



## OREGON EDUCATION INVESTMENT BOARD

Tuesday June 10, 2014

1:00pm – 5:00pm

Oregon State Capitol, Hearing Room F

900 Court Street, NE, Salem, OR 97301

Video Streaming [HERE](#) (Click Hearing Room F)

JOHN KITZHABER  
Governor of Oregon  
OEIB Chair

JULIA BRIM-  
EDWARDS

YVONNE CURTIS

MATTHEW  
DONEGAN

SAMUEL HENRY

NICHOLE JUNE  
MAHER

MARK MULVIHILL

DAVID RIVES

RON SAXTON

MARY SPILDE  
Chair-Designee

KAY TORAN

JOHANNA  
VAANDERING

DICK WITHNELL

Chief Education Officer  
NANCY GOLDEN

*Members of the public wanting to give public testimony must sign in.*

*There will only be one speaker from each group.*

*Each individual speaker or group spokesperson will have 3 minutes.*

### AGENDA

- 1. Board Welcome and Roll Call**
- 2. Approval of Minutes from May board meeting**  
*Action Item*
- 3. Chief Education Officer Update**  
Dr. Nancy Golden, Chief Education Officer
- 4. STEM Council Vision & Initial Recommendations**  
Mark Lewis, STEM Director, Oregon Education Investment Board  
Dwayne Johnson, STEM Investment Council  
Aubrey Clark, STEM Investment Council
- 5. Higher Education Coordinating Commission**  
**Recommendations re: Oregon Opportunity Grant**  
Larry Roper, Chair, State Financial Aid Workgroup  
Ben Cannon, Director, Higher Education Coordinating Commission
- 6. Engineering & Technology Industry Council (ETIC) Transition Report**  
Eric Meslow, ETIC Board
- 7. Chief Education Officer Evaluation Process**  
*Second Reading and Action*  
Julia Brim-Edwards, Chair, Personnel & Management Subcommittee

**8. Preparing for the August OEIB Retreat**

Nancy Golden, Chief Education Officer

**9. Subcommittee Update**

Best Practices and Student Transitions – Dr. Yvonne Curtis, Chair

Equity and Partnerships – Nichole June Maher, Chair

Outcomes and Investments - Dick Withnell, Chair

**10. Agency Reports**

Higher Education Coordinating Commission – Ben Cannon, Director

**11. Public testimony**

**12. Adjournment**

**OREGON EDUCATION INVESTMENT BOARD**

May 13, 2014

1pm – 5pm

Oregon State Capitol

900 Court Street, NE, Salem 97301

[LINK TO AUDIO](#)

[LINK TO MATERIALS](#)

**OEIB Members Present:**

Governor John Kitzhaber, Chair ; Mark Mulvihill; Johanna Vaandering ; Nichole June Maher ; Dick Withnell (late) ; Samuel Henry; Yvonne Curtis ; David Rives; Julia Brim-Edwards; Mary Spilde; Kay Toran

**Advisors Present**

Gerald Hamilton; Bob Brew; Jada Rupley; Ben Cannon; Rob Saxton; Vicki Chamberlain; Iris Bell

**Members/Advisors Excused**, Mathew Donegan; Ron Saxton; Melody Rose

**Staff/Other Participants**

Nancy Golden - OEIB Chief Education Officer

Ben Cannon -HECC

Whitney Grubbs – OEIB Staff

Hilda Rosselli – OEIB Staff

Serena Stoudamire Wesley – OEIB Staff

Mark Lewis – OEIB Staff

Peter Tromba – OEIB Staff

Seth Allen – OEIB Staff

**1. Board Welcome and Roll Call**

Governor Kitzhaber calls the meeting to order at 1:05pm

**2. Approval of Minutes from April 2014 board meeting**

*Action Item*

**MOTION: Samuel Henry moves to accept the meeting minutes from the March meeting. Julia Brim-Edwards seconds the motion. The motion passes unanimously.**

**3. Chief Education Officer Update**

Dr. Nancy Golden, Chief Education Officer

**4. Reaching the Third Grade Proficiency Benchmark**

Rob Saxton, Deputy Superintendent, ODE

Karen Twain, ODE

***Kindergarten Readiness Assessment Update***

Jada Rupley, Director, Early Learning System, ODE

**5. OEIB Quarterly Scorecard**

Whitney Grubbs, Chief of Staff, OEIB

**6. Accelerated Learning Update**

Hilda Rosselli, College of Career Readiness Director, OEIB

Peyton Chapman, Principal, Lincoln High School

**BREAK**

*The Governor leaves and Chair Designee Mary Spilde will lead meeting.*

**7. Subcommittee Update**

Best Practices and Student Transitions – Dr. Yvonne Curtis, Chair

Equity and Partnerships – Nichole June Maher, Chair

Outcomes and Investments - Dick Withnell, Chair

Personnel Management & Oversight – Julia Brim-Edwards, Chair

**8. Agency Reports**

Youth Development Council, Iris Bell, Director

**9. Public testimony**

- Steve Buel, Oregon Save Our Schools

- Eva Payre, Chemeketa Community College faculty & OWEAC

- Kevin Furey, Oregon State Board of Education & Advisor for Chemeketa Community College faculty

**10. Adjournment**

Chair Designee Mary Spilde adjourns meeting at 4:45pm.



# MAY UPDATE - 2014

## A Progress Report for Nancy Golden

### OBJECTIVE #1

#### DESIGN & IMPLEMENTATION OF BIRTH TO COLLEGE & CAREER STRUCTURE

### OBJECTIVE #2

#### ADOPT STRONG POLICY FRAMEWORK

##### *Secure Adoption of Legislative/Administrative Policy Agenda*

- Met with the representatives of the Oregon Education Association, the Governor's Office and the OEIB to develop an appropriate state assessment system.
- Met with representatives of the Governor's Office to discuss Legislative Communication Strategies.
- Met with Rep. Kotek to discuss education and issues of poverty.
- Testified before the House Education Committee regarding Common Core State Standards and Smarter Balanced Assessment.
- Testified before the Senate Education Committee regarding accelerated learning concepts.
- Attended an Emergency Board Meeting regarding the longitudinal database.

##### *Develop Strong Partnerships and Accountability Across Birth to College and Career*

- Toured McMinnville S.D. with Superintendent MaryAlice Russell.
- Presented at the COSA Full-Day Kindergarten Summit.
- Presented to the OEA Representative Assembly at the annual democratic event regarding partnering together.
- Met with Duncan Wyse of the Oregon Business Council to discuss educational strategies.
- Toured Franklin H.S. and met with student and community members.
- Attended the Kindergarten Readiness Funding Team meeting.
- Toured Phoenix H.S. in Phoenix, Oregon and met with school leaders.
- Participated in a statewide Reading campaign strategy session.
- Presented to the State Advisory Council on special education regarding OEIB strategies.
- Toured Earl Boyles Elementary School and met with school leaders and members of the Children's Institute.
- Toured the Coquille School District with district leaders.
- Attended the South Coast Community Collaborative meeting with Governor Kitzhaber to make connections between the South Coast region and the state.
- Attended the Community Collaborative for Early Literacy and School Readiness to discuss partnerships to support school readiness/early literacy.
- Toured Port Orford S.D. and met with school leaders and the school board.
- Toured the Opal School and the Portland Children's Museum.
- Toured Benson H.S. and met with student leaders, community leaders and the principal.

### OBJECTIVE #3

#### CREATE OUTCOMES-BASED BUDGET, ALIGNED TO INITIATIVES

##### *Create Recommendations for Outcomes-Based Budget*

- Participated in the Governor's Funding Team to develop budget strategies.
- Participated in the Education Budget Team meeting.

### OBJECTIVE #4

#### WORK TO BUILD AN ENGAGED & MOTIVATED PUBLIC

##### *Engage and Activate Diverse Communities, Parents and Students*

- Attended the Portland State University Innovation Challenge.
- Met with Nichole Maher to discuss issues of equity.
- Participated in site tour at the Metropolitan Family Services to observe programs that assist students in reaching the 3rd grade reading proficiency benchmark.
- Attended Community Forum at Grants Pass to discuss community resources for education and share the state's vision.
- Attended the COSA Poverty Summit to explore the intersection of poverty and education; participated in a poverty simulation.
- Keynote speaker at the University of Oregon's Capstone Event.
- Met with Confederated Tribes of Grand Ronde to discuss partnerships and student achievement.
- Met with Oregon School Board Association (OSBA) to discuss statewide educational issues and possible solutions.
- Provided opening welcome at the Raising the Bar for Oregon annual luncheon.
- Participated in TEDxUOregon workshop on Rehearsals for Life, a theatre ensemble that inspires dialogue and provide experiential learning around issues of diversity and equity.
- Attended the DevelopED Redesign meeting to provide feedback on improving outcomes for community college students.
- Met with Dr. Paine of the University of Oregon to provide feedback on the Administrative Licensure Program.
- Presented to a University of Oregon Cohort class on the OEIB vision for education in Oregon.
- Keynote speaker at the Kaiser Permanente Health Career Scholarship Awards Presentation. Presented on pathway to careers in health care.
- Speaker at the Coquille and Port Orford Rotary Clubs regarding partnerships and the 40-40-20 goal.
- Met with regional administrators in the South Coast area regarding partnerships and the 40-40-20 goal.
- Met with the Oregon Business Council Meeting to discuss OEIB budget strategies and the 40-40-20 goal.
- Participated in the Gift of Literacy reading event sponsored by Springfield Public Schools.

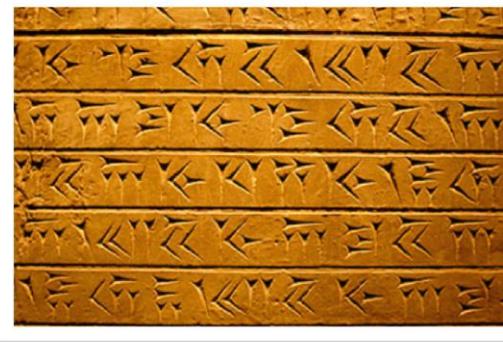
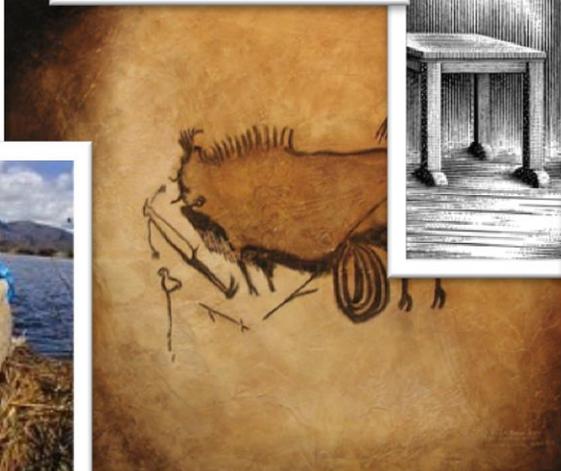
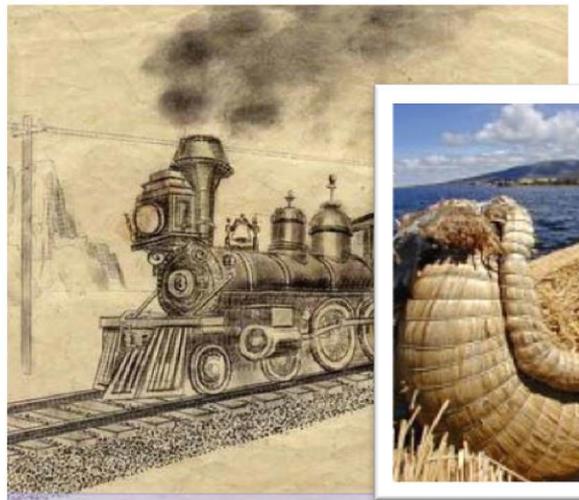
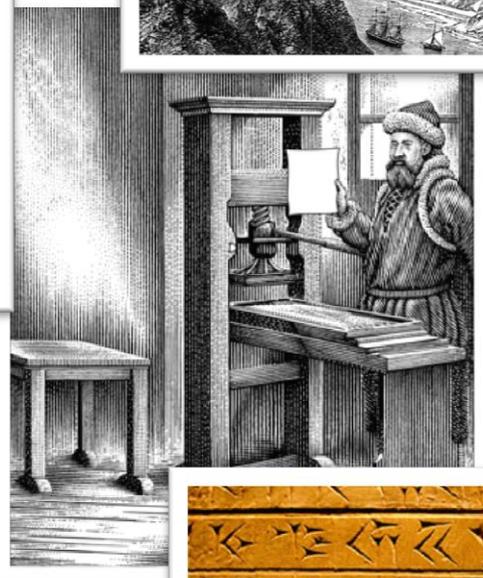
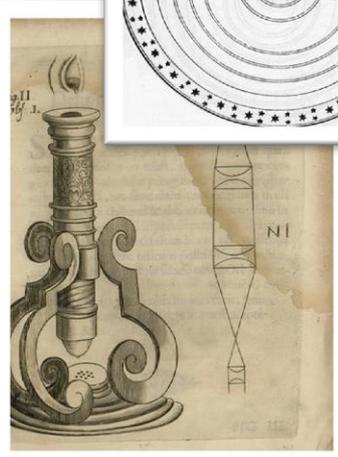
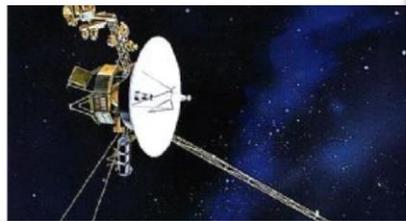
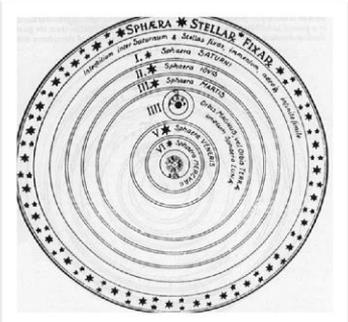


# STEM Investment Council Updates

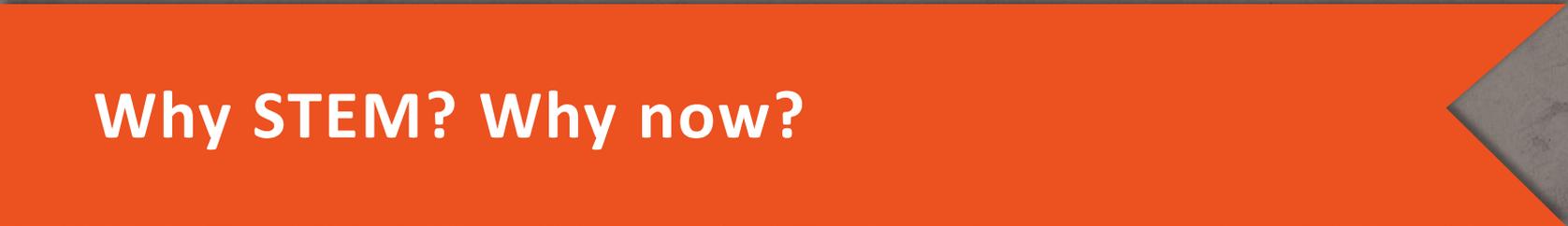
**Aubrey Clark, Intel Corporation**  
**Dwayne Johnson, Center for Inclusive Innovation**  
**Mark Lewis, STEM Director, OEIB**

**June 10, 2014**

# Historical interplay

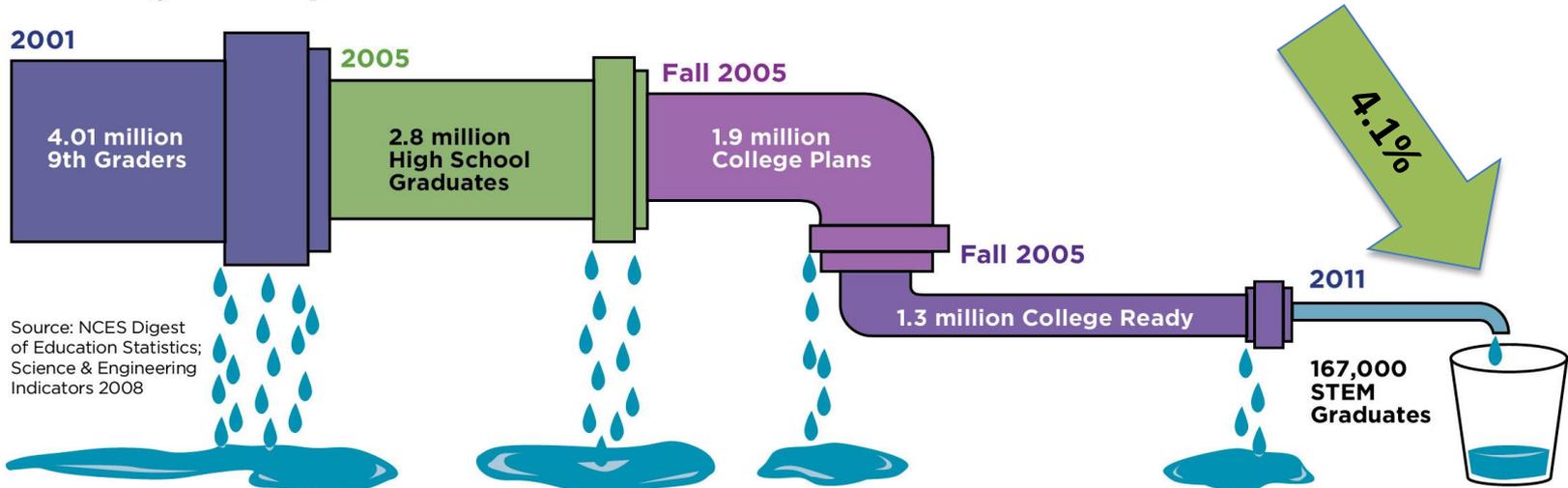


**Why STEM? Why now?**

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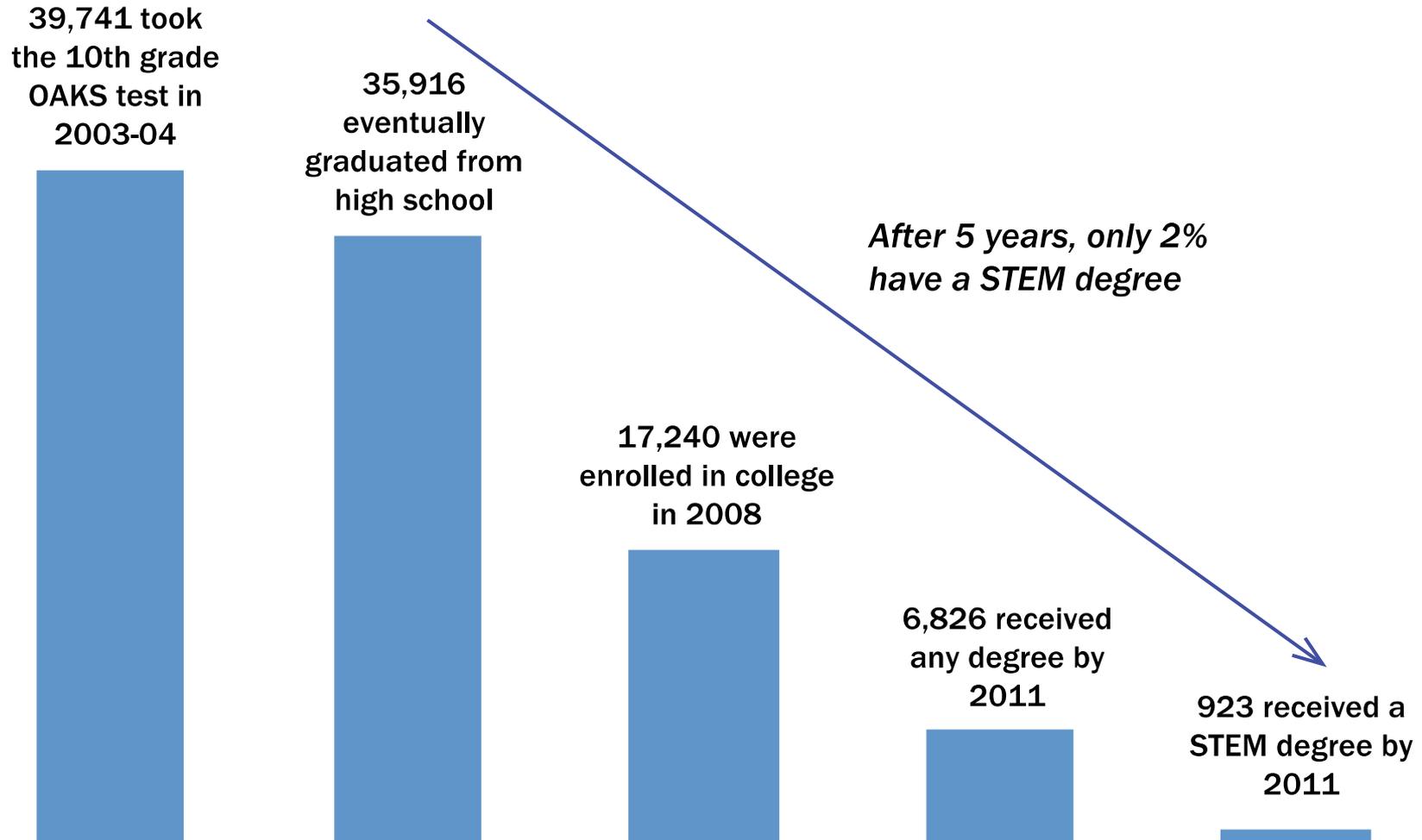
- Companies are competing with each other for a limited number of students graduating in STEM fields.

### A Leaking STEM Pipeline



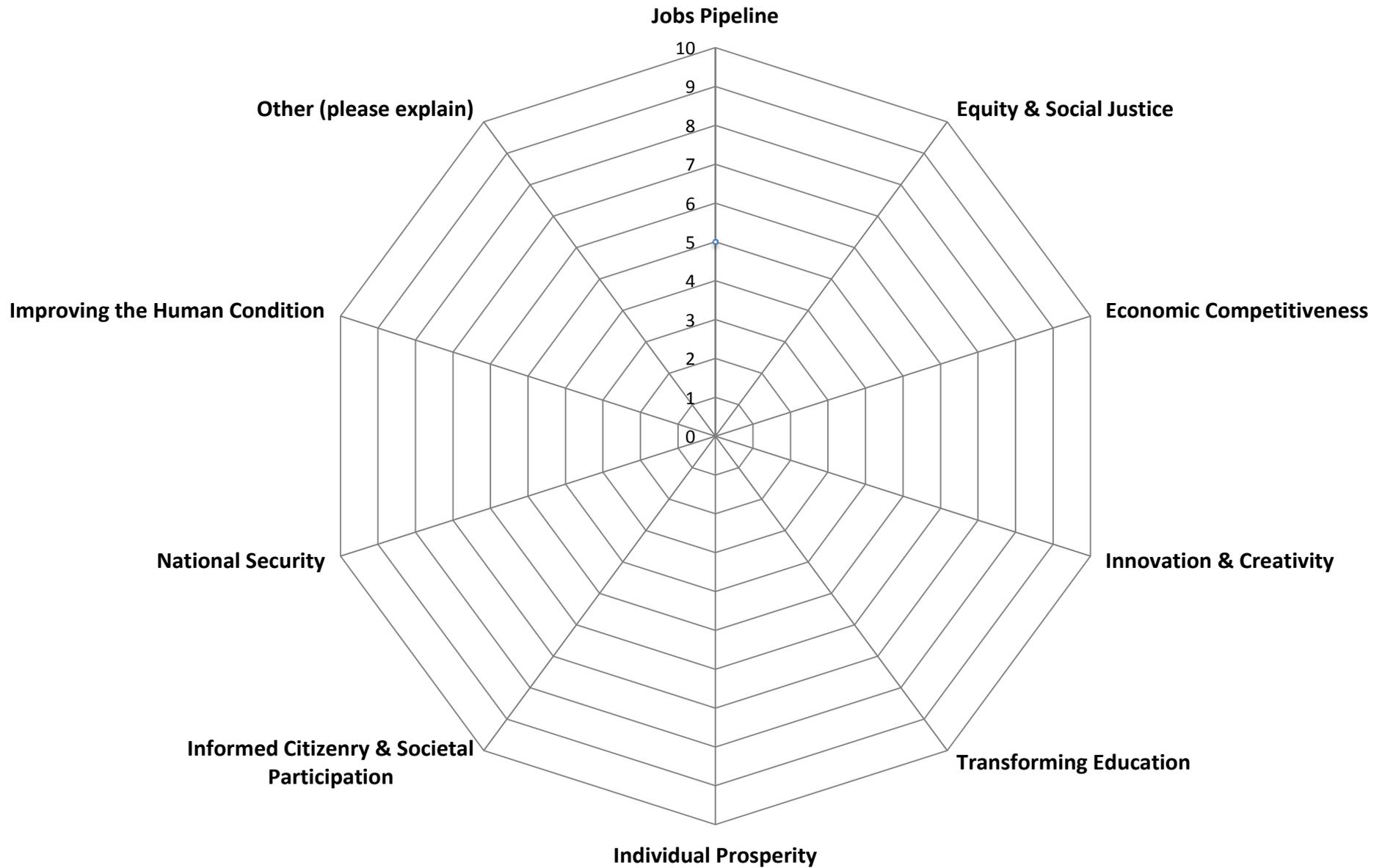
- We must secure our nation's future by supporting high-quality STEM education to prepare a skilled workforce and strengthen U.S. competitiveness.

## STEM Outcomes for the Class of 2005



Source: ECONorthwest analysis of ODE and National Student Clearinghouse data.

**Additional Reasons**



# High Quality Jobs

	Non-STEM Job	STEM Job	% Difference
High School Diploma or Less	\$15.55	\$24.82	60%
Some College or Associate Degree	\$19.02	\$26.63	40%
Bachelor's Degree Only	\$28.27	\$35.81	27%
Graduate Degree	\$36.22	\$40.69	12%

STEM = higher lifetime earnings (~25% more on average)

- Higher state tax revenues
- More \$ in the economy
- Family wage jobs
- Decreased reliance on social services

- High school grads lack foundational skills in STEM literacy.
- Less than 20% of students of color are “proficient or above” on the math and science NAEP.
- STEM industries are importing talent.
- Most students are unaware of the exciting careers in STEM, and perceive math and science as boring.



**STEM = Opportunity**

**The STEM Investment Council**

- Established 2012, HB2636.
- 9 private sector representatives, appointed 11/2013
- Advance ambitious STEM goals that will dramatically impact jobs, the economy, and career opportunities
  - By 2025, double the number of Oregon's K-12 students who are proficient in math and science
  - By 2025, double the number of Oregon STEM post-secondary graduates

- Support OEIB and Chief Education Officer re: policy and investment strategy along the STEM continuum
- Engine for accelerating change through strategic investments
- Monitoring STEM progress and accountability, including:
  - Implementation of seamless, learner centered system
  - Impact of outcome-driven investments
  - Results of teacher development on effectiveness
  - Progress on underserved student motivation, success and retention in STEM

# STEM Investment Council in Action

Chief Education Officer

Oregon Education  
Investment Board

Higher Education  
Coordinating Commission

Universities  
Community Colleges

Deputy Superintendent  
Of Public Instruction

Oregon Department of  
Education

## STEM Investment Council

- Develop STEM Strategy
- Engage industry & other partners
- Guide & support innovation initiatives

### Strategic Role

- ▶ Set STEM education outcomes
- ▶ Report on progress
- ▶ Make strategic investment recommendations
- ▶ Make policy recommendations
- ▶ Develop strategy for business collaboration/partnerships

### Activities

- ▶ Establish STEM education work plan under direction of Chief Education Officer
- ▶ Conduct research and analysis
- ▶ Engage business and other partners in STEM work
- ▶ Review proposals for STEM initiatives
- ▶ Fund initiatives and innovation investments through agencies
- ▶ Conduct annual “State-of-STEM” review with OEIB

## Joining work already in progress...

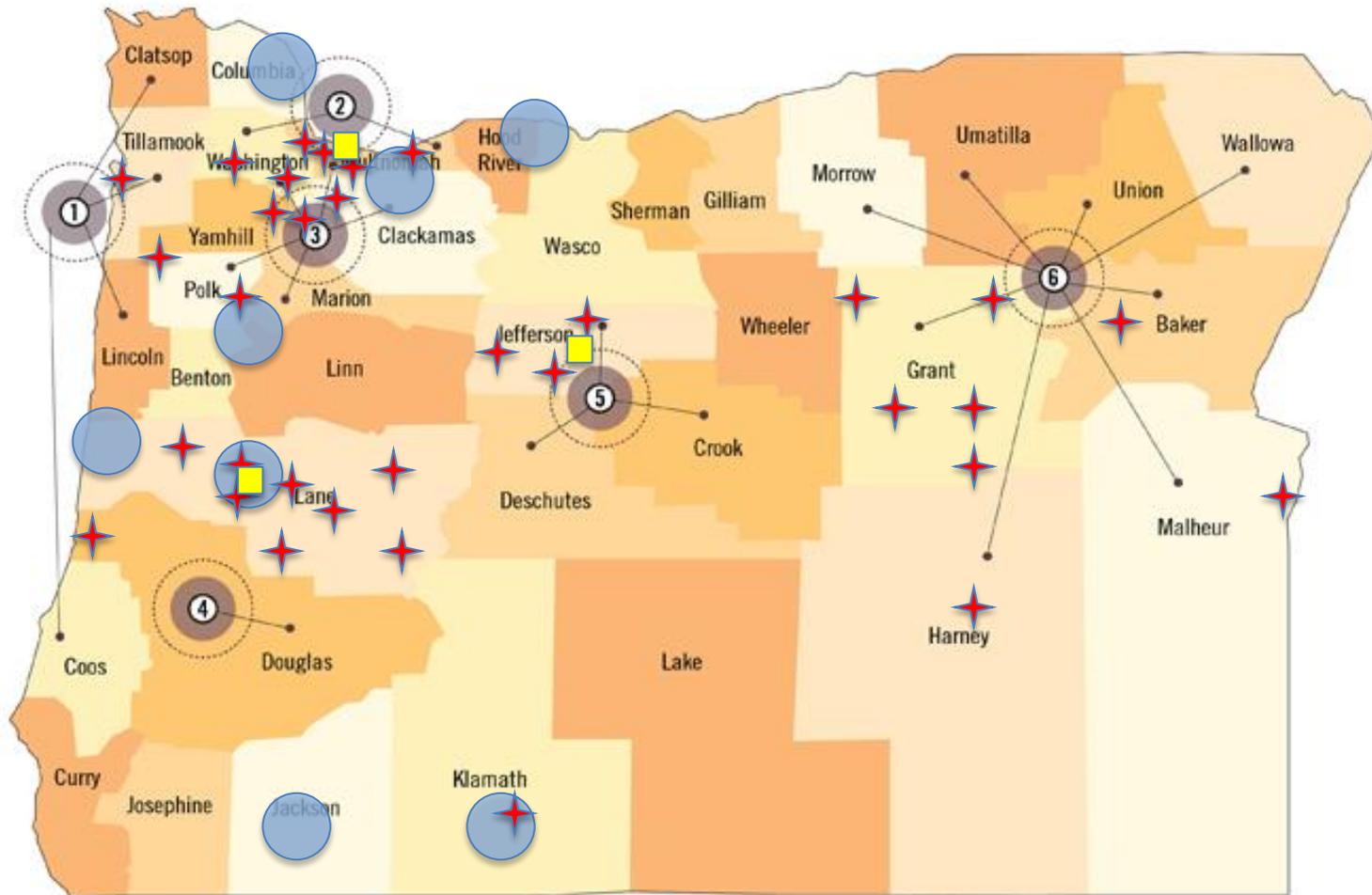
- Isolated pockets of excellence
- Portland & South Metro STEM Hubs
- Oregon Department of Education
  - Framework for STEM
  - CTE Revitalization
  - Strategic Investments in STEM
- STEM Task Force
- STEM Employers Coalition

# OEIB & STEM Initiatives

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- Connecting to the World of Work grants, HB3232 (\$8.5m)
  - Regional STEM Hubs
  - STEM/STEAM/CTE
  - STEM “Lab” Schools





**1 Oregon Coast Regional STEM Hub** led by the Lincoln County school district

**2 Portland Metro STEM Partnership** led by Portland State University

**3 South Metro-Salem STEM Partnership** led by Oregon Tech

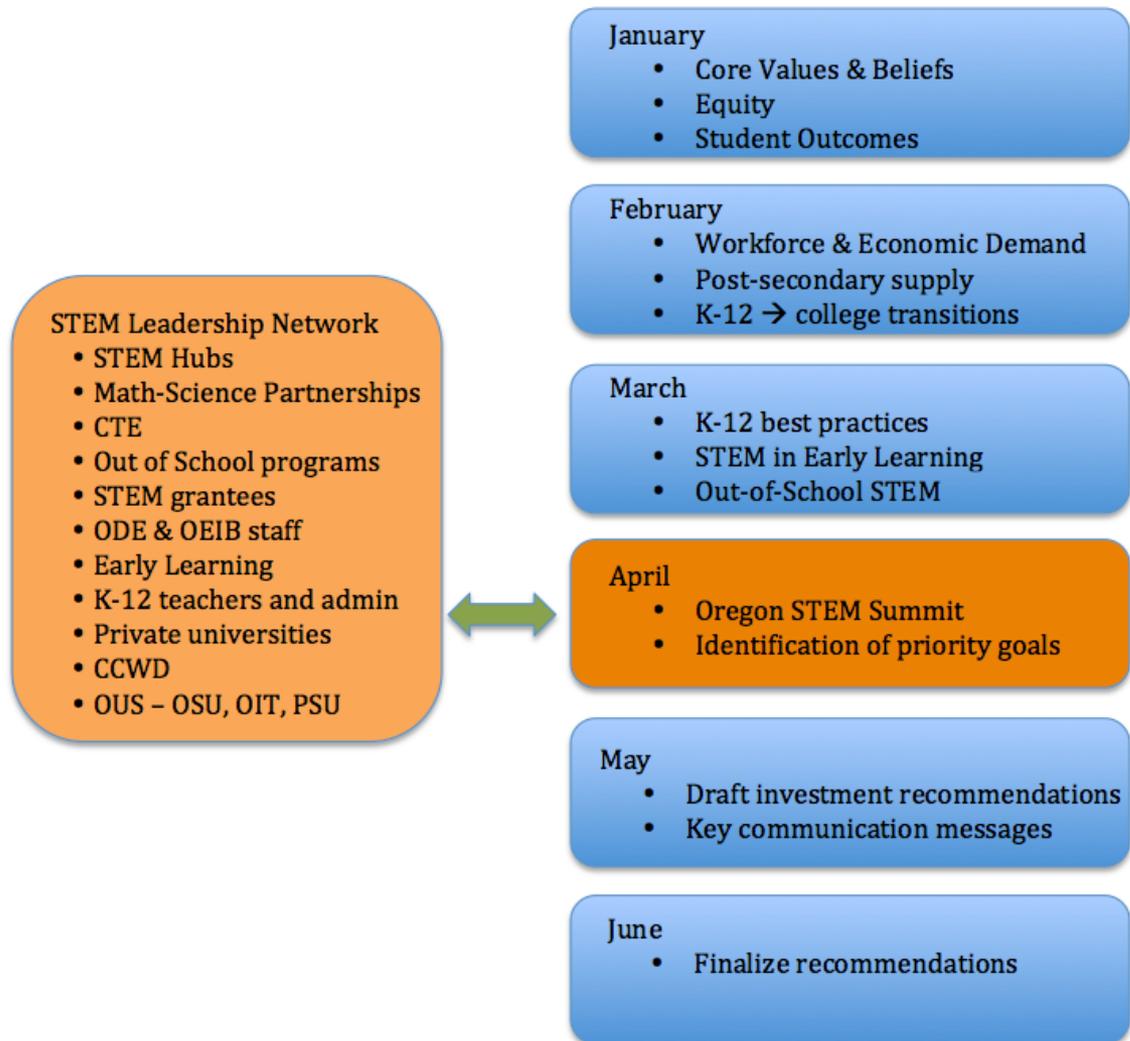
**4 Umpqua Valley Regional STEAM Hub** led by Umpqua Community College

**5 Central Oregon STEM Hub** led by the High Desert Museum

**6 GO STEM Collaborative** led by Eastern Oregon University

**Where have we been? Where are we going?**

## Timeline of meetings



**~50% of teachers quit within 5 years.**

Just 2.2% of Hispanics and Latinos, 2.7% of African Americans, and 3.3% of Native Americans have earned a first university degree in the natural sciences or engineering by age 24.

Children spend less than 20% of their waking time in school.

60% of students lose interest in science and mathematics between 1<sup>st</sup> and 8<sup>th</sup> grade with a precipitous drop in 5<sup>th</sup> grade.

**Only 14% of Oregon's top math and science students are earning STEM degrees 5 years after high school graduation.**

Only 16% of Black, and 20% of Hispanic 4<sup>th</sup> graders in Oregon scored proficient or advanced on the 2013 NAEP math exam.

By the time they reach 6<sup>th</sup> grade, middle class kids have likely spent **6,000** more hours learning than kids born into poverty.

**Women comprise 58% of the workforce, but just 11% of engineers.**

Though 35% of Oregon K-12 students are students of color, just 6.5% of our teachers are.

**Fewer than 40% of students who enter college intending to major in a STEM field complete a STEM degree.**

64% of first year community college students in Oregon coming from high school have to take "developmental math."

- Perception of STEM, especially for girls and students of color
- Traditional math & science teaching is boring students
- Teachers have little/no “contextual” experience
- A retiring CTE workforce; career-changers needed
- Passive early learning environments
- Unequal access to out of school opportunities
- Minimal early career awareness
- Retaining talent in the system – culture of “weeding out”
- >64% of students need to take developmental math
- Isolation restricts spread of effective innovations

1. Statewide STEM network: catalyze economic, workforce, education, and community development
  - Backbone support for ~10 Regional STEM Hubs
  - Centralized support for coherence and interconnectivity.
2. P-14 STEM grants program: incent and spread evidence-based strategies within and beyond school
  - Development grants
  - Dissemination grants
3. Post-secondary Incentive Fund
  - support start-up programs in CC and 4-year
  - increase degree attainment for students of color and women in STEM

- Increase alignment and coordination between CTE & STEM initiatives
- Data: Clearly define STEM jobs & STEM degrees
- Create Evaluation Framework for current grants
- Build capacity & plans for current STEM Hubs
- Create comprehensive STEM strategic plan
- Media campaign to change STEM perceptions

S<sup>2</sup>TEM

ST<sup>2</sup>REAM

STREAM

~~STEM~~

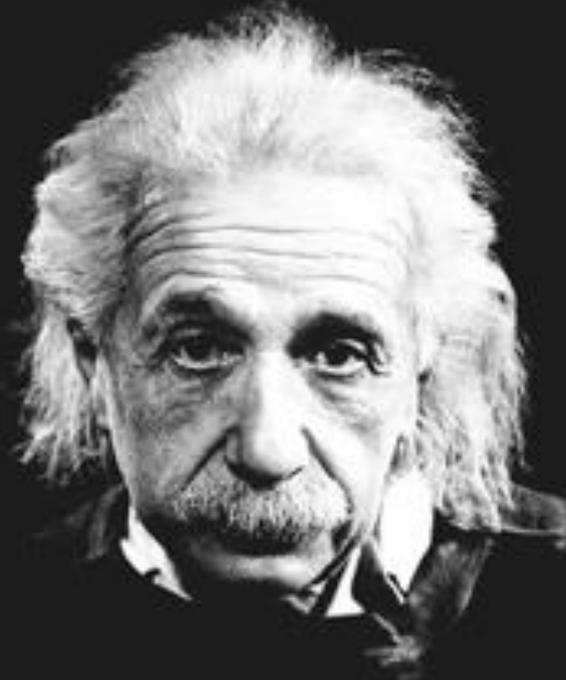
STEAM

STEMM

What is STEM?...moving beyond the acronym.

**"Not everything that  
counts can be counted,  
and not everything that  
can be counted counts."**

-Albert Einstein



What are the characteristics, attitudes, skills, and dispositions of effective STEM practitioners?





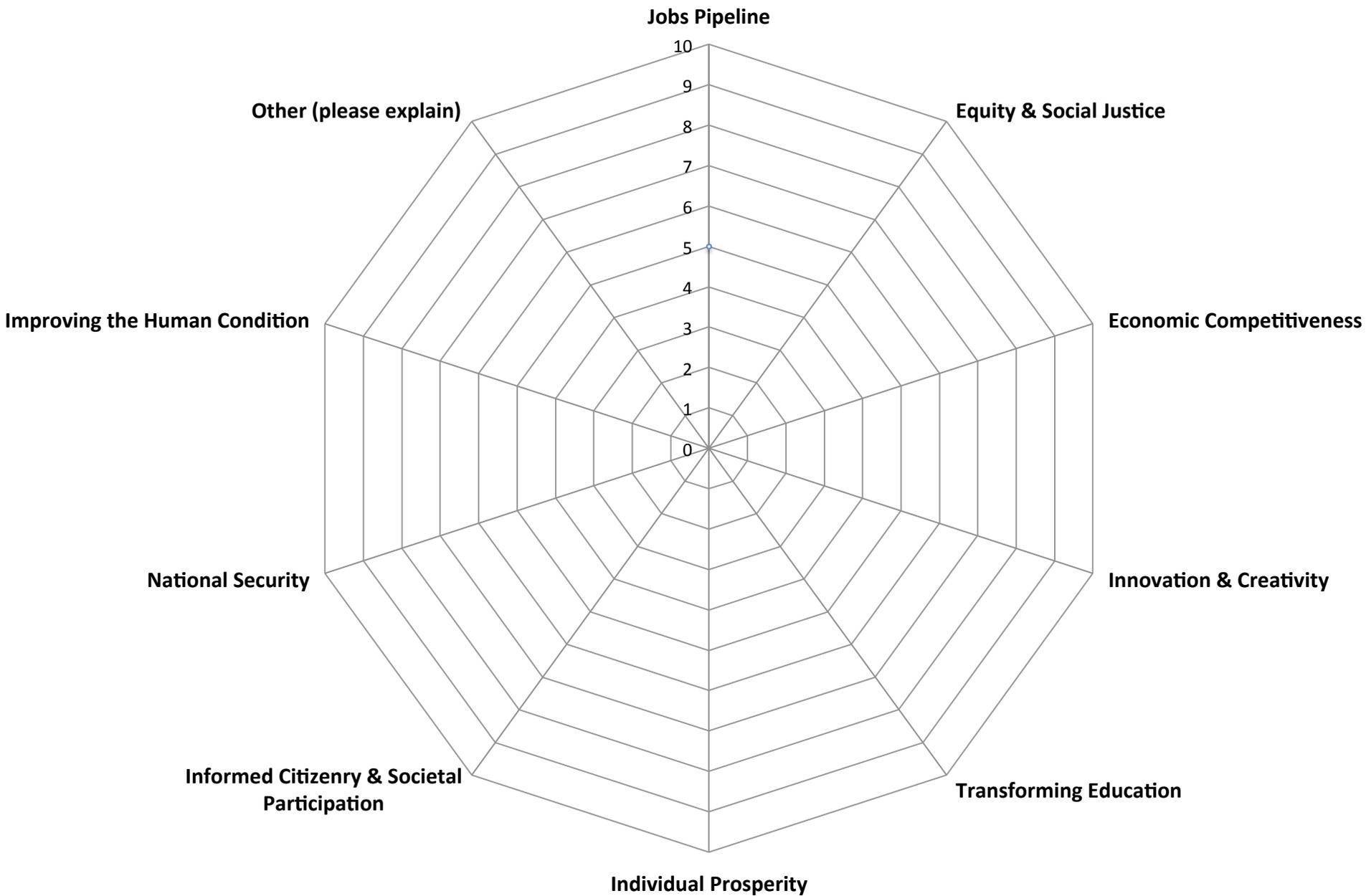
## What is STEM?

*Applied curiosity: an insatiable desire to know and a drive to create.*



## Why STEM Matters - Complementary Perspectives

- 1) Jobs Pipeline** - STEM is about filling current high-demand jobs in STEM fields. Often this is translated to mean high-tech, engineering, computer science, and scientific research. Also included is a focus on “big data”, analysis, and sophisticated algorithms and modeling. For those in CTE, it’s about high-tech manufacturing, utilities, agribusiness, and trades. Seldom is health care or natural resources management included, though momentum is growing to include these in the conversation. A rapidly changing jobs market also requires individuals to be adaptable, critical thinkers, with the ability to collaborate and communicate well using “21<sup>st</sup> Century Skills.”
- 2) Equity & Social Justice** – STEM is a social justice issue. There is a broad societal perception of STEM as being “exclusive”—primarily the domain of upper middle-class white males who are “gifted and talented.” STEM literacy creates family-wage earning opportunities that have the potential to break the cycle of poverty. Yet, our non-Asian students of color are scoring less than half of their white counterparts on standardized tests in Oregon. STEM is a passport to opportunity, but lack of STEM literacy is a major barrier.
- 3) Economic Competitiveness** – The argument here is that we need not just to fill jobs, but also create them. With the rapidly growing influence of China, India, Brazil, and South Asia in the world economy, the US is finding it more difficult to compete in technical jobs that require mostly just “content knowledge.” However, the US has historically had a competitive advantage in research and bringing ideas to market to drive economic growth. Therefore, investing in a strong STEM research agenda, that will spin-off and support local industries is critical.
- 4) Innovation & Creativity** – The world is changing rapidly and requires individuals, organizations, and industries to adapt and innovate. The heart of innovation is imagination, creativity, entrepreneurship, and the ability to both see possibilities and act upon them. Innovation flourishes at the boundaries and intersection of disciplines, cultures, and ideas. STEM pursuits are naturally integrative and have a strong creative aesthetic—though many outside of STEM do not recognize this. Human centered design is a flourishing field which often combines the arts with engineering. Hence, many make the case for adding “Arts” to the acronym to get STEAM.
- 5) Transforming Education**— STEM in K-12 education is seen as requiring a hands-on, project-based approach with authentic demonstrations of proficiency. Rich, “contextual” questions and explorations, often alongside STEM professionals, are becoming more common. CTE and “academic” courses are beginning to blend. These approaches dramatically increase student engagement and are seen as a model for breaking down other silos within the formal school system. Out-of-school STEM opportunities are also valued and are seen to complement the formal learning environments. Additionally, a STEM mindset encourages challenging assumptions, which is essential to drive transformations in education.
- 6) Individual Prosperity** – STEM jobs pay significantly more than non-STEM jobs, especially if one has a post-secondary degree or credential. Having STEM skills opens doors to opportunity as well as increasing one’s ability to adapt to an evolving and dynamic job market.
- 7) Informed Citizenry & Societal Participation** - An increasingly complex, technologically-rich, global society requires STEM skills to fully participate and to be an informed citizen. Most traditionally-defined non-STEM jobs require significant STEM literacy and skills. This includes navigating social media, ability to search and discern data sources, analytical skills to interpret graphs and statistics, and knowing how to use a variety of appropriate technology to address different needs.
- 8) National Security** – With new technology threats to national security are related to issues such as cyber-security, nano-technology, bio-chemical technologies, and advanced weaponry. Gifted STEM talent is necessary to push the boundaries of these technologies and protect our society as well as intellectual property.
- 9) Improving the Human Condition** — Throughout the millennia, advances in STEM have enabled humanity to gather and preserve food, provide shelter, protect communities, settle new lands, combat disease, create works of art and architecture, etc. Increasingly our societal issues have grown exponentially in complexity. Understanding complex human and environmental systems are required to be able to address global issues such as food security, energy, environmental sustainability, overpopulation, health, economic interdependencies, and more...





Presented to the  
HECC Student Success and  
Institutional Collaborations  
Subcommittee

May 7, 2014

LARRY ROPER, CHAIR



# HECC STATE FINANCIAL AID WORK GROUP RECOMMENDATIONS

# WORK GROUP BASICS AND TIMELINE

Legislative interest in effective use of the Oregon Opportunity Grant (OOG) investment led to OEIB charge to HECC

**Charge (OEIB → HECC → Work Group)**



**Work Group Goal**

To recommend a restructured Oregon Opportunity Grant program that will both achieve the goal of improving access to higher education and vocational and technical education for promising, financially-needy underrepresented students, and stimulate the achievement of the State of Oregon's 40-40-20 goals.

# WORK GROUP ANALYSIS

**Work group closely reconsidered the program elements of the OOG in light of:**

- Longstanding access vision for the program
- 40-40-20 goals and completion agenda of the State
- Promoting the ability of underserved students
- Rewarding success and completion
- State and institutional aid relationship
- Underfunded Shared Responsibility Model
- Concern for integrity of the current model given limited funding
- Lack of predictability for students in current OOG methodology, first-come first-served cut off

# WORK GROUP MEMBERSHIP AND PROCESS

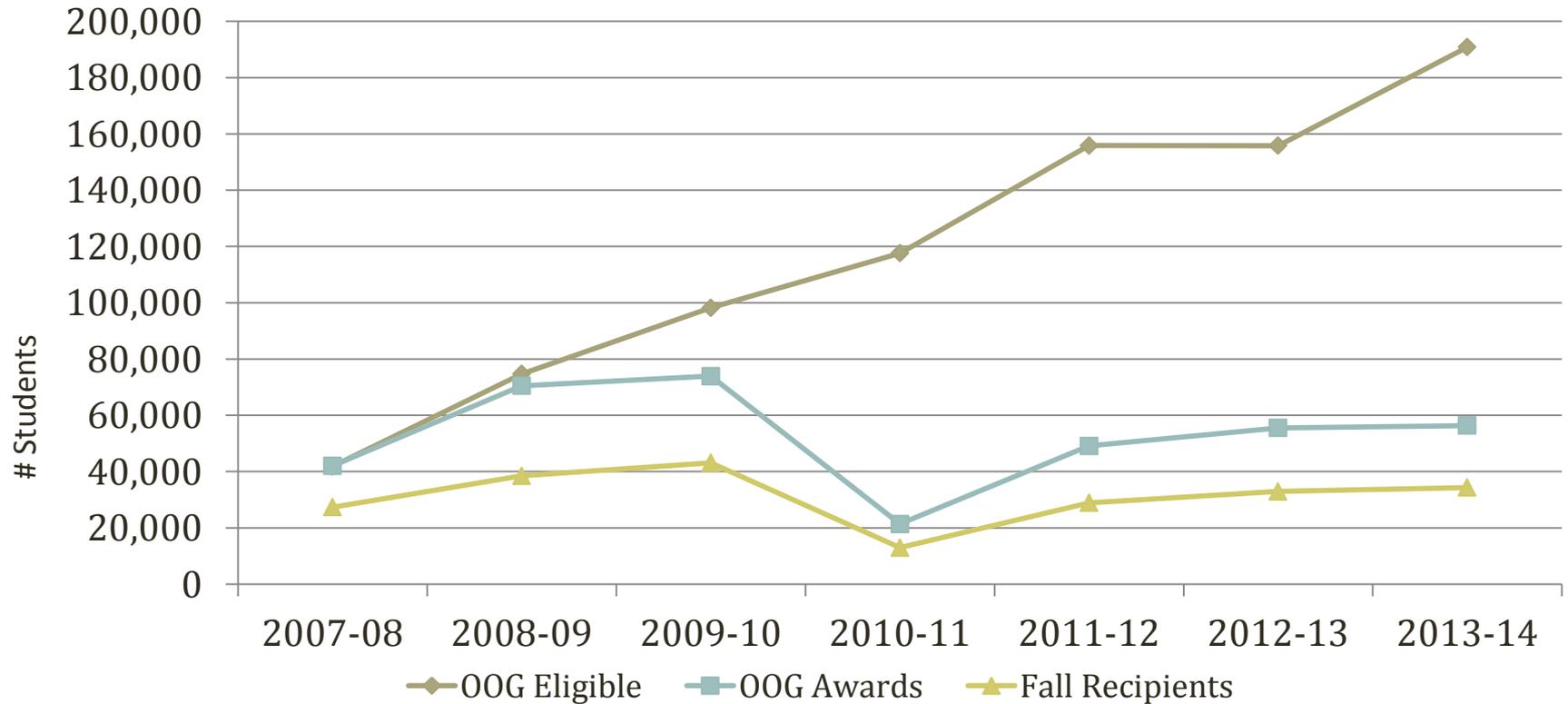
- Work Group charged and convened in November 2013. Members and resource specialists comprised of HECC commissioners, as well as leaders from OUS, Oregon's 17 community colleges, the independent postsecondary sector, student government, OSAC, Office of the Treasurer, and The Oregon Community Foundation.
- Scope of work focused on policy framework for the OOG program, over the course of ten public meetings
- Invited testimony and presentations from financial aid administrators, partners, and stakeholders
- Developed, approved, and ranked a set of foundational principles
- Completed a work group questionnaire on key policy choices, helping to shape final recommendations
- Reviewed research and best practices in other state grant programs, presented by Dr. Nate Johnson, Strategy Lab (supported by Lumina Foundation)

## SHARED RESPONSIBILITY: AN UNDERFUNDED MODEL

- The Shared Responsibility Model vision for affordability as strong, but in practice the **allocation methodology does not function as envisioned.**
- **OOG Program significantly underfunded to meet student need** and to support student progress toward 40-40-20 goals (e.g., of 190,860 eligible in 2013-14, 34,329 received the grant).
- Approximately **one in five eligible students** currently receive the grant under current eligibility criteria.
- **Unmet student financial need** is significant. The original SRM vision was for the state funded OOG to support remaining need after the other partners (student, family, federal government) apply their share. The grant is now administered at a \$2,000 flat amount, and even for the highest need students there is approximately \$4,000 unmet financial need even after state resources.

# OOG FUNDING DOES NOT MATCH ELIGIBILITY

## OOG Eligible/Recipients 2007-08-2013-14



	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
OOG Eligible	41,874	74,694	98,206	117,592	155,855	155,800	190,860
OOG Awards	42,075	70,507	73,912	21,383	49,126	55,547	56,378
Fall Recipients	27,356	38,467	43,136	12,969	28,914	32,924	34,329

# UNMET NEED: SRM HIGHEST NEED STUDENTS

*Examples for \$0 EFC students using Shared Responsibility Model allocation methodology:*

\$20,710 (Pub/Priv 4-yr)

— \$8,800 (Student Share)

— \$0 (Family Share/EFC)

— \$5,645 (Pell)

— \$0 (Tax credit)

**= \$6,265 (Remaining need)**



**= \$2,000 OOG award**

\$17,026 (Public 2-yr)

— \$5,800 (Student Share)

— \$0 (Family Share/EFC)

— \$5,645 (Pell)

— \$0 (Tax credit)

**= \$5,581 (Remaining need)**



**= \$2,000 OOG award**

LARRY ROPER, CHAIR

# RECOMMENDATIONS

# TARGET RECIPIENTS

- Restructure the Oregon Opportunity Grant to **focus on improving access and completion for the most financially needy students.**
- The focus of the grant should be to support **students characterized by “high promise” and high need.**
- Promise should be viewed through the enrolling institution, by virtue of admission. Specifically, the grant should be prioritized for students meeting the enrollment criteria for degree and/or certificate programs at Oregon institutions approved for Federal financial aid.
- The program should prioritize **underrepresented racial and ethnic students among students demonstrating the greatest financial need.**

# INITIAL ELIGIBILITY CRITERIA

- Eligibility will continue to be based on each student's financial need and demographic data as reported in the FAFSA.
- The Work Group recommends that the **\$70,000 income level cap be amended** and a new index be set for need eligibility, to be determined by an implementation team.
- When funding levels do not support the ability to award all students meeting this need index, the grant will be awarded to students with **highest need first**, with special focus to underrepresented racial and ethnic groups.
- Underserved student status will be based on the definitions in the **OEIB Equity Lens**, which is presented in Appendix D.
- The other initial eligibility criteria remain the same.

# AWARD PROCESS

- The Oregon Opportunity Grant award process should focus on **improving access** to post-high school education experiences, while also **promoting retention and completion**.
- **Funding beyond the first year should be determined based on the student meeting progress and achievement benchmarks**, determined for the sector of the educational community in which the student is enrolled.
- **Beyond the second year of enrollment renewal and funding level should be based on escalated performance criteria**, relative to initial renewal benchmarks. Specifically, renewal will be tied to credit hour accumulation and grade point average.
- Other OOG award processes currently in place and described will continue.

# AWARD SIZE AND PREDICTABILITY

- A “meaningful” grant amount will vary based on the circumstance of the student and what amount of aid will influence the student’s ability to pursue education beyond the secondary level.
- The Work Group recommends that **variable grant amounts, with an established maximum**, be awarded based on student need.

# PREDICTABILITY AND INCENTIVES

- **Guarantee the grant for the first two years of attendance**, under conditions of reasonable progress, to strengthen the predictability of the program.
- Consider approaches to **stabilize the cost of education to students**, coordinating contributions of the State, the institution, private funders, and related partner proposals.(e.g., Pay It Forward, The Oregon Opportunity Initiative proposed by the Office of the Treasurer, and The Oregon Promise).
- The Work Group recommends a **rolling application deadline with a processing window** that allows for awarding in a timely manner.
- **Rate of progress and level of achievement should determine eligibility for future grants (beyond the first two years)**, to incentivize students to enroll in and complete postsecondary education.

# LONG-RANGE GRANT PROGRAM

**The Work Group recommends that investment in the Oregon Opportunity Grant be prioritized by the Oregon Legislature.**

The Work Group also recommends **separate investment in an additional K-12 pipeline grant program** that would inspire low-income young people to long-term educational aspirations.

- Establish a postsecondary funding account targeting low-income students
- Provide “scholarships” to students based on minimum GPA benchmarks (with escalating amounts for higher GPAs) for each year they attend a qualifying Oregon middle or high school
- The better students perform in school, the more they would earn towards post-high school education

# IN SUMMARY: RECOMMENDATIONS

1. Restructure the Oregon Opportunity Grant to focus on improving access and completion for the most financially needy students
2. Within the OOG students with highest financial need, prioritize funding for students from underrepresented racial and ethnic groups, based on the OEIB Equity Lens
3. Adopt requirements of student academic progress and achievement for renewal eligibility
4. Endorse predictability by essentially guaranteeing awards for the first two years, if renewal eligibility requirements are met, and awarding grants on a rolling application basis

## IN SUMMARY: RECOMMENDATIONS

5. Strengthen the efficacy of the Shared Responsibility Model and the contribution of the grant program to the 40-40-20 goal by pursuing additional funding to more fully meet current and future financial need
6. Establish an implementation team (including members of the Work Group to the extent possible) to develop an implementation plan and timeline to transition the Oregon Opportunity Grant, consistent with the recommendations proposed by the Work Group
7. Recommend that the HECC and OEIB consider, separately from the OOG recommendations, a “pipeline affordability commitment” for K-12 low-income students

## NEXT STEPS:

### IMPLEMENTATION TEAM, FINANCIAL MODELING

- **Develop an implementation plan and comprehensive financial model**
- Determine the new financial need threshold, maximum grant level
- Determine the process for identifying underrepresented students
- Work with institutional partners to set specific academic requirements for performance benchmarks at each level of the grant and educational sector
- Work with institutional partners to determine the processing window needed for each sector in order to have rolling application deadlines
- Explore the relationship of the OOG with institutional and other sources of aid
- Other implementation decisions as needed

# QUESTIONS?

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# TRANSITION BRIEFING TO OEIB

## ENGINEERING AND TECHNOLOGY INDUSTRY COUNCIL

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June 10, 2014

Eric Meslow, ETIC Chair

# Outcomes for this meeting

- **Understanding of ETIC mission and structure:** Build initial familiarity for the OEIB to assume its decision authority.
- **Why the OEIB?** Legislative action and reasoning.
- **Transition: Current conditions and pending actions:** Overview of relevant current initiatives that affect FY2015 funding decision.
- **FY2015 OEIB funding decision:** Timeline and content of recommendation and decision process.

# ETIC at a glance

<b>Authority</b>	OEIB as of July 1, 2014
<b>Outcomes</b>	Meet Oregon's high tech industry needs for engineering and computer science talent.
<b>Fund</b>	Currently at \$29M/biennium.
<b>Investments</b>	Across all 8 Oregon universities.
<b>Advisory Council</b>	<b>Voting:</b> Senior executives from high tech companies. <b>Non-voting:</b> Industry associations; higher education institutions.
<b>Connections</b>	<b><i>Oregon Innovation Council</i></b> ETIC chair is voting member by statute.  <b><i>Higher Ed Coordinating Commission</i></b> No formal role, but seeking to establish collaboration.

## Mission Focus

- Meeting urgent industry needs
- Upgrading existing talent
- Providing opportunity for new talent

## Investment Quality

- Providing greatest benefits
- Avoiding duplication of existing resources
- Sharing resources across institutions
- Minimizing cost to the public

## Results

- Measuring performance
- Leveraging private investment

# OEIB as safe harbor...

- **Authority change for FY2015**
  - With the pending reduced scope of State Board of Higher Education, a potential conflict of interest existed.
  - ETIC requires a statewide authority with investment — not programmatic — focus.
- **OEIB made best sense** among several options (OEIB, HECC, OInC)
  - Strong connection with STEM Investment Council.
  - Investment mission that covers complete education spectrum.
- **Seeking long-term “home.”** ETIC’s mission involves both education and economic development.

# Current investments

- **Strategic funding**

- Based on industry statement of needs.
- Proposal process.

- **Sustaining funding**

- Targeted to transition to HECC: Oregon student, Oregon job model.
- FY2015 allocations will be set in that context.



# Related decisions

- We are closely coordinating with the STEM Investment Council on the long-term strategic funding and what additional high needs industries should be included.
- How would you like to participate?

# ETIC: Transition Report

Oregon Education Investment Board

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Laura McKinney, Executive Director

May 23, 2014

Version 1.0 (subject to updates)

## ABSTRACT

Report from the State Board of Higher Education to the Oregon Education Investment Board on the current state of ETIC, in preparation for transfer of authority on July 1, 2014. As ETIC transitions to the OEIB, the Council is looking forward to working closely with the Board to continue ETIC's existing restructuring and fund rebalancing efforts and to examine the question of the best long-term home for ETIC's mission. This report is intended to give the OEIB members both the history and current status of ETIC, with an eye to helping the members come up to speed rapidly in order to be thoughtful decision-makers on the ETIC fund allocations and to provide substantive guidance on future directions.

# 1 Table of Contents

<b>2</b>	<b>Executive Summary .....</b>	<b>3</b>
<b>3</b>	<b>ETIC Strategic Review.....</b>	<b>4</b>
3.1	Revisiting ETIC strategy and approach.....	4
3.2	Revamping ETIC operations.....	5
<b>4</b>	<b>FY2014 ETIC Initiatives .....</b>	<b>6</b>
4.1	FY2014: Renewable Investment Model.....	7
4.2	FY2014: Clear Industry Needs.....	7
4.3	FY2014: Credible External Metrics.....	7
4.4	FY2014: Credible Industry Influence.....	9
4.5	FY2014: Advocacy for Oregon Higher Education.....	9
4.6	FY2014: Path Off of ETIC Sustaining Funding.....	9
<b>5</b>	<b>FY2015 ETIC Funding Recommendations.....</b>	<b>12</b>
5.1	Growth/Innovation award funding.....	12
5.2	Sustaining funding: historic and “Oregon student, Oregon job”.....	12
<b>6</b>	<b>OEIB and ETIC .....</b>	<b>17</b>
6.1	OEIB: FY2015 allocations .....	17
6.2	OEIB and ETIC Future .....	17

## A. Appendix: ETIC Membership and Proposed By-Laws

## B. Appendix: Historic ETIC Investments and Performance

## C. Appendix: FY2014 Investments

## D. Appendix: ETIC Legislation

## E. Industry Needs Statements

## 2 Executive Summary

Since 1997, by Oregon Statute 351.663, the ***Engineering and Technology Industry Council (ETIC)*** has advised the Oregon State Board of Higher Education (SBHE) on the investment of a fund to meet the urgent engineering education needs of Oregon's high technology industry. The fund has been continuously renewed during legislative sessions since establishment, primarily due to the consistent advocacy of the industry members.

ETIC consists of senior executives from high technology firms. The size of the council varies, but is currently at 15 voting members. Representatives from key industry associations and public universities are included as non-voting members.

ETIC's outcome is the availability of relevant, quality engineering talent, and the primary metric to date was doubling the growth in engineering and technology graduates at all levels. In addition, ETIC invested in bringing quality faculty to Oregon, and in return expected to see increases in research expenditures as a consequence. Finally, to garner ETIC funding, universities were expected to develop private funds to augment any efforts and reflect industry engagement.

The current \$29M/biennium fund is invested in the following institutions: Oregon Health & Sciences University (OHSU), University of Oregon (UO), Oregon State University (OSU), Portland State University (PSU), Oregon Institute of Technology (Oregon Tech), Southern Oregon University (SOU), Eastern Oregon University (EOU), and Western Oregon University (WOU). The majority of the funding, approximately \$20M per biennium, is currently invested in OSU and PSU, which have the largest engineering schools.

With the passage of SB 270 in June, 2013, the scope of the Oregon State Board of Higher Education was slated to reduce its governance to the four technical/regional universities. With that change in scope, it introduced a potential conflict of interest for the SBHE in overseeing a fund that sent a majority of its investments outside the scope of the Board.

In response, ETIC sought an authority change through the legislature, and in the 2014 session, the passage of HB 4020 transferred ETIC's authority to the OEIB through March, 2016. At that point, given no intervening legislative action, ETIC will transfer to the HECC.

The OEIB was selected over other short-term options for several reasons: 1) Its mission is on education investment, which matches ETIC's goals, and ETIC is very consistent with the goals of the new STEM Investment Council and 2) It is seen as a temporary "safe harbor" as other options are explored for long-term placement. These possibilities include the HECC, Oregon Innovation Council, or other strategic options yet to be fully developed.

Goals for the long-term placement include coordinating more closely with relevant efforts within the Oregon workforce systems and economic development organizations to leverage shared strategies. ETIC will work with stakeholders over this upcoming year to find this new home.

After 15 years of operation, in early FY2014, ETIC declared a strategic restructuring that is underway. We are rebalancing our portfolio, emphasizing outcomes, and building a transparent allocation model for the future.

At heart, this work is to prepare ETIC to continue to support a critical talent pipeline for the high-technology traded sector technology industry into the future.

### 3 ETIC Strategic Review

As with any long-term successful initiative, ETIC periodically needs to take a serious look at its operations and consider revisions to strategy and approach to meet new challenges and conditions.

The basis for the review started by reviewing ETIC’s charter within the original legislation. All ETIC initiatives should tie directly back to this, and reflect adherence to the criteria for evaluating investments. ETIC used this language --- which the Council believes are as relevant today as when ETIC was instantiated --- as the guide for the review and following restructure efforts:

- **Mission focus.** To meet urgent industry needs for new and upgraded talent.
- **Investment quality.** Investments should provide the greatest benefits at the least cost; avoid duplication of existing resources; share resources across institutions; and minimize cost to the public.
- **Outcomes.** Investments should be performance-based, and leverage private investment.

#### 3.1 Revisiting ETIC strategy and approach

As of last year, many engineering programs — despite success in growth in graduates, increased research expenditures and significant private match —were unable to reach full sustainability independent of ETIC support. Much of this was due to the concomitant decrease in state support for higher education during the same period that ETIC was investing. Expected program sustainability through state dollars was not achievable as projected. Eventually, a substantial portion of the ETIC fund investment was going to sustaining initiatives and not towards enabling new efforts or responding to emerging needs. This created an “eternal funding” dilemma for the council, and severely constrained its ability to address emerging needs.

Looking forward, the importance of the high technology industry to Oregon’s economy suggests that without increased flexibility within ETIC, the state will be unable to address challenges that could constrain competitiveness in the next decade.

Consequently, after a comprehensive examination that included industry, current and past ETIC council members, industry association representatives, universities, and government representatives, ETIC declared a strategic change in August, 2013 to prepare the fund for

the future. There was substantial agreement across stakeholder communities on the current strengths and limitations within ETIC. All options were considered prior to embarking on the strategy, including declaring the ETIC initiative complete and terminating the program. Due to current and urgent industry demand, that option was discarded in favor of revitalizing the program.

It was more coincidental than deliberate that the changes in the higher education structure occurred simultaneously. However, with those changes, it provides interesting and compelling alternatives for the ETIC restructure are very consistent with the outcomes-based, student-focused approach.

The newly declared strategy for ETIC is to return the fund to be used according to its original mandate — for change and growth initiatives — and to collaborate with the newly formed HECC to provide a reliable source of sustaining funding for engineering education. To this end, ETIC expects to reduce its funding size request in the upcoming biennium for the growth portion of the fund, and to advocate for an adjustment upward to the HECC higher education general fund allocation.

In addition, ETIC would like to make recommendations to the HECC regarding the “Oregon student, Oregon job” outcomes approach to allocating engineering-directed funds to incentivize continued support for this important talent pipeline for the high technology traded sector technology industry.

### 3.2 Revamping ETIC operations

Initial operational reviews indicated substantial weaknesses in the rigor of ETIC reviews and little knowledge or connections between the industry and university members. In addition, ETIC was not reaching out to external partners and stakeholders in any consistent or reliable manner. For ETIC to realize its mission, these deficits to be addressed.

The council took several significant steps to restructure for effectiveness:

- **Industry needs statements.** ETIC is now producing statements of need from industry, based on outreach to critical industry coalitions. These will drive all future investments. This approach is quite different from the ETIC historic practice of relying primarily on the universities to propose programs for consideration. It also deepens the outcomes that ETIC can measure, as they now become specific to an industry call to action.
- **Industry-university teams.** Instead of all-council meetings with universities, ETIC instituted teams specifically targeted at institutions to get deeper knowledge and mutual influence. All year, small groups of industry councilors and university representatives have been actively reviewing specific proposals and working together on their individual circumstances with respect to sustaining funding. This included developing better understanding among the industry council members on the university business models.

- **Rigorous proposal process.** ETIC instituted a revamped proposal process for its growth/innovation funding that required that each submission provide evidence of industry demand and benefit, clear outcomes, and a viable long-term sustainment plan. In addition, progress will be reviewed on an annual basis, with funding for the next year released only if the project is making progress. Rubrics for proposal evaluation were developed that used the key metrics identified in the legislative language.
- **Strategic partnerships.** ETIC reached out to its relevant industry associations, and has strengthened ties with the Technology Association of Oregon, Oregon Bioscience Association, Association of Oregon Industries and Oregon Business Association. The relationship has moved beyond including representatives as titular members of the council to engaging in shared work on needs statements and proposal evaluations. As part of those efforts, ETIC and TAO conducted surveys across the state for industry needs, particularly in software.

Finally, the council recognized that changes in the higher education governance structure were going to affect its authority, and pursued legislation to ensure the continued transparent operation of the fund under an appropriate statewide entity.

## 4 FY2014 ETIC Initiatives

After an industry member strategic review in July, 2013, a summary list of strategic declarations was adopted by the Council in August, 2013 that strongly reflects execution to the original legislative intent:

- **Renewable investment model is refined and in play.** Some portion of ETIC funding is now tied to specific initiatives against a change/growth funding model.
- **Clear industry needs.** Current ETIC strategic investment priorities and industry needs are sufficiently clear for the university to respond with specific, measurable, and relevant initiatives for FY2015.
- **Credible external metrics.** Metrics for use by external audiences have been crafted that reflect the revised strategy and industry needs.
- **Credible industry influence.** Industry members have an effective method for influencing the university to address current needs commensurate with level of investment. Industry members are confident in their ability to assess university performance.
- **Advocacy.** University members have industry advocacy to address needs, remove barriers, and motivate funding, especially for the 2015-17 biennium.
- **Path off of ETIC as the source of sustaining funding.** Universities have a credible plan for moving off of ETIC as the source of sustaining funding needs over time.

As part of this effort, the proposals for the current 2013-2015 biennium, submitted by the universities in February of 2012, were funded for the first year but not the second. ETIC held back any cost-of-living adjustment, and allocated the same level of funding as was given each of the universities in FY2012.

## 4.1 FY2014: Renewable Investment Model

Starting in FY2014, ETIC reserved a small pool of funds, drawn from the cost-of-living increase and the termination of the Oregon Pre-engineering and Applied Science (OPAS) initiative, to start a renewable fund to focus on growth and innovation initiatives. The fund total for the biennium is around \$3.3M.

Investment criteria include a clear sustaining funding case, so that these new proposals do not fall into the same “eternal funding” dilemma that has constrained the current investments.

ETIC ran a proposal solicitation, campus proposals were submitted, and awards were made in November for initiatives beginning in FY2014, and ETIC is running an additional round currently for FY2015. [See Appendix C.]

This is a first-year experiment with this funding approach, and ETIC is learning from the experience and will be refining the needs-driven proposal process and the monitoring of the progress of projects.

## 4.2 FY2014: Clear Industry Needs

To realize the industry-driven mandate for ETIC, the council has revitalized its outreach to partner organizations representing industry coalitions in order to develop strong statements of need. These will drive the work of the council, and be the basis for analyzing proposals from post-secondary institutions. Focus on the research and creation of these statements from industry community members is a substantial shift from ETIC’s practice over the past few biennia, and reflects a renewed emphasis on driving the work of the Council from documented needs and benefits to industry.

We have a variety of statements from industry stakeholders, including (but not limited to) areas of cyber-security, software development talent, big data/analytics, and power engineering.

In addition, since the February 2014 legislation removed the Portland-centric language for ETIC, we have been aggressively reaching out across the state to industry that has been previously underserved by the council, including Eugene, Ashland and the Gorge.

ETIC expects to be able to document specifically the industry benefits and outcomes for all future investments.

## 4.3 FY2014: Credible External Metrics

At its inception in 1997, there was a severe shortage of quality technical talent in Oregon. To address the situation, ETIC focused on three primary metrics: number of graduates, amount of external research garnered by the universities, and amount of private match funding received.

As rough measures, these enabled early investments to bring faculty to Oregon to build capacity in the engineering and computer science programs. The research funding metric was an attempt to measure an increase in the quality of the institutions that in turn should be reflected in the quality of the graduates. Bringing talented faculty to Oregon had the additional benefit of providing a rich research resource to the state's industry. Finally, ETIC emphasized bringing private dollars to bear on all investments. These were to be an indicator of industry commitment to the specific efforts funded by ETIC.

These metrics served the council well during its first decade. Engineering and technology programs grew, along with graduates. Research expenditures also grew, and for most institutions, private match funding was developed in significant amounts.

From the council's perspective, without this emphasis on engineering talent, Oregon's universities may well have fallen behind nationally, and this has been one aspect of Oregon's economic environment that fosters our current crop of software and technology companies. In addition, ETIC-funded faculty members have been instrumental in being primary movers for the Oregon Innovation Council's Signature Research Centers. Without the faculty, those programs may not have had the research talent available in quite the same numbers and capabilities.

In addition, the early emphasis from ETIC on generating private sources of revenue for the universities had the engineering schools well ahead of other colleges in healthy fundraising and outreach. This held the universities in good stead once state funding began its decline.

Over time, however, these metrics were not adjusted to meet changing conditions. Once a substantial portion of the ETIC funding was tethered to sustaining programs, it was no longer possible for ETIC to underwrite growth, and it became difficult to separate ETIC's influence and outcomes from an overall measure of the institutions performance. Private match funding became very distant from the ETIC outcomes, as it was developed mostly through foundation work and not connected directly to ETIC initiatives.

To re-earn external credibility, ETIC must return to tangible and direct outcomes, tied to the use of the funds. Initially, ETIC is moving away from a high-level, one-size-fits-all set of metrics to a more nuanced evaluation of performance of specific initiatives directed at more targeted needs. Through this approach, ETIC hopes to improve its Oregon-industry driven influence within the university --- and other higher education institution --- programs. In particular, ETIC has the legislative mandate to address the professional development needs of working engineers, which is not reflected at all in the existing metrics.

The trade-off in this revision of metrics is a simple and direct external message. But what ETIC will gain in return is a much more efficient and targeted result.

The first trial of different metrics is in place with the growth/innovation funding for FY2014. ETIC will be conducting yearly, project-specific, reviews of progress prior to renewing funding for follow-on years in multi-year programs. All programs will be expected to demonstrate progress toward independence and sustainability beyond ETIC funding.

#### 4.4 FY2014: Credible Industry Influence

As outlined in the prior sections, as the ETIC fund became tied to sustaining university programs, the degree to which the Council could exert change and growth diminished. In addition, outreach to industry to build strong evidence of need was moribund due to the lack of funding for growth/innovation.

With the creation of even a small renewable pool, we have rebuilt this critical industry-driven aspect of ETIC.

#### 4.5 FY2014: Advocacy for Oregon Higher Education

ETIC council intends to remain a staunch advocate for Oregon engineering higher education, including support for the sustaining funding mechanisms that enable financial viability and success for the engineering and technology schools. The Council recognizes that without appropriate sustaining funding through the HECC, the renewable programs of ETIC may not be viable.

#### 4.6 FY2014: Path Off of ETIC Sustaining Funding

After the declaration in August, 2013 that the FY2015 sustaining funding approach would be changing, the ETIC Council worked with the universities and explored many options for dealing with the sustaining funding required to support existing engineering programs.

As a starting point, ETIC suggested a plan to pull some of the sustaining funding into renewable proposals on a university-by-university basis, and move the remainder through the HECC, based on early signs that they would be amenable to a bump for engineering education in their outcomes-based approach.

To vet that approach, and understand the underlying university business model that was relying on the sustaining funding, ETIC asked the universities to complete an ETIC Sustaining Independence Plan (ESIP), which was designed to elucidate the issues for the industry councilors regarding the dependence on the sustaining funding, and to help create a viable and as much as possible, non-disruptive path forward that would be continuously, predictably and transparently funded into the future.

Here is an excerpt from the ESIP template:

*... outline the strategy and plan for the university to move off of sustaining funding from ETIC over time. This plan will be negotiated within the IU Teams, and presented to the full ETIC for final consideration of sustaining funding.*

*You should structure your document as you see fit to best present your strategy.*

**Note that there is no implied course of action.** ETIC is relying on the universities to step forward and propose how they would see accomplishing moving to independence from OEEIF, while preserving the results of investments that have been made to date.

*In crafting a plan to move off of ETIC as a sustaining operational funding source, the following are potential, but not exhaustive, strategies to consider:*

- **Move funds to renewable status**, by submitting ETIC Achievement Agreements that describe on-going work that meets ETIC needs.
- Advocate to **route a block of funding through the HECC** out of the OEEIF into the base budget of the university. This should be done in such a way as to preserve its use to the engineering school.
- **Negotiate with ETIC to retain sustaining funding for a period of time** and provide metrics associated with prior ETIC goals of capacity and research, including matching dollar commitments.

*Depending on the strategy proposed by the university, ETIC may have different requests for information in order to help evaluate the proposal. To help the industry members evaluate the plan, they must understand the conditions behind the university dependence on continuing ETIC funding for sustaining operations.*

OIT provided an excellent set of criteria in their ESIP response, which formed the basis of the approach developed by the council:

*Analysis & Options The ESIP template outlined three potential options for the university to consider: 1) Move funds to renewable status; 2) Advocate to route block funding through the HECC out of the OEEIF into the base budget of the university targeted for the engineering college; or 3) Negotiate with ETIC to retain sustaining funding for a period of time and provide metrics associated with prior ETIC goals of capacity and research. Oregon Tech has considered the three options and it is capable of accommodating any of the three depending on the overall strategic objectives of ETIC, input from the IU Team, and the decisions made by our sister universities.*

*Oregon Tech is very encouraged and applauds the actions taken by ETIC to create an innovation/growth/renewable fund that enables the universities to submit ETIC Achievement Agreements for programs and initiatives specifically addressing emerging needs. We were very encouraged to see ETIC gaining flexibility and the ability to co-invest with the university to provide time-bound seed funding for*

*initiatives designed to meet urgent industry needs. In particular, we were very pleased of how this pilot program worked in 2014, and we support this direction of ETIC.*

*In addition to the seed funding provided by the newly conceived ETIC renewable fund that will enable Oregon Tech to better meet urgent industry needs and enhance our ability to promptly respond to these by having a co-investor (ETIC) at the onset of the project, we believe that Oregon's engineering universities would also greatly benefit by having a predictable, reliable, sustaining funding source that enables long-term investments in capacity and capability where the strategic vision and time horizon is over 15 years. In order for our engineering colleges and departments to be globally competitive and provide excellent education, they need long-term strategies with a long-term focus. Given the hypercompetitive and highly dynamic/fast changing industry environment that our engineering graduates and industry partners are currently encountering, these initiatives need to go beyond responding to urgent or immediate industry needs (short-term focus) and need be designed to be sources of strategic competitive advantage over long periods of time (typically over 30 years). These strategies require predictable, long-term funding. ETIC and the universities need balance between renewable (innovation/growth) and predictable (long-term sustaining funding). Too much predictable funding for a given university can actually be detrimental. Similarly, excessive amounts of renewable funding could result in malinvestment due to the potential short-term focus associated with meeting urgent needs. Based on these two competing interest, Oregon Tech would advocate for a model as follows:*

*1) Renewable, Innovation, Growth Fund: enabling the universities to submit specific proposals describing initiatives and strategies to meet urgent industry needs, and where ETIC has the flexibility and discretion to fund (substantially equivalent to the ETIC 2014 model).*

*2) Predictable, Long-Term Sustaining Funding: 10% of the direct labor costs associated ETIC aligned initiatives to increase engineering capacity and competitiveness over long periods of time (15-30 year horizons). Oregon Tech would be open to any of two options presented in the document (route block to HECC or ETIC sustaining fund for this purpose). A 10% sustaining fund (\$1M per year approximately) will enable us to add capacity in areas of long-term strategic interest.*

ETIC did not receive constructive ESIPs from either PSU or OSU, and was left with providing a sensible and justifiable recommendation to the legislature and to HECC regarding sustaining funding.

The Council's goals were to recommend to the HECC an approach that would: 1) be transparent, equitable and easy to administer; 2) scale over time; 3) be amenable to

forecasting for the universities over several biennia; and 4) work in concert with the growth/innovation funds over time.

Both cost-based and outcomes-based approaches were considered. In the end, the Council is recommending to the OEIB/HECC based on an “Oregon student, Oregon job” outcomes approach.

At this point in time, all sustaining funding, without any cuts, is being allocated through this approach. Since the existing allocations are based on historic patterns of funding for the universities, this will result in some shifts of funding amongst institutions.

## **5 FY2015 ETIC Funding Recommendations**

For FY2015, there will be several buckets of funding:

1. Growth/innovation awards
2. Sustaining funding based on both
  - a. historic allocations
  - b. “Oregon student, Oregon job” outcomes

### **5.1 Growth/Innovation award funding**

ETIC has run two rounds of proposals for the growth/innovation funds. These are (or will soon be) awarded. Reviews of the FY2014 progress are (or will be) conducted prior to authorizing continuing funding for FY2015.

### **5.2 Sustaining funding: historic and “Oregon student, Oregon job”**

Some portion of the sustaining funding will be based on historic allocations by institution. To decide which portion and how much, in January 2014, ETIC requested that the institutions identify the faculty supported by the ETIC funds in a sustaining manner. This allowed ETIC to see which disciplines were receiving support, and the level of that support.

One key observation after collecting the data was that the allocation to institutions based on analysis of “Oregon student, Oregon job” revealed tremendous discrepancies across schools. For example, ETIC was subsidizing one school over \$29,000 per computer science graduate while giving another school nothing. And the range of allocations in between was spread along the continuum. For sustaining graduate production, the council could not see justification for the magnitude of the differences, so it became apparent that in moving to the outcomes model, that some institutions would benefit financially and others would not.

To rebalance the portfolio accordingly and incrementally, several approaches were considered. The criteria for selecting an approach were ease of implementation, size of impact and ability to address as quickly as possible the most critical and urgent needs.

From the statewide needs assessment and employment department forecasts, it is clear that Oregon continues to have a pervasive and persistent shortage in software development

talent that stretches across all regions and touches most industries. In particular, Lane County has written a needs statement that clearly outlines the problems that their local industry has in recruiting talent, despite the presence of University of Oregon. Likewise, the South Valley region has been very active in trying to create a computer science program at Southern Oregon University to meet the hiring needs for their E-commerce cluster. The Technology Association of Oregon ran a survey in the Portland area and discovered the same patterns, and anecdotal evidence suggests that the Gorge area is similar.

For that reason, the council decided to explore a “discipline-pool” based approach to rebalancing, where each year or two a set of relevant disciplines would be moved to the outcomes model, starting with computer science and electrical engineering (which is often strongly coupled with computer science). This had the benefit of immediately bringing relief to several schools to help address their local shortfalls, while having a reasonable incremental step in reallocating funding. Right now this is the most viable scenario.

The universities were surprised that there is indeed a way to get mean/median salary and Oregon employment data for their graduates in aggregate, based on social security numbers. The costs to do this are very low (\$1,500/10,000+ SSNs) and the timeline is quick. It relies on collaboration between the OUS Institutional Research department and the Oregon Employment Department. This looks to be promising and simple to implement from here forward.

ETIC recognizes that for the “Oregon student, Oregon job” outcome, the portfolio will need to be rebalanced. Instead of introducing a sudden shift of funding, ETIC is recommending staging the process from FY2015 through FY2019, moving incrementally to the outcomes approach.

What follows are some discussion points relative to the recommendation. This should be finalized in the near term, based on refined data and resolution to a couple of questions highlighted below.

### ***Why just resident graduates?***

Non-resident students pay tuition that fully covers the cost of their education. There is no need to use limited state resources to reward the universities for these graduates.

ETIC recognizes that importing talent from out of the region is valuable to the state’s industry. However, ETIC expects that this graduate-outcomes approach will provide strong incentives to seek placement for graduates in Oregon, and a natural spillover will happen as those programs work for both resident and non-resident graduates.

In addition, Oregon’s industry acknowledges and values that Oregon graduates tend to be “sticky” and more likely to stay in the state for the long term, as opposed to those graduates who may leave after a few years.

Should there be a short-term gap that requires that significant talent be imported to the state, ETIC may choose to temporarily reward for targeted non-resident graduates in

specific disciplines through the use of ETIC renewable funds.

### ***Why just placed in Oregon?***

Since ETIC's mission is narrowly drawn to meeting Oregon's industry needs, we choose to focus on placements that provide direct benefits to Oregon.

Once placed in Oregon, there is a direct tax benefit to the state where this award may be easily recouped within a few years of employment.

Provides a positive incentive for universities to align their programs with local industry.

### ***Why pay at the end?***

The best indication of a valuable graduate is the placement of that graduate within industry. If this program is phased in over a 4-year period, there should be a rolling effect, and the universities should be able to forecast revenues accordingly.

In addition, this approach provides an incentive for universities to exceed their forecasts by cooperating with feeder schools, such as community colleges, to increase their graduate rates at lower costs.

### ***How does this relate to the renewable funding?***

ETIC recognizes that the universities are working on longer timescales which are less responsive to the short-term economic conditions. There must be a strategic planning component that looks forward in such a way to support the pipeline and shifting of resources within the universities. This may be a 5-10 year forecasting process, in partnership with the universities. The universities, HECC and industry must have a shared strategic viewpoint.

### ***How might this be extended to the rest of the engineering disciplines, or other fields with significant industry demand?***

ETIC recommends that if there are significant other Oregon industry clusters with similar needs, that ETIC either be extended in its mission to include other clusters, or that other ETIC-like councils be instituted. All of these should have an advisory role with the HECC. Healthcare may be one such area, where the education of students is more expensive than other disciplines, but the demand is high within industry.

### ***What is ETIC's role with the HECC looking forward?***

ETIC hopes to continue to advise the HECC, especially with regard to the following:

- Identifying university/community college disciplines, programs, degrees/certificates that should be included.
- Qualifying higher education institutions for participation.
- Providing forecasts for workforce needs that can inform the size of the award. The awards should be increased or diminished to accommodate shifting state and industry needs. However, this should be done gradually to allow institutions to adjust in accordance with trends.
- Informing the HECC of new programs or approaches that are being tested with renewable funds and that could affect the delivery of engineering education and the HECC.

### ***What is the size of the outcome award?***

The pool allocated for outcome awards will vary based on the current and forecast capacity needs of the state. The structure of the program should be designed to give plenty of forward notice to the universities for either increases or decreases in the pool, to allow them to adjust programs and counsel students accordingly.

The award should be sufficient incentive for the universities to provide engineering education, which we recognize is more expensive to deliver than other disciplines. We will use the difference between in-state and out-of-state tuition level as the maximum for any award.

As higher-education institutions are better able to provide consistent, reliable and department-level cost information regarding their programs, this may be taken into account when setting award levels. This helps ensure that programs are viable long term, even as demands wax and wane.

For assessing quality of graduates, the mean or median starting salary across an institution's qualifying graduates will be used as an objective measure. Awards for a specific degree will vary in accordance. This should address the concerns about the potential differences in graduates across different institutions. Note that this doesn't say anything about the quality of an institution as a whole, only how much in demand their particular graduates are for this industry cluster.

### ***What reporting will be required?***

Universities will be required to provide graduates rates by residency, and to compute the mean or median starting salary for all resident graduates placed in Oregon. It is not expected that ETIC should need any individual graduate data.

This may require the participation of the Oregon Employment Department in order to correlate graduates with state tax records. There is an open question about how to annualize salaries for graduates. It may require going back a couple of years to get annualized figures for graduates.

### ***Why aren't we rewarding differently by degree level?***

This is possible, but adds to complexity of the model. The question is whether that complexity is actually material in making the decision.

Originally, the goal of using the median was to measure the relative quality between schools for a same-level graduate.

However, using the median, gives us some capability to reward for graduate education, without making the model overly complex. We can collapse quality and relative degree value into a single number: that is, we can measure both the relative quality across institutions for the same degree level and incorporate the increased market value for higher level degrees, without having to differentiate among the various approaches. This allows us to use a pure market approach.

In addition, the tuition for resident graduate education is far closer to the tuition paid by non-residents. Thus graduate education reaches closer to parity and the true costs for the delivery.

In summary, the median should reflect the overall market value of a non-differentiated graduate produced by that institution. The total funding received depends as well on the number of graduates produced.

Here are some further thoughts about the <perhaps unintended> value in not addressing the differentiation by degree.

Here is some complexity that it eliminates:

- If we try to cut the population of graduates into smaller pools by degree level, we may get into an escalating problem with determining the industry average salary for such a specific target. Right now it is fairly straightforward using employment department data.
- If an institution has average BS and average MS students, they wouldn't see any quality bump if we differentiate by degree. If we then wanted to reward for MS production, we would need to supply some other kind of incentive to the system.

Here are some business case scenarios enabled by the simple model. An institution could:

- Focus on increasing the quality of their undergraduate program without introducing higher level degrees, and show value to the market.
- Maximize its funding by being selective on its entering undergraduate population, say drawing from those with existing work experience who will garner higher salaries simply because of the overall value of their backgrounds. This could reward efficient production of graduates like the OSU post-baccalaureate program.
- Expand to include a variety of professional education certificates, that may have shorter-term completions but yield market value. We might need to require some kind of median entering salary level for students in these programs, to normalize the market delta.

We may also choose to use the renewable funds for short-term bursts of demand at the graduate level for specific disciplines.

### ***Existing questions and issues...***

- How would we recognize community college contributions?
- Is this model a counter-incentive for addressing more challenged populations of students (e.g. First generation, non-English speaking...)
- What about students moving on to grad school? Especially out of state?

A more useful model would include the median estimate salary for the students when they entered the program, thus rewarding the delta in capability that was produced by the institution. This may be an improvement to introduce later, which could also reward equity-based behavior (that is, reaching out to first generation or lower income populations.)

## **6 OEIB and ETIC**

There are two critical pieces of OEIB's work with ETIC in the next year: deciding on the fund allocations for FY2015 and working on a long-term home. OEIB will also be asked to review the ETIC by-laws changes, in light of the transition to OEIB.

### **6.1 OEIB: FY2015 allocations**

As ETIC is advisory to the OEIB, ETIC will be preparing proposals for how to allocate the ETIC fund for FY2015 to the universities. OEIB will make the decision about allocations. Following that, contracts will be finalized with each of the targeted institutions.

These recommendations will be presented to the OEIB in September at the OEIB meeting, unless otherwise directed. ETIC will be ready as early as July with final recommendations.

### **6.2 OEIB and ETIC Future**

For the next biennium, ETIC will need to have located a solid future organizational home within the state's structure. There are ongoing conversations about the options. We will be including stakeholders within the education system, workforce systems, and economic development organizations to explore viable options. ETIC appreciates the OEIB's role in facilitating this long-term plan.

## A. Appendix: ETIC Membership and Proposed By-Laws

### Voting Members

Chair – Eric Meslow, Timbercon

Vice-Chair – Chris Brooks, WebMD

<b>Jeff Blank</b> Vice President Engineering	<a href="#">3D Systems</a> P.O. Box 1000 M/S 60-060 Wilsonville, OR 97070
<b>Eileen Boerger</b> CEO	<a href="#">CorSource Technology Group</a> 419 SW 11th Ave. Suite 300 Portland, OR 97205
<b>Chris Brooks</b> Senior Vice President of Technology	<a href="#">WebMD Health Services</a> 2701 NW Vaughn Street Suite 700 Portland, OR 97210
<b>Keith Brown</b> Director, STG Strategic Industry and University Alliances	<a href="#">IBM Corporation</a> 15400 SW Koll Parkway Beaverton, OR 97006
<b>Dick Burnham</b> Vice President, Business Development	<a href="#">RF Stearns, Inc.</a> 5200 SW Meadows Rd. Suite 200 Lake Oswego, OR 97035
<b>Tom Buzak</b> President, Innovation & Advanced Technologies	<a href="#">Tektronix, Inc.</a> 14150 SW Karl Braun Drive Beaverton, OR 97077
<b>David Childers</b> CEO	<a href="#">Compli</a> 610 SW Broadway Suite 600 Portland, OR 97205

<p><b>Dan Dobry</b> Vice President</p>	<p><a href="#">Bend Research, Inc.</a> 63045 Corporate Place Bend, OR 97701</p>
<p><b>Lisa Graham</b> CEO</p>	<p>Black Canyon Woodworks 63023 Layton Ave. Bend, OR 97701</p>
<p><b>Art Johnson</b> Vice President</p>	<p><a href="#">KPFF Consulting Engineers</a> 111 SW Fifth Ave. Suite 2500 Portland, OR 97204</p>
<p><b>Don Kania</b> President &amp; CEO</p>	<p><a href="#">FEI Company</a> 5350 NE Dawson Creek Drive Hillsboro, OR 97124</p>
<p><b>Bruce Kenny</b> Executive Vice President, Product</p>	<p><a href="#">Webtrends, Inc.</a> 851 SW 6th Ave. Suite 1600 Portland, OR 97204</p>
<p><b>Mary Kent</b> Platform Program Manager</p>	<p><a href="#">Hewlett-Packard Co.</a> 1000 NE Circle Blvd. Corvallis, OR 97330</p>
<p><b>Steve Litchfield</b> Senior Project Manager</p>	<p><a href="#">CH2M HILL</a> 2020 SW 4th Ave. Suite 300 Portland, OR 97201</p>
<p><b>Eric Meslow</b> President &amp; CEO</p>	<p><a href="#">Timbercon, Inc.</a> 20245 SW 95th Ave. Tualatin, OR 97062</p>
<p><b>Steve Pawlowski</b> Intel Senior Fellow</p>	<p><a href="#">Intel Corporation</a> 2111 NE 25th Ave.</p>

GM Central Architecture and Planning	Hillsboro, OR 97124
<b>Tuan Phamdo</b> (alternate) Director of Extreme Technology	<a href="#">Intel Corporation</a> 2111 NE 25th Ave. Hillsboro, OR 97124
<b>Mike Rohwer</b> CEO & Founder	<a href="#">Performance Health Technology</a> 3993 Fairview Industrial Dr. SE Salem, OR 97302

**NonVoting Members - Academic**

<b>Mateo Aboy</b> Associate Provost & VP for Research	Oregon Institute of Technology 27500 SW Parkway Ave. Wilsonville, OR 97070
<b>Steve Adkison</b> Provost & SVP for Academic Affairs	Eastern Oregon University One University Blvd La Grande, OR 97850
<b>Scott Ashford</b> Dean, College of Engineering	Oregon State University 101 Covell Hall Corvallis, OR 97331
<b>Andy Berglund</b> Associate Dean of the Graduate School	University of Oregon 1219 University of Oregon Eugene, OR 97403
<b>Dan Dorsa</b> Vice President for Research	OHSU 3181 Sam Jackson Park Rd, L335 Portland, OR 97239
<b>Charlie Jones</b> Dean, School of Engineering,	Oregon Institute of Technology 3201 Campus Drive

Technology and Management	Klamath Falls, OR 97601
<b>Pat Jones</b> Associate VP for Research and Innovation	University of Oregon 677 East 12th Ave. Suite 500 Eugene, OR 97403
<b>Jim Klein</b> Provost & VP for Academic Affairs	Southern Oregon University 1250 Siskiyou Blvd, CH130 Ashland, OR 97520
<b>Laura McKinney</b> Executive Director, ETIC Asst. Vice Chancellor Industry Partnerships	Oregon University System PO Box 751, IAFF Portland, OR 97207
<b>Melody Rose</b> Chancellor	Oregon University System P.O. Box 751, CHAN Portland, OR 97207
<b>Steve Scheck</b> Vice President for Academic Affairs	Western Oregon University 345 North Monmouth Ave. Monmouth, OR 97361
<b>Ren Su</b> Dean, Engineering & Computer Science	Portland State University P.O. Box 751 Portland, OR 97207

**NonVoting Members – Associations**

<b>Jim Craven</b> Director, Legislative Affairs	TechAmerica 5285 SW Meadows Road, Suite 200 Lake Oswego, OR 97035
<b>Ryan Deckert</b>	Oregon Business Association 6975 SW Sandburg Road, Suite 250

President	Tigard, OR 97223
<b>Betsy Earls</b> Vice President & Counsel	Associated Oregon Industries 1149 Court Street NE Salem, OR 97301
<b>Dennis McNannay</b> Executive Director	Oregon Bioscience Association 2828 SW Corbett Ave., Suite 115 Portland, OR 97201
<b>Skip Newberry</b> President	Technology Association of Oregon 111 SW 5th Ave., Suite 120 Portland, OR 97204

**BYLAWS**  
**ENGINEERING & TECHNOLOGY INDUSTRY COUNCIL (ETIC)**  
**Revised and Adopted, ~~August~~ May 9, 2013**  
**To take effect on July 1, 2014**

**I. PURPOSE**

The purpose of these bylaws is to establish policies and procedures for the operation of the Engineering and Technology Industry Council (ETIC). Such bylaws are intended to be consistent with ORS 351.663, 351.666 and 351.668 and to facilitate public understanding of the role, policies and procedures of ETIC.

**II. ETIC ROLE**

The role of ETIC is to advise the ~~Chancellor~~ Chief Education Officer of the Oregon ~~University System~~ Education Investment Board and the ~~State Board of Higher Education~~ on how Oregon public and private educational institutions can best improve and expand engineering facilities, programs and educational capacity to meet the engineering and technology needs of Oregon's public and private sectors with an emphasis on economic growth and opportunity. In particular, ETIC shall provide advice on all matters related to the investment of funds separately appropriated by the Oregon Legislature for these purposes.

**III. VOTING MEMBERS**

- A. ETIC shall be composed of between eight and twenty voting members appointed in writing by the ~~Chancellor~~ Chief Education Officer. Voting members shall not be employees of Oregon public and private educational institutions. Appointment of voting members shall be for renewable terms of up to four years each. Resignations from ETIC should be made in writing to the ~~Chancellor~~ Chief Education Officer. Appointments may be made at any time to replace members or expand ETIC membership. The ~~Chancellor~~ Chief Education Officer may also appoint official alternates for certain voting members providing that the alternate is from the same organization. Such members shall vote instead when the other corresponding member is absent from a meeting or otherwise unable to vote.
- B. At least three-fourths of the voting members shall represent employers with Oregon operations that employ engineers, computer scientists or material scientists. One voting member will be drawn from the STEM Investment Council. Such members will hold senior executive positions in their companies, with exceptions being made at the discretion of the ~~Chancellor~~ Chief Education Officer.
- C. From among the members of ETIC, the ~~Chancellor~~ Chief Education Officer shall appoint a Chair of ETIC who is responsible for chairing ETIC meetings and conducting the business of ETIC. A resignation of the Chair should be made in writing to the ~~Chancellor~~ Chief Education Officer. Appointment of a successor shall follow the provisions of this section.
- D. The ~~Chancellor~~ Chief Education Officer shall appoint one or two Vice Chairs of ETIC from within the members of ETIC. Either vice chair may perform the

duties of the Chair in the Chair's absence. A resignation of a Vice Chair should be made in writing to the ~~Chancellor~~Chief Education Officer. Appointment of a successor shall follow the provisions of this section.

- E. With prior approval by the Chair, voting members may select alternates to represent them on ETIC. Without such approval, alternates may participate in ETIC meetings on a non-voting basis.

#### IV. NON-VOTING MEMBERS

- A. In addition to voting members, ETIC shall have up to thirty non-voting members. These shall include the ~~Chancellor of the Oregon University System~~Chief Education Officer; ~~and one member from each Oregon public university with programs in engineering, computer science or material science; and at least two representatives from Oregon community colleges with pre-engineering or computer science programs.~~ These members shall serve as long as they retain the same position at their ~~university institution~~ or until when their successor is appointed. Additional non-voting members may be appointed for two-year renewable terms, including past voting members, representatives of industry organizations, private universities, other community colleges, governmental agencies and other organizations.

~~B. Those that are legitimately appointed as voting members of ETIC who also qualify for non-voting status shall be considered voting members in good standing.~~

#### V. MEMBERSHIP

- A. Members are not reimbursed for the routine costs of their attendance and participation in ETIC meetings. At the discretion of the Executive Director, voting members may be reimbursed for certain other costs.
- B. Members who change employment, change their role at their current place of employment or leave Oregon may be asked to resign by the ~~Chancellor~~Chief Education Officer.

#### VI. STAFF SUPPORT

The ~~Chancellor~~Chief Education Officer shall ~~assign employees of the Oregon University System~~ ensure that staff is available to support ETIC including an Executive Director. The Executive Director shall work in consultation with the Chair and Vice Chair(s) to prepare and distribute materials such as agendas, minutes, reports, action items and the like, to manage ETIC records, to maintain an ETIC website and to assume other responsibilities as assigned by the Chair, Vice-Chair, or the ~~Chancellor~~Chief Education Officer. Costs associated with ETIC activities ~~shall be funded through the Office of the Chancellor. Such funding may include~~ may be covered by allocations from funds separately appropriated by the Legislature to support engineering, computer science, and technology programs.

#### VII. MEETINGS

- A. ETIC shall meet at least quarterly. These meetings will be open to the public.

- B. The Executive Director shall distribute an agenda, minutes from the previous meeting and other materials at least four days before the meeting. The Chair may amend the agenda and distribute other materials at the meeting as circumstances require.
- C. In order to conduct business, a quorum of at least one half of the voting membership, but not less than five, shall be present. Members may participate via teleconferencing or other interactive media. Any formal action of ETIC requires approval by a majority of the voting members participating.
- D. Meetings shall be conducted in a collegial manner intended to afford broad input. Roberts Rules of Order will serve as a guide should parliamentary issues arise.
- E. Should ETIC fail to reach a quorum at a regularly scheduled meeting or should the Chair decide that action on certain agenda items should be taken prior to the next regularly scheduled meeting, the Chair may direct the Executive Director to conduct a vote by electronic mail or equivalent method. This voting process shall provide all voting members at least 10 days written notice. In such cases all members shall be provided a mechanism for communicating their questions, opinions or concerns to all other members during this ten-day period. Any decisions made between meetings will be subject to ratification at the next regular meeting of the ETIC.

**VIII. COMMITTEES**

ETIC may form committees or task forces from time to time. Such committees and task forces shall have whatever responsibilities that ETIC gives them that are consistent with these bylaws. Any decisions or recommendations they make shall be subject to review at the next meeting of ETIC.

**IX. RECORDS RETENTION AND AVAILABILITY**

The ~~Chancellor's Office~~[Oregon Education Investment Board](#) shall retain and manage all ETIC records, including these bylaws, in a manner consistent with Oregon's ~~public University System~~ records retention policies. To facilitate public understanding of the role, policies and procedures of ETIC, agendas, minutes, key decision documents, rosters of voting and non-voting members, bylaws, reports and the like shall be included on the ETIC website.

**X. CONFLICT OF INTEREST**

ETIC members are subject to the provisions of ORS 244 and ~~OUS-OEIB~~ Board Policy regarding conflict of interest. The Executive Director shall provide written guidance to members regarding these provisions and procedures should actual or potential conflicts of interest arise or should members convey questions or concerns on such matters in writing to the Executive Director.

**XI. LIABILITY**

ETIC members, who are not state employees, serve as volunteers. As such they shall be offered any liability or insurance protections provided by the ~~University System~~[state](#) to other volunteers. The Executive Director shall provide written material regarding this issue upon request by any member.

**XII. AMENDMENT OF BYLAWS**

These bylaws may be amended by a majority vote.

## B. Appendix: Historic ETIC Investments and Performance

<b>ETIC Summary of Investments</b>									
	<b>1997-1999</b>	<b>1999-2001</b>	<b>2001-2003</b>	<b>2003-2005</b>	<b>2005-2007</b>	<b>2007-2009</b>	<b>2009-2011</b>	<b>2011-2013</b>	
<b>EOU</b>			0.13	0.25	0.33	0.45	0.39	0.34	
<b>OGI/OHSU</b>			2.15	2.6	2.48	2.90	1.62	1.43	
<b>OIT</b>			1.67	1.08	0.99	1.40	1.20	1.06	
<b>OSU</b>			8.96	9.92	9.40	19.48	16.64	14.70	
<b>PSU</b>			4.69	4.96	4.88	7.60	6.49	5.73	
<b>SOU</b>			0.39	0.54	0.51	0.53	0.45	0.40	
<b>UO</b>			2.31	1.8	1.00	2.93	2.50	2.21	
<b>WOU</b>			0.15	0.25	0.24	0.75	0.64	0.57	
<b>OPAS/PC</b>			1.79	see notes	0.84	1.24	1.06	0.94	
<b>TOTAL</b>	<b>5.00</b>	<b>10.00</b>	<b>22.23</b>	<b>21.40</b>	<b>20.66</b>	<b>37.28</b>	<b>30.98</b>	<b>27.39</b>	
	in millions								
2003-2005	0.74 precollege included in host university allocations (OIT, OSU, PSU/SatAcad)								

## 2011-2013 Biennium - Report as of June 30, 2013

updated 11/6/13

## Investment Summary

	PRIVATE SUPPORT (\$M)		FACULTY SUPPORTED				RESEARCH EXPENDITURES (\$M)			
	2011-13 Biennium ETIC Investment	Biennium Goal*	Biennium Actuals 2011-13	Existing ETIC supported positions		New ETIC Positions		AY13 Goal*	AY12 Actual	AY13 Actual
				Supported as of June 2011 (FTE)*	Actual faculty in existing positions as of June 2013 (FTE)**	New Positions Goal* for 2011-13 Biennium	New Positions Filled as of June 2013			
<b>EOU</b>	<b>0.344</b>	0.58	0.71	2.20	2.20	0.00	0.00	0.50	0.22	0.02
<b>OHSU</b>	<b>1.429</b>	2.55	4.95	9.50	9.50	2.00	1.00	19.59	16.23	14.82
<b>OIT</b>	<b>1.058</b>	1.93	1.64	4.00	3.00	0.00	0.00	0.375	1.336	1.18
<b>OSU</b>	<b>14.704</b>	24.47	30.27	44.00	37.00	2.00	0.00	35.00	38.80	36.38
<b>PSU</b>	<b>5.735</b>	9.61	4.66	16.40	16.24	0.00	0.00	9.00	8.95	9.50
<b>SOU</b>	<b>0.401</b>	0.68	2.75	2.50	1.50	0.00	0.00	0.20	0.00	0.00
<b>UO</b>	<b>2.214</b>	4.58	10.75	0.00	0.00	2.00	0.00	13.00	14.06	16.36
<b>WOU</b>	<b>0.566</b>	0.96	0.20	5.00	4.65	0.00	0.00	0.01	0.00	0.00
<b>TOTAL</b>	<b>26.451</b>	<b>45.352</b>	<b>55.93</b>	<b>83.60</b>	<b>74.09</b>	<b>6.00</b>	<b>1.00</b>	<b>77.68</b>	<b>79.60</b>	<b>78.26</b>

OPAS investment of .937M not included in first column

\* From ETIC Plan for 2011-2013 Biennium

\*\* Reflects actual faculty in existing ETIC-support positions supported on 6/30/13 and no vacant existing positions or new positions.

## 2011-2013 Biennium - Report as of June 30, 2013

updated 11/6/13

## Metrics Data

	BACHELOR'S DEGREES GRANTED								UNDERGRADUATE STUDENT CREDIT HOURS							
	Actuals						Goals from 2011-2013 Plan		Actuals						Goals from 2011-2013 Plan	
	AY99	AY09	AY10	AY11	AY12	AY13	AY13	AY15	AY99	AY09	AY10	AY11	AY12	AY13	AY13	AY15
<b>EOU</b>	0	7	10	15	14	20	15	20	0	8,933	3,429	13,294	12,791	12,403	3,000	3,250
<b>OIT</b>	167	183	181	212	199	254	216	255	26,603	25,303	25,457	26,895	27,685	29,560	26,499	29,633
<b>OSU</b>	390	536	561	614	660	679	550	560	52,690	64,344	69,204	74,896	84,375	87,507	67,000	69,000
<b>PSU</b>	157	185	203	261	274	220	204	253	20,785	33,231	35,524	35,644	35,669	38,030	35,050	37,955
<b>SOU</b>	33	35	31	43	39	43	50	55	7,389	5,325	6,170	5,409	5,795	5,523	8,500	9,100
<b>WOU</b>	40	35	32	46	53	28	42	45	7,170	7,700	7,780	7,765	7,200	7,618	8,000	8,500
<b>TOTAL</b>	<b>787</b>	<b>981</b>	<b>1,018</b>	<b>1,191</b>	<b>1,239</b>	<b>1,244</b>	<b>1,077</b>	<b>1,188</b>	<b>114,637</b>	<b>144,836</b>	<b>147,564</b>	<b>163,903</b>	<b>173,515</b>	<b>180,641</b>	<b>148,049</b>	<b>157,438</b>

	MASTER'S DEGREES GRANTED									GRADUATE STUDENT CREDIT HOURS							
	Actuals						Goals from 2011-2013 Plan			Actuals						Goals from 2011-2013 Plan	
	AY99	AY09	AY10	AY11	AY12	AY13	AY13	AY15	AY99	AY09	AY10	AY11	AY12	AY13	AY13	AY15	
<b>OHSU</b>	103	36	12	14	13	5	14	20	9,479	4,812	3,318	3,229	2861	2,952	2,580	2,824	
<b>OIT</b>	0	7	2	6	8	9	15	19	135	533	722	437	628	695	761	950	
<b>OSU</b>	123	138	168	185	206	186	150	160	12,870	19,981	22,976	25,304	27,858	27,276	23,000	28,000	
<b>PSU</b>	105	180	203	237	216	209	187	208	8,685	13,542	13,459	13,034	13,286	13,150	14,125	15,638	
<b>SOU</b>	5	3	1	2	3	0	7	9	128	90	170	203	134	75	325	450	
<b>UO</b>	2	23	43	44	58	52	35	45	203	2,358	2,124	2,488	3,132	2,808	3,000	3,500	
<b>WOU</b>	0	1	8	17	24	15	24	30	0	240	340	1,400	584	374	960	1,080	
<b>TOTAL</b>	<b>338</b>	<b>388</b>	<b>437</b>	<b>505</b>	<b>528</b>	<b>476</b>	<b>432</b>	<b>491</b>	<b>31,500</b>	<b>41,556</b>	<b>43,109</b>	<b>46,095</b>	<b>48,483</b>	<b>47,330</b>	<b>44,751</b>	<b>52,442</b>	

	PHD DEGREES GRANTED								
	Actuals						Goals from 2011-2013 Plan		
	AY99	AY09	AY10	AY11	AY12	AY13	AY13	AY15	
<b>OHSU</b>	9	8	9	12	10	5	11	12	
<b>OSU</b>	27	36	41	41	46	60	38	45	
<b>PSU</b>	4	14	9	9	9	18	17	28	
<b>UO</b>	9	6	9	16	16	10	17	19	
<b>TOTAL</b>	<b>49</b>	<b>64</b>	<b>68</b>	<b>78</b>	<b>81</b>	<b>93</b>	<b>83</b>	<b>104</b>	

Grand Total 1,174 1,433 1,523 1,774 1,848 1,813 1,592 1,783

INTELLECTUAL PROPERTY METRICS								
	Invention Disclosures			Licenses Granted			Spin-Off Companies	
	Actuals		Goal	Actuals		Goal	Actuals	Goal
	AY12	AY13	AY13	AY12	AY13	AY13	AY13	AY13
<b>OHSU</b>	16	29	18	-	4		2	1
<b>OIT</b>	11	4	5	-		2	0	2
<b>OSU</b>	29	34	25	7	5	3	4	3
<b>PSU</b>	8	8	5	2	1	4	1	1
<b>UO</b>	15	19	12	-	4	1	2	-
<b>TOTAL</b>	<b>79</b>	<b>94</b>	<b>65</b>	<b>9</b>	<b>14</b>	<b>10</b>	<b>9</b>	<b>7</b>

Notes on Intellectual Property Metrics:

- 1- # invention disclosures received by your college or department as reported to Association of University Technology Managers
- 2- # patent licenses or other royalty-generating intellectual property licenses granted to commercial entities
- 3- \$ income received (thousands) from patent and other intellectual property licenses granted to commercial entities
- 4- # spinoffs as reported to Association of University Technology Managers

\*PSU - 3 existing start-up companies (2 ongoing, 1 new in FY13)

## C. Appendix: FY2014 Investments

<b>ETIC Renewable Funding -- FY14 Proposal Awards</b>				
<i>approved by ETIC Voting members November 15, 2013</i>				
<b>PropID</b>	<b>University</b>	<b>Short title</b>	<b>Faculty</b>	<b>FY2014</b>
2014-01	PSU	New Beginnings	Harrison	\$124,520
2014-02	PSU	RF-Analog	Campbell	\$0
2014-03	PSU	Engr/Mgmt 3+2	Kocaoglu	\$78,936
2014-04	PSU	Sustainability	Koch, Wells	\$0
2014-05	PSU	Envoys*	de Rouen	\$20,000
2014-06	PSU, OIT	Westside	Crespo, McNames	\$80,000
2014-07a	OIT	Portfolio-optical	Aboy	\$96,093
2014-07b	OIT	Portfolio-systems	Aboy	\$110,000
2014-08	OIT	Renewable Grid**	Chiasson, Zipay	\$215,000
2014-09	OSU	Robotics**	Stone	\$240,000
2014-10	UO	Bioinfo/Big data**	Berglund, Cresko, Espy, Larson	\$180,000
2014-11	PSU, OSU, OIT	Power Engineering**	Bass, Cotilla-Sanchez, Garibay	\$185,451
				<b>\$1,330,000</b>
<u>Notes</u>				
*Envoys will receive funding from OPAS fund balance.				
**Funding includes 1:1 match requirement for space improvements/equipment requests.				
Follow-on Requests for FY2015 and beyond have been identified but not committed.				
<u>Full Titles</u>				
2014-01	The New Beginnings Initiative: <i>Helping College Graduates Migrate to Careers in Computing via the Master of Science in Computer Science Integrated with a Structured Internship Experience.</i>			
2014-02	Project-Based Radio Frequency Analog Education			
2014-03	Fast Track BS+MS Program in Engineering and Technology Management between Portland State University and Oregon Tech Wilsonville			
2014-04	Integration of Sustainability concepts, approaches and design practices across the Engineering Curriculum			
2014-05	Continued Funding for the PSU Engineering Envoy Program			
2014-06	Electrical and Computer Engineering Labs to Support Oregon Tech – PSU Westside Partnership			
2014-07a	New Program Development & Capacity Increases for High-Demand Engineering & Technology BS & MS			
2014-07b	Degrees at Oregon Tech Wilsonville			
2014-08	Grid Integration of Renewable Energy Sources (“Smart Grid” with “Smart Buildings”)			
2014-09	Graduate program in robotics			
2014-10	University of Oregon Graduate Internship Program in Bioinformatics and ‘Big Data’ Genomics			
2014-11	Oregon Power Engineering Education Project			

## D. Appendix: ETIC Legislation

## CHAPTER 85

AN ACT

HB 4020

Relating to the Engineering and Technology Industry Council; creating new provisions; amending ORS 351.663; repealing ORS 351.666 and 351.668; appropriating money; and prescribing an effective date.

**Be It Enacted by the People of the State of Oregon:**

**SECTION 1.** ORS 351.663 is amended to read:

351.663. (1) The Engineering and Technology Industry Council is established. A majority of the council members are representatives of high technology companies in Oregon. The council shall be consulted on the work plans and resource allocations for engineering education.

(2) The council shall establish criteria and measurements that will be used for determining investments made from the account [*designated by ORS 351.666*] **established under section 5 of this 2014 Act.**

(3) The criteria and measurements established by the council include:

(a) Responding to the urgent engineering educational needs of Oregon's fast growing high technology industry[, *especially in the Portland metropolitan area*].

(b) Increasing this state's faculty and program capacity to meet the graduate level, professional education needs of engineers working in Oregon's high technology industry through investments in public and private institutions.

(c) Creating additional opportunities for Oregonians to pursue education in electrical engineering, computer engineering and other engineering disciplines critical to the advancement of Oregon's high technology industry.

(d) Investing relatively scarce state financial resources to:

(A) Address the high technology industry's most demonstrated and pressing needs;

(B) Produce the greatest amount of educational benefits with the least short-term and long-term costs to the public;

(C) Avoid duplicating existing public or private resources; and

(D) Leverage existing and future private resources for the public benefit.

(e) Making all investments in public and private institutions through performance-based contracts with measurable outcomes in order to ensure strong linkage between the most urgent engineering education needs and implemented solutions.

(f) Maximizing the leverage of state investment funds to build faculty and program capacity and share existing and new faculty and program resources.

(4) Priority is given to investments where private financial resources from Oregon high technology companies or individuals with significant interests

in the growth of high technology in Oregon are made available to augment public funds.

(5) The council must submit biennial performance reviews of all investments made to improve engineering education with public funds in public and private institutions. The reviews must be submitted to the [*Chancellor of the Oregon University System*] **Chief Education Officer** and the [*State Board of Higher Education*] **Oregon Education Investment Board.**

**SECTION 2.** ORS 351.663, as amended by section 1 of this 2014 Act, is amended to read:

351.663. (1) The Engineering and Technology Industry Council is established. A majority of the council members are representatives of high technology companies in Oregon. The council shall be consulted on the work plans and resource allocations for engineering education.

(2) The council shall establish criteria and measurements that will be used for determining investments made from the [*account established under section 5 of this 2014 Act*] **Engineering and Technology Industry Fund established under section 8 of this 2014 Act.**

(3) The criteria and measurements established by the council include:

(a) Responding to the urgent engineering educational needs of Oregon's fast growing high technology industry.

(b) Increasing this state's faculty and program capacity to meet the graduate level, professional education needs of engineers working in Oregon's high technology industry through investments in public and private institutions.

(c) Creating additional opportunities for Oregonians to pursue education in electrical engineering, computer engineering and other engineering disciplines critical to the advancement of Oregon's high technology industry.

(d) Investing relatively scarce state financial resources to:

(A) Address the high technology industry's most demonstrated and pressing needs;

(B) Produce the greatest amount of educational benefits with the least short-term and long-term costs to the public;

(C) Avoid duplicating existing public or private resources; and

(D) Leverage existing and future private resources for the public benefit.

(e) Making all investments in public and private institutions through performance-based contracts with measurable outcomes in order to ensure strong linkage between the most urgent engineering education needs and implemented solutions.

(f) Maximizing the leverage of state investment funds to build faculty and program capacity and share existing and new faculty and program resources.

(4) Priority is given to investments where private financial resources from Oregon high technology companies or individuals with significant interests

in the growth of high technology in Oregon are made available to augment public funds.

(5) The council must submit biennial performance reviews of all investments made to improve engineering education with public funds in public and private institutions. The reviews must be submitted to the [*Chief Education Officer and the Oregon Education Investment Board*] **Higher Education Coordinating Commission**.

**SECTION 3.** The amendments to ORS 351.663 by section 2 of this 2014 Act become operative on March 15, 2016.

**SECTION 4.** ORS 351.666 and 351.668 are repealed.

**SECTION 5.** (1) An account in the Oregon Education Investment Fund established under section 3, chapter 519, Oregon Laws 2011, is established for the purpose of investments in engineering education. Notwithstanding section 3, chapter 519, Oregon Laws 2011, interest earned on moneys in the account is credited to the account.

(2) The Oregon Education Investment Board shall use the moneys in the account designated by this section solely for the purpose of investing in engineering education. The board shall follow the criteria and measurements established by the Engineering and Technology Industry Council in allocating moneys for investments in engineering education.

**SECTION 6.** (1) The account designated under ORS 351.666 for investments in engineering education, within the Oregon University System Fund established under ORS 351.506, is abolished.

(2) Any moneys remaining in the account on the effective date of this 2014 Act that are unexpended, unobligated and not subject to any conditions shall be transferred to the account established under section 5 of this 2014 Act for the purpose of investments in engineering education.

**SECTION 7.** Section 5 of this 2014 Act is repealed on March 15, 2016.

**SECTION 8.** (1) The Engineering and Technology Industry Fund is established in the State Treasury, separate and distinct from the Gen-

eral Fund. Interest earned by the Engineering and Technology Industry Fund shall be credited to the fund.

(2) Moneys in the fund are continuously appropriated to the Higher Education Coordinating Commission. The commission shall use the moneys in the fund solely for the purpose of investing in engineering education. The commission shall follow the criteria and measurements established by the Engineering and Technology Industry Council in allocating moneys for investments in engineering education.

**SECTION 9.** (1) The account established under section 5 of this 2014 Act for investments in engineering education, within the Oregon Education Investment Fund established under section 3, chapter 519, Oregon Laws 2011, is abolished.

(2) Any moneys remaining in the account on March 15, 2016, that are unexpended, unobligated and not subject to any conditions shall be transferred to the Engineering and Technology Industry Fund established under section 8 of this 2014 Act.

**SECTION 10.** Sections 8 and 9 of this 2014 Act become operative on March 15, 2016.

**SECTION 11.** Notwithstanding any other provision of law, the General Fund appropriation made to the Oregon Department of Administrative Services for use by the Oregon University System by section 1 (2), chapter 564, Oregon Laws 2013, for the biennium beginning July 1, 2013, for state programs, is decreased by \$14,805,721 for transfer of funding for the Engineering and Technology Industry Council to the Oregon Education Investment Board.

**SECTION 12.** Notwithstanding any other provision of law, there is appropriated to the Oregon Education Investment Board, for the biennium beginning July 1, 2013, out of the General Fund, the amount of \$14,805,721 for the account established in section 5 (1) of this 2014 Act for investments in engineering education.

**SECTION 13.** This 2014 Act takes effect July 1, 2014.

Approved by the Governor April 1, 2014  
Filed in the office of Secretary of State April 2, 2014  
Effective date July 1, 2014

## E. Industry Needs Statements

ETIC is in the process of developing a full portfolio of Industry Needs Statements. We expect that document to be available later this summer.

Examples include the following:

- Big Data
- CyberSecurity
- Electric Power Industry
- Interconnected Devices
- Lane County Computer Science
- T-Shaped Professionals



Oregon Education Investment Board

**TO:** Personnel Management & Oversight Subcommittee  
**FROM:** Whitney Grubbs, OEIB Chief of Staff  
**DATE:** June 5, 2014  
**RE:** Final Process for Chief Education Officer Evaluation

## **TIMELINE**

Dr. Nancy Golden took the position of Interim Chief Education Officer on August 1, 2013, and became the permanent Chief Education Officer in October 2013. Her evaluation will be completed annually by September 30.

Specific steps in the process for 2014 would include:

- April 29, 2014 – Personnel Management & Oversight Subcommittee reviewed draft process & evaluation format and provided initial feedback
- May 13, 2014 – Personnel Management & Oversight Subcommittee Chair, Julia Brim-Edwards, presented draft process & evaluation format to full OEIB for input by May 18
- By June 6, 2014 – Chief of Staff incorporates feedback and obtains final approval from Chair of Personnel Management & Oversight Subcommittee
- June 10, 2014 – Full OEIB approval of final evaluation process
- By June 16, 2014 – Chair Brim-Edwards distributes evaluation format to Dr. Golden, Board & key agency leaders / internal staff for input by July 31, 2014
- August 2014 – Personnel Oversight & Management Subcommittee meeting to review evaluation feedback and prepare findings
- September 9, 2014 – Chair presents initial evaluation findings to OEIB Board

## **PROCESS**

The evaluation process would consist of 2 overlapping phases:

### **❖ Phase 1 – Self-Evaluation**

Dr. Golden will provide feedback on her own performance through the Chief Education Officer scorecard as well as by completing a written feedback form.

## ❖ Phase 2 – Board & Key Agency Leaders/Staff Input

OEIB Board members and key agency leaders / staff would provide feedback via written evaluation form.

Key agency leaders / staff include:

Rob Saxton, Deputy Superintendent of Public Instruction, ODE

Ben Cannon, Executive Director, HECC

Jada Rupley, Early Learning Services Director, ODE

Iris Bell, Youth Development Director, ODE

Daniel Ledezma, Policy Advisor to Governor

Whitney Grubbs, OEIB Chief of Staff

Hilda Rosselli, OEIB Director of College & Career Readiness

Peter Tromba, OEIB Director of Policy & Research

Mark Lewis, OEIB Director of STEM

Subcommittee Chair Brim-Edwards will summarize Board, agency leader & staff feedback in each area of the evaluation criteria on the attached consolidated feedback format. The feedback would then be presented to the full OEIB Board.













JOHN KITZHABER  
Governor of Oregon  
OEIB Chair

JULIA BRIM-  
EDWARDS

YVONNE CURTIS

MATTHEW  
DONEGAN

SAMUEL HENRY

NICHOLE JUNE  
MAHER

MARK MULVIHILL

DAVID RIVES

RON SAXTON

MARY SPILDE  
Chair-Designee

KAY TORAN

JOHANNA  
VAANDERING

DICK WITHNELL

Chief Education Officer  
NANCY GOLDEN

## OREGON EDUCATION INVESTMENT BOARD

### Planning Meeting

Tuesday August 12, 2014

9:00am – 5:00pm

Eola Events

Riesling / Chardonnay Rooms

215 Doaks Ferry Road, NW

Salem, OR 97305

*\*There will be a working lunch.*

### DRAFT AGENDA

1. **Board Welcome and Roll Call**
2. **Review Core Purpose and Value Conversation**
3. **Strategic Plan Update**
  - **Statewide Longitudinal Database**
  - **Minority Teacher Act**
4. **Barrier Analysis: *Where are we?***
5. **Subcommittee Policy Recommendations & Discussion**
6. **Outcomes and Investment Strategic Investment Recap and Recommendations**
7. **Expanding: Board Member Engagement: *What do you need from us?***

**Oregon Education Investment Board (OEIB)  
Equity & Partnerships Subcommittee – June 2014**

**Policy Recommendation Framework for Youth without High School  
Diplomas:  
Creating a Shoreline of Opportunities**

**Vision**

High school completion is a key metric in Oregon to measure systemic success; however, 25% of Oregon students do not complete high school. Students of color and students from poverty are over-represented in the population of students without a high school diploma. It is incumbent on K-12 educational institutions to eliminate that opportunity gap.

As K-12 improves graduation rates and closes opportunity gaps, there remains and will remain for years a segregated group of youth without diplomas. Oregon currently has only one alternative route to a diploma for students to demonstrate high school content attainment. Improving and increasing alternative routes to high school certification is a critical equity issue. An opportunity exists for Oregon to increase the number and diversity of students earning an alternative high school certification, enrolling and completing post-secondary education, and finding gainful employment.

The goal of any existing or new route to high school certification must have the same goals as those of existing high schools and districts: career and college readiness. A spectrum of programs and approaches with common standards will provide a differentiated set of paths that can serve all students. The data is clear: current systems do not serve all Oregon students. Our vision is a more diverse system that meets the needs of each and every student.

**Background and Opportunities**

Oregon's 40-40-20 goal, adopted into law in 2011, has become shorthand for the efforts of the Legislature, Governor, the OEIB, and other state education boards, commissions, and agencies to significantly improve the education achievement levels and prosperity of Oregonians by 2025. The 40-40-20 goal intends to provide a clear target, a "North Star", aligned with Oregonians' economic, civic, and social aspirations, against which to generally gauge the state's educational progress. The OEIB and the Governor are united in the belief that in order for the 40-40-20 goal to be meaningful, it must be accompanied by the clear understanding that increased levels of attainment of diplomas, degrees and certificates must be achieved equitably across populations and across regions of the state.

Fundamentally, 40-40-20 says that *every Oregonian* is capable of earning at least a high school diploma or the equivalent thereof, and must have the opportunity to enter into the workforce in a meaningful way. Oregon's youth who are not represented in the "traditional" pipeline must be considered as part of the "each and every" to whom our goal applies. In fact, the success of these youth is fundamental to the overall achievement of the 40-40-20 goal.

In the years leading up to 2025, we cannot afford to ignore our youth who are at risk of or who have dropped out, but rather must seize the opportunity these youth represent for improving our outcomes in both the short and long term. In Oregon and across the country, these out of school youth are described as Opportunity Youth to represent their potential and to identify students from a strength-based perspective. These youth are a clear opportunity for Oregon: as they reach high school and post-secondary goals they bring value and powerful contributions to our communities.

Opportunity Youth include:

- Students who never attended high school.
- Students who did not complete high school.
- Youth with a high school diploma or equivalent, who are disconnected from postsecondary education and/or who are unable to gain a foothold in the labor market.

Instead of the traditional pipeline, a shoreline approach will better serve their needs. Opportunity Youth need multiple access points and multiple pathways with no wrong door. Therefore it is critical that we consider systemic responses to create this access and these pathways for students to complete high school and attain career and college readiness. One response is to improve the intrinsic and extrinsic value of current programs and another is to consider alternatives.

In Oregon, the General Education Development (GED) subject tests are currently the only method other than a high school diploma to certify that a student has met high school level academic skills. Therefore, access and options for students to GED training and testing is crucial. In addition, in January 2014, the GED Testing Service changed to a new assessment that continues to provide a mechanism to earn a high school credential and adds measures of career and college readiness. Test takers can now attain a GED (high school equivalence) or a GED With Honors (career and college ready).

This “new GED” presents an opportunity for the state to re-brand the test and the preparation programs associated with it. The goal of a GED With Honors is aligned to the goals of high schools and K-12 districts and therefore a more powerful credential for post-secondary admissions and employers.

## **Beliefs**

We believe the P-12 system is working to increase the number of students who complete high school; however the 25% of youth without a diploma must be served with improved systems.

We believe that a significant number of Opportunity Youth require more and better options to demonstrate high school content attainment and achieve college and career readiness.

We believe that any “pipeline” approach to serving students will inherently not serve each and every student; a shoreline approach is required.

We believe that because the GED is currently the only alternative route to high school completion that the state must maximize the GED’s potential for students through better public options and increased community based options.

We believe it is the responsibility of governing bodies to solve barriers, not the students' to navigate confusing systems.

We believe the new GED has increased value, especially with the inclusion of college and career readiness indicators and the GED with Honors designation. We need a systemic communication campaign regarding the value of the new GED that crosses all education systems and institutions and that includes students and employers.

We believe that high education needs to be a partner by recruiting, welcoming, admitting, and responsively supporting students who complete the GED. This may require significant cultural shifts at some institutions.

We believe that programs for GED preparation that also provide wrap-around services and that attend to college and career readiness are a best practice.

We believe that welcoming and culturally responsive GED training and testing programs increase the chance for high and equitable levels of GED attainment.

We believe that cost should not be a barrier for students in their decision and ability to get training for the GED or to take the test.

We believe the state must research alternatives to the GED currently accepted in other states and evaluate them as possible options for Oregon.

## **Strategic Recommendations**

The areas addressed in these recommendations fall, in many cases, within the charges of other agencies, boards, and workgroups. The intent of the OEIB Equity & Partnerships Subcommittee is to provide high-level direction and alignment between those efforts and to suggest areas of investment or repurposing of resources to better serve state goals.

The 2013 Secretary of State Audit Report: "Opportunities to Increase Adult GEDs In Support of 40-40-20 Education Plan" and the 2014 Portland City Club Report: "A Second Chance for Oregon, High School Dropouts and the GED" have both produced important recommendations. The OEIB has considered these recommendations, along with input and testimony to the Equity and Partnerships Sub-Committee and their subsequent deliberations and discussion, to produce the following:

### **Alignment:**

- The creation of a work group with Community College and Workforce Development (CCWD), community college, the Oregon Department of Education (ODE) and high school staff and others involved with state based GED training and testing programs to produce an analysis of current practices and policies and recommendations for how those systems can be aligned and serve more students more effectively.
- Continued collaboration between high schools, community colleges, and other agencies to help ensure clients who need a GED are referred to local programs.

- The development of common communication tools and protocols to ensure that the same message regarding the GED is distributed across settings.
- Data sharing among agencies.

**Access:**

- Implement strategies to defray the cost of GED preparation programs and the GED test.
- Broaden the set of qualified GED preparation providers to include community or faith based organizations that already serve Opportunity Youth with wrap-around services.
- Improve the culturally responsive practices of state providers.
- Develop blended GED preparations that are partially delivered on line.

**Value:**

- Increase public awareness of the value of obtaining a GED credential. Any campaign should address multiple audiences: Opportunity Youth, employers, and internal staff.
- Request Oregon's public universities update their admissions criteria to allow admissions for qualified recipients of the GED who earn the Honors designation.

**Research:**

- Evaluate the relative effectiveness of GED providers.
- Investigate the other alternatives to a diploma currently in use in other states.

## **Investment and Resource Reallocation Recommendations for the 2015-2017 Biennium**

**Recommendation 1:** Analyze current GED programs governed by the ODE, CCWD, and Department of Corrections in order to create aligned programs that serve more students more equitably.

**Recommendation 2:** Identify successful organizations who provide wrap-around services and strategically invest and partner with them to either begin providing or continue to provide GED Preparation for Opportunity Youth.

**Recommendation 3:** Lower cost barriers for students by standardizing and supporting current efforts across community colleges.

The Outcomes and Investments sub-committee of the OEIB is calling for descriptions of proposed strategic investments for the 2015-2017 biennium. Therefore, recommendations 1, 2, and 3 have been expanded and analyzed using the framework supplied by this sub-committee and for proposal in July 2014.

**Testimony to Oregon Education Investment Board      June 10, 2014**  
**Donna L. Cohen, M.Ed. Vocational Education Administration,**  
**and former Technology Education teacher**

"The expertise of educators working in classrooms... is a key factor—some would say *the* key factor—in determining whether integrated STEM education can be done in ways that produce positive outcomes for students."

*From: STEM Integration in K-12 Education. National Academies Press. 2014.*  
[http://www.nap.edu/catalog.php?record\\_id=18612](http://www.nap.edu/catalog.php?record_id=18612)

Definition of STEM: an interdisciplinary, project-based, approach to the study of Science, Math, Technology and Engineering which opens the door to a variety of related career paths.

"STEM is considered preparation for a variety of careers"

*From CTE is Your STEM Strategy <http://careertech.org/sites/default/files/CTEYourSTEMStrategy-FINAL.pdf>*

But, some of the Oregon literature connects STEM to CTE in a way that is problematic. Clarification is important because our approach impacts who teaches STEM.

The draft STEM Council recommendations say "One of the overall goals in K-12 should be to promote shifts in educator practices .....supported by STEM practitioners from outside the education system.

*From STEM Career Cluster – Engineering and Technology Pathway – Knowledge and Skill Statements*  
<http://www.careertech.org/sites/default/files/K%26S-CareerCluster-ST-2008.pdf>

There is a great deal of emphasis on seeking out teachers from industry for STEM. However, looking primarily to industry is not the solution. When you hire from industry, you hire someone who has a specific knowledge-base.

In the area of Technology / Engineering, you want someone who knows about a **broad array of skills, tools, equipment and fabrication techniques**. [For guest visits to classes, an industry person is great, though!]. You don't hire a scientist to teach science, you don't hire an engineer to teach STEM technology / engineering [Engineering consists of a number of separate *specialties*]. You hire a TECHNOLOGY EDUCATOR. That person is a teacher with a teaching endorsement in Technology Education or Technology / Engineering Education.

A Technology teacher can teach all the skills [and more] outlined below in "STEM Career Cluster – Engineering and Technology Pathway – Knowledge and Skill Statements", including:

**SCPA01.04 Demonstrate the ability to use Newton's Laws of Motion to analyze static and dynamic systems with and without the presence of external forces.**

SCPA01.04.01 Use the laws of conservation of energy, charge, and momentum, to solve a variety of problems involving mechanical, fluid, chemical, biological, electrical, and thermal systems.

SCPA01.04.02 Use the relationships between energy, work, and power to solve a variety of problems involving mechanical, fluid, electrical, and thermal systems.

SCPA01.04.03 Use the principles of ray optics to describe reflection and refraction of light.

**SCPA01.05 Explain relevant physical properties of materials used in engineering and technology.**

SCPA01.05.01 Explain the relationships between amplitude, wavelength, frequency, period, and speed of a wave.

**SCPA10.02 Develop processes and concepts for the use of technology which model technical competence.**

SCPA10.02.01 Use and calibrate probes, sensors, measuring systems, and devices to collect data using traceable standards.

SCPA10.02.03 Safely operate a variety of tools, machines, and equipment (e.g. milling machines, rapid prototyping machines, drill press, band saw, CNC

machines, and hand tools)

*From STEM Career Cluster – Engineering and Technology Pathway – Knowledge and Skill Statements*  
<http://www.careertech.org/sites/default/files/K%26S-CareerCluster-ST-2008.pdf>

**If done right**, STEM will increase interest among students who have traditionally seen themselves as not suited to Science and Math, and increase the number of minority and female students in Science and Math. **A good STEM program will keep kids in school longer and improve graduation rates.**

STEM holds great promise. The MOST IMPORTANT MISSING PIECE OF STEM IS THE LACK OF FOCUS ON EDUCATORS WITH TECHNOLOGY and TECHNOLOGY / ENGINEERING teaching endorsements.

In order to have the numbers of Technology Educators necessary, Oregon must reinstate at least one Technology / Engineering Teacher Ed program. I received my credential from OSU. This group and the STEM Council need to focus on creating a modern equivalent – possibly a combined community college for technical skills / four-year college for professional skills approach.

The last point – to my utter dismay the STEM Council has no public school teachers on it. Where are the teachers? For successful STEM program planning we **must** have teachers from all the STEM disciplines involved.

EXAMPLES OF COURSES LEADING TO A TECHNOLOGY EDUCATION OR TECHNOLOGY / ENGINEERING EDUCATION TEACHING ENDORSEMENT [terminology depends on college and state]

- Fundamentals of Power Technology
- Intro to Technical Drawing & Constraint Based Solid Modeling
- Introduction to Building Construction
- Introduction to Manufacturing Processes
- Graphic Communications Technology
- Constraint Based Solid Modeling & Production Drawings
- Engineering Design
- Teaching Transportation, Energy, and Power Technologies
- Trigonometry
- Robotics Education
- Curr. & Methods in Tech. Educ
- Lab Planning in Tech. Educ
- Engineering Graphics and Technical Illustration
- Materials Processing and Fabrication
- Materials Molding and Forming c
- Materials Precision Production
- Electronics Technology
- Computer Assisted Design and Drafting
- Construction Systems
- Transportation Systems
- Energy and Power Technology
- Communication and Multimedia
- Metals Manufacturing Technology
- Technology and Civilization
- Introductory Physics
- Technical Writing and Literacy
- Microcomputer Applications
- Teaching Methods for Technology Education
- Professional Field Experience

# State of Oregon

*This is to certify that*

DONNA L. COHEN

*Has met the requirements of the Teacher Standards and Practices Commission  
and is hereby granted this*

## TEACHING CERTIFICATE

*to be employed in the public schools of the State of Oregon  
pursuant to the endorsements and authorizations entered below.*

Type: BASIC  
D-542

Valid: DEC 08, 1988 - JAN 29, 1992

Endorsements and Authorizations:  
TECHNOLOGY EDUCATION 019

032

Certificate No.: 223518  
014-38-8449



*[Handwritten Signature]*  
Executive Secretary

See reverse for explanation  
of authorization code

