

## ...an investment Oregon needs

Whenever our state legislators and Congressional delegation see young Oregonians engaged in hands-on career and technical education, they are always in awe of students' abilities. From robotics to 3-D printing to pre-engineering, Oregon has some great examples of high school offerings that are helping prepare the state's next-generation technical manufacturing workforce. Career and Technical Education – or CTE – is a critical link to ensure that Oregon has a prepared workforce for the state's important, strong and growing manufacturing sector. A critical first step is supporting school districts that are implementing manufacturing career pathways, and reigniting high school CTE programs. Supporting CTE work that community colleges are implementing throughout the state is the complementary second step. Many are developing machining centers and apprenticeship programs, including Portland Community College's Training Center, to ensure workforce-ready Oregonians for high-skill manufacturing jobs.

High-value manufacturing – ranging from precision and specialty metal fabrication to microchips – is the single-largest sector of Oregon's economy, with average pay pushing \$70,000 a year. Today's manufacturing jobs are not the grimy manual labor type occupations that once existed. Highly automated, advanced manufacturing now requires high tech skills that our youth are very well positioned to learn with their already high engagement in the digital world. One of the biggest concerns I hear from our industry partners at the Oregon Manufacturing Innovation Center – Research & Development (OMIC R&D) is the lack of workers with skills to fill their thousands of high skill, high paying jobs. Manufacturers need employees today who can also adapt to the jobs of tomorrow as new technologies rapidly evolve. These industries know that their contributions to state and regional economic growth are fully reliant on financial and philosophical support from our state K-12 system, community colleges and universities. CTE and manufacturing career pathways play a central role in producing the next generation of highly skilled, creative machinists, welders and designers who will fill the jobs that bolster our urban and rural communities. Teachers and career counselors recognize that there are students who have disconnected from mainstream K-12 academics, despite their potential. Yet when they are introduced to the excitement of robotics, taught to program and operate manufacturing equipment, or learn how to weld using computer animation, they often find their path! By using their hands, they find ways to engage their highly capable minds.

As a hub of both industry-informed manufacturing research and technical education, OMIC R&D is working hard with its K-12 and postsecondary education partners to provide opportunities for students and to fill the industry's need. The programs we are developing with our partners offer a head start towards technical careers for youth, and for working adults seeking to upgrade their skills or reorient toward technical disciplines.

I do not envy the difficult task that lays ahead for Legislators as they balance needs against available resources. However, funding hands-on and minds-on CTE and manufacturing pathways is an investment, not a cost. Moreover, one can boast large opportunity dividends to young people to become part of a thriving workforce. Manufacturing has the highest economic multiplier of any sector and leads the way in creating the wealth and revenues our state needs. Competition is global and the stakes are high: nothing less than securing the economic future of the state and region.

So, let us put a stake in the ground, for our youth and CTE investment.

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