

Vision, Mission & Goals

Summit delegates were asked to comment on the vision and goals statement:

- **What is missing?**
- **What suggestions do you have to improve it?**

DRAFT STATEMENT

Vision – What we’d like to see in 20 years

Private and public entities in Oregon work in concert to ensure that all Oregon students understand the role of engineers and scientists in creating a great society, and are provided with educational opportunities that prepare them for the rigors of collegiate study and for careers in engineering and technology. In particular,

- All students will have access to high-quality courses that prepare them for collegiate study in engineering and applied science.
- Educational pathways will be 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.
- Public and private schools, community colleges, and universities will use a common set of achievement and preparation standards for measuring program improvement, efficiency, enhanced learning, and accountability.
- Curricular and co-curricular programs will work closely together assuring students have strong combination of theory and hands-on education.
- All Oregonians will have the opportunity to pursue advanced technical education regardless of ethnicity, gender or financial means.

Mission of the Summit Delegates

- Create a statewide strategy that includes a set of measurable goals that will lead to doubling the number and expanding the diversity of Oregonians receiving two-year, four-year, and graduate degrees in engineering and applied science.
- Secure the commitments and resources needed to implement this strategy.
- Leverage the expertise of all sectors to assure the efficient use of resources and a high-quality educational experience for all students.

Goals of the Summit

Create a strategy that will

- Increase the motivation and academic preparedness of students who are pursuing or might pursue engineering or applied sciences careers;
- Adopt and expand the use of best practices, improve coordination and cooperation among organizations and leverage existing resources and technical expertise to increase the impact of existing programs;
- Identify methods for securing additional financial resources to support Oregon’s statewide strategic plan;

- Promote efficient and seamless transfer of credit among education sectors;
- Set measurable goals that measure our progress and assure accountability;
- Provide input to the Engineering & Technology Industry Council (ETIC) including criteria for possible future funding of pre-engineering and pre-college grants; and
- Complement the work of the State Board of Education, the State Board of Higher Education, and the Joint Boards of Education.

Delegate Comments

What's Missing?

For a complete list, see Appendix A

Some items dealt with the overall document format, such as “Goals should better define a recommended program/ strategy”, consider short term as well as long term timeline and “Who determines our progress and how?” Some groups wanted greater mention of institutional support. They wanted to know how the results of conference would be communicated with Superintendent of Public Instruction and people necessary to carry it out, and who would be responsible for state level advocacy for engineering.

A strong theme was business and industry involvement. Delegates wanted to see more explicit connections with industry, such as active industry partnerships to provide careers, and industry input into curriculum.

Another theme was the learning environment and skill sets, for example, creating an inquiry-based environment, developing “problem solvers”, and emphasizing to students the value of their education experience to their futures

Engaging non-traditional students was another theme: “Greater diversity of students... explicitly stated”, allowing for different points of entry, and family engagement in education process. Some groups thought motivation should be emphasized, including recognition of the role of informal science education and recognition of social supports that are needed.

SUGGESTIONS FOR IMPROVEMENT

Many of the same themes were also mentioned in the suggestions. The complete list from the conference is included below.

- **Vision Elements**
 - “Oregon will be recognized as a national leader in motivational and graduating highly qualified engineering students at all levels of the educational system.”
 - Work to INSPIRE students to study science and engineering
 - Educate/ elevate contribution of engineers to society
 - Vision: include that we want Oregon companies to be hiring the well-prepared graduates
 - Vision: (1st bullet revise) “that prepare them for collegiate study.” (Eliminate “engineering and applied science.”)

- “advanced technical education” is too narrow -> “Problem solvers”
- Vision bullet #3 – include “flexible” and adaptive
- Vision: the well-prepared graduates are entrepreneurs and create companies and jobs
- Mission: Create an environment in which students will
 - “see”
 - “grasp”
 - “execute” engineering opportunities because of an educational system which meets the needs of all students
- **Educational Process**
 - Our goal of education to hit specific results (testing) may not be the best approach for engineering where process is what matters.
 - Elevate the value of “hands on” learning/experiences (K-14)
 - Clear set of :
 - Skills
 - Attitudes
 - Experiences
 - Integrated model provided to the student with respect to science and engineering
 - Imbedding versus segregating learning
 - Focus on starting earlier – “enlightenment”
 - K-12: foundational, solid education that students apply to science & engineering
- **Flexibility/Transferability**
 - Add flexibility in the educational pathway
 - K-12 (all levels?) prep that allows students to continue when they change goals
- **Institutional Support**
 - Strategy to include federal government
 - State boards should receive input from institutions (not send information to)
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- **Additions to the Goals**
 - Engage and enhance industry involvement
 - Industry connected to the classroom
 - Bring best engineers and scientists into the schools
 - Add diversity to stated goals
 - Link the goals to enhancing economic prosperity in the state
 - Identify weaknesses in the engineering education pipeline
- **Document Framework and Format**
 - Separate out the individual goals (example: 1st has motivation and preparedness)
 - Add outcomes
 - Guiding role of standards
 - Clarify breadth -> includes tech pathways?
 - Too many bullets; narrow it down
 - Add “timeline” to goals bullet #5

- **Other**
 - Embellish work samples – add engineering work samples
 - Make engineering degrees tuition-free
 - Available studies in motivating students
 - Take initiative to “grass root” this at our institution.