

2014

Strategic Plan

For the Manufacturing Sector Council of
the State of Nevada

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Overview

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The Nevada Governor's Workforce Investment Board Manufacturing Sector Council strives to aid in the development of a workforce that is the catalyst for economic prosperity. The Nevada Governor's Workforce Investment Board Manufacturing Sector Council is one of the vehicles that can help create a truly integrated talent development system designed to make Nevada a magnet for both talent and jobs.

Illuminate, Evaluate, Advocate

The goal of this business-led effort is to dramatically improve the quality and quantity of the region's talent to meet increasingly more complex and diverse workforce needs. Regional collaboration among all stakeholders in the talent system will ensure that our state is globally competitive with a greater quality of life for all.

Together we work to:

- Illuminate Performance Gaps
- Evaluate Solutions
- Advocate for Leading Practices

Executive Summary

Nevada not only suffers from decades of not demanding high enough skill from our own students, but also we were a magnet for non-skilled workers whose jobs vanished rapidly and will continue to do so.

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In a recent Las Vegas Review Journal Article, it was reported, “Nevada's ranking for public education has hit rock bottom, according to a new national study on children's well-being. The Silver State was ranked 50th in the nation despite improvements in key areas, such as the percentage of fourth-graders reading at grade level and eighth-graders who are proficient in math.”

Too many students are leaving high school without being college ready. According to a recent study, almost 60% of the Nevada high school educated students enrolled in college required remedial education. The approaching retirement of the Baby Boomers will create demand that will outpace the supply of skilled workers. And employers in every industry face persistent talent shortages.

Nevada’s talent supply requires employers to work together to be strong and consistent in defining the workforce needs of the future to drive systemic change.

In response, the Governor’s Workforce Investment Board Manufacturing Sector Council has come together to provide a mechanism that illuminates performance gaps, evaluates solutions, and advocates for leading practices to improve the talent development system.

It is our vision that in order to be successful, employers have to PULL for change. Only when employers effectively engage with partners in education, workforce, and economic development can we create truly shared accountability for the talent supply chain. Further, as we require outcomes that align with business and economic needs of the region, the system will begin to move in a direction of sustainability.

Background

Not so long ago, whether one finished high school or not, he or she could get hired at the local manufacturing plant or casino and would earn a middle-class lifestyle until retirement. It's a different world now.

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Since 2001, the nature of U.S. manufacturing jobs has changed. Though there has been some improvement in the economy and new jobs have been created, the skill set required for employment has evolved rapidly. Gone are the days of high-paying jobs that require minimal skills. A 2007 report from the Council on Competitiveness says, "In 1950, 80% of U.S. jobs were classified as "unskilled," while today an estimated 85% of jobs are classified as "skilled"—requiring training beyond high school."

Talent has become the primary driver for regional economic prosperity. According to the Lumina Foundation, by 2025 a globally competitive workforce will require at least 60% of its employees to have a post-secondary credential—either a technical certificate, a two-year Associate's degree, a Bachelor's degree or more. The Lumina Foundation also notes that every percentage increase in educational attainment results in a \$763 increase in per capita income.

Top performing regions in the U.S. are setting 80% educational attainment goals, while only 29.5% of Nevada's working-age adults have a post-secondary education credential, and only 19.3% have a four-year degree or more. Nevada employers in every sector are experiencing shortages in qualified talent. Clearly, innovative strategies are needed to improve levels of educational attainment to meet the workforce needs of employers to sustain a prosperous region.

These statistics show that there is a strong correlation between educational level and median earnings.

The Demand: The Need for Skills in the 21st Century

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A diverse and talented workforce is an essential component of a thriving economy. The model of setting up an industrial park and courting a company with land and infrastructure is no longer effective. Global competition drives companies to locate where they have an abundance of skilled workers. For Nevada, this means a mix of credentials including certificates, two-year, four-year, and advanced degrees that meet the needs of the region's diverse employer base and attract new, growing business sectors of the global economy.

Whether it is in manufacturing or information technology, the skill requirements for employment have become more sophisticated. Nevada's talent shortages range from engineers and supply chain managers to welders and CNC operators.

Individuals need credentials and the 21st century skills: understanding how to locate and use information, think critically, communicate effectively, collaborate, create and pursue life-long learning.

It is generally acknowledged that:

- Nevada is lagging behind other states in educational attainment. It ranks 47 out of 50 states.
- Student performance in Nevada falls dramatically between the third and sixth grade and does not recover.
- Only about 71.3% of Nevada's students graduate from high school, compared to nearly 90% of students in the top-performing areas of the United States.
- Too many students are leaving high school without being college ready. More than 60% of the students enrolled at two-year colleges, and 20 to 30% at four-year colleges, take remedial courses.
- Too many community college students are dropping out.
- Approaching retirement of the Baby Boomers will create demand that will outpace the supply of skilled workers.
- Nationally, occupations requiring an Associate's degree are expected to grow by 19.1% between now and 2018.
- In Nevada, the growth of occupations requiring a master's degree or higher is expected to grow at 16.4%. This includes occupations such as scientists, business executives, physicians, professors, and engineers.

Without intervention, these demographic shifts, changes in skill-sets needed by employers and underperformance of the region's education system across all segments paint a bleak forecast. The existing workforce will not be employable. There will be few workers qualified to meet future needs of existing business. Emerging industries will locate in other regions where educational attainment is greater. And businesses in Nevada will find it increasingly difficult to maintain their operations in our state. The reality is the cost of unemployment,

underemployment, poverty, and crime could make Nevada a non-competitive place to do business in the future.

In response to global competition and the breakneck pace of technology development, threats to quality of life, and shrinking resources in the state, we need to develop a statewide mindset, and leaders from around Nevada must come together to develop a shared vision for the future. There must be a conscious shift to partner and work together across sectors and jurisdictional boundaries.

For generations, our process of education relied on educators to PUSH students from kindergarten to high school graduation and on to college with limited resources for counseling to align student aptitude with a career opportunity.

The Manufacturing Sector Council believes there is more to developing talent than graduation rates. Education, public policy, workforce and economic development all contribute to a talent development system that nurtures Nevada's native talent and enhances our ability to attract and retain new talent.

Education is Paramount

Page | 6 This strategic plan places deliberate emphasis on education and workforce development. Rather than relying on the “push” system, talent will be PULLED forward through the supply chain by employers with an emphasis on developing a career pathway and amassing a portfolio from middle school to retirement.

Employers must proactively engage with educators and workforce development professionals to reexamine how we support self-directed learning to build skills that are in demand. Talent development must become more certain, uniform, and predictable. The economic model of talent management will be viewed increasingly as a supply and demand model. Employers need to develop a robust capacity for talent supply chain management to drive improvement in the talent development system.

When opportunities arise, the Governor’s Workforce Investment Board Manufacturing Sector Council will explore strategies that can contribute to a more successful talent system.

The Role of Employers is Key

Our strategic plan should not be viewed as a program; rather, it should be viewed as a process of continuous improvement. In the spirit of servant leadership, members of the Governors Workforce Investment Board Manufacturing Sector Council will convene segments of the educational, workforce, and economic development system to understand the challenges and to encourage cooperation across the region to achieve a shared vision for a globally competitive workforce. This shifts the thinking from, “They need to fix the schools and workforce system” to, “We are working together to improve our talent supply chain.”

Members of our council have been appointed to engage in one or more working groups and act as an accountability partner with stakeholders to illuminate performance gaps, evaluate solutions, and advocate for leading practices to improve the talent system. Under each of the working groups is a mission statement and documented progress to date. Some of the working groups missing information are still in their formative stages.

Working Groups

CREDENTIALS

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The Working Group on Credentials reviews and recommends to the council those credentials that validate critical competencies for a skilled manufacturing workforce. The credentials must be nationally portable, industry-recognized, validated by a third party, and driven by longitudinal data.

Progress to Date – In 2013, the Council formally endorsed the credentials listed below. In addition, the graphic illustrates how these credentials map to the manufacturing career pathway. **The Council strongly encourages the Governor’s Workforce Investment Board to allocate funds that support the attainment of these credentials.**

Foundational Skills

Applied Reading, Applied Math, Locating Information

- *ACT National Career Readiness Certificate (NCRC)*
- Supporting Institutions: Western Nevada College, Truckee Meadows Community College, College of Southern Nevada, JobConnect and One-Stop centers statewide

Core Technical Skills

Safety, Quality Practices and Measurement, Manufacturing Processes, and Maintenance Awareness

- *Manufacturing Skills Standard Council’s (MSSC) Certified Production Technician*
- Supporting Institutions: Western Nevada College, Truckee Meadows Community College

Occupation Related Skills

Machining and Metalworking

- *National Institute of Metalworking Skills (NIMS) credentials*
- Supporting Institutions: Western Nevada College, Truckee Meadows Community College

Welding

- *American Welding Society (AWS) credentials*
- Supporting Institutions: Western Nevada College, Truckee Meadows Community College

Transportation, Distribution, and Logistics

- *Manufacturing Skills Standards Council (MSSC) credentials*
- *Association for Operations Management (APICS) credentials*
- Supporting Institutions: Local APICS chapters statewide

EARLY CHILDHOOD DEVELOPMENT AND K-12 EDUCATION

The Working Group on Early Childhood Development and K-12 Education promotes the replication of successful educational and community-based programs that are aligned with industry job skill requirements across the region.

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Progress to Date – In 2013, the council reviewed the remarkable progress that several of the career and technical academies are making in Clark County. The council would like to draw the Governor’s Workforce Board’s attention to the following institutions, which serve as model schools that are publicly funded and are achieving the highest graduation, proficiency, and higher education attainment rates in the state. All of them have tremendous engagement with industry. These schools are producing students certainly with the foundational skills necessary for a career in manufacturing, and in some cases, the core technical and occupational skills necessary to succeed.

Advanced Technologies Academy – Focused on information: Cisco networking, broadcast, 3D, etc.; Project Lead the Way engineering (civil, architectural, and possibly SIM).

Clark High School – Focused on math, science, and technology: post-secondary and higher levels of math; academy of finance, medical professions, and teacher education.

East Career and Technical Academy – Focused on information technology and electronics: mechanical technology.

Northwest Career Academy – Focused on engineering: civil engineering and architecture; construction; mechanical technology; medical and biomedical; culinary arts; hospitality; feature education; and media communications.

Rancho High School – Focused on aviation: aeronautical engineering; pilot training; and aviation maintenance.

Southwest Career and Technical Academy – Focused on manufacturing: entertainment engineering; game technology; programming and digital electronics.

West Career and Technical Academy – Focused on civil engineering and architecture: principles of engineering; environmental management (air, soil, water)

In addition to these exceptional public schools in Clark County, Washoe County is instituting a similar model commonly known as the Signature Academies in nearly all of the high schools. These academies foster meaningful engagement

with industrial partners and offer a project based learning model that ensures students attain the necessary foundational skills for success on any career path.

The council is highly supportive of these efforts that are preparing young people with the skills that the dynamic global economy of the 21st century here in Nevada will require, and we believe this caliber of public education should be made available to all children in our state.

POST-SECONDARY EDUCATION

The Working Group on Post-secondary Education advocates for strategies that improve college readiness, access, and persistence; encourage adult learners to pursue a post-secondary education credentials and academic credit; encourage internships as a region-wide strategy.

Progress to Date – The council reviewed multiple programs in the system of higher education. Numerous programs are granting the nationally portable, industry-recognized credentials aforementioned. In particular, we want to highlight a fast track program that is scalable and gaining tremendous traction:

Right Skills Now

This effort represents an unprecedented partnership between industry, education, and the workforce system. It was featured on “60 Minutes” in the fall of 2013. Based on industry demand, the program provides fast-track training that prepares the students for careers in manufacturing. The program participants earn the following credentials in addition to the skills necessary to develop a long term manufacturing career (please note these credentials are all in line with those endorsed by the council):

ACT’s National Career Readiness Certificate (foundational skills)

AND

National Institute of Metalworking Skills (NIMS) credentials

OR

American Welding Society (AWS) credentials

AND

20-25 Hours of College Credit

ADULT WORKFORCE DEVELOPMENT, UNEMPLOYED, UNDER-SKILLED

The **Working Group on Adult Workforce Development and the Unemployed, Under-skilled** is focusing on state-provided data from the Bureau of Research and Analysis to make recommendations on workforce training programs that align with industry needs beginning in 2014.

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TALENT DEMAND

The **Working Group on Talent Demand** will begin convening in 2014, where it will develop a mission statement aligned to the strategic plan.

METRICS

The **Working Group on Metrics** will begin convening in 2014 to establish a formal mission statement and metrics to measure the impact of implementing leading practices in the region. A draft of potential metrics can be seen below:

- Early Childhood Development and K-12 Education
 - %/# of children enrolled in pre-school
 - %/# of childcare centers accredited by the National Association for the Education of Children
 - %/# of kindergarten students with moderate to serious difficulty following directions
 - %/# of children recognizing basic shapes at kindergarten entry
 - Third grade reading proficiency
 - Sixth grade reading and math proficiency
 - High school graduation rate
 - Percentage of students who have gone through career coaching
 - Percentage of students who have a National Career Readiness Certificate and a career portfolio
 - Breakout of students who have achieved a National Career Readiness Certificate at the Bronze, Silver, Gold, and Platinum levels.
 - Percentage of 8th and 9th grade students who are exploring a post-secondary education
 - Percentage of 10th grade students with plans for a post-secondary education
 - ACT Composite Score of 11th and 12th grade students
- Post-Secondary Education
 - Four-Year Graduation Rate
 - Retention Rate (First to second year)
 - Percentage of college students who are the first generation in their family to pursue a post-secondary education
 - Percentage of households with secondary education
- Talent Attraction
 - % of Employers offering internships

- % of college age students participating in an internship in Nevada
 - Retention rate of talent recruited to Nevada
- Adult Workforce
 - Percentage of adults 25 years or older with at least a certificate or two-year degree
 - Percentage of adults 25 years or older with at least a four-year degree
 - Percentage of employees with an NCRC credential
- Globally Competitive Workforce Metrics
 - Unemployment rate
 - Per capita income

A Call to Action

The time has come for:

- Employers to drive change related to talent development within their organizations and across industries by establishing a real-time talent demand forecast.
- Companies to create a culture of lifelong learning and help their employees build awareness of the important role parents, guardians and caregivers have in children's education.
- Industry sectors to work together to develop and publish detailed and precise talent requirements for workers in the next 3-5 years.
- The education system to dramatically increase outcomes at every stage of the system.
- Workforce development partners and the educational system to align outcomes with talent demand.
- Non-profits dedicated to implementing leading practices, improving educational outcomes, and promoting workforce development to see how their work fits in a bigger picture and implement leading practices.
- All stakeholders to support the need for building 21st century skills in order to obtain and sustain employment.

If we successfully take action together, we can expect:

- Graduating students and skilled adult workers who are qualified for employment in the region.
- Retention of the region's best asset – its young people.
- More competitive employers.
- Increased job growth.
- Increased quality of life for Nevada residents.