



# OPAS Initiative

## Summary of the Bright Future Strategy

July 17, 2009

The Engineering and Technology Industry Council’s strategy for increasing the supply of engineering, computer science, and materials science undergraduates was developed by a broad coalition of leaders comprising the Oregon Pre-engineering and Applied Science (OPAS) Initiative. The OPAS strategy is designed to:

- 1) **Build on proven successes to maximize the ability of programs to increase** the number and diversity of future engineering and applied science students through measurable, scalable programs.
- 2) **Address critical pre-college gaps** by promoting participation in hands-on learning in engineering, computer science, and applied sciences; fostering rigorous academic curricula; and recruitment and retention of underrepresented groups.
- 3) **Expand student opportunities in engineering and applied sciences across the system**, by fostering collaborations, partnerships and additional funding sources; scaling up best practices; and sharing expertise, resources and information.

### Key Activities for the 2009-2011 Biennium

<i>Segment</i>	<i>OPAS Strategic Recommendation</i>	<i>Teachers</i>	<i>Grades 9-12</i>	<i>Grades 4-8</i>
<b>In-Class Programs</b>	<ul style="list-style-type: none"> <li>• Extend national exemplar pre-engineering program Project Lead the Way (PLTW) to make Introduction to Engineering Design (IED) available in more high schools and introduce Gateway to Technology (GTT) at middle schools.</li> </ul>	X	X	X
	<ul style="list-style-type: none"> <li>• Expand access to computer science by providing CMU’s CS4HS program to high school teachers and piloting a new discrete math curriculum at Oregon high schools.</li> </ul>	X	X	
<b>Out-of-School-Time (OST) Programs</b>	<ul style="list-style-type: none"> <li>• Expand proven engineering and applied science programs that feature team-based engineering and applied science projects.               <ul style="list-style-type: none"> <li>○ Seed district support for coaches of such programs, primarily at the high school level</li> <li>○ Expand the number and diversity and students that have access to these programs in grades 4 through 12.</li> </ul> </li> </ul>	X	X	
	<ul style="list-style-type: none"> <li>• Expand summer internships featuring engineering &amp; applied sciences for high potential students in industry and universities.</li> </ul>	X	X	X
	<ul style="list-style-type: none"> <li>• Focus statewide communications/marketing to students, parents, teachers and counselors on STEM education and career paths.</li> </ul>	X	X	X