

Next Generation Industry Engagement

Toward a Shared Investment Approach
to High-Demand Workforce Training

Prepared by Collaborative Economics
for the Morgan Family Foundation

February 2015

Introduction

While a skilled workforce is key to driving economic growth and prosperity, regions throughout California report a persistent “skills gap;” employers can’t find skilled individuals to fill their open positions and, at the same time, many Californians remain unemployed or under-employed. Labor market changes driven by global competition and changing technologies require a new approach to workforce training that is highly flexible and responsive to the needs of growing industry sectors. To implement this approach, community colleges in regions throughout California are taking industry engagement to new levels, developing deep and authentic employer partnerships that result in highly customized workforce training that prepares workers with the skills they need for high-demand jobs. These partnerships are playing a vital role in preparing California’s workforce to meet the demand of high-growth industry sectors.

Next generation partnerships take unique forms, but share some common themes in addressing workforce gaps:

- **Targeting groups of businesses or industry sectors:** Rather than focusing business engagement efforts on developing one-on-one partnerships that are often transactional in nature, next generation partnerships target groups of businesses within the same industry sector that share common workforce challenges. By working together at the sector level, businesses are able to collaborate and identify shared talent needs. The catalyst for these kinds of partnerships is sometimes a group of employers that recognize a shared workforce need and realize the opportunity and benefits of collaboration (for example, see San Diego EDGE profile). In other cases, partnerships form as a result of leadership from an individual employer champion, who sees the benefit in engaging a broader group of employers in the discussion to achieve a greater outcome (for example, see Power Pathways profile).
- **Employers as partners, not customers.** One of the keys to successful community college-industry partnerships is working with employers as partners rather than customers. By engaging employers as true partners who are meaningfully invested in the design and implementation of training, next

generation partnerships achieve a deeper and more sustainable level of employer engagement and success. These partnerships involve employer input that goes beyond advising on curriculum development or program design; they involve employers as co-designers and co-investors in workforce training that meets industry needs. These authentic employer partnerships not only increase community college capacity to deliver high-demand workforce training but they also ensure that training is aligned with employer needs.

- **Leveraging capacity of a wide range of training providers.** Effective community college-industry partnerships often involve multiple workforce training partners and programs, such as local workforce investment boards, economic development agencies or groups of community colleges. Community colleges cannot solve workforce challenges alone, therefore it is important to leverage the capacities of a wide range of education and training partners, as well as employers, to co-invest in training. This investment from employers could include in-kind staff time, financial resources or facilities use. These types of partnerships form for a number of reasons including recognition of a shared goal, employers’ articulation of a need, or grant funding. But no matter the driver, ensuring that employers are playing real leadership roles and taking ownership is critical.

Developing effective industry-community college partnerships is hard work. It often means that institutions must start thinking and doing things differently. However, within this larger framework, there are a number of ways to achieve authentic employer engagement. What follows are examples of how community colleges throughout the state have responded to local demand for new or different programming by engaging employers as partners in 21st century workforce development. In some cases, colleges have developed or implemented replicable models of industry engagement. In other cases, they are customizing a model according to the unique opportunities and needs within the industry and region.

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The San Diego EDGE Initiative Leveraging Existing Partnerships to Meet Specialized Training Needs

In the San Diego region, the growing biofuels industry has a need for highly skilled workers with specialized sector knowledge. As an emerging industry with evolving talent needs, the biofuels industry requires a flexible and responsive mechanism to align training with workforce needs. In response to this gap, a diverse group of stakeholders created the Educating & Developing Workers for the Green Economy (EDGE) Initiative to develop technical certificates and advanced degree programs for the biofuels industry. These stakeholders have leveraged existing public-private partnerships and industry relationships to ensure the local talent is trained for in-demand skills.

Understanding the Local Industry

In 2008, Cleantech San Diego, a nonprofit member organization, conducted a scan of the local market and identified an emerging biofuels research and development cluster in the region. Cleantech San Diego engaged local business leaders and identified a number of emerging opportunities to grow the biofuels sector in the region.

In order to adequately address industry's diverse needs, Cleantech San Diego helped form the San Diego Biofuels Initiative, a public-private collaborative to address biofuels sector opportunities, such as industry competitiveness and talent needs. The San Diego Biofuels Initiative has a wide range of partners including MiraCosta Community College, Cleantech San Diego, BIOCUM, the BIOCUM Institute, San Diego Regional Economic Development Corporation, Imperial Valley Economic Development Corporation, California Center for Algae Biotechnology, UC San Diego, and the San Diego Workforce Partnership. The partner organizations represent over 1,000 local clean technology and life sciences companies. These stakeholders understand that collective action is needed to address industry needs as a whole and leverage their diverse strengths.

The San Diego region is now home to a robust biofuels research and development cluster. A 2014 analysis by the San Diego Association of Governments reported that the algae biotechnology sector alone provides 505 direct jobs and \$103 million in direct economic activity in the region.¹ The biofuels and algae biotechnology sector is set to steadily grow in the region, and stakeholders have organized to prepare the local workforce to meet industry needs.

Much of the success of the EDGE Initiative is due to the involvement of our region's biofuels and industrial biotech industry leaders. Without them, the development of a program that specifically meets their employment needs, both now and in the future, would not have been possible. As the industry continues to develop, the courses will be adapted to meet future needs.

Jason Anderson

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Establishing an Industry-Driven Training Partnership

The San Diego Biofuels Initiative launched the EDGE Initiative in 2010 to prepare highly skilled workers for careers in the biofuels sector. At the first meeting of the Biofuels Initiative, business leaders identified a lack of trained workers as a key barrier to expanding in the region. These employers saw a need for a long term training program to create a pipeline of trained workers in the region, rather than a one-off or short-term training program for an individual business. The Biofuels Initiative acted as a vehicle for identifying shared workforce needs across companies and mobilizing workforce and education partners to meet those needs. Because the Biofuels Initiative engaged a mix of business, economic, workforce, and academic leaders, the partnership was uniquely qualified to address some of the major talent needs facing the industry.

In response to the identified talent need, the San Diego Biofuels Initiative partners applied for and received a grant from the State of California Green Innovation Challenge grant in 2010 to create the EDGE curriculum. The local workforce investment board was the financial administrator of the grant and the grant partner organizations included MiraCosta College, UC San Diego, and Cleantech San Diego. The goal of the EDGE Initiative is to provide education, training, and placement services to unemployed and dislocated workers within San Diego and Imperial Valley. The Biofuels Initiative partners matched grant dollars with in-kind contributions and staff time to organize industry feedback and create curriculum.

¹ <http://algae.ucsd.edu/career-development/edge/index.html>

Keeping Employers in the Driver's Seat

The EDGE Initiative partners leveraged existing industry relationships to ensure the new training and curriculum met employer needs. The biofuels industry includes large companies as well as early-stage businesses, many of which were already actively engaged in regional partner organizations such as Cleantech San Diego. These business leaders wanted the training programs to increase their local talent pool, and therefore many were willing and eager to take an active role in the initiative.

The EDGE Initiative created a private sector feedback loop to engage businesses throughout the development and implementation of the training. The partners established an Industry Advisory Council to work hand-in-hand with academic faculty in developing the training programs. These advisors donated their time to the effort and were selected because of their interest and enthusiasm for creating quality curriculum.

Grant partners also actively engaged a broader group of employers early in the process to aggregate diverse business needs. One of the first steps was to conduct a workforce survey to identify barriers to commercialization and shared workforce priorities. The survey was created collaboratively among partners and distributed through organizations with existing industry relationships, such as BIOCOM and Cleantech San Diego. In conjunction with the survey, the grant partners held a forum at an industry conference to facilitate information sharing and networking among businesses.

Creating Customized Curriculum for the Industry

Based on feedback received from the broader industry engagement efforts of the survey and forum, the academic partners identified training components to create and courses to update at regional institutions. The EDGE Initiative academic partners at MiraCosta College, UC San Diego, and San Diego State University met to identify classes and programs at their respective institutions that would align with these training needs and to develop the curriculum. In addition, the business leaders on the Industry Advisory Council were deeply engaged with reviewing and editing curriculum as it was being developed. By engaging a wide-range of employers throughout the process, the academic partners had willing business partners to engage for job opportunities and businesses in turn had access

to skilled workers. More than half of the companies on the Industry Advisory Council offered internship and workplace training opportunities for students, and some have begun to hire EDGE graduates.

The programs range from certificates to advanced degrees, including:

- Biomass Production Training Certificate
- Biofuels Science Technician Certificates: Biological/Biofuels Lab Technician, Microbiological/Crop Management Technician, Biofuels Analytical Chemist
- Advanced Training in Biofuels Production Certificate (Masters of Advanced Studies)

Certificate courses began in March 2011 at UC San Diego Extension and MiraCosta College, and the Masters program launched in 2013. To date, 311 students have been enrolled in EDGE training programs and 102 have been placed in positions or entered graduate school. In addition, over 100 paid internships have been provided for EDGE students to get hands-on experience with regional employers and for employers to see the results of the program in action.² The EDGE Initiative also organizes semi-annual speed networking events for students to speak directly to industry employers and find the right match for internships and jobs.

Sustaining the EDGE Initiative

While the grant funding for the EDGE Initiative is completed, stakeholders remain actively engaged and invested in sustaining the program. The California Center for Algae Biotechnology (Cal-CAB), a consortium of academic researchers including staff from MiraCosta College and UC San Diego, maintain the EDGE curriculum and program activities. Cal-CAB maintains the EDGE curriculum and organizes events regularly with industry to ensure students are meeting evolving industry needs. In addition, while the Biofuels Initiative has evolved into other programs, regional stakeholders such as Cleantech San Diego and Imperial Valley Economic Development Corporation regularly engage the biofuels industry to identify economic and workforce opportunities and feed back into the EDGE Initiative.

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²<http://www.glenmosier.com/wp-content/uploads/2012/08/EDGE-Program-Overview.pdf>

PowerPathway in Sacramento

Aligning Industry and Training to Prepare a Skilled Workforce for Energy Careers

With large numbers of key talent preparing to retire, utilities face significant challenges in ensuring they have the workforce they need to service their customers and maintain their business. In the Sacramento region, a partnership of utility companies, along with education and training providers, have worked together to address this gap, developing customized training that meets industry needs and creates career pathways in to the energy sector, ensuring that graduates are prepared for successful careers in the energy industry.

Identifying shared workforce needs across utilities
Particularly with the coming retirement of baby boomers, utilities face a growing need to develop new talent pipelines of skilled workers. Pacific Gas & Electric (PG&E), for example, estimates that 40 percent of its workforce will be retirement-eligible within the next five years.

In the Sacramento region, utilities have come together to develop shared solutions to address their workforce needs. PG&E, Roseville Electric, the Sacramento Municipal Utility District (SMUD), the City of Sacramento Utilities are working together as part of the PowerPathway program, a nationally recognized workforce development model, pioneered by PG&E. The Sacramento PowerPathway program, which formed in 2010, is a collaboration among utilities, local community colleges, the public workforce development system, and unions to grow the pool of skilled workers for entry-level utility occupations in the region. The program currently offers an eight-week, pre-apprentice line worker course at American River College SMUD's Hedge training facility and the City of Roseville Corporate Yard.

Shared investment among employers, colleges, and workforce development to prepare an energy workforce
The PowerPathway program has created a unique venue for collaboration and shared investment in workforce training among employers, community colleges, and the public workforce development system. Each of the three major utility employers involved in the partnership contributes financial or in-kind resources to the training. SMUD, for example, contributes its facilities for the substation and pole-climbing portion of the curriculum, and PG&E contributes \$25,000 per year to run the program. In addition, the Sacramento Employment and Training Agency (SETA) contributes additional training funds and manages participant

recruitment from its network of career centers. The training takes place at the American River College STRIPE facility and main campus, where employers work closely with College staff to design the program and curriculum to ensure it is aligned with the needs of industry.

Focus on industry sector needs

The PowerPathway program originated as part of the Sacramento region's sector-based approach to workforce and economic development. In the mid-2000s, the region formed a collaborative effort to identify and support key industry sectors that were driving growth in the regional economy. The clean technology and energy sectors were identified as promising sectors with growing demand for skilled workers. By convening businesses along with partners in education, economic development, and workforce development, regional leaders surfaced shared priorities across sector employers and identified opportunities to work together to advance those priorities. The three regional utilities, for example, identified a shared need to develop new talent pipelines and prepare for an aging workforce. Mobilizing around that priority, workforce development, education, and economic development partners collaborated with the three major employers to develop PowerPathway as a strategy for meeting industry's talent needs while ensuring that Sacramento residents were prepared for growing jobs in the industry.

Engaging employers as partners

A key element of success in the Sacramento PowerPathways program has been employers' engagement as full partners in the design and implementation of the training. PG&E helped develop the technical portion of the curriculum, while SMUD and Roseville Electric provide hands-on training at their facilities. Selected students are offered an opportunity to participate in a capstone lineworker course at Roseville Electric, offering them additional opportunities for exposure to culture of the industry.

This level of employer partnership has resulted in a deeper and more sustained level of engagement in the program over time. Now in its fourth year, all three utilities are continuing to participate and to hire workers from the program.

Targeting veterans as a new talent pool

The PowerPathway program emerged as a response to utilities' need for new talent pools to replace their retiring workforce. As a result, the program has targeted recently discharged veterans as a future talent pool. The unemployment rate among veterans is high, particularly among younger veterans. However, with transferable technical skills that make them good candidates for careers in the energy industry, veterans are a high-potential talent pool for the industry.

The PowerPathway program is currently targeting veterans at American River College in Sacramento, preparing them to be skilled utility line and gas workers. The program was also able to leverage funds targeted specifically at veterans. SETA provides recruitment and supportive services for participants, including intensive case management and assessment for Post-Traumatic Stress Disorder (PTSD), as needed.

Results to date

To date, the PowerPathway program has graduated 132 students, and placed 84 graduated into employment. And of that 84, 80 students are entering jobs with utility companies with an average wage of \$28.03 per hour. In addition, the program has served as a model of collaboration for workforce training in the region. With industry playing a leadership role in designing and implementing the curriculum, while also investing time and resources in the training, the program has remained adaptable and responsive to changing industry needs.

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Orange County Registered Nurse Transition to Practice Program Providing Registered Nurses with Practical Experience to Secure Full Time Jobs

Since the great recession, more Registered Nurses (RNs) have returned to work or are delaying their retirement, which has made it difficult for new RN graduates to find jobs. In Orange County, a partnership among community colleges, the Health Workforce Initiative (HWI), and clinical sites has formed to bridge this gap and provide recent RN graduates with clinical experience, preceptor training and continued education courses to sharpen their skills and help them transition into full-time RN positions.

Jump at Opportunities and Leverage Pre-Existing Knowledge

With expanded insurance coverage and growing demand for health care, the need for more health care workers has been a topic of national discussion. In recent years, more students have attended nursing school to enter the growing healthcare industry; however, in Orange County many recent RN graduates have not been able to find a full-time RN job after graduating. The nursing program directors at Saddleback College (SC) and Golden West College (GWC) realized that with a relatively small investment of on-the-job training, they could help recent RN graduates enter full-time employment. When the opportunity presented itself in the spring 2010, they were ready to jump in head first to tackle this growing issue.

The Institute of Medicine (IOM) is a nation organization that makes recommendations on federal health policy and best practices. In 2010 the IOM made a recommendation to implement paid nurse residency programs to help new nurses gain hand-on experience. As part of the California Action Coalition, a coalition that serves to implement new policies and practices, the nursing directors of SC and GWC understood the value of the model, but it was expensive and difficult to implement during the latter part of the recession. They instead created the RN Transition to Practice Program, an unpaid three-month internship experience, to improve the on-the-job skill set of recent RN graduates, making them more marketable for open positions.

To kick off the program, SC and GWC started with what they knew; they reached out to their local hospital network to discuss their idea. At first, a number of hospitals agreed to take one or two students, but once they saw the value in the program first hand (training and developing recent graduates they could then hire) many came back the next session asking for more students.

Targeting Employer Partners Who Will Benefit From Programming

The RN Transition to Practice Program has been successful because each partner and participant (e.g., the student, the community college, and the industry partner) understands the value-add of the program and invests their time and resources. This has involved adapting the program along the way. Originally the RN Transition to Practice Program included classroom instruction, but new graduates were not receptive to more in-the-classroom instruction time, so SC changed the program to solely include experiential, simulation and clinical work.

SC and GWC have also focused their energy on nurturing relationships with hospitals who are set up to benefit from their partnership and who understand the value of the program. A number of small and magnet hospitals have had to cut their budgets because they are unsure of where the health care industry is going and didn't want to be part of the program. Instead of continuing to reach out to these new hospitals, the colleges have realized they should be focusing on the successful partnerships they already have. Foundation Valley Hospital, for example, sees the real value in the program, and 23 out of the 27 students this session will attend this hospital for fieldwork and most, if not all, will be hired by the hospital at the end of the program. The community colleges realized they should continue to nurture relationships with hospitals such as Fountain Valley who see the value in the program and the recent graduates they are training.

Clearly Outline Program Requirements and Goals

The New Graduate RN Transition to Practice Program has been successful because SC and GWC have set strict program acceptance requirements, outlined the program goals clearly and learned to plan ahead.

To help ensure that program participants will be successful, the community colleges have developed strict requirements to qualify for the 12-week long program. Nurses must be recent graduates with at least a B average, and they must have passed the RN boards and be currently unemployed as RNs. Before being accepted into the program, the applicant must also have completed a physical, had the necessary immunizations and passed a background check.

Once accepted into the program, students attend an orientation at the college. Here the program staff outline the policies and goals of the program and discuss what is and what is not acceptable behavior at the hospital. They discuss how this is an opportunity to put your best foot forward, how it's important to be professional, and how you shouldn't call in sick. The program participants learn that they will be evaluated weekly in a self-evaluation using reflective journaling and by the preceptor twice during the course. They understand that once they successfully complete the program, they will receive a certificate of completion, a list of their competencies and an evaluation of their work. By outlining the program structure and expected behavior at the beginning, recent graduates start the program excited and prepared for the 12 week long internship.

The colleges have found it is helpful to work backwards when planning out the timeline for a new session since there are a number of moving pieces. This includes determining the facility logistics at the college such as ensuring there is available lab space at the school and a faculty member is in charge to run the simulations. This also involves screening applicants and choosing the new class of participants, as well as coordinating with the hospitals.

It Comes Down to Shared Investment

SC and GWC agree that shared investment from both community colleges and employers has helped to make the program successful. Clinical employers assist the college in defining the program's strategy and goals, identifying necessary skills and competencies to include in the programs, and ensuring that the training reflects the needs of both nurses and employers in the region. They also help identify and refer qualified candidates to the program, such as those that the employer interviewed but did not have an open position for. The clinical partners also meet with the community colleges to review applications and choose qualified candidates for the next session. Often times, hospitals take more applications than they agreed to take in the first place because they are impressed by the caliber of recent graduates. The clinical partners also provide in-kind contributions to the program including equipment, work-based learning activities and a preceptor-aid. The industry partners realize that the support they give, both in terms of time and resources, greatly strengthens the program, which in turn provides them with qualified RN graduates they can train and then hire.

The community colleges also invest significant time and resources in the program. They are in charge or organizing the sessions, reaching out to industry partners, and making sure the programs run smoothly. This includes enrolling the students in the Cooperative Work Experience course, and offering two campus-based instruction opportunities in the simulation lab, as well as covering workman's compensation and liability insurance for the RNs. The professor of the Cooperative Work Experience course also comes to the clinical site twice throughout the program to meet with the preceptor and student to make sure they are settling and to discuss what they have learned. HWI provides the community colleges with funds to successfully carry out the program. Through this shared investment of time and resources by both the employer and the community college, RNs are provided with exceptional training and guidance over three months, making them better prepared to enter the workforce as RNs.

Outcomes

Since 2011, HWI has funded 23 Transition to Practice Programs throughout the state. The program has had 420 participants, 336 of which have been hired into RN positions (80% hire rate). In Orange County, they have had over 300 RN graduates participate in the program, 80 percent of which were hired by the hospital they interned at. The recent summer program had 18 students all of who were placed at the hospital. The program has helped recent RNs graduates feel a better sense of comfort and confidence in decision making for the management of safe and effective patient care. It has also provided RNs with practical experience making them more desirable to employers.

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Ensuring a Future for Manufacturing in Los Angeles Broader Mission Drives Training Program Success

Manufacturing has been an important industry in California, creating jobs and growing the economy in many regions throughout the state. This has been particularly true for the greater Los Angeles region, which has the largest manufacturing workforce in the country.³ Nonetheless, Los Angeles' manufacturing companies have consistently struggled to find qualified individuals to fill all their open positions. To fill this gap, a partnership among Aerospace Dynamics International (ADI), one of the largest aerospace manufacturing companies in Santa Clarita, along with numerous other advanced manufacturing companies, and College of the Canyons (COC) has been working for nearly 20 years to increase the supply of trained workers and strengthen the overall manufacturing industry in the area.

Define the Need, Listen to Industry and Go After It!

In 1997, ADI was in need of employees trained in the CATIA computer design program. ADI had been investing thousands of dollars in training their employees on CATIA through an internal program, only to have other manufacturing companies in the area recruit these employees to their firms. It was clear; the region needed more design engineers trained on CATIA. To resolve this issue, the CEO of ADI met with the chancellor of COC and their economic development director. ADI said that they could provide a facility to train the students, if COC could implement the training. Both the chancellor and the economic development director agreed enthusiastically. COC was eager to respond to industry needs and help a growing sector, as well as a local company in their region.

From the beginning, COC has pulled in a variety of industry leaders to make sure the program is meeting their needs. Manufacturing companies such as ITT Aerospace, Haas and Boeing joined together with ADI and the college to set up the facility. Together, they have applied for and won Centers for Applied Competitive Technologies (CACT) grants to sustain the training program beyond its launch in 1998.

Shared Goal = Shared Success

ADI and COC have had a strong and sustainable partnership due to their clear, shared goal: leverage resources to train manufacturing workers and supply the manufacturing industry with qualified employees. To achieve this, ADI invested a significant amount of time and money to ensure the success of the program. Since the program's inception, ADI has invested more than

\$1 million of in-kind donations including rent (valued at \$56,000 annually) and general support to the program at no cost. They and other local client companies have also utilized their network of suppliers to maintain and modernize COC facility and equipment at discounted rates. This highlights the level of support ADI provides the college to make sure their program is equipped with the right machinery.

While ADI has provided COC with a training facility for over 16 years, they have directly benefited from only three to four percent of trainees that go through the programs. ADI understands the broader goal of the program is to prepare a skilled workforce for the manufacturing industry as a whole, not just to train employees for their own company needs. However, when ADI needs a particular, customized training, COC is happy to help. Recently, ADI reached out to COC because they needed 16 CNC operators by the end of the year, so COC set up the training course and will provide ADI with qualified workers. ADI is proud to show off its successful "in-house" training program, and clients are impressed by the work that goes on within ADI's walls.

Build a Strong Network of Industry Partners

The key to the success of this program and the greater manufacturing network in Los Angeles is that each manufacturer understands the need for strong training programs that ensure there is a supply of trained manufacturing workers. If there is not enough supply, then companies will begin to poach qualified employees from other manufacturers in the region. This is why many manufactures are eager to participate in advisory groups and surveys. With enough supply, manufacturing workers are able to find jobs and grow in their careers, without companies having high turnover.

To gauge market demand on an ongoing basis, COC reaches out to their network of 200 client companies through multiple avenues, including advisory meetings, surveys and individual contact. In any given year, they provide training to 80-100 of these companies. COC has built this solid network of manufacturing industry members by being actively involved with both the business and manufacturing community. COC leaders are on the board of directors of different business and community organizations such as the chamber of commerce, Valley Industry Association and the Santa Clarita Valley Economic Development Corporation.

³ Los Angeles Times. "Los Angeles is largest manufacturing center in U.S., government says. September 1, 2014. <http://www.latimes.com/business/la-fi-los-angeles-manufacturing-20140829-story.html>

Also the full- and part-time consultants and trainers employed by the college's Economic Development Division are active in the business community. COC knows which companies are part of mechanical or hydraulic assembly for example, so they know which companies to reach out to with certain questions.

COC has found that it's important to have industry experts as part of the economic development team. It is invaluable for team members to have worked in industry. This way, they can talk to industry and empathize with them and their needs because they too were once in their shoes.

Be responsive to industry needs and market demand
COC is highly responsive to industry needs, whether it be up-skilling current manufacturing employees or training out-of-work individuals for companies to directly hire. For example, an industry member contacted COC and said they needed a blueprint reading class dedicated to their employees. The college aligned the necessary resources and got the class up and running at the company's facility.

COC has also worked to provide customized trainings to groups of employers with similar workforce needs. For example, COC will set up a training course if multiple companies have a similar training need, and COC will advertise the training to its company partners. To respond to growing demand for biomedical manufacturing, the college also modified one of its Fast Track manufacturing assembly and test technician courses to meet the specific needs of the biomedical industry.

Program Outcomes

COC has built a highly successful manufacturing training program. COC's fast track CNC machining program has a 79 percent placement rate and a 95 percent retention rate. This proves that COC's program provides individuals with the necessary skills to succeed in open manufacturing positions in the region.

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Kern Community College District Building a 21st Century Energy Center

Kern County has a strong energy industry, with a growing number of renewable energy installations and established oil and gas industry. Kern Community College District's (KCCD) 21st Century Energy Center (originally called the Clean Energy Center) plays an important role in preparing the local workforce for careers in the energy industry. By working closely with energy companies in the region, the Center's training programs provide local workers with the necessary certifications and skills to get jobs in the industry.

Identifying the Local Need

In 2009, the wind energy market was projected to grow quickly, and KCCD's wind technology bootcamp was in high demand. At this time, KCCD was also establishing early connections with the area's utility, PG&E, and energy companies including EDF Renewable Energy to train local workers for local energy projects. Seeing a projected increase in renewable energy jobs, KCCD and neighboring Taft College established the Southern Sierra Clean Energy Collaborative to prepare local workers for clean energy jobs, including wind and solar. In 2010, KCCD applied for and received two grants, totaling nearly \$4 million, through the California Energy Commission and Employment Development Department, and the U.S. Department of Labor. This funding enabled KCCD to launch the Clean Energy Center and establish training programs as a part of their not-for-credit economic and workforce development office.

Engaging Industry Early and Often

KCCD's Clean Energy Center engaged a variety of industry partners early in the process of creating the training programs and continues to work closely with businesses. Industry partners were identified through a mixture of building on existing relationships, businesses contacting KCCD for training, and conducting a scan of the local market. KCCD engaged businesses around shared training and market needs through advisory boards, industry group meetings and conferences, and one-on-one discussions. The individual discussions proved to be most useful in creating and improving the training programs because they learned what businesses needed most from workers and their skill priorities. KCCD learned what technical certifications and skills were required or desired in a worker, including basic skills such as math and workplace communication. Because it is a not-for-credit program,

KCCD is able to modify their training in the next round to be able to respond quickly to industry needs and improve trainees ability to get jobs.

For example, KCCD modified their Core Construction Skills program to directly reflect the needs of employers. The 120-hour program is a pre-requisite for other energy training programs, and includes basic skills needed in most industry jobs, such as trade math, technical drawing and design, safety certifications, and workplace soft skills. KCCD also helps trainees meet other basic workplace requirements to improve their chances of getting a job, such as obtaining a driver's license and passing a drug test. Energy industry companies have come to see the Center's program graduates as desirable workers because they are pre-screened and have in-demand skills.

Building the program through company partnerships KCCD has a broad range of energy industry partners whom they engage on a regular basis. Early partnerships with PG&E and EDF Renewable Energy were particularly pivotal in building the Clean Energy Center.

KCCD reached out to the investor-owned utility in the region, PG&E, knowing that the utility needed skilled workers to meet growing demand in the region. PG&E had already established its PowerPathways program for training utility workers, so they did not form an official training partnership with KCCD, but they help KCCD to help start their program. For example, PG&E donated their curriculum to KCCD, valued at \$300,000, which formed the foundation of their core introductory training program. In addition, PG&E connected KCCD with retired utility workers to recruit training staff and provided access to their general construction yard to give students field experience in setting poles, trenching, and other basic utility skills. PG&E also helped KCCD understand the company's hiring process to help trainees work through the job application system. KCCD is still engaged with PG&E and is working with them to offer a new class in Spring 2015 called Entry to Gas Operations.

EDF Renewable Energy, formerly known as enXco, reached out to KCCD in 2010 after the company started scoping areas to develop in the local Tehachapi area and wanted to become a part of the community. EDF Renewable Energy is a wind and solar company and

wanted to be able to hire local skilled workers in their development projects. The company provided KCCD with a \$160,000 scholarship and internship fund for trainees at the Center. The scholarship provides support for unemployed or underemployed trainees going through the program to help with living expenses. The internships provide a stipend for trainees to work at EDF Renewable Energy and gain on-the-job experience.

In addition to individual companies, KCCD is also establishing relationships with unions and industry associations. For example, the International Brotherhood of Electrical Workers (IBEW) has a new solar panel installer track that is not a formal apprenticeship, but is a union position that is well-paid. While IBEW initially saw the Center program as a competitor, after hiring many of the program graduates from a job fair, the IBEW realized KCCD is a complementary program and now partners with the Center to help source workers in the region.

Sustaining Program Results

Since 2010, KCCD has trained more than 1,200 people and these trainees are increasingly in-demand at companies in the region. KCCD achieved these results by engaging with industry and continually modifying training programs to meet employer needs. For example, early in the program, trainees were having a difficult time getting jobs because the wind industry was not growing as quickly as projected. Therefore, KCCD talked to employers and realized that many of

the skills in the current program were transferrable to other industries such as oil and gas. KCCD adapted some training components, changed the program name to the 21st Century Energy Center, and now works with the broader energy industry to increase the likelihood of success for trainees.

The Center provides training that help students earn industry-recognized certifications and stackable credentials to help them succeed and grow in the energy industry. The pre-requisite Core Construction Skills program is offered once every two months and the Solar Photovoltaic Installer program is offered about three times a year, while other training programs including Powerline Worker and Wind Turbine Technician are offered based on industry need.

The initial grants for the Center ended in June 2013. These grants allowed trainees to participate in the program for free, but KCCD has been able to continue to offer free training through corporate donations from Chevron and Wells Fargo. This braided funding model has allowed KCCD to continue programs without interruption and train skilled workers for in-demand jobs.

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From Automotive Training to Advanced Transportation Leveraging Employer Relationships to Meet the Workforce Needs of a Rapidly Changing Industry in Los Angeles

Advanced transportation is a relatively new and rapidly changing industry that encompasses a range of technologies such as electric vehicles, intelligent transportation, and alternative fuels. Preparing a pipeline of trained workers for this ever-evolving field requires a highly flexible approach and full engagement of industry partners in ensuring that training is aligned with employer demand. Cerritos Colleges (Cerritos) in Los Angeles has built on their long history of successful automotive training programs to develop a leading advanced transportation training program that is tailored to the needs of employers.

Build Off of Success

Cerritos has a long history of providing talent to local automotive companies, starting in the 1970s. The program was built on strong partnerships with major automotive companies such as Ford, General Motors and Chrysler, which required highly customized technician training for their facilities. With the success of Cerritos' training program, these companies leveraged funding to contribute to the \$4.8 million capital campaign to build a world-class automotive training center in 2007, known as the Cerritos Center for Transportation Technologies, to train both corporate and non-corporate employees.⁴ Cerritos is one of the only programs that offers (3) corporate programs on the West Coast.

Today Cerritos is home to one of ten state Advanced Transportation Technology and Energy Centers. As the transportation industry has changed, Cerritos has continued to adapt to changing workforce needs, developing new programs to meet growing demand in advanced transportation. Due to its strong base of employer partnerships among major automotive companies and local dealerships, Cerritos stays on top of industry needs. A regular check in protocol with their industry stakeholders allows them to confirm that they are meeting industry needs.

On-going, real-time understanding of industry trends in the constantly-evolving alternative fuel industry, being aware of labor market changes and technology advances is critical. Cerritos does this by thoughtfully engaging employers and asking the right questions. Cerritos has had such success engaging employees because most of the staff in the alternative fuel program comes from the automotive industry. This

gives them a leg up; they are working in the workforce world with the market and industry knowledge, which is invaluable. They also stay current on labor market trends and technology advancements. This way they can have productive conversations with employers and ask them informed questions. Cerritos staff will often call a technology company to get more information on the new product. They also call dealerships and tell them they are interested in better understanding a new technology and ask if they can borrow one of the cars. It's this type of submersion in the industry and engagement with employers that translates into successful training programs.

Shared Investment Makes New, Demand-Driven Training a Reality

As alternative fuel vehicles gain more market share and become a ubiquitous presence in the Los Angeles region, Cerritos has responded by offering alternative fuel vehicle training for automotive technicians. Creating new curriculum and training for these new technologies was not something the college could undertake alone. Local dealerships who were long-time partners of the program were able to leverage curriculum and resources from the national automakers. The dealerships also provided equipment and cars for the students to learn on.

Knowing When to Scale Training Offerings for an Emerging Industry

Community colleges have a special role to play in supporting local industries. As these industries evolve and new technologies and processes come online, it can often be difficult to assess when it's time for the college to invest heavily in training workers on new technologies or tools. Cerritos staff walk this line carefully and rely on signals from local employers and the national labor market. It became clear that creating special curriculum for alternative vehicles was necessary when alternative fuel vehicles started commanding enough market share to warrant a need for their own industry. By staying in touch with local employers Cerritos staff were able to gauge when the dealership would no longer be able to rely on in-house training to provide the scale of automotive techs needed and thus were ready to invest in a larger scale training effort.

⁴ California Community Colleges Chancellor's Office. "About Us: Cerritos College." <http://californiacommunitycolleges.cccco.edu/collegeDetails.aspx?collegeID=811&txt=Cerritos%20College>

Staying ahead of the game is crucial to create and adapt training programs. Cerritos attests that this forward thinking mindset has helped their program thrive. With its corporate programs, Cerritos is made aware of some of these changes earlier than others. Other times, OEMs will let Cerritos know that when a technology comes to market, they will need trained individuals in say two or three months. Cerritos internalizes this information and then makes the necessary program adjustments. Companies are impressed by Cerritos responsiveness and are even more willing to contribute their time and expertise to grow the program. Staying abreast of these industry changes is critical to curriculum development and ensuring that there will be a pipeline of trained workers.

Outcomes

Cerritos Colleges recently became California's CTE Strategic Hub for developing secondary and post-secondary pathway in alternative fuels. These programs start at the high school level and go through to industry. Cerritos continues to adapt and add courses based on industry needs and market information. They just added a new training program for incumbent workers in alternative fuels.

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Skill Standards

Defining the True Functions of Food Manufacturing Maintenance Workers in the Central Valley

In 2010, food manufacturers throughout the Central Valley were experiencing a serious hiring deficit of entry-level maintenance mechanic workers in the region. Employers reported not just that there was a shortage of applicants for these open positions, but also that the students coming from local colleges did not have the appropriate cross-functional skills. As a response, Merced College and College of the Sequoias co-lead an effort to sponsor a Skill Standards process for maintenance mechanics in food manufacturing. This process engages industry members to develop a clear foundation of specific skills needed to effectively perform a given job. While this program was initially undertaken in order to improve training efforts of the regional colleges, ultimately the program strengthened the relationship between employers and the community colleges involved in the effort, provided the tools to create a standards-based foundation to measure skills and helped increase the pipeline of skilled maintenance mechanics that matched employer's needs.

The Skill Standards Program Process

The Skill Standards consultants used are from Washington State University and part of the national Skill Standards movement. Skill Standards have garnered much attention and been replicated at many colleges and universities nationally. The Washington State University Skill Standards model involves five steps: research, focus groups, set performance criteria, scenarios, and validate. The process helps identify the knowledge, skills, and abilities an individual needs to succeed in the workplace.⁵ And it answers two important questions:

- What do workers need to know and be able to do be successful in today's workplace?
- How do we know when workers are performing well?⁶

Merced College and College of the Sequoias decided to launch a Skill Standards project, in particular, due to the program's national success and because the program's goals aligning directly with their need to close a critical skill gap in the region. Working with the consultants, Merced College and College of the Sequoias convened top-level food manufacturing managers from diverse segments to draft skill functions for maintenance workers. Food manufacturing companies were poaching skilled workers from other companies within the region

This cooperative effort between education and industry is a vision I have been striving for and hoping to achieve during my involvement in regional manufacturing groups over the last 10 years.

Stephanie Moreno, HR Manager South Valley Operations, The Wine Group⁷

because there weren't enough trained workers, so this idea of collaboration to increase the supply of employees grabbed employers' attentions.

Each employer then committed an expert maintenance mechanic from their company to attend a two-day focus group where they went through and revised a list of critical work functions devised from preliminary research and the initial employer meeting. They then sent out a survey of SCANS skills and qualities for maintenance mechanics to food manufacturing employers throughout the region to validate their findings. One of the main findings from the process was that maintenance mechanics will need to be cross-trained in a number of areas such as electrical, welding, CNC or Machinist, computer-aided design, and program and maintain computerized control systems. This would mean working collaboratively as a region in new ways to fulfill all of these skill needs. These findings and more were shared at the release meeting where participating employers, local workforce investment boards, and local community colleges gathered.

Results: Better Skill Articulation, Better Training, Enhanced Relationships, Shared Investment

The Skill Standards process is a well mapped out process that is an effective way to clearly articulate skill needs. Unlike other models, the Skill Standards breaks down each element of a job position and asks precisely what knowledge, skills, and abilities (KSAs) are needed to perform each task. By focusing on how KSAs operate in a specific context, education partners are better able to understand how students will use their training in a real work setting.

Employers and employees also determine the average level of skill needs for each knowledge area within a given position, which helps colleges determine how

⁵ Merced College, College of the Sequoias, and Washington State University Energy Program. "Skill Standards for Food Manufacturing Maintenance Mechanics." 2013. pg. 20.

^{6, 7} Ibid

much training is needed. Some employers require a rudimentary level of a certain skill, while others require a sophisticated level, which makes it difficult for community colleges to design the most appropriate curriculum to train employees. By determining this regional average, community colleges can design effective training programs and they can prioritize which courses to offer. By contextualizing KSAs, educators who face certain constraints when adapting curriculum (mostly classroom time) are able to understand which KSAs are most important to job performance, and how they might be integrated into existing curriculum in a way that best replicates real life job conditions.

An important and unanticipated outcome by the college partners was that this process led to much closer and more productive relationships with employers. By bringing in employers as creative partners, the community colleges were able to develop close working relationships with a variety of local and regional companies. An upshot of becoming part of the design process was that employers were also able to recognize on their own how important employer investment in training is to their immediate and long-term success. For instance, employers articulated the importance of more on-site training for new industrial mechanics and through this process of discovery realized that if what was needed was more on-site training, they as an employer group were charged with creating more internship slots! While the Skill Standards was laborious and demanded significant time investment from regional employers, it was the deep level of investment that created a shared sense of success and responsibility to train the next generation of maintenance workers.

Employers continue to demonstrate the value of their co-investment after the curriculum redesigns and the Skill Standards project was completed. Employers involved in the process have referred others educators and industry colleagues in the region to the report. They say once you have adjusted programs to reflect these

skills, they will accept opportunities for partnership in the areas of internships or employee hires.

By utilizing the Skill Standards process and working with employers, the colleges were able to clarify employer needs, create a common vocabulary, and identify the level at which skills were needed. This created a more sophisticated foundation for discussion between the community colleges and food processing manufacturers and was a catalyst for greater regional collaboration. The colleges were able to adapt curriculum to meet employers' needs and employers had a greater supply of skilled individuals to fill their open positions. The success came from buy in from both the community colleges and employers.

Lessons Learned

A Skill Standards program is a financial investment and a time investment. It has to be a labor of love since it is a big undertaking from the community college side to coordinate and facilitate the effort. Also, community colleges have to be ready to move and be responsive to industry needs upon completion of a Skill Standards project because when you get the ball rolling, it's going.

The process has been so successful in the Central Valley, that they replicated the Skill Standards model for their Retail, Hospitality and Tourism sector in 2014.

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[To read the full report follow this link.](#)

The Marketplace

Creating a Unique Space for Industry-College Collaboration on Workforce Training in the Bay Area

Meeting the workforce needs of growing industry sectors requires a new kind of collaboration, where employers work with community colleges as true partners and not just as customers. The Bay Area Community College Consortium has developed a unique model for surfacing and supporting these opportunities for collaboration—regional “marketplaces” of college and industry.

Marketplaces create a space for industry, college, and workforce development to come together to explore collaboration around a given industry, occupation or topic. Some marketplaces address a particular industry such as health care, biotechnology, or advanced manufacturing, while others are targeted to a specific occupation such as industrial maintenance machinists or medical assistants. By creating an opportunity to hear everyone’s interests, the marketplace provides a venue to connect and collaborate with others, identifying complementary roles. It is also a process that is intended to be repeated, providing regular opportunities to come back to the marketplace to identify new opportunities for collaboration.

Creating a Venue for Collaboration

The marketplace model grew out of an understanding that effective collaboration requires a venue for people to connect with one another to identify compatible interests and opportunities to play complementary roles. The marketplace provides that venue for colleges, employers, and workforce development organizations to come together and identify opportunities to work together to prepare a skilled workforce.

While a marketplace convenes around a specific topic, such as an industry or a particular occupation, there are no predetermined outcomes for a marketplace meeting. Instead, participants are asked to come with a specific need in mind and the facilitator ensures that everyone’s interests are heard. Where interests align, the marketplace can facilitate collaboration. This approach is fundamentally different from traditional industry engagement, where employers are approached to provide support or input on specific topics or for a particular program. Since the marketplace is open-ended, collaboration arises naturally from shared interests.

By inviting a range of colleges, employers, and workforce development organizations, marketplaces

also create scale in addressing regional workforce needs. For employers, the marketplace becomes a single venue for working with several community colleges, rather than approaching each one-by-one. Similarly, college faculty and staff benefit from the opportunity to connect with their colleagues and peers in a single venue.

Connecting Assets and Needs where Interests Align

The marketplace facilitator plays an important role in working with participants to identify areas where there are compatible and complementary interests that could be combined. This facilitation involves working with the group to identify tangible next steps that employers and college partners can work on together to advance their shared goals. In addition, the marketplace convener provides initial project management support to get collaborative projects off the ground.

Connecting assets and needs looks different in every marketplace, but can have real, tangible impact in improving college programs or student outcomes, or increasing employer investment in high-demand training. For example, during a marketplace focused on medical assisting, college leaders raised a question about the placement rate from one of its programs, which recently dropped 25 percent. This led to an honest discussion about the need to increase the rigor in English and math in that program to ensure that graduates were competitive. As a result, college faculty and staff worked with employers through a series of meetings to revamp the program and ensure that it aligned with their needs. The change has been so successful that, recently, a major health care employer has expressed an interest in replicating the program across the state.

In other cases, the marketplace has resulted in more direct investments in high-demand workforce training from employers. In a health care marketplace, a major employer came forward to ask that the existing nursing program expand to meet growing demand, but that the expansion be implemented in phases so that the graduates could be absorbed over time. The colleges shared an interest in expanding the program, but could not move forward since an increased cohort would cost an additional \$80,000 per year. This led employers to collectively contribute the additional funds to support an increased program, sharing the costs of the training.

Replicating the Model

The Bay Area College Consortium has shared a wide range of Marketplace tools and videos on their website⁸ with a goal of supporting replication of the model elsewhere. In addition to using a similar process and tools, marketplace conveners report that the most critical success factor in replicating the model is identifying a facilitator that can effectively uncover shared needs and collaborative opportunities among businesses, college faculty and staff, and other partners. An effective facilitator is well-versed in listening and capturing individual's interests and guiding the group through identifying and prioritizing where those interests overlap, including mapping out clear next steps. In addition, the convener must provide some initial project management support to get projects off the ground. These skills are critical to ensure that the marketplace surfaces areas of common interest and that the resulting collaboration achieves tangible results.

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⁸ bacc.net/marketplacemodel

Design It - Build It - Ship It

East Bay Community Colleges and Partners Launch East Bay Advanced Manufacturing Partnership Using Sector Partnership to Implement an Employer-Led Advanced Manufacturing Agenda

Manufacturing has long been a core industry in the East Bay, providing thousands of jobs at multiple skill levels and helping drive an innovative, export-oriented economy. Despite the low cost of manufacturing labor outside of the United States, domestic manufacturing remains competitive in more advanced manufacturing activities. In recent years, there has been significant federal, state and local investment in maintaining and growing this 21st century manufacturing sector.

The East Bay supports a number of institutions and entities charged in some part with assisting the regional manufacturing sector thrive: community colleges, economic development organizations, workforce investment boards, a manufacturing extension partnership, and a number of industry associations all serve the diverse manufacturing community in Alameda, Contra Costa, and Solano Counties. Due to its importance as a sector and its critical role in the regional economy, many of these institutions actively seek out industry partners and advisers to help them implement a variety of education, workforce, and economic development activities.

In 2012 a consortium of 10 East Bay Area community colleges, 5 workforce boards, UC Berkeley, CSU East Bay, East Bay EDA and other regional partners were awarded a large Trade Adjustment Assistance Community College Career Training (TAACCCT) grant to support, among other industries, advanced manufacturing in the East Bay. The grant, Design It - Build It - Ship It (DBS), is an initiative that coordinates the work of a number of the support organizations identified above to integrate their efforts to help the East Bay's manufacturing sector grow. With so many entities and a diversity of manufacturing employers, the community colleges have organized their efforts under an employer-driven Manufacturing Sector Partnership, the East Bay Advanced Manufacturing Partnership

Sector Partnerships are partnerships of companies from the same industry, along with education, workforce development, economic development and community organizations, that focus on key issues related to the target industry in their natural labor market region. The partnership acts as a coordinating body across multiple education, workforce development, economic development programs and other programs to create highly customized responses to a target industry's needs. Sector Partnership success is contingent on

members of industry acting as leaders and champions of the effort: employers set and drive the agenda and the partnership works together to implement industry-identified priorities

Convening and Launching a Sector Partnership

Sector partnerships must have an active convener. In case of DBS, the convener was the grant leadership team that acted on behalf of the many community colleges, workforce investment boards, economics development agencies, and manufacturing extension partnerships that were involved in the grant. The leadership team also acted on behalf of the many community partners that play a critical role in supporting the manufacturing industry in the East Bay but were not necessarily part of the grant.

The first thing the DBS team did to convene and launch a Sector Partnership was to find a manufacturer to serve as an initial champion and convening partner. The team and their college, WIB, and EDA partners surfaced several strong employer connections and, ultimately identified four local manufacturers—Inland Metal Technologies, Plastikon, SMTC Corporation, and Tesla-- that were willing to invite other employers to an initial “launch meeting.” This meeting convened a range of manufacturers to identify priority action areas that the employers were interested in working on together. Having a local firm convene the first meeting and invite peer-employers sent a powerful message that employers were in the driver's seat for this effort.

About 20 local manufacturers attended the first meeting of the East Bay Advanced Manufacturing Partnership. The group went through a facilitated process to identify “opportunities” and “requirements” to grow their businesses. By focusing on opportunities to grow the manufacturing industry in the East Bay, employers were set up from the start to work together on shared aspirations. Opportunities identified included a renewed interest in domestic manufacturing (“Buy American”), a regional focus on new technologies, and a strong regional supply chain. However, in order to leverage these opportunities there were areas where it was clear local manufacturers and public entities would have to work together. Some of the requirements manufacturers identified were a better way of identifying and supporting agile manufacturing firms, a stronger, better trained pipeline of workers, and a more supportive policy environment. Employers at the meeting then

volunteered to join sub committees that would work on the three action areas.

At the first meeting and in the meetings that followed, community partners like the colleges, WIBS, and EDA's were encouraged to listen to employers without jumping in too early with suggestions for how the public sector could respond to employer needs. This helped create the space needed for employers to find their collective voice and to realize that they are being called upon not just to provide input, but to provide leadership and partnership in a regional economic (and workforce) development initiative. Employers are expected to do the work of defining and championing the strategies that will strengthen what it is that they need to be successful and community partners are there to think creatively about how they might best leverage their institutions and funding streams to help meet those needs.

In the months following the launch of the East Bay Advanced Manufacturing Partnership, the larger group of employers has convened quarterly while the subcommittees meet more regularly. Each committee has put together an action plan that clearly sets out the employers' goals and how community partners will help execute the vision. By laying out the action plan in terms of the employers' collective vision, community partners, like the community colleges or WIBs, can identify how they can best assist employers and get important context for related projects that they are involved in. Partners are also able to leverage a variety of resources they have access to. Some examples of partners integrating and leveraging the work they are already doing to meet goals set out in the employers' works plans include:

- The regional colleges created a map of regional training programs in advanced manufacturing that will form the basis for improving information for companies;

- The East Bay Advanced Manufacturing Deputy Sector Navigator convened a "marketplace" of businesses and community college instructors to begin the development of a quality control training at the college level;
- Manex, the local manufacturing extension partnership, designed a self-assessment tool for manufacturers to measure agility, and is currently planning the pilot of an East Bay agility network.

Moving Forward

The East Bay Manufacturing Sector Partnership has a lot on the horizon. At the moment the group is trying to tackle the employer action plans which have both long and short terms goals. They continue to recruit employer partners and engage with other community organizations who are interested in supporting the local manufacturing sector.

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Industry, Workforce, and Community Colleges Partner to Provide a Skilled Health Care Workforce in the Sacramento Region

The Los Rios Community College District, the Sacramento Education and Training Agency (SETA) and regional Sacramento health care employers have a long-standing history of working together to address the workforce needs of the local health care sector. Over the past two decades a number of grant and project-specific initiatives have brought some combination of these players together to address demand for training. While the specifics vary from one project to another, together these partners leverage each other's resources and expertise to maximize regional investment in health care workforce training. Several key themes are critical to the success of this long-standing and productive relationship are:

- Employers help shape program design.
- There is shared investment: employers provide resource support either through direct financial support or in-kind resources such as nurse preceptors, equipment, on the job experience, and facilities. College and WIB partners leverage a diverse array of grant and WIA funding in order to subsidize employer investment.
- College and WIB partners strive to be flexible and respond to employer needs by thinking outside of the box.

Employers Drive the Design

The Sacramento Region is home to four large health care organizations: Kaiser Permanente, Sutter Health, UC Health Systems, and Dignity Health. These four employers have a long history of working together through the Healthy Community Forum to address shared issues. Early on, the employer partners in the Healthy Community Forum recognized that workforce was a shared issue and that ensuring a pipeline of skilled employees that met the changing demands of the healthcare industry was critical to everyone's bottom line. In particular, the employers identified qualified registered nurses as an occupation where there constant shortages. The region's education and workforce organization's were quick to come to the table as part of this conversation. Health care jobs represent roughly 30% of the employment in the region. Health care is also an industry with a variety of jobs and skill levels which means that a continuum of education and training partners are needed to meet employer demand: from WIBS, to community colleges, to advanced degree medical schools.

From 2002-2005 the region designed and implemented a Nurse Workforce Initiative to increase the number of trained nurses in the Sacramento region. Sutter Health and Sacramento City College worked together through the Los Rios College District's Contract Education Office to implement a nursing extended campus (the curriculum is identical to main campus – an important point to note since the BRN requires it to be so. The Sutter nursing program was in addition to the nursing cohorts that the college was already training, thus raising the net number of trained nurses in the region. Offered at the Sacramento City College Extended Campus at the Sutter Center for Health Professions, the training was (and continues to be) an accelerated 16 month (vs. 24 month) course of study that subsidizes enrollment fees and utilizes Sutter's various hospital settings to provide clinical experiences. To bring the training to a new campus, to make it accessible to a variety of potential students, and to accelerate the timeline, the college had to make a number of changes to the way it delivered curriculum. To facilitate this process, provide administration and handle the fiduciary, legal and credit implications of the an alternative training program, Los Rios Community College District Office's Contract Education Office (CEO) came on board as the administrative entity. This allowed the new program to be more flexible than if it were coming through the traditional community college system.

The Nurse Training Initiative is just one example of a program that the CEO, regional healthcare employers, and SETA have undertaken. This successful initiative paved the way for a number of other focused training initiatives that were sponsored and subsidized by employers, WIA funding, and state and federal grant opportunities. Over the last decade the partners have worked together to improve and create training for Health IT, phlebotomists, lab technicians and CNAs among others. In addition, this model of college-employer partnership to produce more nurses has since been adapted by other employers and education institutions in the region.

The important take-away though, is that these initiatives are employer-led and based on real demand for workers. To be responsive employer needs and funding opportunities, the Contract Education Office is oriented 100% towards employer needs. As a fee for service unit they must operate like a business, ensuring that

they are meeting funder needs in real time. When CEO receives a request for training they then work backwards from that request to see how the colleges, curriculums, and faculty within the district can fulfill the employer's needs. They schedule start times, locations, and class duration accordingly.

Shared Investment

Sutter was and continues to be an active investor in the Sutter nurse training program. At the beginning, Sutter recognized how important CEO's administration of the program was and agreed to help bear the cost of the CEO's staff. Sutter also provides their own working nurses to serve as nurse instructors, preceptors, and managers. To this day Sutter continues to help pay for the program and to provide nursing instructors and clinical experiences even though only 50% of the graduates go on to work directly for Sutter.

SETA and Los Rios have also access to different kinds of funding streams. As a WIB SETA has access to resources that the other partners do not: they can use WIA funds to train certain classes or worker and eligible for a number of special workforce grants. The community college also has dedicated funding streams but it often less flexible which incentivizes the two organizations to work together look for outside grants. Together two organizations prefer to go after funding that is more flexible or discretionary than traditional WIA so there is more flexibility to do what employers need.

College and WIB partners strive to be flexible and respond to employer needs by thinking outside of the box

Using Partner Strengths Effectively

For many of the partnership's efforts, SETA provides case management for students who were going through training. One talent issue that regional employers identified was high attrition rates from health care training, especially for entry-level positions. The population of workers expected to occupy these entry-level jobs often faced a plethora of employer and training barriers. Even when enrolled in the proper community college classes to become employed, students would have to drop out due to personal circumstances and if they did complete training were often unable to hold on to their new jobs. Additional support from SETA improves completion rates, decreases attrition and produces workers who were more prepared for employment.

Using Contract Education to Improve Responsiveness

What makes Los Rios such a responsive partner in workforce training initiatives is that CEO operates as part of the traditional college, but outside some of the normal constraints. CEO's classes are run entirely on fee-for-services funds; none of the classes are paid through with the college's budget. Instead, when regional partners like SETA or Sutter Health come to the Contract Education Office, they pay directly for the classes. This gives CEO a lot of flexibility in how to address their partners' needs: start date, location, participant criteria, credit, and class structure can be adapted to meet the needs of the partner.

For credit bearing classes student still need to meet college requirements and go through an assessment process for subjects like reading and math, but CEO and the funder can exercise more control than if a student were just to enroll in the Community College in classes. Additionally, classes can be held at the location of the funders choice (including on college campuses) and the start date and class schedules are flexible. Instruction is provided by accredited adjunct faculty and credit is awarded at whichever institution the faculty is affiliated with. The CEO works with the community colleges' deans to hire faculty in order to make sure that all efforts are coordinated.

Outcomes

Since 2002 the Nurse Training Initiative with Sutter has produced 533 nurses, and the 15th cohort is just getting underway. While 50% of the nurses trained in this program have gone on to work at Sutter, many of the other students have gone on to work at other area hospitals. In the past few years, the program has also seen some of its first nursing graduates promoted to nurse managers, serving as preceptors and mentors to new generations of the program's students.

What's Next?

The next project in the works for the Sacramento partnership is a Community Health Worker curriculum. Employers have expressed interest in defining and developing this new position which is expected to be a critical part of health care expansion.

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