



### ***Vision – What we'd like to see in 2020***

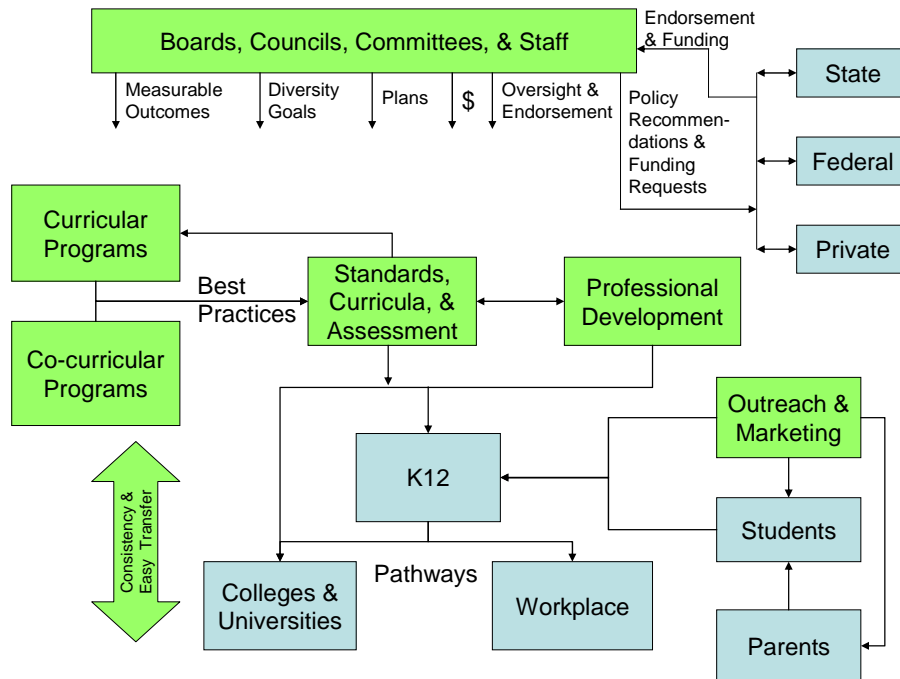
[We need to choose one of the following or some other short vision statement. The balance of our long-term goals can go in Goals section below.]

- A. All Oregon stakeholders in the education, industry and government sectors are engaged in supporting students' understanding of and preparation for careers in engineering and applied science.
- B. All students are aware of career opportunities in engineering and applied science and what educational steps are required to seize these opportunities. Those that choose to pursue such opportunities have access to high quality programs that allow them to obtain the knowledge and skills they need to go on to the next step.
- C. A diverse and growing number of Oregon's young people are motivated to pursue engineering and applied science as a field of study and a career. These students have access to high quality educational programs that allow them to make efficient progress towards a degree and a successful career with Oregon employers
- D. A comprehensive integrated education system that motivates and prepares Oregonians for technical careers in a competitive job market and provides them with the skills needed by Oregon's employers.
- E. All Oregonians have educational opportunities that prepare them for the rigors of collegiate study and for careers in engineering and applied sciences and those that successfully pursue these career paths increase in both number and diversity.

## ***Goals – What we'd like to accomplish by 2020***

- All students have access to high-quality primary and secondary programs that prepare them for collegiate study in engineering and applied science as well as establish skills for life-long learning and career success. Attributes of high quality programs will include coursework that is engaging and motivating, allowing students to understand the relevance of what they are learning including how it relates to key organizing concepts like inquiry and practical problem solving as well as issues in the world around them.
- Educational pathways are flexible, well coordinated and clearly articulated, allowing students to successfully plan their education and efficiently achieve the education they need, and successfully transition among Oregon educational institutions, the workplace, and back again.
- Public and private schools, community colleges, universities, and employers use common standards for measuring knowledge and skills as well as shaping curriculum and instructional development. These same organizations share responsibility for program improvement, efficiency, enhanced learning, and accountability.
- Curricular and co-curricular programs work closely together assuring all students have a strong combination of theory and hands-on education through a variety of individual and team experiences.
- All Oregonians have the opportunity to pursue advanced technical education regardless of ethnicity, gender, financial means, or cultural barriers.
- Graduates have skills that make them highly competitive in the global marketplace and productively employed by Oregon businesses and contributing to their success or engaged in creating new businesses for Oregon.

## Summary of Five-Year Strategy



- Enhance primary and secondary science, technology, engineering & mathematics (STEM) **standards and curricula**. Likewise enhance post-secondary pre-engineering & applied science standards & curricula. These enhancements must provide for all students engaging experiences that
  - provide insight into the relevance of these subjects to solving problems in the world around us and motivation to pursue challenging technical.
  - develop research and problem solving skills.
  - assure literacy in science and technology and preparation for the next level of study.
- Develop policies and practices throughout the educational system that increase the **consistency between standards and assessment** at one level with the prerequisites for the next level. Assuring that credit can be easily transferred regardless of whether the student plans on an associate degree or a four-year degree.
- Grow and enhance **professional development** programs that allow K12 and college faculty to more effectively deliver STEM curricula and assure consistency between the outcomes of courses and the prerequisites of subsequent courses.
- Create a customizable framework for **career and degree pathways** in applied science and engineering.
- Integrate **best practices** from the traditional classroom with co-curricular programs and vice versa. Integrate engaging experiences and skill development featuring **research methods and problem solving** into the delivery of curricula to enhance motivation, understanding, and retention of both key principles and detailed knowledge.

- Initiate and enhance **marketing and outreach efforts** to assure that all students and their parents understand the educational and career opportunities available to them and the steps required to reach them.
- Make these opportunities **available** to students **regardless of gender, race, or socioeconomic background**, with specific focus on under represented populations.
- Enhance **funding** to achieve these goals from federal, state, and private sources through collaboration among stakeholders.
- Establish **mechanisms** to further develop this strategy and associated tactics, establish measurable outcomes, and oversee its implementation to assure efficient use of limited resources and maximum availability to Oregonians.
- Establish a **board or councils** that provide oversight and endorse the development of these programs and initiatives.