

# **New England Works:**

A New England Leadership Summit on Bridging Higher  
Education and the Workforce

## **Plenary Session**

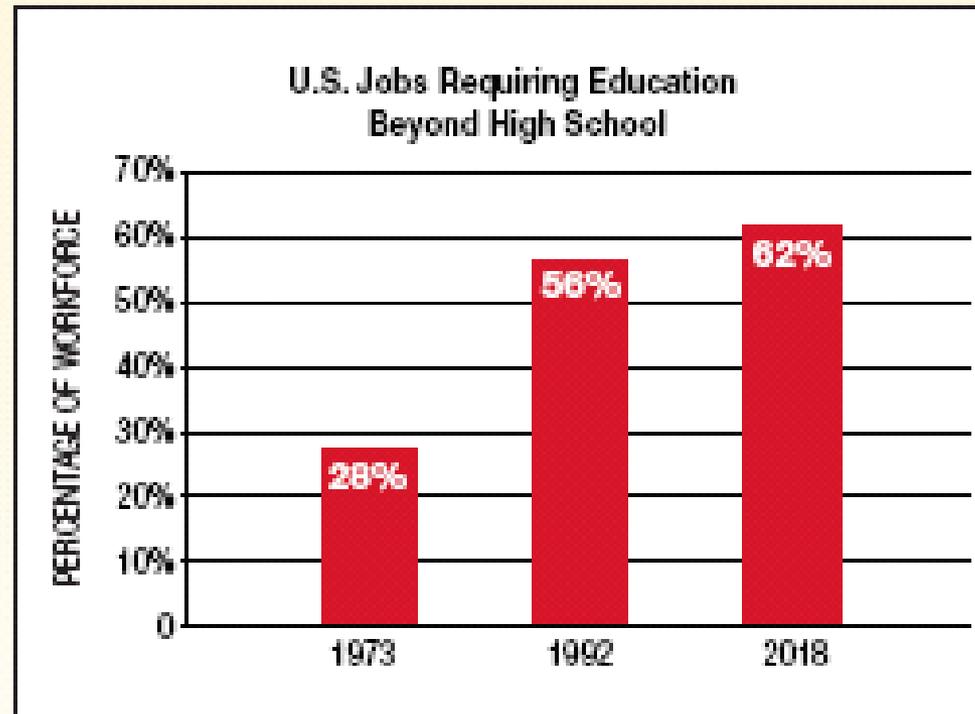
**In Search of New Models, Best Practices  
and Promising Reforms for Linking Higher  
Education and Workforce Development**

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**November 7, 2011**

# Raising Expectations for Universities and Colleges

**More Degrees are Important.**



**FROM... TO...**

State Goal

500 New  
Degrees  
Annually

Market  
Data



State Goal

500 New  
Degrees  
Annually



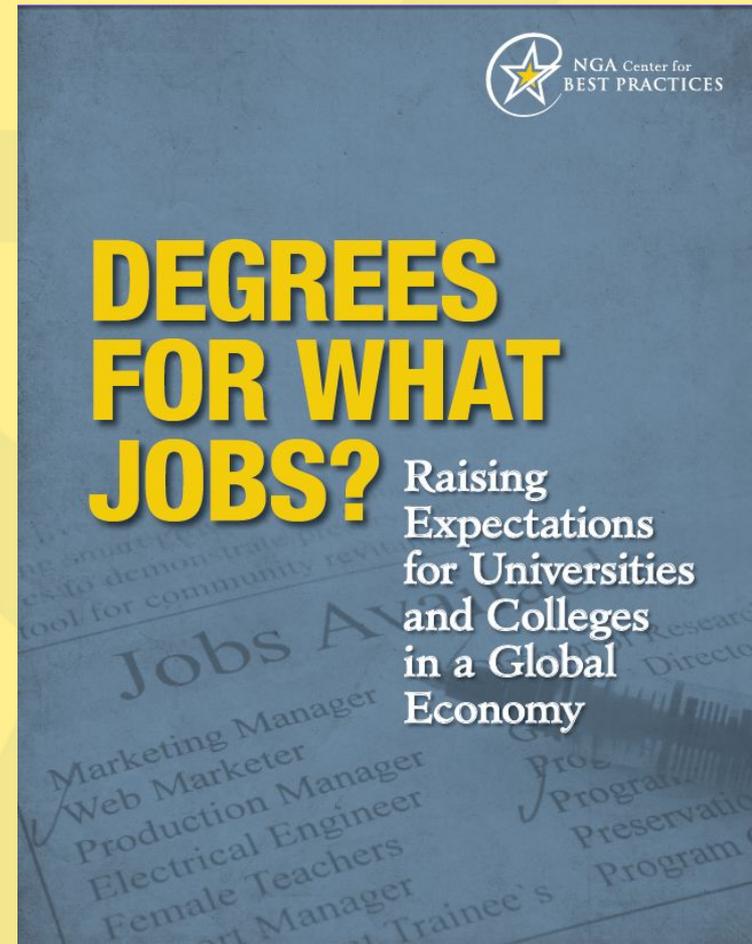
200  
Healthcare  
Degrees

300  
IT  
Degrees

# Degrees for What Jobs?

Some governors and state policy makers are beginning to move beyond their focus on getting more students to get “degrees” to asking: “Degrees for what jobs?”

- How do we know that the degrees and certificates student are pursuing are the ones they will be able to use in new jobs?
- Are we producing degrees that provide the greatest chance of yielding the most benefit—for individuals, industry, and the state economy?



# Doubling Down on Policy

- **Policy Agenda 1.0:** Getting more Americans into—and successfully out of—college
  - College Access
  - Degree Completion
- **Policy Agenda 2.0:** Creating new, good paying jobs in the economy and making workers (current and future) ready for those jobs
  - Workforce Preparation
  - Economic Development

# Policy Agenda 2.0: Raising Expectations for Universities and Colleges

1. Set Clear Expectations for Higher Education's Role in Economic Development and Workforce Development
2. Emphasize Rigorous Use of Labor Market and Other Data to Define Priorities
3. Encourage Employers' Input in Higher Education
4. Require Public Higher Education to Collect and Publicly Report Impacts
5. Emphasize Performance as an Essential Factor in Funding

## TRADITIONAL HIGHER EDUCATION

Colleges and universities use **limited, often anecdotal information** on the workforce needs of industries that hire their graduates.

Colleges and universities base curricula decisions on the expertise and interests of faculty, the interests of students, and other **internal** factors.

Students and faculty have **limited interaction with employers**.

Measures of success are focused on the **enrollment in and completion of** educational programs by students.

Students have **inadequate, limited information about the labor market**, limiting their ability to make informed major/certificate choices.

## ALIGNED HIGHER EDUCATION

A **regular system of quantitative and qualitative information on the labor market and changing employer needs** provides dynamic, reliable measures of demand and supply, with a focus on high-wage, high-skill occupations by region.

Universities and colleges develop new programs and revise existing programs in response to **industry input and labor market information**.

Students and faculty **engage with industry through internships, cooperative education, research opportunities**, and faculty externships.

Measures of success include those relating to **students' employment after graduation** and on the ability of the college and university to meet employer needs and state economic and strategic goals.

Students, through improved information on the labor market and changing employer needs and through internships and cooperative education, are able to make **informed decisions** about their education and career choices.

# State Examples

- **Ohio:** Former Governor Strickland's TurnAround Ohio initiative committed to making higher education key to improving the state's economy. Created a coordinated University System, a cabinet-level Chancellor, and a far-reaching 2008 Strategic Plan
- **North Carolina:** the 2007 UNC Tomorrow developed a vision for increasing the UNC system's role in economic development, making the system more demand-driven, and preparing graduates with education and skills needed by the state's key industries
- **Washington State:** Goals of the 2008 Strategic Master Plan include creating a higher education system that provides expanded opportunity and drives greater economic prosperity
- **Minnesota:** Under several initiatives, the postsecondary system is placing a higher priority on state and regional economic competitiveness.

# Action 1: Set Goals

Several states' strategies have clear goals for higher education that include preparing students for jobs in high-wage, high-skill industries:

- **Ohio:** Former Governor Strickland's TurnAround Ohio initiative committed to making higher education key to improving the state's economy. Created a coordinated University System, a cabinet-level Chancellor, and a far-reaching 2008 Strategic Plan
- **North Carolina:** the 2007 UNC Tomorrow developed a vision for increasing the UNC system's role in economic development, making the system more demand-driven, and preparing graduates with education and skills needed by the state's key industries
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# Action 1: Set Goals

**Washington's** master plan combines traditional student achievement goals with economic development goals

- **Economic demand:** Strengthen state and local economies by meeting the demands for well-educated and skilled workforce
- **Student Success:** Achieve increased educational attainment for all residents across the state
- **Innovation:** Use technology, collaboration, and innovation to meet the demands of the economy and improve student success

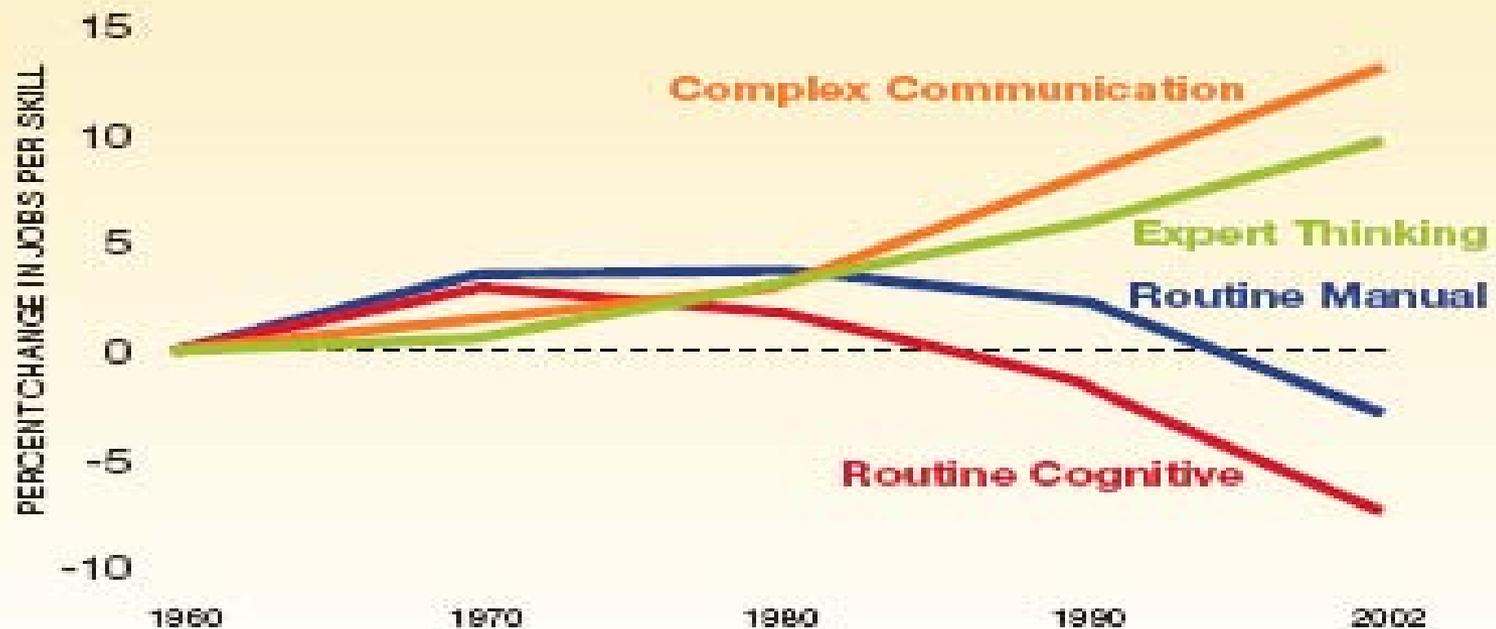
# Action 2: Rigorous Use of Labor Market Intelligence

Leading states are moving to incorporate LMI and direct knowledge of employer needs into higher education planning processes:

- **Minnesota:** MNSCU uses quantitative data provided by an in-house labor market analyst and MN DEED to identify regional high-growth industries, supplemented by qualitative information on employer needs. MNSCU staff includes an Education-Industry Partnership Manager for Emerging Technologies.
- **Washington State** requires a Biennial Assessment of Employer Demands, which compares type and number of education and training credentials against forecasted employer demands.

# Keeping Up with Change

**FIGURE 3: The Service Economy Creates Demand for Advanced Skills**



Source: Council on Competitiveness, *Competitiveness Index*, 2007.

# Keeping Up with Change

TOP AREAS OF JOB GROWTH – 2008-2018		
AREAS OF WORK	NEW JOBS	
	2008-2018	PERCENT GROWTH
Taking Care of People	2,629,300	24.6 %
Making Computers Work	677,700	23.7 %
Taking Care of Business	655,100	22.7 %
Building and Maintaining Our Infrastructures	1,488,200	12.9 %
Teaching Children	860,400	12.7 %
Designing Things; Solving Problems	178,300	11.0 %
Keeping Businesses Running	1,909,800	12.0 %
Selling Goods and Providing Basic Services	1,873,900	6.7 %
<b>TOTAL NEW JOBS</b>	<b>10,272,700</b>	

Source: U.S. Bureau of Labor Statistics

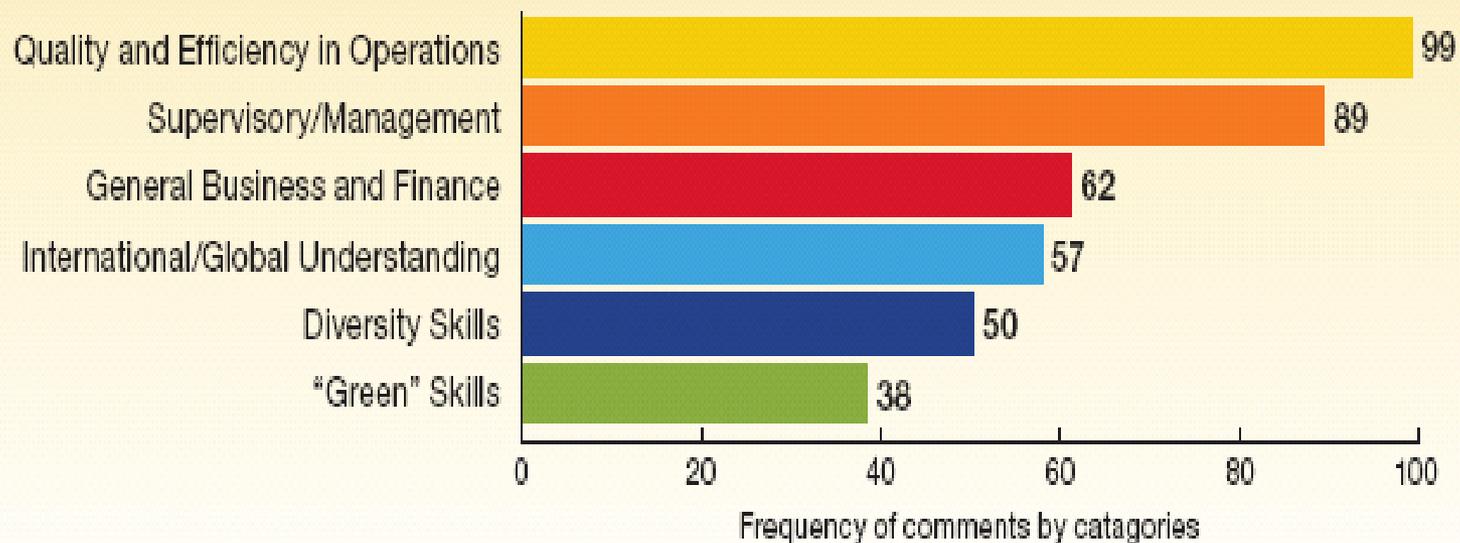
# Keeping Up with Change

## How do we prepare a workforce when:

- an industry can be here one year and gone the next—either through creative destructive or through offshoring?
- an entire workforce needs to be more entrepreneurial and creative?
- an industry has positions and responsibilities that do not fit into our current industrial or occupational classification systems (green jobs)?

# What Business Leaders Want

**FIGURE 2: Emerging Workplace Competencies Identified by Minnesota Business Leaders**



*Source: Minnesota State College and University System Workforce of the Future: Leadership Reaches Out to Business.*

# Action 3: Encourage Employers' Input

States are developing policies to reform curricula based on LMI, regional employer needs, opportunities to advance key industries, and inclusion of global knowledge economy skills:

- **North Carolina:** UNC System requires state's 17 public 4-year schools to integrate “soft skills”—critical thinking, problem solving, teamwork, communication, entrepreneurship—into curriculum for all students
- **Minnesota, Washington and Ohio:** Centers of Excellence to respond to the talent needs of specific industries: skills panels, career pathways

## Responding to the Talent Needs of Specific Industries

Career Pathway developed by one of Minnesota's four centers of excellence

**FIGURE 4: Career Pathway for a Manufacturing and Applied Engineering Worker in Minnesota**



# Action 4: Collect and Publicly Report Impacts

Comprehensive strategies include accountability measures tied to strategic goals:

**Florida** Education and Training Placement Information Program (FETPIP): longitudinal data system developed by Workforce Florida matches student records from HS, community colleges and universities with UI wage records and other data sets to determine employment and wage outcomes

**Minnesota Measures:** annual report presents data on effectiveness of postsecondary education in meeting talent needs.

- **5 Goals:** two address student access and three address market end of the pipeline:
- **Measures include:** Are MN students choosing programs and majors that lead to demand occupations? What is the activity of customized training? How are higher education institutions meeting the training needs of employers?

# Washington Tracking High Demand Degrees

**TABLE 6: Increase in Production of Degrees in Program Areas of High Employer Demand in Washington State from Academic Year 2003-2003 to 2008-2009**

High Demand Instructional Program Areas	Academic Year						
	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Allied Health & Health Sciences	5,766	6,820	7,217	7,898	7,805	8,072	8,393
Computer & Information Sciences	1,877	1,899	1,516	1,222	1,191	1,188	1,212
Engineering Technologies & Technicians	2,137	2,362	2,012	2,013	2,030	2,046	2,429
Engineering, 4-Year Only	1,264	1,255	1,262	1,293	1,347	1,343	1,375
Math, Biological & Physical Sciences, 4-Year Only	1,974	1,949	2,133	2,215	2,396	2,374	2,537
Transfer High Demand (STEM), 2-Year Only	1,056	1,281	1,111	1,059	1,013	1,129	1,051
Construction Management, 2-Year Only	44	84	94	125	253	306	270
Public Higher Education Total	14,118	15,650	15,345	15,825	16,035	16,458	17,267

Source: Washington State, Government Management Accountability and Performance (GMAP) Report.

# Minnesota Tracking Workforce Gaps

**TABLE 5: Too Few Degrees in 2006-2007 for High Paying Information Technology Jobs in Minnesota...**

Occupation	Estimated Employment 2006	Projected Annual Openings* 2006-2016	Annual Academic Awards Granted, 2006-2007
Information Technology (See Specific IT Occupations Below)	57,674	2,909	1,646

## ...Despite Employment and Wage Opportunities

Information Technology Occupations	Estimated Employment 2006	Median Annual Salary
Computer Software Engineers, Applications	16,096	\$84,279
Computer Support Specialists	10,679	\$46,003
Computer Systems Analysts	8,982	\$74,551
Network Systems and Data Communications Analysts	5,723	\$80,405
Network and Computer Systems Administrators	8,690	\$67,979
Computer Specialists, All Other	7,504	\$69,833

\*Total annual openings represents the sum of new jobs and replacements

# Completion alone is a Poor Indicator of Success

- Labor Market Outcomes, as measured by public wage records tied to transcript data, are increasingly seen for evaluating postsecondary success
- Possible Metrics:
- Labor Market Demand by program of study;
- Number of graduates by program;
- Placement in field;
- Earnings of students relative to cost and debt load by program;
- Employment stability by program of study;
- Earnings of students by completion status;
- Relative value of different course clusters, certificates, and degrees
- Student's work status while enrolled;

# Action 5: Use Financial Incentives

Some states are adopting performance-based and incentive funding, rewarding progress toward meeting goals but acknowledging differences in institutional missions and demographics

- **Washington State:** based on “tipping point” research, SBCTC introduced funding formula for two year colleges based on momentum points (earning 15 college-level credits; 30 college-level credits; first five college-level math credits, pass remedial math or English, etc.)
- **Ohio:** new funding formula rewards education outcomes that are better aligned with strategic priorities around degree attainment, course completions, research funding, and other goals. Includes additional weighting for at risk students and incentives for STEM, nursing, etc.
- **MNSCU:** 1% of appropriation tied to meeting 3 of 5 goals (increasing STEM, online enrollments, enrollment at Centers of Excellence, etc.)

# Washington Achievement Measures

Reward for class completion and graduation, not enrollment

**TABLE 8: Gains in Student Achievement Sparked by Performance-Based Funding in Washington State**

## ACHIEVEMENT MEASURES POINTS THAT BUILD MOMENTUM

	Students	Increase Basic Skills	Become College Ready	Earn 1st 15 College Credits	Earn 1st 30 College Credits	Earn 5 College Math Credits	Complete Certificate, Degree, Apprenticeship	Total Points
<b>2006-07 Baseline</b>	467,809	70,950	61,581	60,422	45,385	33,989	22,932	295,259
<b>2008-09 Performance Year</b>	486,927	94,796	73,652	70,127	52,300	36,000	25,544	352,419
<b>% Change</b>	4%	34%	20%	16%	15%	6%	11%	19%

Source: David Prince, August 2010.

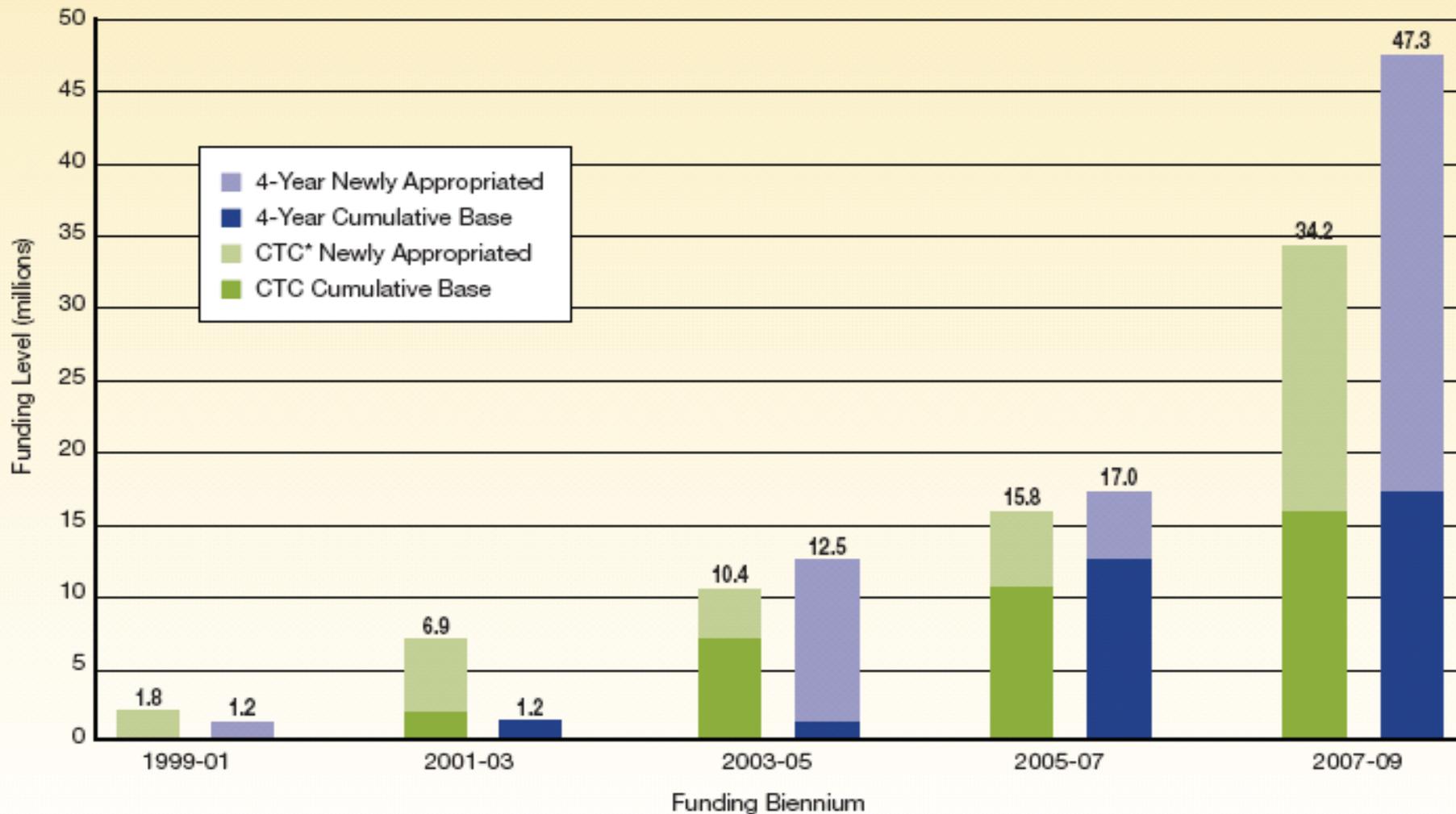
**TABLE 7: Three Measures of Student and Economic Outcomes Associated with Postsecondary Education in Washington State**

**3. Student and Economic Outcomes**

Measure	Target	Actual	Status	Agency*	Notes
<b>3.1 Degree Production</b>	40,344 degrees	41,509 degrees		HECB, SBCTC	Over 41,000 baccalaureate and graduate degrees were conferred in 2008-09 by public and private institutions, exceeding the goal for the year, but not increasing fast enough to meet the 2018 goals. In addition, almost 22,000 associate degrees were awarded.
<b>3.2 High Demand Degrees &amp; Certificates</b>		17,267 degrees & certificates		HECB, SBCTC	Students received over 17,000 degrees and certificates in high demand fields in 2008-09, the most since 2002-03. The growth rate of high demand fields outpaced overall degree growth. (For CTCs, data is only for programs funded by the high demand program.)

**FIGURE 5: Growth in Washington State Funding for New Programs in High-Demand Fields, 1999-2001 to 2007-2009**

**STATE FUNDING TO EXPAND ENROLLMENTS IN HIGH DEMAND FIELDS OF STUDY**



\*CTC=Community and Technical Colleges.

Source: Washington Higher Education Coordinating Board and Washington State Board for Community & Technical Colleges.

# Conclusions / Recommendations

- Articulate goals for higher education to contribute to state's economy
- Develop regular system of information on labor market and changing employer skill needs; disseminate broadly so students, faculty and staff, and policymakers can make decisions.
- Identify and track appropriate measures of alignment that demonstrate progress toward meeting strategic goals
- Create longitudinal data systems to determine employment outcomes of students
- Ensure funding formulas reward performance in the areas of access, attainment and alignment, and award competitive funds to educational institutions that develop curricula to meet needs of key industries

# The Economy Can't Be an Afterthought

**Everyone—employers, educators, job seekers, students, and policymakers—will have to invest the time to understand what is really going on and then undertake informed action.**

# Economic Principle

A degree is better than no degree, but degrees that do not fit the job market and raise the standard of living will not lift the economy

