

5. EDUCATION AND WORKFORCE

RECOMMENDATIONS

To raise and sustain Oregon's economic competitiveness and quality of life, the state must develop the capacity of Oregonians to participate in high-value work and civic activities. Oregon must educate more Oregonians at higher levels than ever before, which requires a fundamental redesign and prioritized investment in our PreK-20 education systems. Oregon also must include all qualified workers in the workforce. The recommendations that follow support the goals and objectives of the Oregon Workforce Investment Board's strategic plan, "[Winning in the Global Market](#)."

Oregon should:

1. Integrate education systems and practices to help students move easily and successfully as far as they want to go in the PreK-20 continuum. Toward that end,
 - Align curriculum standards, proficiencies, and assessments across public PreK-20 education, with particular focus on points where students must be prepared to make the most difficult transitions.
 - Adopt more rigorous high school graduation requirements based on knowledge and skills needed for success in post-secondary education and work, and make postsecondary study and credit easily accessible to high school students ready to move to that level of study.
 - Offer curriculum and instruction to prepare students for high-demand occupations (currently, engineering, construction trades, health care, and manufacturing).
2. Create and adopt a unified, transparent, student-centered budget at the state level to help shape priorities and tie funding levels to performance outcomes.
3. Continue to build an integrated data system to measure student progress, ease student transfer, help students plan their education path, and hold institutions accountable for results.
4. Study the implications for governance, delivery, and accountability in a PreK-20 enterprise featuring the redesign elements described above.
5. Make needed investments in various initiatives that have measurable student achievement gains across the PreK-20 continuum, reflect workforce priorities, produce efficiency and productivity gains, or increase system accountability. See page 52 for specific recommendations.
6. To address projected worker shortages, widen the pool of qualified workers by including everyone with the skills and desire to be in the workforce. Toward that end,
 - Increase inclusion of and accommodations for skilled Oregonians with disabilities.
 - Increase the size and stability of Oregon's workforce while improving safety and productivity by supporting drug-free work environments and workplace policies to reduce drug use.

Vision

For its companies and its economy to compete effectively in the global marketplace, Oregon must maximize its potential workforce. That means it must educate as many of its people possible at the highest levels to which they aspire, and it must encourage an inclusive workplace that utilizes all pools of talent available. All competitive, efficient enterprises require well-educated, skilled employees. This is particularly true of businesses that compete globally through innovation and value-added manufacturing, services, marketing, distribution, and other processes driven by knowledge workers. Such employees are going to be in shorter supply in coming years as the economy expands and as the Baby Boom generation, with its reservoir of knowledge and skills, reaches retirement.

To fill the workforce needs created by these retirements and the evolving economy, Oregon must pursue two key strategies. First, our education and workforce enterprise must educate more Oregonians to higher levels than ever before. This means that everyone must be encouraged to participate in education and must have access to support systems designed to foster such participation. This includes students from low-income backgrounds, immigrants, minorities, and those who are first-in-family to advance into postsecondary education. Second, Oregon must include everyone who is willing and able to participate in the workforce. Among working-age adults, this includes those who are displaced, in transition, or who may require some accommodation such as older adults, working parents, or people with disabilities. Additionally, public and private collaboration has an opportunity to expand the pool of skilled workers by aggressive drug prevention and rehabilitation efforts.

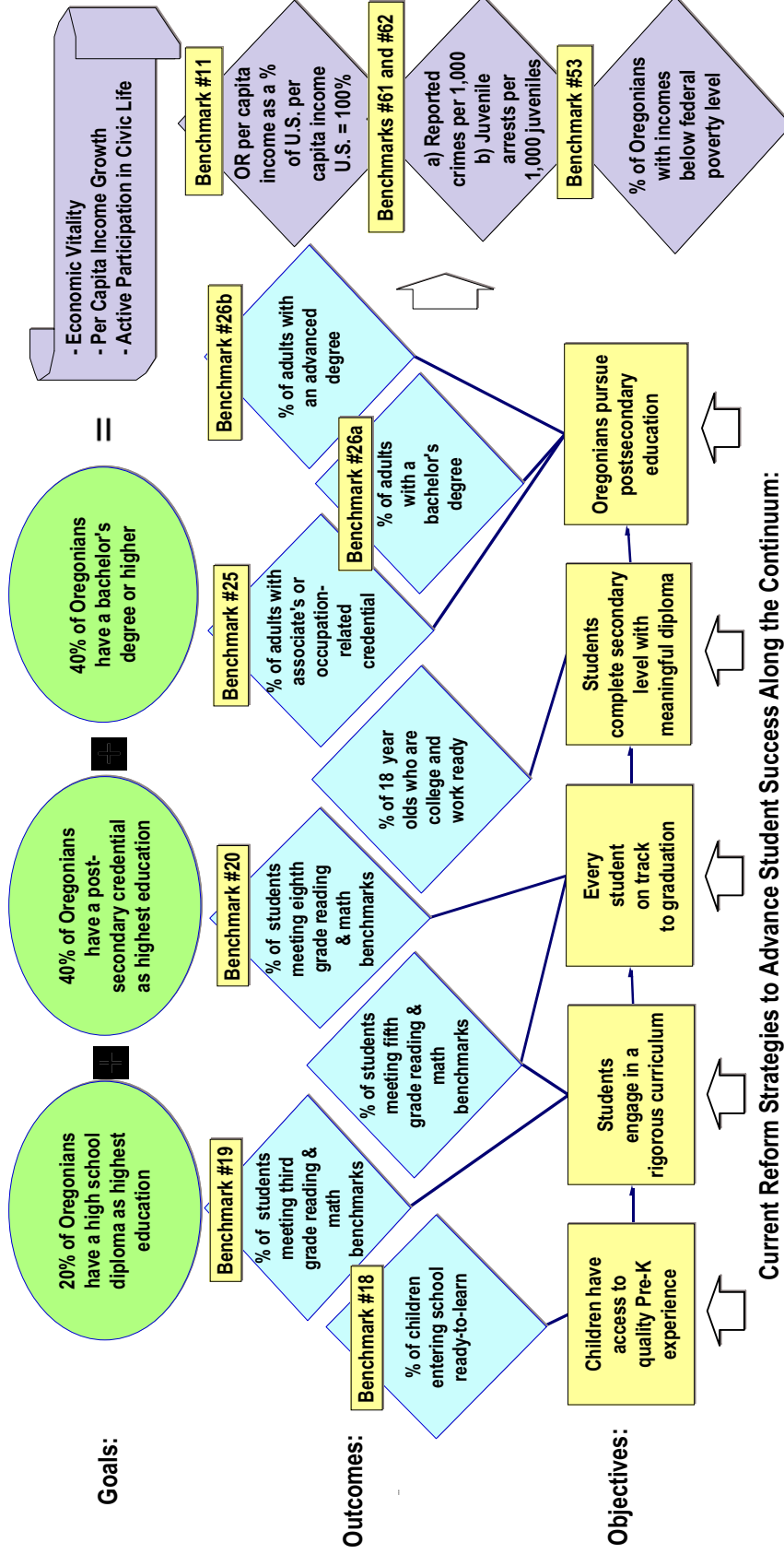
The Vision Is Critical for Oregon

For its companies and its economy to compete effectively in the global marketplace, Oregon must ramp its education achievement and workforce preparation to unprecedented levels – specifically, 20-40-40. Twenty percent of Oregonians should have no less than a high school diploma as their highest level of attainment; 40 percent should have an associate's degree or equivalent certification as their highest attainment; and the remaining 40 percent should have a bachelor's degree, including at least 20 percent who also have a graduate degree. Statistically, a portion of this achievement will come from newcomers, but Oregon will have to meet most of this high standard in the education it provides its own citizens. The stakes could not be clearer. Low-paying jobs will not support families or the Oregon economy. Increasingly, both low- and medium-paying manufacturing jobs, and even many service jobs, are going offshore or falling to automation. All jobs that pay well increasingly require higher levels of education and work readiness.

Because Oregon's education systems do not have the capacity to meet the 20-40-40 vision, they must be fundamentally redesigned as a cohesive enterprise. The redesign envisioned should result in a seamless education enterprise that starts in pre-kindergarten and extends through graduate school. It should offer greater access to learning that is personalized, connected to the demands of work and citizenship, and relevant to the student's life experience and goals. It should prepare students well at each stage to move to the next stage. At the postsecondary level, it should afford every student access to as much education as he or she desires. That education should be affordable and should offer smooth pathways, capacity, and personal support to help students complete their studies. Furthermore, the system should offer easy access to workers who seek to return to the education system to upgrade their skills or earn additional credentials throughout their lives. Finally, the system should recognize that education is a shared responsibility of effort and engagement between the student and the state. Education can only succeed if both parties commit the required time, effort, and resources.

Because Oregon's education systems do not have the capacity to meet the 20-40-40 vision, they must be fundamentally redesigned as a cohesive enterprise.

The Impact on Oregon: An Aligned PK-20 Education System



Current Reform Strategies to Advance Student Success Along the Continuum:

1. A **Rigorous Curriculum** that prepares students well at each stage of education for the next.
2. A **Data System** that provides regular and timely feedback on individual student progress and that aids credit transfer and institutional accountability.
3. A **Unified Budget** that invests in what works to advance students' academic progress and divests efforts that produce an insufficient return on student success.

This figure was developed in the course of work done by a group of legislators committed to aligning Oregon's PreK-20 education systems to achieve the 20-40-40 vision. It illustrates the impact of an aligned Oregon education system. Using research from the Oregon Education Roundtable and the Oregon Progress Board, it shows the relationship between high-level goals and the benchmarks by which Oregon can measure the outcomes of its education system. Legislators involved include Rep. John Dallum (R), Sen. Ryan Deckert (D), Sen. Richard Devlin (D), Rep. Linda Flores (R), Rep. Betty Komp (D), Rep. Susan Morgan (R), Rep. Arnie Roblan (D), Sen. Kurt Schrader (D), and Sen. Bruce Starr (R)

While Oregon works to increase education attainment in order to develop its future workforce, it should, in the meantime, make fuller use of existing skilled labor pools, including those it has failed to sufficiently engage. This includes a growing pool of skilled workers with disabilities. In 2002, there were 408,304 people with disabilities of working age in Oregon, 41.5 percent of whom are employed for wages. People with disabilities are as likely to attend college and win degrees or advanced degrees as their non-disabled counterparts and as likely to be self-employed. In the job market, however, Oregon citizens with disabilities are 30 percent less likely to land jobs than people without disabilities. Oregon can neither afford to lose the opportunity to hire skilled workers with disabilities nor lose workers to disability or injury for long periods. Instead, Oregon businesses must develop and share strategies to accommodate and engage skilled workers with disabilities.

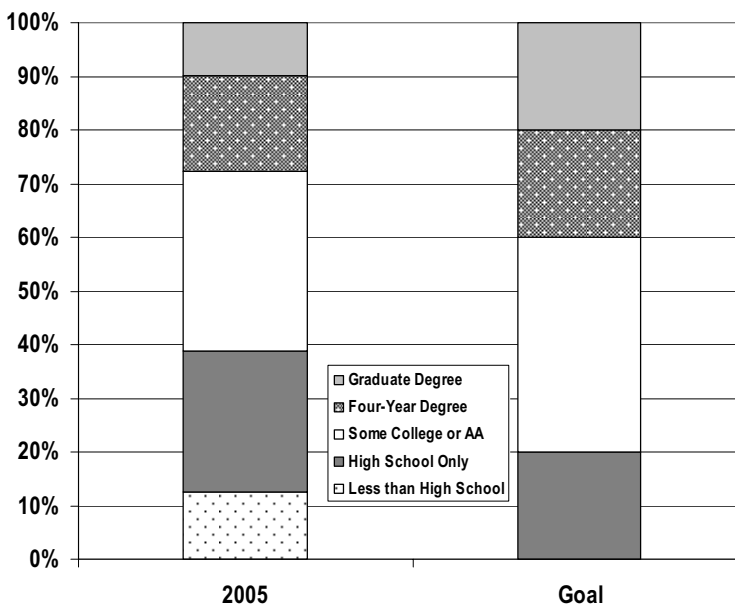
One significant way that Oregon can avoid loss of workforce talent – and improve workplace safety and productivity – is by promoting a drug-free environment and supporting programs to reduce drug use. Many employers cite drug use as a significant factor which limits the available pool from which they can hire new employees and which hurts the productivity, safety, and stability of their existing workforce. Programs such as those that educate current employees, potential employees, and even high school students about the expectations of drug-free workplaces, that provide treatment for current drug users, and that support employers in developing drug-free workplace policies expand the competitive workforce by reducing loss of existing and potential workers.

Challenges in Achieving the Vision

As the table above illustrates, Oregon's education and workforce officials have been working diligently the past year on many of the issues described in this initiative. However, everything done so far represents just early steps in the right direction.

As the adjacent chart shows, our current education and workforce systems do not produce the high percentages of well-educated, work-ready graduates that Oregon needs in the 20-40-40 vision. These obsolete systems, created in the early and mid 1900s, were not designed to meet the education needs of the 21st century. To meet such demands as the 20-40-40 vision, our education systems will require substantial redesign.

Oregon's Education Attainment: Current and Goal



Source: 2005 American Community Survey

Though current systems are not designed to meet goals as ambitious as 20-40-40, they are well entrenched and resistant to change. Redesigning them will require significant resources, effort, and public will.

HIGHLIGHTS OF 2006 ACCOMPLISHMENTS

- √ The State Board of Education is finalizing new, more rigorous high school graduation requirements, with approval expected in January.
- √ The Department of Education, high schools, community colleges, and universities worked together to implement the Expanded Options program to create addition paths for qualified high school students to earn postsecondary credit.
- √ Coordinated by the Board of Higher Education, all Oregon postsecondary institutions standardized their advanced placement credit policies.
- √ With leadership from the Joint Boards, Oregon's university and community college systems have implemented student transfer and dual enrollment procedures more accessible to students.
- √ The Board of Higher Education helped lead efforts to create career pathways to facilitate students' preparation for specific high-demand careers.
- √ The Business Education Compact (BEC), working with the manufacturing cluster, is launching a pilot to expand its internship program to include opportunities for students interested in trade-related careers.
- √ The Governor's proposed 2007-2009 budget recommends increased investment in education across the board, including full funding for Head Start and a significant increase in need-based financial aid.
- √ The Board of Higher Education developed the Shared Responsibility Model as a better way to distribute state need-based financial aid. The Governor endorsed this model in his proposed budget.
- √ The Chalkboard Project fully implemented Phase I of its Open Book\$ initiative.
- √ Over 50,000 Oregonians shared their opinions with Chalkboard in 2006, bringing the total number who have participated to over 100,000.
- √ In fall 2006, 19 small public high schools opened with support from E3's Oregon Small Schools Initiative (funded by the Gates Foundation and Meyer Memorial Trust), bringing its total number of schools to 30.
- √ Over 100 employers have signed up to participate in the Employer Classroom Challenge, sponsored jointly by Chalkboard Project, E3, and the Oregon Business Plan.
- √ The Oregon Workforce Investment Board published its strategic plan, "Winning in the Global Marketplace: Competitive Companies, Productive People, Innovative Ideas."

System redesign also is hampered by incomplete, inaccessible, or unclear data. Existing information systems do not provide the comprehensive data about students, budgets, and system performance that is necessary for informed decision-making about the education enterprise. This challenge is addressed through budget and data system proposals long recommended by the Oregon Business Plan and restated here.

Government structures and processes in both the legislative and executive branches, including administrative agencies, present further challenges. These processes are not structured to facilitate comprehensive analysis of system strengths and weaknesses and support redesign where necessary. Just as individual education systems are disconnected, so are government processes, preventing efficient operation, free flow of information, and fully informed decision making.

Generally, public opinion does not reflect recognition of the economic imperative for increased education attainment, creating another barrier to system redesign. While some

Oregonians recognized that higher academic standards and increased postsecondary education are essential to the state's economic competitiveness, many others still believe that postsecondary education is unnecessary for individual or state success. To create a sustainable, globally competitive economy for the 21st century, it is vital that all Oregonians understand why the 20-40-40 vision of education attainment is necessary.

The current mismatch between K-12 academic requirements, postsecondary requirements, and employer expectations create further challenges to achieving the vision. Many employers have not been involved with helping develop the standards, proficiencies, and assessments of the PreK-20 education system, resulting in a mismatch between education and workforce standards. Similarly, many community colleges and universities have not been fully engaged in developing K-12 standards, proficiencies, and assessments, creating misalignment between high school graduation requirements and postsecondary entry and placement expectations.

The effort to expand workforce participation by skilled disabled workers faces cultural and communication hurdles. For example, a 2002 Oregon study of employed people with disabilities found that 27 percent believed they had been refused a job interview because of their disability, 31 percent said they were refused a job because of it, and 21 percent said they had been denied a workplace accommodation. Many employers do not have experience with or strategies in place to tap the resources of nontraditional worker pools, and they will need models and information resources on how they can better employ and accommodate workers with disabilities.

Agenda for 2007 and Beyond

Here are the action items for the education and workforce initiative in 2007 and beyond. It bears repeating that these action items are vitally important if Oregon is to close the gap between its need for a highly educated, engaged workforce, and the present capacity of its education and workforce systems to produce such a workforce.

1. Learning Standards and Curriculum Integration.

Significant systemic changes are going to be required in achievement standards and curriculum design and integration at least through the lower division collegiate level. At the beginning of the education pipeline, students must enter the first grade ready to learn. By middle school they should be adept in reading and math in particular. By the eighth grade they should be ready for rigorous high school learning. High schools must require higher graduation standards, give students closer support, and allow them to progress as fast as they want to go, even if they take collegiate level courses alongside their high school classes. High school learning standards must align with lower division collegiate courses so students can move smoothly into college without the need for remedial instruction in reading, math, and writing.

In developing its proposed high school graduation requirements, the State Board of Education engaged in extensive public conversation both with stakeholder groups and with the general public.

Recommendation: For the 2007 legislative session, state education officials should have a package of proposals ready to raise high school graduation requirements and to integrate curriculum standards, proficiencies, assessments, and credits within the K-12 system, between the K-12 and postsecondary systems, and within the lower division postsecondary curriculum at Oregon's community colleges and state universities. The aim of the redesign should be to help students connect learning with future goals, learn at their own pace, navigate as easily as possible from one step to the next, and attain the highest levels of education to which they aspire.

State postsecondary officials, led by the Joint Boards, are making progress in developing a uniform lower division General Education curriculum.

Much work is already being done along these lines. On standards, for example, the State Board of Education is on the verge of sending the Legislature the most far-reaching recommendations for high school standards in Oregon history, a set of standards developed through extensive public conversation with stakeholder groups and the general public. On curriculum alignment, state postsecondary officials, led by the Joint Boards, are making progress in developing a uniform lower division General Education curriculum

Features of the redesign should include:

- High school skill and knowledge requirements that represent what all students need to master to succeed in further school, work, life, and citizenship
- Common curriculum standards and assessments for similar classes across systems
- Common assessments for advancement and placement
- Exit standards for one stage matched to entry requirements for the next
- Student credit for learning in a variety of venues, including internships, integrated classes, and internet-based learning

2. Unified, Student-Based Budgeting. For years, Oregon has been making the vast majority of its public education investment through blanket funding of three system "silos" – K-12 districts, community colleges, and state universities. A small share goes to need-based postsecondary aid. Rather than allocate multi-million-dollar sums broadly to competing systems, the state should have a unified PreK-20 budget and fund distinct education programs across the continuum with an eye toward particular student outcomes. It should measure the effectiveness of those investments against specific performance criteria.

Budgeting and spending public education dollars this way confers significant investment control. In particular, it would enable us to analyze and, if necessary, adjust:

- How much we spend *per student* at various levels, how that has changed over time, whether per-student spending is adequate to achieve particular outcomes, and, if not, what additional resources are needed and what would they buy
- Non-classroom inputs to a quality education, how much we spend on them, and whether we could get a better return on our investment

- What drives labor costs (e.g., salaries, retirement benefits, health care benefits, contracted labor) and what share of our labor expenses fall in instructional and non-instructional categories
- Different types of programs delivered through the continuum, what their goals are, whether they are being met, and whether investment or disinvestment at one level of the continuum directly impact spending or outcomes at another level
- Whether students and parents are asked to share in the cost of education, where so, where not, and why
- How change in postsecondary spending affect enrollments at Oregon public colleges and universities, in particular tuition levels, and where students go if they don't enroll
- Comparable program costs and outcomes among institutions.

Public schools, community colleges, and state universities, working together, are making progress toward a unified data system.

In developing his 2007-2009 budget, Governor Kulongoski took significant steps toward using a more unified, transparent, performance-based budget. His education spending recommendations are based on consideration of education as a unified PreK-20 continuum, with a focus on initiatives that will produce system results and student achievement gains across the continuum.

Recommendation: During the 2007 session, the Legislature should use unified, transparent, student-based budget tools to set priorities and make decisions about education policy and spending. All budget and policy decisions also should take into account past, current, and expected education system and student performance results. During the interim, both the Legislature and the Governor should take steps to ensure that the unified, transparent, student-based performance budget is permanently implemented as the budget mechanism for all future Oregon education budgets.

The Governor and Legislature are moving toward adoption of an integrated education budget

- The business and philanthropic community should continue to provide assistance to the Governor and the Legislature to help them create a unified, transparent, student-based performance budget for the PreK-20 education continuum.
- With per student spending and enrollment well characterized at each level of the continuum, the state should develop a base education-expenditure floor. Each year the state would determine funding based on projected changes in enrollment and an educator compensation index. Enrollment and staff compensation are the major drivers of the education sector's costs. The state already forecasts enrollments at most levels of education. Change in salaries and benefits of teachers, professors, and staff should be linked to compensation growth of professionals in the private sector. Together, the enrollment and compensation indices would show how much schools, colleges, and universities would need to maintain their service levels. The Governor

and Legislature would fund that floor with the expectation that performance would, at a minimum, remain constant. Policymakers could procure higher performance through additional, targeted investments.

3. *Integrated Data System Development.* As the Oregon Education Roundtable has agreed, Oregon should be persistent in integrating and improving its student data systems. The process will take time, patience, and resources, but the benefits will make the effort worthwhile. Oregon is on the verge of creating uniform, integrated, and automated student records to facilitate efficient transfer of student credits from school to school, both within and between education systems. This is a significant and much needed accomplishment to improve student pathways, but it represents just the down payment on a much larger commitment needed to improve and integrate data systems across the education spectrum in Oregon. As indicated earlier, if Oregon embraces this commitment and does its work well, students will have better information about their skill development and education planning choices. Schools and policymakers will be able to track student achievement and persistence more accurately. Longitudinal data, now in short supply across most state education systems, including Oregon, will make it easier to improve curriculum, instruction, and student services, and to hold institutions accountable for results.

Education officials must develop a robust student plan and profile in order to help students map the path to their education goals and track their progress. This part of the data system should also provide information on higher-grade requirements for lower-grade students and their parents. With this capability, students and their parents should know the full range of curriculum and assessment requirements along the full length of the pathway so there will be no surprises, no students who come up short. Students, parents, teachers, and counselors should be able to go online, at any time, at any grade level, and compare a student's progress against the student's goals and against the requirements of a particular academic pathway.

The system wide implementation of the data system to accommodate student plan and profile will be accomplished in stages. The Department of Education has designed the data system framework for the transfer of student records (the student profile), and is currently piloting this system. Full implementation of the student record component of the data system is expected in the 2009-2011 biennium. Work on integrating the student plan with the data system is proceeding more slowly, and it is complicated by the need to comply with the restrictions of the Family Education Rights and Privacy Act (FERPA). Currently there is no estimated date to implement this component of the data system.

Recommendation. Fully implement the student record portion of the data system no later than the expected implementation date of the 2009-2011 and the student plan portion no later than the target date of 2011-2013. Given the importance of this work to the success of individual students and improved system performance, education officials should do everything possible to implement both portions of the data system sooner than these target dates.

4. *Implications of System Redesign.* Accomplishing the extensive redesign recommendations above will create new pressures and opportunities to align governance and service delivery systems with the PreK-20 continuum. Oregon needs to understand the implications for existing governance and delivery systems, including what costs or

benefits might result, how new or altered systems might better take advantage of new opportunities or manage costs, what those systems might look like, and what trade-offs might be involved in the creation of those new systems. For example, one issue for consideration is determining the best policy mechanisms to prompt systems and institutions to find economic efficiencies.

Recommendation: In 2007 the Oregon Education Roundtable should undertake a study or related studies of the implications for governance, service delivery, and accountability in a PreK-20 enterprise redesigned to achieve curriculum integration, unified education budgeting, and data system integration. Representatives of the executive and legislative branches of state government, and of state and local education agencies, should take part in the study to ensure that it reflects existing challenges and new opportunities.

Oregon has achieved unprecedented public, private, and philanthropic collaboration on education, evidenced by such efforts as the Oregon Small Schools Initiative, Chalkboard Project, and the Oregon Education Roundtable.

5. Specific Education Improvement Opportunities.

A wide range of groups have developed specific initiatives to improve education in Oregon. Many of these initiatives reflect thoughtful work in education over time, significant research into effective education practices, and careful outreach processes to determine the preferences and priorities of Oregonians. Some of the many groups proposing initiatives include the Chalkboard Project, the Children’s Institute, Stand for Children, the State Board of Education, the Board of Higher Education, the Joint Boards, the Engineering and Technology Industry Council (ETIC), and the Oregon Workforce Investment Board.

The process for choosing which proposed initiative to support in the Oregon Business Plan, considered four key criteria:

- Does the initiative produce measurable achievement gains for students across the continuum?
- Does the initiative reflect workforce and employer priorities?
- Does the initiative create efficiency and productivity gains?
- Does the initiative create a mechanism to promote increased accountability within the education system?

The Business Plan considered initiatives that met any of these criteria, but favored those that met more than one. Additionally, the Business Plan favored initiatives with specific accountability measures tied to them to allow the Legislature to evaluate the effects of its investment using the unified, transparent, student-based performance budget.

Recommendation: The Oregon Business Plan recommends the following education investments in the 2007-2009 biennium:

- Make the Oregon Head Start Prekindergarten program accessible to all eligible students
- Use School Improvement Fund grants to lower class sizes, beginning with kindergarten and first grade
- Provide reading tutors for all students not reading at grade level in K-3

- Support implementation of new, more rigorous high school diploma requirements
- Increase need-based financial aid for students pursuing higher education (Oregon Opportunity Grants) using the new Shared Responsibility Model
- Increase funding for engineering (ETIC programs), manufacturing, health care, and professional technical credentialing
- Support continuing education of displaced, transitional, and incumbent workers
- Support teacher and administrator mentor programs and professional development, requiring that professional development be tied to student achievement and school performance goals
- Continue funding for PreK-20 integrated data system development, including enhancements to assessments
- Revise the school bus funding formula and launch a study of long-term student transport options
- Create state level capacity for system performance reviews, with incentives for efficiency gains.

6a. Greater Inclusion of Skilled Workers with Disabilities in the Workforce. Individuals with disabilities represent a highly qualified worker pool that, with proper accommodation, can bring much needed skills and talent to the workforce. We must adopt business strategies that demonstrate that recruiting and retaining workers with disabilities is good for business. The Oregon Business Leadership Network, together with Oregon businesses and public sector partners, should work to:

- Develop a private/public clearinghouse of accommodation resources and brokerages that provide quick access for businesses to Oregon resources around workplace accommodation in a way that meets business needs within sectors.
- Initiate a dialogue between businesses and state resource organizations around creating mechanisms for a smoother interface between accommodation expertise and Oregon business.
- Maintain an interactive website that provides a forum for business-to-business networking, and establish strategic links with national, regional, state, and local expertise on accommodation.
- Provide a series of business-led leadership forums on linking accommodation strategies and measures to business plans.

6b. Drug-free Oregon Workforce. Businesses in five of nine Oregon Business Plan Bus Tour stops in 2004 identified drug use as a key obstacle to hiring otherwise qualified workers, and the percentage of Oregon employers identifying on-the-job drug use as a great concern has risen to an all-time high.

Recommendation: Oregon employers (public and private), under the leadership of the Workdrugfree Employer Task Group, should:

- Mount a statewide campaign to boost the percentage of certified drug-free workplaces from 25 percent in 2006 to 75 percent in 2008. The campaign should include employer-to-employer education and mentoring, technical assistance and training, and a drug-free workplace certification program. It should also engage insurers and legislators in exploring financial incentives that encourage drug-free workplace programs.

- Raise legislators’ awareness of the impact of drugs on business competitiveness. Continue to engage them in developing legislation to better align employer responsibility to accommodate medical marijuana cardholders with workforce safety and productivity needs
- Assist Oregon’s Workforce Investment Board in establishing a Substance Abuse Prevention Standard for job seekers that meets employer needs. Include a workforce development agency policy statement and supervisor and staff training, and insure improved linkage with substance abuse evaluation services. Evaluate the standard through a demonstration project.
- Assist the State Board of Education in creating a Career-Related Learning Standard to prepare students for employment in a drug-free workplace. Assist education agencies in strengthening school drug policies and administrator training; encourage state agencies to include student workforce preparation in drug prevention initiatives.

Education and Workforce Initiative Leaders

Eileen Drake, PCC Structural, Inc.
 Gretchen Pierce, Hult & Associates
 Sam Brooks, S. Brooks & Associates
 Elizabeth King, ESCO Corporation
 Don Skundrick, LTM Inc.
 Howard Sohn, Lone Rock Timber
 Ken Thrasher, Compli

Background Resources

Education white papers for past Oregon Leadership Summits, www.OregonBusinessPlan.org
 Six education white papers <http://www.oregonedroundtable.org/PDF%20Folder/6%20White%20Papers.pdf>
 developed for the Oregon Education Roundtable, www.OregonEdRoundtable.org and
www.OregonBusinessPlan.org
 The Chalkboard Project (survey findings and publications), www.chalkboardproject.org
 Oregon Department of Education <http://www.ode.state.or.us>
 Department of Community Colleges and Workforce Development, <http://www.oregon.gov/CCWD>
 Oregon University System, www.ous.edu
 State Board of Education white paper on the need to align curriculum, standards, credits and proficiencies, and
 assessments, <http://www.ode.state.or.us/stateboard/boardwhitepaperfinal.pdf>
 Oregon Workforce Investment Board Strategic Plan,
http://www.oregon.gov/WORKSOURCE/OWIB/docs/OWIB_1006.pdf