<td>343</td>
</tr>
<tr>
<td>Computer Support Specialists</td>
<td>1,082</td>
<td>763</td>
<td>319</td>
</tr>
<tr>
<td>Computer and Information Scientists, Research</td>
<td>98</td>
<td>2</td>
<td>96</td>
</tr>
<tr>
<td>Primary &amp; Secondary Teachers (Except Spec. Ed &amp; Vocational)</td>
<td>2,349</td>
<td>2,373</td>
<td>-24</td>
</tr>
<tr>
<td>Automotive Service Technicians and Mechanics</td>
<td>438</td>
<td>601</td>
<td>-164</td>
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<tr>
<td>Accountants and Auditors</td>
<td>901</td>
<td>1,094</td>
<td>-193</td>
</tr>
<tr>
<td>Nursing Aides, Orderlies, and Attendants</td>
<td>764</td>
<td>958</td>
<td>-194</td>
</tr>
<tr>
<td>Lawyers</td>
<td>549</td>
<td>817</td>
<td>-269</td>
</tr>
<tr>
<td>Registered Nurses</td>
<td>2,033</td>
<td>2,513</td>
<td>-480</td>
</tr>
<tr>
<td>Cosmetology and Related Personal Grooming Services</td>
<td>802</td>
<td>1,295</td>
<td>-493</td>
</tr>
<tr>
<td>General and Operations Managers</td>
<td>712</td>
<td>1,278</td>
<td>-566</td>
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<tr>
<td>Licensed Practical and Licensed Vocational Nurses</td>
<td>517</td>
<td>1,110</td>
<td>-593</td>
</tr>
<tr>
<td>Market Research Analysts</td>
<td>316</td>
<td>1,470</td>
<td>-1,154</td>
</tr>
<tr>
<td>Management Analysts</td>
<td>549</td>
<td>4,033</td>
<td>-3,484</td>
</tr>
</tbody>
</table>

THE FINANCIAL ENVIRONMENT FOR HIGHER EDUCATION IN WASHINGTON
State Tax Capacity & Effort
Washington Indexed to U.S. Average

Source: State Higher Education Executive Officers (SHEEO)
State Tax Capacity & Effort
Washington Indexed to U.S. Average

Source: State Higher Education Executive Officers (SHEEO)
Projected State and Local Budget Surplus (Gap) as a Percent of Revenues, 2013

Source: NCHEMS; Don Boyd (Rockefeller Institute of Government), 2005

Percentage of Income Needed to Pay for College at Public Two- & Four-Year Institutions, 2000-2008

Share of Income that the Poorest Families Need to Pay for Tuition at the Lowest Priced Colleges

Average Loan Amount Students Borrow Each Year, 2004

Proportion of Need-Based Aid Distributed to Part-Time Students 2004-05

Source: NCHEMS Student Financial Aid Survey
IT’S NOT JUST ABOUT THE MONEY
Six-Year Graduation Rate

- High Performance, High Funding
- High Performance, Low Funding
- Low Performance, Low Funding
- Low Performance, High Funding

Total Funding Per FTE

- UCLA
- UCSD
- UCI
- UMD
- UCD
- UW
- CU
- UMA
- RUT
- UCHC
Summary of Performance Relative to Funding, University of Washington (Index Scores)

- Overall Retention Rate, Fall 2005: 70.9
- GRS 2006, Graduation Rate: 67.6
- Bachelor's Degrees Awarded per 100 FTE Undergraduates: 76.9
- PHDs Awarded per 100 Degrees Awarded (Bachelor's and Above): 83.8
- Total Research Expenditures per FTE Faculty: 77.8
Summary of Performance Relative to Funding, Washington State University (Index Scores)

Best Performance Relative to Funding (Similar Institutions)

- Overall Retention Rate, Fall 2005: 63.4
- GRS 2006, Graduation Rate: 55.9
- Bachelor's Degrees Awarded per 100 FTE Undergraduates: 76.1
- PHDs Awarded per 100 Degrees Awarded (Bachelor’s and Above): 39.5
- Total Research Expenditures per FTE Faculty: 42.5
Summary of Performance Relative to Funding, Central Washington University (Index Scores)

- Overall Retention Rate, Fall 2005: 94.7%
- GRS 2006, Graduation Rate: 82.5%
- Bachelor's Degrees Awarded per 100 FTE Undergraduates: 95.7%
Summary of Performance Relative to Funding, Eastern Washington University (Index Scores)

Best Performance Relative to Funding (Similar Institutions)

Overall Retention Rate, Fall 2005: 84.6
GRS 2006, Graduation Rate: 72.7
Bachelor's Degrees Awarded per 100 FTE Undergraduates: 76.0
Summary of Performance Relative to Funding, The Evergreen State College (Index Scores)

Best Performance Relative to Funding (Similar Institutions)

- GRS 2006, Graduation Rate: 60.2
- Bachelor's Degrees Awarded per 100 FTE Undergraduates: 85.8
Summary of Performance Relative to Funding, Western Washington University (Index Scores)

Best Performance Relative to Funding (Similar Institutions)

- Overall Retention Rate, Fall 2005: 88.5
- GRS 2006, Graduation Rate: 92.4
- Bachelor's Degrees Awarded per 100 FTE Undergraduates: 94.5
ISSUES THAT EMERGE FROM THE DATA
Issues

• Low education attainment levels of the most rapidly growing elements of the State’s population
• Large geographic disparities in education attainment and income
• A highly educated workforce
  – Dependent on imported talent
  – Substantial differences between supply & demand in key areas
• Lack of capacity at the baccalaureate level
• University R&D strengths not aligned with key Washington industries
• Dependence on established industry/low incidence of start-ups