

CENTERS OF
EXCELLENCE

**A New Decade
for New Growth**



*Washington State Centers of Excellence Impact Report:
Ensuring a Better Workforce for Tomorrow*

CENTERS OF EXCELLENCE

Executive Summary

The Centers of Excellence are flagship institutions that build and sustain Washington's competitive advantage through statewide leadership. Each Center focuses on a targeted industry that drives the state's economy and is built upon a reputation for fast, flexible, quality education and training programs. A targeted industry is identified as one that is strategic to the economic growth of a region or state.

Centers are guided by industry representatives to lead collaborative and coordinated statewide education and training efforts to build a competitive workforce in a global economy.

Centers will:

- ✔ Maintain an institutional reputation for innovation, responsive education, and training delivery to their targeted industry.
- ✔ Act as a broker of information and resources related to their targeted industry for industry representatives, community-based organizations, economic development organizations, community and technical colleges, secondary education institutions, and four-year institutions.
- ✔ Translate industry research into best practices.
- ✔ Provide system coordination, coaching, and mentoring to assist in building seamless educational and work-related systems.
- ✔ Build a competitive workforce for driver industries in Washington State.

Vision

Washington shall become a national model in developing partnerships among business, industry and education for the purpose of enhancing economic and workforce development initiatives to meet the current and future needs of the industries critical to the state's economic vitality.

Mission

Washington's Centers of Excellence shall serve as the statewide liaisons to business, industry, labor, and the state's educational systems for the purpose of creating a highly skilled and readily

available workforce critical to the success of the industries driving the state's economy and supporting Washington families.

Core Expectations:

- ✔ Ensure the efficient use of state resources for workforce development activities and initiatives by fostering a culture of cooperation within the Community and Technical College (CTC) system.
- ✔ Provide leadership by representing the Washington CTC system, local business and industry in state, national and international industry specific forums, activities and economic development initiatives.
- ✔ Serve as a resource for the creation and sharing of model curricula, educational pathways, degree/certificate programs, industry specific skill standards and best practices.
- ✔ Demonstrate excellence in communication and collaboration while fostering synergistic interconnectedness of Washington's economic, workforce development and education systems.
- ✔ Ensure the long-term sustainability of the Center of Excellence programs and services.

The Centers of Excellence have created an impact report to demonstrate the state's return on investment, highlight positive achievements, describe individual center impact on the community and technical college (CTC) system as a whole, demonstrate connections made between industry and educators, and report cost savings by showcasing Center events, products, projects, research and services.

The return on investment from these highlighted projects, services, research, or products from the eleven Centers' approximates \$1.792 million dollars. The annual core funding for the Centers is \$1.2 million, with performance funding at a minimum of \$0 to a maximum of \$550,000. The Center initiatives have recovered the initial annual investment of \$1.2 million. The aggregate return on the combined value of each Center's projects and initiatives far exceed the annual core and performance funding.



Aerospace and Advanced Materials Manufacturing

The Center's mission is simple: to help aerospace and advanced manufacturing industries in Washington State increase their competitiveness not only nationally but globally. The CoE for Aerospace's vision is to be the leading national and international institute of excellence for innovative training and programs in Aerospace and Advanced Materials Manufacturing.



Agriculture

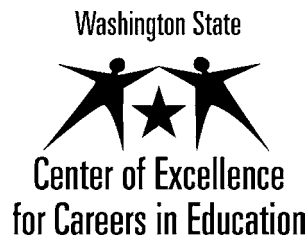
The Agriculture Center of Excellence provides fast and flexible service responding to interests of education institutions and workforce training needs of the agricultural industry across Washington State. Designed to encourage economic development through collaborative processes and partnerships, the Center fulfills this role by supplying leadership and coordination that link education and industry needs. The Center continues to evolve in a diverse and technologically advancing industry that includes rural, urban, and related agriculture support services. To this end, the Center promotes the establishment of clear education and career pathways in agriculture to advance the state's \$38 billion food and agricultural industry. The Center demonstrates collaboration and communication while fostering mutually beneficial connections between education and industry. The Center is a resource to the CTC system, secondary schools, four-year colleges/universities, and the agricultural industry. The Center provides a nucleus for innovative curricula, customized training, and promotion of clear education and career pathway for the agricultural industry.



Allied Health

The Allied Health Center of excellence, through collaboration and cooperation, is dedicated to addressing Washington State's healthcare workforce needs of today and tomorrow through innovative programs for preparing qualified health care professionals and leaders for the future. With regional and statewide leadership activities, the Center serves as a resource to all 34 community and technical colleges, K-12 schools, and business/industry partners, plus identified government entities to ensure a continuous pipeline of new healthcare professionals by:

- ✔ Creating and expanding career opportunities in the health care industry
 - ✔ Promoting collaboration and maximizing resources
 - ✔ Supporting and developing innovative allied health programs
 - ✔ Collecting, sharing and disseminating allied health information and best practices
 - ✔ Addressing skill-related training needs and upgrading skills within the existing workforce
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Careers in Education

The Center is designed to respond to the workforce training needs and related interests of educational institutions and industries in Washington State. This includes the expansion/strengthening of existing programs and creation of new program options to meet the education and training needs of an industry that is ever changing. We pride ourselves on being Washington State's best resource for careers in education.

The Center:

- ✔ Innovative programs for future educators and sharing of Best Practices
 - ✔ Support, mentoring, referrals and advising to community colleges and their K-20 partners for the creation and expansion of career-ladder programs in education
 - ✔ In-service training and professional development for current education professionals
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Construction

The Center is a statewide leader in construction workforce education and training. RTC has a strong background in construction education, and offers classes and programs in all building phases, including pre-construction, construction, and post-construction/maintenance, as well as classes and programs to train individuals at all stages of their careers.

The primary charge of the CCE is to help the state’s economic vitality grow by:

- ✔ Serving as a point-of-contact and resource hub for industry trends, best practices, innovative curriculum, and professional development opportunities.
- ✔ Maximizing resources by bringing together workforce education and industry partners in order to develop highly-skilled employees.



Energy Technology

The Center of Excellence for Energy Technology is a nationally recognized model providing strategic coordination for the energy industry’s skilled workforce in Washington State. The Center is led by a broad based partnership comprised of industry and labor leaders that guide the center to:

- ✔ Develop and mature industry and labor partnerships to better understand the ever changing workforce issues facing electric utilities and independent power producers
- ✔ Translate energy industry research into “Best Practices” training and education to ensure programs meet industry’s workforce needs
- ✔ Provide clear education and career pathways for students and job seekers for entry into high skills high wage energy jobs
- ✔ Create a competitive workforce pipeline to meet increasing energy demands and support the economic future of Washington State



Homeland Security

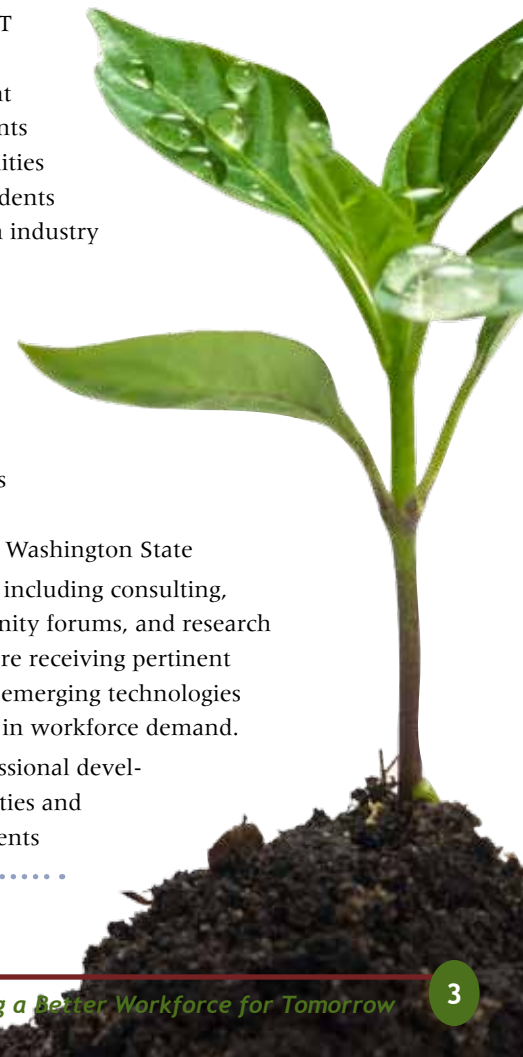
The Center at Pierce College is for Homeland Security. It is a coalition of all 34 community and technical colleges, public agencies, and private sector organizations dedicated to delivering dynamic Homeland Security training statewide. The Center serves as system leader, facilitates curriculum development in related programs, connects with Federal/State educational resources, disseminates information and facilitates articulation processes within the system and with appropriate partners.



Information and Computing Technology

The Center is a statewide resource for the CTC system; K-12 educators, and builds crucial relationships with information and computing technology industry professions in order to leverage:

- ✔ Best practices for IT education, professional development opportunities, events to create opportunities for faculty and students to collaborate with industry
- ✔ Up-to-date research, including ICT trends that impact hiring and educational needs and business growth across industry sectors in Washington State
- ✔ Products, services, including consulting, resources, community forums, and research to ensure faculty are receiving pertinent access to new and emerging technologies as well as changes in workforce demand.
- ✔ K-20 faculty professional development opportunities and student-centric events





International Trade, Transportation & Logistics

The Center, in collaboration with community & technical colleges, industry & industry associations, labor, K-12 and Universities, the Center works to:

- ✔ Maintain an institutional reputation for innovation and responsive education and training delivery to the International Trade, Transportation & Logistics industry.
- ✔ Act as a broker of information and resources related to the industry for industry representatives, community-based organizations, economic development organizations, community and technical colleges, secondary education institutions, and four-year colleges and universities.
- ✔ Translate industry research into best practices.
- ✔ Explore and develop pathways through better educational system coordination, to assist in building seamless educational and work-related systems.

- ✔ Design training that is industry relevant, timely and that can be delivered using various methods in order to build a competitive workforce for this driving industry in Washington State.



Marine Manufacturing and Technology

The Center actively supports a statewide alliance of private industry, education, economic and workforce development professionals, the Centers' mission is to increase the competitiveness of the boat and ship building, repair and refit industries of Washington State. Serving as the hub for innovation and education, the Center helps to highlight and share best practices related to industry trends and emerging technologies fostering economic vitality through leadership and collaboration with state, national and international partners. Additionally, the Center is dedicated to building a world-renowned marine industry through training and curriculum that can be shared throughout the community and technical college system, the development of a highly skilled workforce, and continually improving processes and practices through outreach and collaboration.



Process and Control Technology

The Center of Excellence for Process and Control Technology's focus is advanced manufacturing continuous flow processes and instrumentation, welding, HVAC, machining and electronics used in advanced manufacturing industries such as petroleum refineries, chemical processing plants, food processors, pulp and paper mills and wastewater treatment plants. Seeking partnership with other workforce education groups enables the Center to share ideas about common challenges, such as student outreach, recruitment, and training resources. The Center offers access to innovative curriculum, advanced labs, process simulators and other state-of-the-art training aids. The role of the Center is to link education, industry, government and nonprofits together to meet the growing needs of Washington's economy. To that end, The Center has developed partnerships with local refineries, power plants, food processors, and educational institutions locally and nationally. These partnerships create strong, lasting programs designed to create positive changes in education and industry.

How Centers Ensure a Better Workforce for Tomorrow

A core initiative of the Washington's Centers of Excellence is to act as a statewide liaison to business, industry, labor, and the state's educational systems for the purpose of creating a highly skilled and readily available workforce critical to the success of the industries driving the state's economy and supporting Washington families.

The Centers of Excellence's top priority is to serve the CTC system to ensure activities generate products, services, resources, or research that supports the successful alignment of programs to correctly anticipate and meet industry needs and workforce demands. The Center's of Excellence have demonstrated a firm commitment to serving the CTC system.

Master the Classroom Boot Camp



The Center of Excellence for Careers in Education offered community and technical college (CTC) annual system-wide access to newly hired professional technical

faculty that have content subject mastery, but do not have classroom teaching experience. Experienced faculty shared best practices and effective pedagogy, during the two, five-day professional development Western and Eastern Washington training sessions for the 36 participants from 21 CTCs.

Topics included:

- 🌱 Adult Learning
- 🌱 Classroom Management and Facilitation Skills
- 🌱 Lesson Plan Development

In 2009, the registration fee is \$200. The average for-profit professional development training is \$700.

The savings: \$18,000.

Energy Skill Standards



The Center of Excellence for Energy Technology in partnership with Washington State University Extension Energy Program has been the catalyst for the development of **12 new energy**

occupational skill standards to include the nation's first Wind Technician Skill Standards. The skill standards developed through Center of Excellence Advisory Board focus groups are

being integrated into post-secondary degree programs across the state, pre-apprenticeship and industry and labor registered apprenticeship programs. A primary achievement was students are now hired at a higher rate of pay – 4th step apprentice rates are \$25 per hour thus shortening the apprenticeship by eighteen months to reach a journey pay rate of \$37 per hour.

The savings: \$400,000.

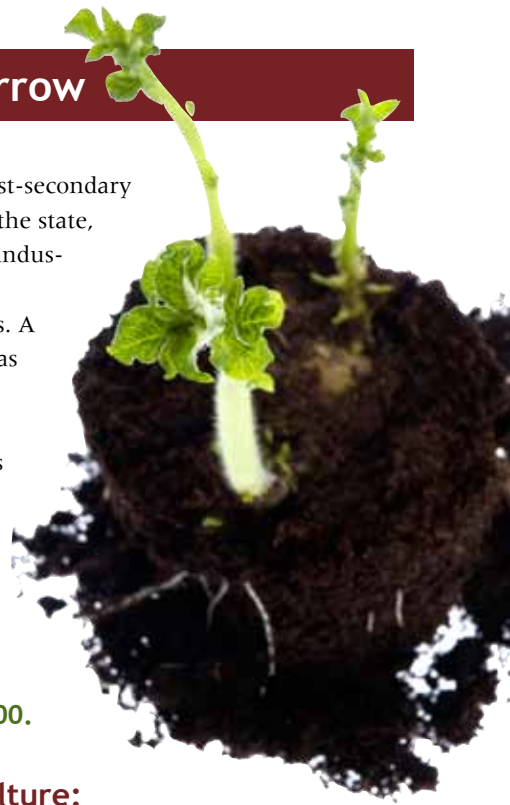
Careers in Agriculture: Recruiting and Marketing Initiative



A core initiative of the Center of Excellence for Agriculture is to aggressively promote, market, and attract students to careers in agriculture. The Center implemented an innovative two-step strategy to recruit a greater number of

high school students into collegiate agriculture and agriculture-related programs. The Center's statewide agriculture recruitment efforts as well as a directory of all CTC agriculture programs have advanced the effective implementation of this core initiative. The recruitment effort achieved contact with over 1,000 Washington state students. The Center developed the CTC program directory concept in 2008, which was then implemented by the other ten Centers of Excellence. The 2009-2010 edition of the booklet was disseminated to over 300 high school agriculture educators at the Washington Association of Agricultural Educators (WAAE) Annual Conference during June 2009. The revised edition of the booklet dated 2010-2011 presents agriculture and agriculture-related programs by area of study, granting participating institutions one-page per primary degree program. The updated booklet will be disseminated in hardcopy to Washington State Work Source Offices and is currently available electronically on the Center website.

The savings: \$100,000.



Information and Computing Technology College Program Review



The Center of Excellence for Information and Computing Technology recruited over 25 information and technology (ICT) industry professionals to review six current state CTC IT/CS

program degrees and certificates. Each review team looked at the composition, title, course titles, and course descriptions for each of the six degrees or certificates submitted. Bellevue, Big Bend, Cascadia, Everett, Lower Columbia, and Seattle Central Community College were not charged for this service and received a report documenting methodology, detailed suggestions for degree or certificate titles, course titles, descriptions, and a high-level industry demand scan. Follow up and evaluative activities will continue through May 2010.

The savings: \$70,100.

"This is really helpful and will be put to immediate use as we are in the process of writing program reviews. I am truly grateful and impressed. I'll be interested to see which of the suggestions we decide to incorporate into our program over the next year."

Sharon Buck, Dean of Business and Workforce Education
Everett Community College

Workplace Readiness



The Center International Trade, Transportation, and Logistics in response to industry demand, enlisted the expertise a specialist in instructional design

and construction of online pedagogy using theories of adult learning. The goal was to take a nationally recognized assessment tool (<http://learning-resources.com/>) and develop a series of online modules that can be used by industry to help train employees, and can also serve as a tool for community colleges looking to incorporate basic soft skill awareness into their Professional/Technical programs. The initial goal at this point is pre-assessment so students know where they are, general awareness and skill training, and then post assessment. These were created with the knowledge that these skills must be embedded in the training for the entire length for any significant learning to happen. The entire training modules on Angel will be available for copy to local servers by any CTC for a nominal fee (\$60 or less). The remaining creation of Workforce Readiness Skills modules are currently in process. The modules will cover: integrity, responsibility, self esteem,

self-management, and sociability. The total cost to the Center to have the modules developed and disseminated will be, when all are completed, \$16,000, saving each of the nineteen colleges who desires the training the cost of development.

The savings: \$304,000.

The Centers of Excellence are committed to demonstrating excellence in communication and collaboration while fostering synergistic interconnectedness of Washington's economic, workforce development and education systems. These collaborations create effective improvements or changes for the CTC system.

Get AMPT!



The manufacturing camp is for all high school students in Washington State. This is a collaborative event with: Aerospace, Marine and Process Technology CoEs; Washington Business Week; the

Northwest and Snohomish County WDC's and industry. Get AMPT! is a summer camp that will increase the exposure of manufacturing to high school students. The development and planning of the camp as well as the funding to support these events have been completed. A project this size could have potentially cost a single organization \$100,000 (space, materials, staffing) and will provide for statewide participation through the participating students and industry partners. This event will serve a minimum of 50 students.

The savings: \$70,000, plus.

TEA



The concept for the TEA was developed by the Centers of Excellence for Aerospace & Advanced Materials Manufacturing and Marine Manufacturing and Technology led by Biomedical Engineer Celeste Baine of the Engineering Education Service

Center. This event provides middle school girls with the opportunity to learn about engineering and technology related career fields by participation in hands-on activities and interacting with an engineering professional to learn about valuable, high-wage, high demand opportunities in advanced manufacturing. More than 160 girls, parents and teachers have participated in the TEA's, and more are being planned.

Total savings: \$12,000.

Green Building: Jobs of the Future DVD



The DVD “Green Building: Jobs of the Future” project continues to grow in scope and reach, and it was made possible only through extensive statewide partnerships and the leveraged funds

and resources that came about because of those alliances. The video continues to be adopted by an ever widening circle of stakeholders, including colleges and organizations around the nation who see it as a model and find its message relevant and universal. The CCE’s video, in conjunction with those created by the COEs for Marine Manufacturing & Technology, Aerospace & Advanced Materials Manufacturing, and Energy Technology, are acting as catalysts for other projects. One of the most notable for the 2009-10 year is the High School Innovation Competition Showcase, which draws on the subject matter in the COE-created videos to inspire skills center students to engage in innovative projects that will allow them to explore the issues relevant to each of our industries, as well as share their results with an industry audience, strengthening the connection between education and employers. With over videos distributed to 150 training centers in North America, 75 apprenticeships, and 400 high schools.

The savings: \$104,500.

The Centers of Excellence serve as a resource for the creation and sharing of model curricula, educational pathways, degree/certificate programs, industry specific skill standards and best practices. They strive to create and deliver projects that show growth and opportunity to effect positive changes for the CTC system.

A Day in Healthcare



The Center of Excellence for Allied Health designed A Day in Healthcare to increase the recruitment rate of high school, college freshman and sophomore student into Allied Health, Health Sciences and Nursing career pathways. A Day in Healthcare speakers included health care industry professionals, current healthcare program faculty, and

college students. Participants attended workshops covering 10 healthcare career pathways that explored health care career options, educational pathways and salaries, strategies for effective job searching, and healthcare employers. Educational requirements and professional responsibilities were explained by industry professionals.

The event was attended by 385 students, 8 career

counselors, 35 teachers, and 4 career and Technical Directors from various health care careers.

The savings: \$13,780.

Tech Prep Pathways



Partnering with the Center of Excellence for Aerospace and Advance Materials Manufacturing, Edmonds Tech Prep Consortium provides high school students in engineering, materials

science and manufacturing pathways take college placement assessment for no charge, pre-college advising, and college tours. Partnership outcomes also include increased alignment between Edmonds Community College and school districts’ engineering and materials science programs. Early reports show approximately 831 high school CTE students earned 4,922 Edmonds Community College credits; a total tuition savings to students is \$373,087. Of the 831 high school students, 452 are Edmonds School District CTE students who earned 2712 college credits; a tuition savings of \$205,569; several consortium students graduated high school with short term and 1-year college certificates.

Total savings: \$578,656.

Homeland Security



Homeland Security Emergency Management The Center of Excellence for Homeland Security in partnership with the Department of Education and the Community and Technical College System

developed an on-line Homeland Security - Emergency Management (HSEM) associate degree program designed to prepare the next generation of emergency management and policy leaders with the knowledge and skills they need to improve outcomes in disasters of all types. This degree program articulates to colleges and universities nationally In addition, the Center conducted train the trainer classes to assist the thirty-four (34) community and technical colleges in the state to become National Incident Management System (NIMS) compliant. Each college received vulnerability and risk assessments train-the-trainer courses that included a “table top” discussion exercise and follow on training tools training for staff, faculty and students. These tools are designed to prepare colleges on methods to respond to incidents of workplace violence on campus and school shooting and/or hostage incidents.

The savings: \$116,281.

Vision Statement from the Chair

In 2009, Washington became the first and only state in the nation to codify Centers of Excellence into state statute. In an effort to meet legislative mandates and solidify our statewide leadership role, the Center Directors formed as a board to cohesively support Centers in becoming increasingly strategic with outreach to industry, labor, economic and workforce development and to positively impact and serve the Community and Technical College system and K-12.

Washington is recognized nationally for creating the Center model as a state sector strategy to serve as an economic development driver for industries that help the economy grow. Given the economics of our state and nation, this is a critical time for the Centers and the system to develop a competitive workforce pipeline that will ensure the economic future of Washington State.

An important strategic opportunity for Centers rests in linking to the state's efforts to expand the "green economy," which assumes that the state's economic and environmental goals are interdependent. Even more important, lasting economic and environmental benefits can only be achieved if these efforts emphasize sustainability, by focusing on fulfilling present and future needs while ensuring that assets such as renewable, natural and human resources are used wisely and nurtured over time.

As we move into the new decade, it is the goal of the Centers to integrate sustainability into every facet of our system's workforce training and education programs. This can only be accomplished by identifying and integrating sustainability practices, efficiency measures, and conservation impacts into workforce development initiatives for the industries represented by the Centers. It is the collective goal of the Washington State Centers of Excellence to lead the nation in developing a sustainable workforce that will serve our state and nation in the new 21st century economy.

Barbara Hins-Turner, Chair
Center of Excellence Board of Director



http://www.sbctc.edu/college/_e-wkforcecentersofexcellence.aspx