WORKFORCE

The Pacific PNMP region has multiple workforce development efforts targeted toward the manufacturing sector, including advanced wood products manufacturing and distance learning that focuses on rural areas. A skilled workforce is a core ingredient to the continued success and expansion of our manufacturing sector. The challenge facing the PNMP is to increase our limited resources, coordinate our programs and leverage additional support to achieve widespread impact.

Our partnership includes lead workforce organizations with expertise in proven models of manufacturing skills training that produce workforce-ready employees. Our goal is to scale these efforts across the PNMP region. This approach will bring a strategic and results-oriented emphasis on skills training, apprenticeships, learning-by-doing, and practicing high-skill craft in real world settings with mentorship, coaching, guidance and support.

This focused approach will target needed training to ensure the workforce has the skills to work in the Advanced Material Science for Advanced Manufacturing cluster. As high-tech labor requirements in manufacturing increasingly resemble those of other high-tech creative industries, training strategies must adapt and keep pace. This fundamental training goal and workforce strategy is among the key motivators in pursuing the IMCP designation.

Current Institutions and Existing Programs for Improving Capability

**Technical Institutes.** Our region is building on decades of investment in vocational/trade schools and programs that provide high school youth with an opportunity to learn needed manufacturing skills. Examples include the Pathways to Manufacturing Program in Portland, Mountain West Career Technical Institute in the mid-Willamette Valley, and the Sabin-Schellenberg Institute in Clackamas County.

**STEM Hubs.** Oregon Education Investment Board is investing millions in a network of science, technology, engineering and math (STEM) Hubs, like the Portland Metro’s Partnership in Washington County. The Intel STEM Center for College and Career Readiness supports the aligned activities of partnering school districts and organizations by establishing shared measurement practices, mobilizing funding, advancing policy and building public will to support change. These STEM hubs are increasing the reach of businesses and key technologies into our school districts and communities.

**CTEs.** In SW Washington, The Clark County Career and Technical Education (CTE) consortium, an organized group of all CTE programs from three school districts, aligns their programs across districts and engages industry collaboratively to ensure their manufacturing programs meet industry demands. The CTE manufacturing programs train high school youth in six career pathways that lead to manufacturing occupations directly out of high school and align directly with Clark College manufacturing programs. In Oregon alone, 24 CTE Revitalization Grants were awarded for the 2013-2015 biennium. These CTE grants will benefit 140 schools
across Oregon with programs ranging from agricultural sciences to manufacturing, marketing to
engineering, building and construction trades.

**Regional Workforce Plan.** The Columbia-Willamette Workforce Collaborative has worked
with area manufacturers to develop a two-year Regional Manufacturing Workforce Plan to
increase the pipeline of workers into manufacturing careers, develop the skills of the
manufacturing workforce, and support industry’s connection to a qualified recruitment pool.
Many of the plan’s benchmarks have been exceeded with 1,500 youth attending career exposure
events, 122 youth manufacturing internships awarded, 600 new workers trained, 633 job
placements made, and 1,245 incumbent workers trained. Collectively, these efforts have
established the foundation for a certified manufacturing workforce.

**Workforce Collaborative.** Recipients of round I and III US Department of Commerce Jobs and
Innovation Accelerator Challenge (JIAC) grants, the Workforce Collaborative has a proven
record of bi-state regional collaboration with economic development, Manufacturing Extension
Partnership programs, industry associations and educators to address workforce challenges.
Through these grants the Collaborative has helped many unemployed individuals re-enter the
workforce through training and has supported manufacturers’ internal training needs by
coordinating multi-company consortium trainings.

**Gaps**

**Lower Wages, Less Income.** The Portland-Vancouver metropolitan area per capita income has
fallen below the national average and is declining relative to other regions. Since 2007, Greater
Portland’s per capita income fell lower than the national average and is now 21 percent behind
the Seattle metro—a $10,000 per year difference. Income inequality also is widening. Other
cities within the supra-region are also continuing to fall behind. In the second-largest population
center — Eugene-Springfield — prime-age, college-educated worker earnings rank 277 out of
283 metropolitan areas.

**Disengaged Youth and Aging Workforce.** Short-term challenges include an aging workforce in
manufacturing jobs (especially machinists, computer programmers, and mid-level and executive
managers) and a very high high-school dropout rate. Replacement of workers is difficult, in large
part due to declining interest and misperceptions about vocational training and lack of “soft
skills” necessary to obtain and retain jobs.

**Succession Planning.** A generation of manufacturing leaders and owners is now facing
retirement. Succession planning and training for the next generation of manufacturing leaders is
necessary to maintain existing management and executive expertise in our Advanced
Manufacturing companies.

**Certifications for Employment.** Employers value certifications as an indicator of readiness for
production jobs. In a recent survey, Oregon employers said certifications were valuable for
workforce recruitment and retention. These technical certifications may be obtained through
secondary or post-secondary training programs. While a common practice in the Midwest and
East Coast, industry certifications are not yet widespread on the West Coast but the PNMP partners will serve as the link to improve this outcome.

**Shortage of Highly Skilled, Technical Employees.** In 2012, 1,939 new H1B visas were approved to fill the need for advanced degree workers in our region with 60 percent in computer/mathematical jobs. There were 703 H1B visas issued for Intel alone at an average annual salary of $101,959. This indicates a shortage of native talent in highly-skilled computer, software and engineering occupations.

**Smaller companies ill-equipped to develop their workforce.** Manufacturing program training graduates enter the workforce with only a broad foundational knowledge base. Companies must still mold these new hires into fully productive and competent employees but many manufacturers lack the capacity to develop and manage formal internal training programs.

**Plans**

The areas in which we initially plan to focus our workforce and training efforts follow.

1. **Connecting Youth: Next Generation Manufacturing Workforce** will bring more young people to manufacturing in all the industrial sectors that make up the Advanced Material Science for Advanced Manufacturing cluster and prepare them for pathways to good paying manufacturing jobs. We will also build a cadre of young leaders who think working in advanced manufacturing is an exciting opportunity by providing soft and hard skills training, on-the-job training, and internships. Specific programs targeting advanced wood products manufacturing will be developed in collaboration with community colleges and workforce development agencies across our region.

2. **Manufacturing-Ready Certification** will allow more unemployed and underemployed workers to achieve higher pay and steady employment through training and certification to meet the growing needs that the Advanced Material Science for Advanced Manufacturing cluster has for skilled workers. This is particularly urgent as baby boomers retire. Companies will have the talent they need to grow and Oregon and SW Washington communities are desirable locations for manufacturers looking to do business in the region. We will develop and adopt statewide standards for a Manufacturing Talent Pool. Our plans include identifying the industry certifications that will validate an individual’s skills and knowledge as a viable candidate for the manufacturing industry. They will build upon the capacity of the Workforce Collaborative region’s Certified Production Technician program. Certification in advanced wood products manufacturing skills will be included in training and certification program development.

3. **Expanding Middle and Executive Manufacturing Expertise** will prepare company leadership for the changing future of manufacturing including planned leadership transition from baby-boomers over the next decade. It also will expand continuous improvement training for small companies that have had minimal exposure to other resources; and expand access to Employee Training Assistance Fund (ETAF) for employees in H1B Visa Occupations.
4. **Sector Pathways.** In fall 2015, Portland-based Worksystems, Inc. will launch the Sector Pathways program to create industry-specific, focused training programs intended to help youth who are disconnected from the traditional school system gain the education, skills, and credentials they need to access career-pathway employment in high-wage, high-demand occupations in the regional economy. Sector Pathways will position students to qualify for entry-level employment in manufacturing, and form the basis for subsequent specialization and progress along different career paths within a specific industry or occupation. The manufacturing skills obtained in the program will be relevant across multiple manufacturing industries, from wood product manufacturing, food processing, and metals manufacturing. Lessons learned from the Portland project will be replicable in the more rural areas of the PNMP region where wood product manufacturing for CLT will occur. The Sector Pathways program is supported by a $300,000 grant from the TK foundation, $25,000 in Workforce Investment Act (WIA) funds and leverages the infrastructure of the $1,000,000 annual WIA funded SummerWorks internship program.

5. **eLearning.** For some manufacturing occupations, the traditional training system is not producing skilled workers and graduates at a rate that matches industry demand. Additionally, small businesses frequently struggle to access training for their workers due to time constraints and resources. Worksystems, Inc. will be launching an eLearning system in July 2015 that will expand regional training capacity and offer our region’s job seekers and businesses a new level of training customization, responsiveness, user flexibility, ease of access and affordability. Training content will support skill development for entry-level manufacturing jobs, skilled production and maintenance jobs, engineering and management occupations for the diverse industrial sectors that make up the Advanced Material Science for Advanced Manufacturing cluster. The online learning system will initially be available in the Portland area and the PNMP partners plan to replicate the system and make it scalable and accessible throughout the entire PNMP region. This will be particularly valuable for rural residents and manufacturers — areas poised to re-energize the wood products industry with CLT, but where workforce training is often not readily available.