WORKFORCE DEVELOPMENT PROPOSAL

Region 9: Inland Empire/Desert Region

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Region 9 Inland Empire/Desert Region
Workforce Development Proposal

Executive Summary

The Inland Empire is in great need of an educated and skilled workforce. A mere 12% of the population holds a bachelor's or graduate degree while 13% have never graduated from high school. Only 5% of the population holds an associate degree and 31% have either graduated from high school or have some college. In 2010, the area recorded a record unemployment rate of 14.3% and in 2012 the poverty levels hovered between 16% and 20%. Educators play a key role in economic recovery and prosperity by preparing residents for positions and careers with a livable wage. The community colleges in Region 9 have collaborated to produce this proposal for an integrated workforce development program in the Inland Empire. Our overall goals for this program are to:

- Address critical labor market shortages in the Inland Empire by preparing students for high demand occupations and careers with livable wages.
- Facilitate transitions into identified educational pathways.
- Decrease unemployment by providing streamlined paths to high demand occupations and careers.
- Increase the number of college completers in high demand labor market sectors.
- Share best practices and resources among the region's workforce development partners.

We have identified a number of key strategies to address the region's need including:

- **Partnerships –**
  Working with partner agencies such as the WIBs, Economic Development Agencies, K-12, public and private 4-year colleges, and industry organizations.
- **Curricular Alignment –**
  Developing and enhancing streamlined educational pathways from K-12 (including adult education) to community colleges (including credit, non-credit, and not-for-credit) to baccalaureate programs where appropriate. Special attention will be given to stackable programs with consistent curriculum across the region that is based on industry standards.
- **Outreach –**
  Providing information to parents and students about high demand pathways for the purpose of encouraging enrollment, completion, and employment.

Based on high labor market demands, we will develop and enhance educational pathways in:

- Healthcare, specifically:
  - Nursing – LVN >> RN >> BSN
  - EMT and Paramedic
  - Respiratory Care
  - Radiologic Technology
  - Dental Hygiene

- Logistics, specifically:
  - Logistics Management/Supply Chain Management
  - Automated Systems/Supply Chain Technology

- Advanced Manufacturing

- Advanced Transportation

High demand for skill sets that cut across other sectors requires us to develop and enhance curriculum in:

- ICT/Digital Media
- Small Business/Entrepreneurship

Finally, the emerging fields of Renewable Energy and Water Technology and the potential growth areas of Public Safety and Agriculture will be explored and appropriately addressed.

The community colleges in Region 9 are committed to working together to serve the Inland Empire with workforce development programs that address real needs and contribute to economic prosperity.

Overall Goals

- Address critical labor market shortages in the Inland Empire by preparing students for high demand occupations and careers with livable wages.
- Facilitate transitions into identified educational pathways.
- Decrease unemployment by providing streamlined paths to high demand occupations and careers.
- Increase the number of college completers in high demand labor market sectors.
- Share best practices and resources among the region's workforce development partners.

Overview of the Inland Empire

The Inland Empire, Riverside and San Bernardino counties, counted a combined population of 4,348,083 in 2013.

In the two-county Inland Empire region the unemployment rate has seen a substantial decrease over the last four years. In 2010, the area recorded a 14.3% unemployment rate which fell to 10.2% in 2013. As of August 2014, the region reported an 8.7% unemployment rate.

The level of education attainment in the Inland Empire by the population who is 25 years of age or older is as follows:

Education Attainment	9th Grade	Some High School	High School Graduate	Some College	Associate Degree	Bachelor's Degree	Graduate Degree
# of Residents	264,606	301,077	693,400	673,267	210,569	344,824	185,736
% of Population	6%	7%	16%	15%	5%	8%	4%

In 2013 the median household income of Inland Empire residents was $56,238. The percentage of the population in Riverside County that lived in poverty in 2012 was 16.9%, in San Bernardino County 19.4% of the population lived in poverty in the same year.

The racial make-up of the Inland Empire's population is predominantly Hispanic, with 44.7% of the region's population falling into this category. The next largest representation is 34% White, followed by 7.1% Black, 6.4% Asian, and 7.8% of the population being other races.

Pathways of Focus – Overview

Healthcare

- The healthcare industry is resilient during economic downturns
- Number of jobs: 121,000
- Number of firms: 7,933
- Jobs with the largest growth: Nurses, CNAs, Medical Assistants, Personal and Home Health Aides, Medical Secretaries, and Dental Assistants
- Jobs with the fastest growth: EMTs, Paramedics, Personal and Home Health Aides, Dental Hygienists, Dental Assistants, RNs, and Medial Assistants
- The community colleges in Region 9 will focus our attention on developing pathways in:
    - Nursing – LVN >> RN >> BSN
    - EMT and Paramedic
    - Respiratory Care
    - Radiologic Technology
    - Dental Hygiene

Logistics

- Region 9 Community Colleges will focus on two of three areas:
    - Logistics Management or Supply Chain Management (currently taught at Barstow and Norco colleges)
    - Automated Systems or Supply Chain Technology (Currently taught at Norco College)
    - Number of Jobs: 87,000
    - Jobs with the largest growth: Truck Drivers, Material Movers, Industrial Truck and Tractor Operators, Stock Clerks, and Managers
    - Jobs with the fastest growth: Stock Clerks, Packers, Industrial Truck and Tractor Operators, Managers, Customer Service Reps, and Ticket Agents
    - The Logistics Sector intersects with other sectors as all industry areas have a need to store and transport products.

Advanced Manufacturing

- Number of firms: 5,180

Advanced Transportation & Renewable Energy

- Number of firms: 5,033
- The outlook for the need for Industrial Maintenance Mechanics , Maintenance and Repair Workers, General, and First line Supervisors of Mechanics, installers, and Repairs is high
- The number of jobs in California in 2012 was 116,600
- The projected growth is 10% of the next 10 years
- The entry-level skills required in the positions listed above are also very similar to those required for logistics, supply chain technology, utility scale solar, and energy. Following the Doing What Matters for Jobs and the Economy model, this is the lattice portion upon which stackable certificates and degrees in pathways required in other sectors can be built.

Information & Communications Technology/Digital Media

- Number of jobs: 46,016
- The ICT/Digital Media Sector intersects with other sectors as all industry areas have a need to store, share, and analyze data

Small Business

- Number of small businesses: 87,413
- The region will focus on integrating curriculum and skills across sectors
- From a survey conducted by the Center of Excellence[1], small businesses in the region are comprised of:

Inland Empire	High and Low Desert (sub-region)
14% manufacturing	21% retail trade
14% retail trade	14% health care
11% construction	9% construction,
9% professional services	5% manufacturing
7% health care	5% restaurants
5% Hospitality	3% Finance
5% Information technology	3% Accommodations (Hotels/Motels)
3 % real estate	
3% finance and investments	
29% "other"	

- Only 12% of small businesses surveyed in the Inland Empire, and 5% in the high and low desert sub-region, reported that they export their goods or services out of the country. Some exported products included:

Inland Empire	High and Low Desert (sub-region)
Aircraft parts, out-of-print books, fabric & clothing, computer software, scrap and sheet metal and auto & motorcycle parts	Aviation parts, engine parts, vitamins, and pain reliever products.

- The employment size of small businesses in the region:

	Inland Empire	High and Low Desert
0 employees (owner operated)	15%	15%
1-10 employees	46%	60%
11-25 employees	13%	15%
26-50 employees	9%	5%
Over 50 employees	17%	3%

Public Safety

- Number of jobs for firefighters: 3,548 with an annual demand of 167
- Number of jobs for first-line supervisors of firefighting and prevention workers: 720 with an annual demand of 46 (American Community Survey from the US Census Bureau as reported by Chmura Economics & Analytics to the San Bernardino County WIB, http://cms.sbcounty.gov/wib/WhatsNew.aspx)
- The region will explore developing stronger pathways for fire fighters and police officers

Agriculture/Water

- The region will explore pathways and opportunities in this sector

[1] Small Business Survey in the Inland Empire and Low and High Desert Regions. Centers of Excellence for Labor Market Research, Desert/Inland Empire Region. November 2014.

Core Strategies

Pathways & Curricular Alignment

- **Develop K-12 Partnerships**

  - Establish **bridge programs** with K-12 including academies and adult education programs
    - Incorporate Salary Surfer into orientation

  - Hold **"Maker Faires"** throughout the region to highlight CTE and STEM fields – A Maker Faire is an all-ages gathering of tech enthusiasts, crafters, educators, tinkerers, hobbyists, engineers, science clubs, authors, artists, students, and commercial exhibitors. All of these "makers" come to a Maker Faire to show what they have made and to share what they have learned. Maker Faires feature innovation and experimentation across the spectrum of science, engineering, art, performance and craft and is a gathering of fascinating, curious people who enjoy learning and who love sharing what they can do. Additional information can be found at: http://makerfaire.com/.

- Continue to develop program and **curriculum pathways and inventories.**
  As a result of the region's efforts under Doing What Matters, inventories of programs and curricula related to its priority and emerging sectors have been created. These sector-related inventories can be viewed as a catalog of instructional resources – resources that can be brought to bear in responding to new knowledge and skill requirements identified by our industry and workforce investment partners. Additional work is needed to maintain these databases and update them periodically as programs are enhanced or altered to meet sector needs. Additional work to establish enabling policies for the sharing of these instructional resources is also needed. Creating the ability of our member colleges to assemble rapid and effective responses to industry-identified needs utilizing existing program and curriculum resources will be a priority task under this project. Some of the strategies this project will employ include:

  - Using model and/or "approved" curricula and develop **Stackable Certificates** that are aligned among the colleges in the region.

  - Using **faculty "collaboratives"** to develop curriculum and ensure alignment
    - Start with articulating introductory courses.

  - **Integrating and including fee-based/not-for-credit/adult education, contract education, non-credit, and credit options**.
    - Contract Education: Most all of the IE/Desert community colleges have some sort of contract education or customized training program designed to work directly with business. However, more and more colleges are using contract education in different ways to leverage business community expertise. In addition, contract education can be

used as a platform to pilot business training programs and even deliver full credit classes to high school students.

a. Early College Concept, Victor Valley College
   In April 2014, the Victor Valley College (VVC) Board of Trustees and Hesperia Unified School District (HUSD) approved an agreement for VVC to deliver seven for-credit HASS classes and one science class to Hesperia High School (HHS) upperclassmen. HUSD required a closed class of HHS students; therefore, contract education was employed to accommodate the District's needs. The Early College Academy commenced on August 18th and students will graduate high school with between 15 and 30 college credits earned.
b. Contract Education, Barstow College & College of the Desert with Bright Source
   The deputy sector navigator (DSN) for Advanced Transportation and Renewables is working with the colleges to deliver on-site and ongoing customized training to employees of Bright Source's Invapah Solar Generation facility near Stateline.

- **Aligning closely with employer needs**
  - Customized Training Sponsorship - Chaffey College & California Steel.
    Chaffey Community College has developed Industrial Maintenance curriculum with the DSN of Manufacturing to directly benefit the California Steel Corporation. California Steel has also brought in Chaffey program interns to offer real-word work experience. This type of direct employer developed curriculum is in response the business community's need for highly trained employees in a rapidly changing manufacturing environment.

- **Contextualizing** wherever possible
  - Basic skills
  - Customer service/soft skills

- Incorporating dedicated **community college counselors** who understand the pathway

- Identifying **areas of synergy** between sectors

- **Incorporating Small Business, Logistics, ICT, and STEM** as appropriate for each Sector
  - STEM - Many of our sector initiatives are focusing on the infusion of essential, related science, technology, engineering and math into middle school or high school curricula as part of their career pathway development work. Their objectives generally revolve around context and content, providing teachers the professional development and curriculum resources they need to teach their students sector-based STEM subject matter and to inspire students to learn more about the related fields and occupations. Motivating students to learn more STEM subject matter through sector related resources and activities may be the best way we can put younger students onto a successful career pathway. This project will work to develop one complete, well-defined pathway for each sector infused with contextual STEM subject matter and structured activities.

- Small Business - Online entrepreneurial tools including *HP LIFE* and Kauffman's hybrid delivery *Ice House* workshop can be seamlessly integrated into for-credit classes such as automotive repair. Infusing curriculum will expose CTE students to concepts and skills that will help them succeed in launching and growing a business. For example, Victor Valley College's Automotive Department will experiment with infusing entrepreneurial curriculum into a for-credit automotive class. The first students to take this new model class will be spring of 2015.

Outreach and Information

- Develop **meaningful materials** for use with **parents** and **potential students**.
  Whether a younger student is transitioning from high school to community college or an older student is transitioning between careers, knowing their educational options and where they could lead is what matters most to our customers. However, clearly defined educational choices and guidance to support their decision-making is often lacking in the system. The outreach and information priority for our region under this project will be to develop an effective informational piece for each sector describing occupation choices, what the educational requirements are for each, and several well-defined pathways presented a "career ladder" approach. The career ladder map describes 1) how an education and training process builds from one level to the next, 2) where cross-over points exist within and between programs for students to gain specialization, and 3) where career-experienced students can enter and exit programs based on their level of skill or expertise needed for career advancement. Each college participating in this grant will work with the region's DSNs to help define the career ladders and how their sector-related programs fit.

Partnerships

- Work with:
  - WIBs
  - Inland Empire Economic Partnership (IEEP)
  - Coachella Valley Economic Partnership (CVEP)
  - Health Convergence Group
  - Inland Coalition
  - AB 86 Consortia

- Enhance/Expand Business/Industry Partnerships
  - Regional or sub-regional advisory groups
  - Hold a two-day meeting with industry attending the first day; second day is work day for community colleges

- Develop 4-Year Partnerships

- Develop K-12 Partnerships

Innovations/Pilot

The following strategies are innovations that would be conducted as part of a pilot program in collaboration with the Chancellor's Office.

- Fast Tracking of Curriculum (Similar to TMCs)
- Sharing Curriculum, resources, and students
- Consider who will receive "credit" for completions
- Consider splitting fees and FTEs
- Shared lab facilities and equipment - Updating programs to remain current and creating structured activities for students at all levels suggests a need for modern, well-equipped facilities. To achieve the type of facilities that give students exposure to the most current technologies, a model for sharing such facilities and equipment is needed. These facilities could include state-of-the-art medical simulation labs and electro-mechanical design and fabrication labs. It would be prohibitively expensive to create well-equipped facilities of this type in support of our sector career pathways if we strive to build them on each campus.
- Experimental/industry courses (Maricopa Example, e.g. IND170)
- Use of payroll taxes (Michigan Model)
- Joint Service Transcripts (Vets)
- Digital Badging: the speed of new technology development is giving rise to individual companies and industry sectors to seek out new ways to verify employee skill levels. In fact, a recent study by the University of Michigan presented at the 2013 CCCAOE conference found that industry is bypassing the higher education system and issuing their own, more relevant credentials. These proof-of-skill credentials are taking the form of digital badging. These badges can be featured online and in print and convey a specific skill level to employers.
    - Example of Digital Badging: Corona-Norco Unified School District
      The CNUSD Passport to Success is using a digital badging program as a motivational tool for high school students to complete their A-G graduation requirements.
- Conjoint and online learning technology - Victor Valley College, San Bernardino Valley College; Crafton Hills Community College; Barstow Community College; Regional ROPs, and multiple regional high school districts:
    - Under the CCPT grant, real-time lectures will be delivered simultaneously across the region making class materials accessible to a wider array of students.
    - Online Education Initiative: Victor Valley College will serve as the Chancellor's Office "Tutoring Staging Group" which entails reviewing and piloting a method of delivering online tutoring services.

Leveraging Funding Streams

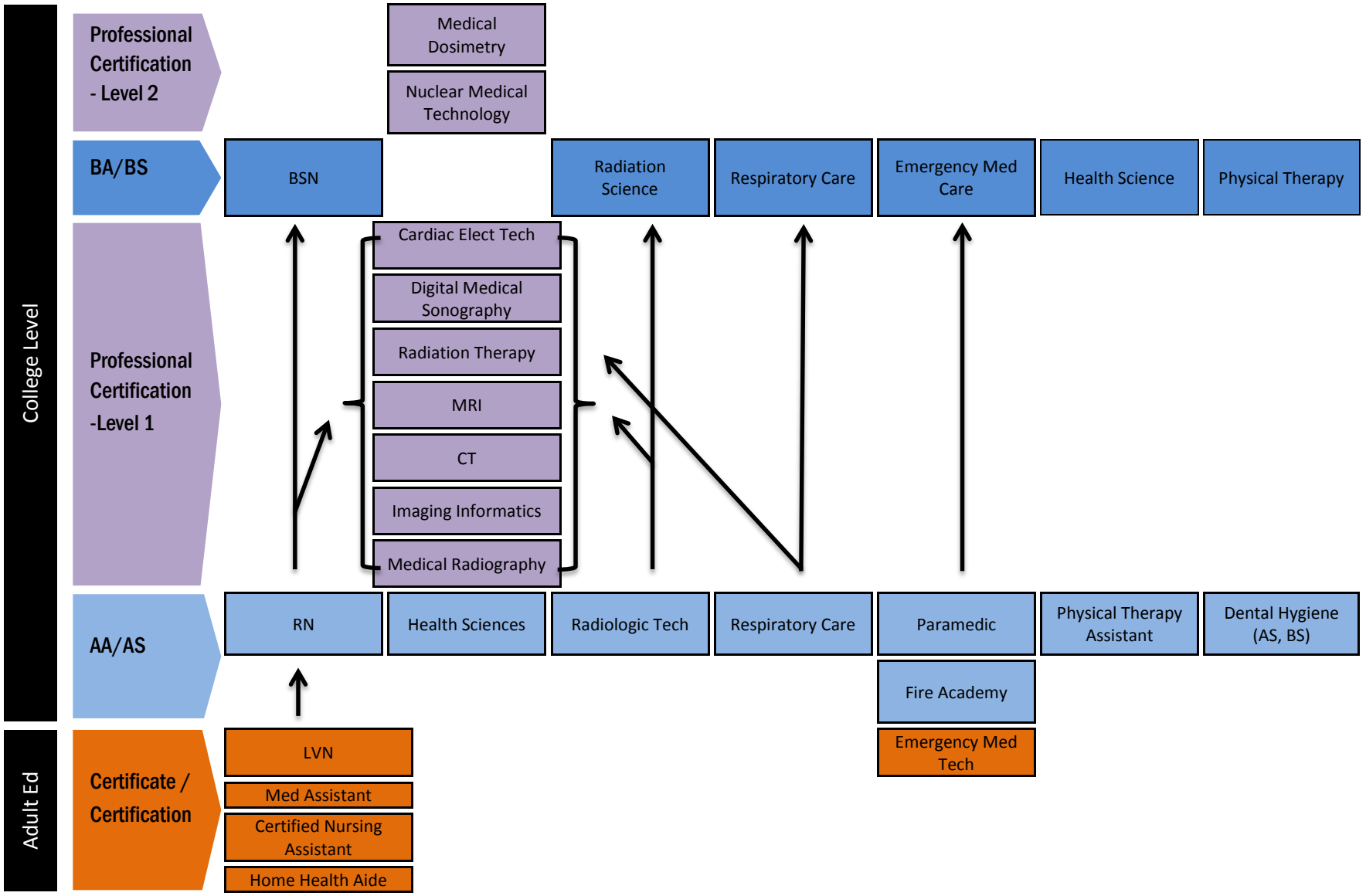
- WIB Funds
- “Employment Zones”
- Request coverage of the cost of certificates (student doesn’t pay)
- CTE Enhancement Funds
- CTE Transition Funds
- Career Pathways Trust
- WIOA
- SB1070
- Perkins
- Other Federal grants/funding streams
- AB86
- Grants
- Foundations

Proposed Action Plan: Healthcare

<table>
<tr><td colspan="3">GOAL: Develop five pathways to meet labor market needs (PATHWAY: Short term training with certification lending to long-term education and training for career growth and economic efficiency)</td></tr>
<tr><td rowspan="2">Partnerships</td><td><u>Action Plan</u>:
➢ Develop and expand partnerships
• 4-Year partners for transfer and bridge programs
• Regional alignment of course for easier transition from high school to community college
• K-12 partners for outreach/career exploration, curricular alignment, dual enrollment, and bridge programs
• Recommend that industry supply mentors, internships, and real-world validity to coursework (leveraging)
• Involve IEEP
• Involve Healthcare Convergence Group</td><td>Responsible Parties:
1. CSUSB
West Coast University
APU
Cal Baptist
2. K-12 Health Academies & CPAs
ROPs
Charter schools with health ed. programs
3. Alliance for Education (SBCSS)
Inland Coalition
CVEP
REACH Centers</td></tr>
<tr><td colspan="2">Timeframe: Ongoing</td></tr>
<tr><td rowspan="2">Pathways & Curricular Alignment</td><td><u>Actions:</u>
➢ Develop and enhance educational pathways:
• LVN >> RN >> BSN (Nursing)
• EMT and Paramedic
• Respiratory Care
• Radiologic Technology
• Dental Hygiene
➢ Explore
• HIT, secretaries, administrators, health service techs (Allied Health Management), blended skills
• PA >> MS (Physician Assistant)
➢ Review curriculum inventory
➢ Review labor market data
➢ Develop model pathway that includes true pre-requisites
➢ Hold regional working meetings
➢ Work with CCCCO on fast-tracking degrees and certificates
➢ Develop an implementation plan for embedded CTE counselors
➢ Update labor market information</td><td>Responsible Parties:
1. Subcommittee:
CC Curriculum Committees
Dean of Curriculum/colleges
Center of Excellence
2. Dean of Curriculum/colleges
Regional Consortium
3. Deans & Directors
School of Nursing at CCs</td></tr>
<tr><td colspan="2">Timeframe:</td></tr>
</table>

Outreach	**Actions:** ➢ Collaborate with DSN and Health Academy coordinators to facilitate informational forums for implementation of HASPI (Health & Science Pipeline Initiative) in the Inland Empire. ➢ Collaborate with K-12 to bolster relevance of academic curricula through blending with industry focus (Allied Health Programs) ➢ Provide guidance, advising, and youth development workshops to highlight practices for school-based counseling, guidance, and socio-emotional support to help students engage and grow in school. (mental health) ➢ Offer college and career readiness workshops to highlight work specifically focused on preparing students for college and careers. Examples include college guidance, college exposure, internships, and development of professional skills. ➢ Provide leadership, coaching, and staff development targeted to principals, program directors, coaches and other people responsible for career pathways at the secondary level.	*Responsible Parties:*
	Timeframe:	
Innovations/Pilot	**Actions:** ➢ Identify opportunities for shared costs • Regional simulation lab access @ RCC. Leverage funding to support costs of facility and operations to allow for access to all secondary/post-secondary educators in demographic area • Shared facilities and equipment • MSJC Simulation Lab used in moderation • Expanding Chemistry and Anatomy/Physiology offerings	*Responsible Parties:* 1. *RCC* 2. *All participating colleges*
	Timeframe: Ongoing discussion.	
Leveraging Funding Streams	**Actions:** ➢ Identify Funding Streams • WIB Funds • "Employment Zones" • CTE Enhancement Funds • SB1070 • Perkins • AB86 • Grants	*Responsible Parties:* *1. EDA* *2. CDE* *3. CCCAOE* *4. OSHPD.ca.gov* *5. BRN* *6. Clinton Foundation* *7. CAActioncoalition.org* 8. *WIOA*
	Timeframe:	

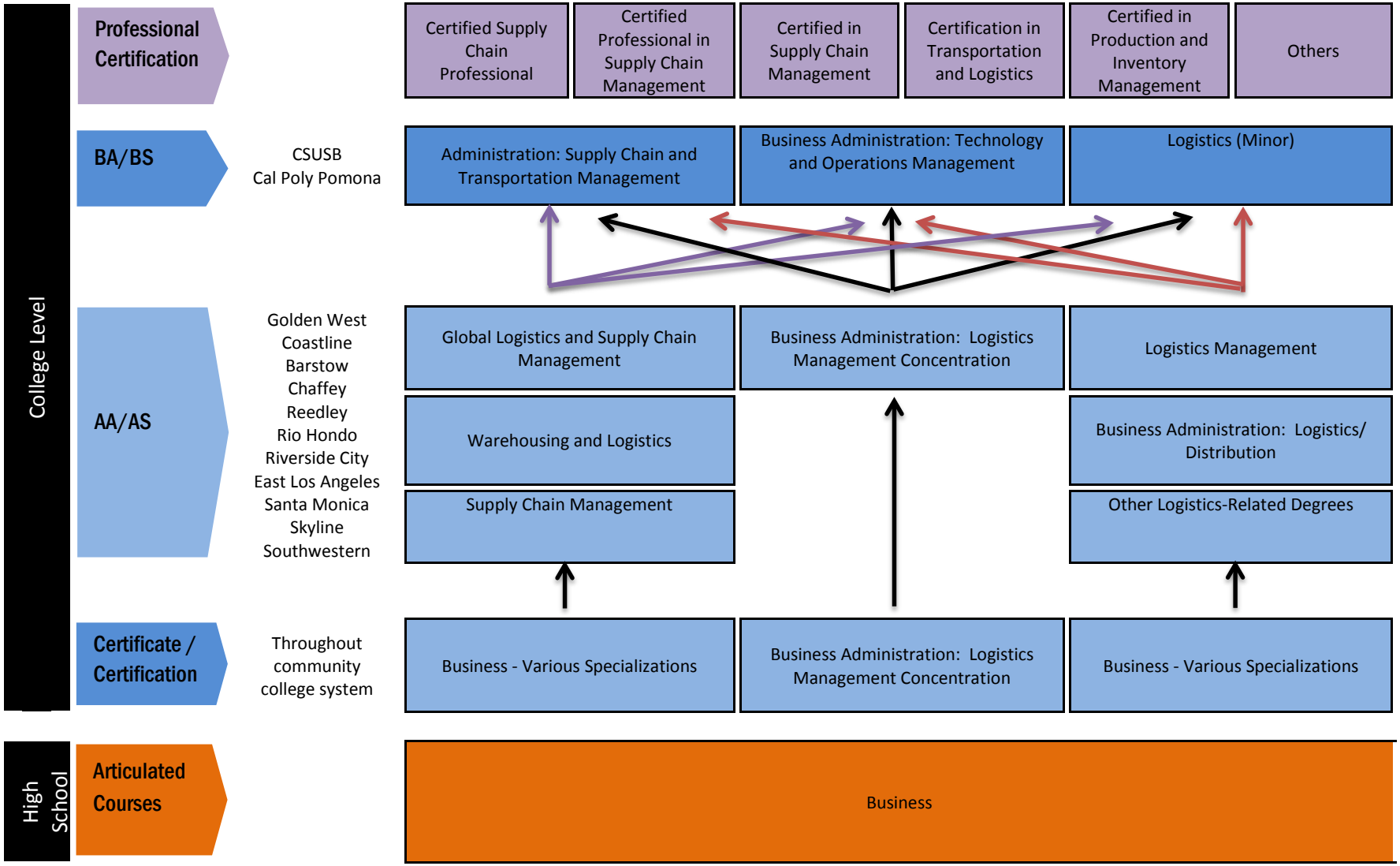
Health Care Pathways



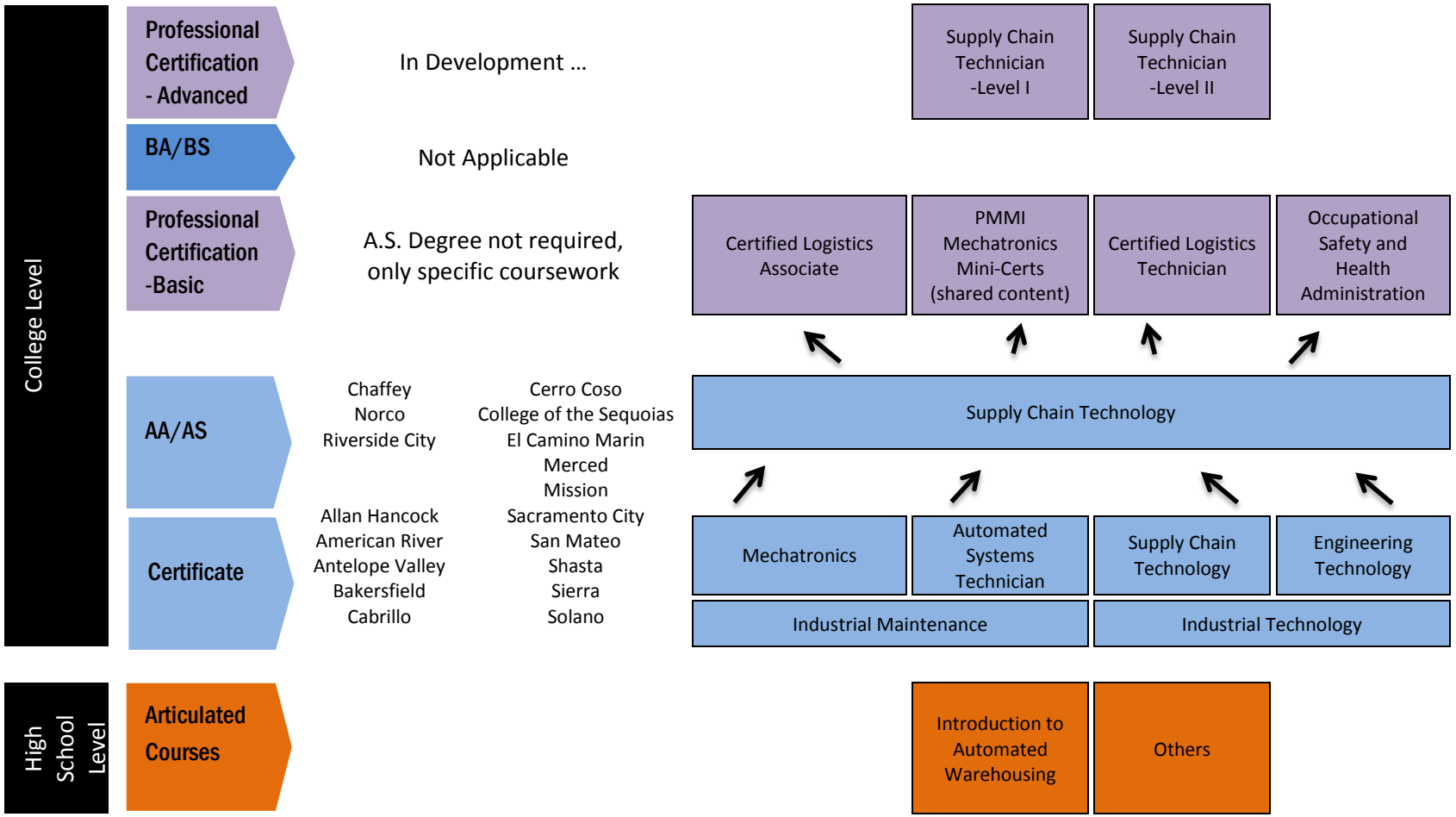
Proposed Action Plan: Logistics

<table>
<tr><th colspan="3">(Two areas of focus: Logistics Management or Supply Chain Management
and Automated Systems or Supply Chain Technology)</th></tr>
<tr><td colspan="3">GOAL: Establish a uniform model program for Supply Chain Technology to be disseminated to all interested colleges in our region.</td></tr>
<tr><td rowspan="2">Partnerships</td><td><u>Action Plan</u>:
• Develop industry partners wherever possible for each representative site.</td><td>Responsible Parties:</td></tr>
<tr><td colspan="2">Timeframe:
Success Indicators:</td></tr>
<tr><td rowspan="2">Pathways & Curricular Alignment</td><td><u>Actions:</u>
➢ Explore the possibility of the establishment of a uniform curriculum adoption process to enable course-sharing among colleges in our region
➢ Utilize the Supply Chain Technology program as a model to pilot the process at interested colleges in our region
➢ Ensure adequate qualified faculty and students for the supply chain technology program
➢ Utilize existing professional development content to train faculty to teach the content</td><td>Responsible Parties:</td></tr>
<tr><td colspan="2">Timeframe:</td></tr>
<tr><td rowspan="2">Outreach</td><td><u>Actions:</u></td><td>Responsible Parties:</td></tr>
<tr><td colspan="2">Timeframe:</td></tr>
<tr><td rowspan="2">Innovations/ Pilot</td><td><u>Actions:</u></td><td>Responsible Parties:</td></tr>
<tr><td colspan="2">Timeframe: Ongoing discussion.</td></tr>
<tr><td rowspan="2">Leveraging Funding Streams</td><td><u>Actions:</u></td><td>Responsible Parties:</td></tr>
<tr><td colspan="2">Timeframe:</td></tr>
</table>

Logistics - Logistics/Supply Chain Management Pathways



Logistics – Supply Chain Technology Pathways



Proposed Action Plan: Information & Communications Technology (ICT) and Digital Media

Information & Communications Technology (ICT) and Digital Media is used across all disciplines and is necessary for success in today's economies. ICT skills are required to become a good digital citizen[2]. Community colleges have a responsibility to develop students into individuals who can thrive in the digital information and communication era. Individuals who are digitally literate are more likely to be economically secure. Digital proficiency skills are important in higher education because both technical and graduate-level jobs, which provide above-average wages, are almost entirely performed using computers and portable devices.

Labor market data shows that ICT and Digital Media positions are growing at a 12% to 25% rate in the Inland Empire. This may be understated because many jobs in ICT and Digital Media exist in the Inland Empire but do not show up in labor market data because they are captured under other industry sectors, are small businesses (under 50 employees), are positions with companies in neighboring regions using telecommuters (or commuters) or are independent contractors.

Cross-discipline basic digital literacy skills include keyboarding, Microsoft Office Suite, business communications and relations, customer service, and information systems.

Specific Information Communications Technology (ICT) skills include the ability to understand and maintain operating systems, Ethernet, OSI Basics, datalink, network, transport, VoIP, connectivity, convergent technologies, MAN, LAN, WAN, Wi-Fi, infrastructure, hubs, switches, routers, ISDN, security and many, many more.

Industry recognized certifications include A+, Network+, Linux+, Security+, CCENT, CCNA, CCNA Voice, CCNA Security, CCNA Wireless, CWNA, VMware, client OS (Windows/iOS/Linux/Unix), MCITP, EMC and others.

For community colleges to provide instruction in ICT and prepare students for certification and employment, students and faculty need access to current equipment and technology that is often very expensive. Opportunities to leverage funding throughout the region exist through operation of a new regional computing facility or utilizing subscription services (NetLabs, CompTIA, etc.) Much of the program material may be taught online either synchronously or asynchronously, and will allow access to program materials for outlying colleges like Palo Verde, Copper Mountain, and Barstow.

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[2] Digital citizenship has nine components (Ribble, 2014):

- Digital access: full electronic participation in society.
- Digital commerce: electronic buying and selling of goods.
- Digital communication: electronic exchange of information.
- Digital literacy: process of teaching and learning about technology and the use of technology.
- Digital etiquette: electronic standards of conduct or procedure.
- Digital law: electronic responsibility for actions and deeds.
- Digital rights and responsibilities: those freedoms extended to everyone in a digital world.
- Digital health and wellness: physical and psychological well-being in a digital technology world.
- Digital security (self-protection): electronic precautions to guarantee safety.

<table>
<tr><td colspan="3">GOAL: Develop three shared ACADEMIC pathways to meet labor market needs (PATHWAY: Short term training with certification lending to long-term education and training for career growth and economic efficiency)</td></tr>
<tr><td rowspan="2">Partnerships</td><td><u>Action Plan</u>:
Develop and expand partnerships
➢ 4-Year partners for transfer
➢ K-12 partners for curriculum alignment
➢ Industry partners for internships and jobs</td><td>Responsible Parties:</td></tr>
<tr><td colspan="2">Timeframe:</td></tr>
<tr><td rowspan="2">Pathways & Curricular Alignment</td><td><u>Actions:</u>
Develop common courses/curriculum.
➢ Review curriculum inventory
➢ Investigate San Diego City College Business Worker
➢ Create Introduction to Digital Literacy Interdisciplinary Curriculum
Must Include:
• Communications
• Attendance/Attire
• Online Employment Applications
• Use of Electronic Forms
• Digital Responsibility
• Soft Skills
• Networking/Human Interaction
➢ Review advisory meeting recommendations
➢ Develop model curriculum
• Start with a single introductory course across all colleges in the region
• Incorporate skills into other areas/contextualize content for specific areas.
• Hold regional working meetings
o 1st meeting: Deans/Department Chairs
o 2nd meeting: CC Faculty
o 3rd meeting: HS Faculty and SMEs</td><td>Responsible Parties:</td></tr>
<tr><td colspan="2">Timeframe:</td></tr>
</table>

<table>
<tr><td rowspan="2">Outreach</td><td><u>Actions:</u>
Develop and implement outreach plan
➢ To Industry:
• What are your candidates lacking?
• What are the BASICS of the skills they are lacking?
• What do they need to know how to do (i.e., internet search, calendar, document open/save using flash drives)
➢ To high schools:
• CTE doesn't look like it did for your parents
• Create outreach materials
• Hold regional/sub regional career fairs</td><td>Responsible Parties:</td></tr>
<tr><td colspan="2">Timeframe:</td></tr>
<tr><td rowspan="2">Innovations/ Pilot</td><td><u>Actions:</u>
➢ Guest Lecturers using Industry Partners via Video Conferencing (WebEx/CCC Confer)
• How ICT is used in their industry.
• Student(s) (either individually or in teams) to set up Webinar/WebEx/CCC Confer Video Conference.</td><td>Responsible Parties:</td></tr>
<tr><td colspan="2">Timeframe:</td></tr>
<tr><td rowspan="2">Leveraging Funding Streams</td><td><u>Actions:</u>
➢ Identify costs:
• Cost of technology (computers)
• PDF textbook
• Software Costs
• Faculty
➢ Identify opportunities for shared costs
• Shared facilities and equipment
➢ Identify Funding Streams</td><td>Responsible Parties:</td></tr>
<tr><td colspan="2">Timeframe:</td></tr>
</table>

Proposed Action Plan: Small Business

Overview of Small Business in the Inland Empire

Small Business is generally defined by the Small Business Administration (SBA) as any firm that features less than 500 employees and/or less than $50 million in annual gross receipts. Of course, these standards vary based upon a business's North American Industry Classification System code or NAICS code. However, the composition of businesses located throughout the Inland Empire/Desert geographical region, which encompasses San Bernardino and Riverside counties, primarily leans toward the lower end of the employee and gross receipts scale.

Statistics extracted from the State of California's EDD Labor Market Information tables for Q3 2012 show that 89% of small business employ 19 people or less with the majority 66% employing between one and four people. There are a total of 87,413 small business in the Inland Empire/Desert Region. The composition is shown in Table 1.

Sector	Percentage
Ag	0.01
Mines	0.00
Util	0.00
Const	0.07
Mfg	0.04
Wholesale	0.04
Retail	9.90
T&W	0.02
Info	0.01
Finance	0.03
R. Estate	0.03
Services	64.80

Table 1: Small Business Composition

Altogether, small business in San Bernardino and Riverside counties generated $7.33 billion in combined payroll for Q3 2012.

Occupations with the fastest job growth by percentage could all possibly fall within the small business category. The table below illustrates the fastest growing occupations in the San Bernardino/Riverside MSA:

Occupation	Estimated Year - Projected Year	Employment		Employment Change	
		Estimated	Projected	Number	Percent
Biomedical Engineers	2010 - 2020	130	220	90	69.2
Home Health Aides	2010 - 2020	5,000	7,690	2,690	53.8
Veterinary Technologists and Technicians	2010 - 2020	670	1,020	350	52.2
Marriage and Family Therapists	2010 - 2020	240	350	110	45.8
Market Research Analysts and Specialists	2010 - 2020	1,850	2,650	800	43.2

Table 2: Fastest Growing Occupations in the San Bernardino/Riverside MSA

The Research

Both formal and anecdotal research have uncovered several challenges for small businesses in the Inland Empire region. Approximately 65% of all businesses make it through their first year. The survival rate then declines until just 33% make it a full decade. The vast majority of small businesses nationwide are a non-employer business (79%), sole proprietors (72%), home-based business (52%) or a combination thereof.

Furthermore, both nationwide and regional research has revealed that many students in CTE strands of instruction tend toward low unit certificates or leave altogether if given the choice between work and

continuing their education. The data also indicates that these education **"leavers"** often experience a 20% wage gain upon starting employment. Students that have completed a certificate, degree, or leave college altogether very often pursue entrepreneurial activities such as launching their own businesses. This phenomenon can be seen particularly in the service industries such as welding, fabrication, and automotive repair.

These entrepreneurs often possess outstanding technical skills however lack the basic business skills needed to launch and successfully grow a sustainable business. This gives rise to a skilled labor force ill-equipped to succeed in business. Therefore, the business becomes a grim statistic.

<table>
<tr><th colspan="3">GOAL: Incorporate Small Business Management Skills into selected pathways.</th></tr>
<tr><td rowspan="2">Partnerships</td><td><u>Action Plan</u>:
Develop and expand partnerships
➢ 4-Year partners for transfer
➢ Industry and government partners for incubation opportunities
➢ Involve IEEP</td><td>Responsible Parties:</td></tr>
<tr><td colspan="2">Timeframe:</td></tr>
<tr><td rowspan="2">Pathways & Curricular Alignment</td><td><u>Actions:</u>
Develop common courses/curriculum.
➢ Review curriculum inventory
➢ Develop model curriculum
• Hold regional working meetings</td><td>Responsible Parties:</td></tr>
<tr><td colspan="2">Timeframe:</td></tr>
<tr><td rowspan="2">Outreach</td><td><u>Actions:</u>
Develop and implement outreach plan
➢ Create outreach materials
➢ Hold regional/sub-regional career fairs</td><td>Responsible Parties:</td></tr>
<tr><td colspan="2">Timeframe:</td></tr>
<tr><td rowspan="2">Innovations/ Pilot</td><td><u>Actions:</u>
➢</td><td>Responsible Parties:</td></tr>
<tr><td colspan="2">Timeframe:</td></tr>
<tr><td rowspan="2">Leveraging Funding Streams</td><td><u>Actions:</u>
➢</td><td>Responsible Parties:</td></tr>
<tr><td colspan="2">Timeframe:</td></tr>
</table>

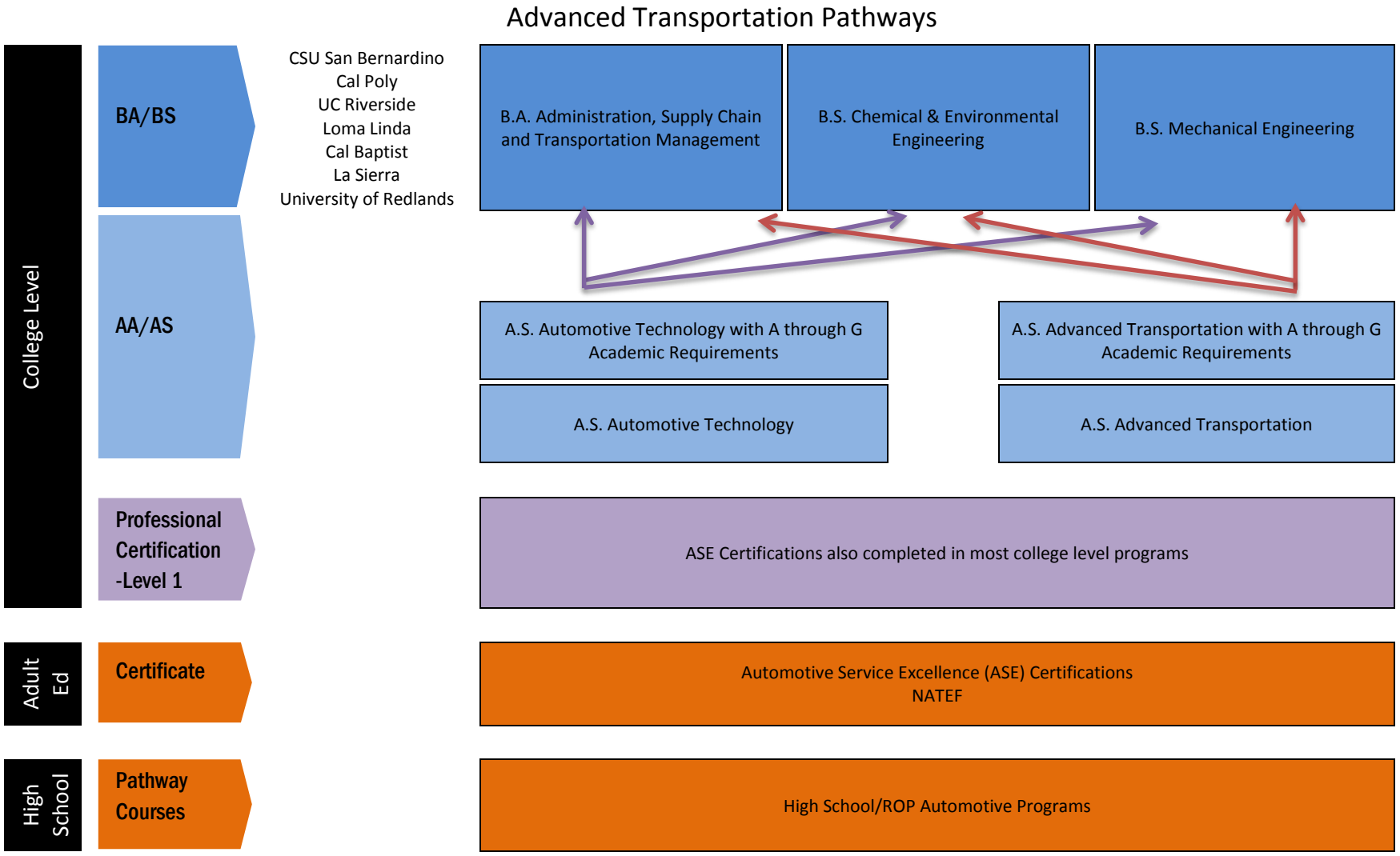
Proposed Action Plan: Advanced Manufacturing

<table>
<tr><td colspan="3">GOAL: Increase the knowledge and awareness of career pathways and development of a skilled workforce in Advanced Manufacturing.</td></tr>
<tr><td rowspan="2">Partnerships</td><td><u>Action Plan</u>:
➢ Work with the WIBs
➢ Work with the Inland Empire Economic Partnership
➢ Develop K-12 Partnerships
• Bridge Programs
• Academies
• “Maker Fairs”
➢ Develop 4-Year Partnerships
➢ Enhance/Expand Business/Industry Partnerships</td><td>Responsible Parties:</td></tr>
<tr><td colspan="2">Timeframe:</td></tr>
<tr><td rowspan="2">Pathways & Curricular Alignment</td><td><u>Action Plan</u>:
Expand Awareness and adoption of common courses/curriculum
➢ Update curriculum inventory
http://desertcolleges.org/dsn/advanced_manufacturing.html
➢ Hold regional working meetings
➢ Involvement in the Manufacturers Council of the Inland Empire (MCIE)
➢ Continue to meet with industry.
➢ Actively involve industry in the development and submittal of funding proposals, such as TAACCCT, NSF-ATE, IMCP
➢ Promote benefits of nationally recognized industry certified training programs such as NCCER, NIMS, AWS, and MSSC.</td><td>Responsible Parties:
DSN
CIOs
CTE Deans
Faculty</td></tr>
<tr><td colspan="2">Timeframe:</td></tr>
<tr><td>Outreach</td><td><u>Actions:</u>
Develop and implement outreach plan
➢ Create outreach materials
➢ Hold regional/sub-regional career fairs
➢ Have industry attend.
➢ Provide on-site tours, hands-on skill building programs such as summer camps and Saturday career exploratory classes.
➢ Recruit industry partners to go to high school campuses to discuss and explain today’s advanced manufacturing.
➢ Provide hands-on skill training equipment such as 4-portable AC/DC electrical training systems with laptops including simulation software to provide on-site hands-on demonstrations and training.</td><td>Responsible Parties:
DSN
CTE Deans
Faculty</td></tr>
</table>

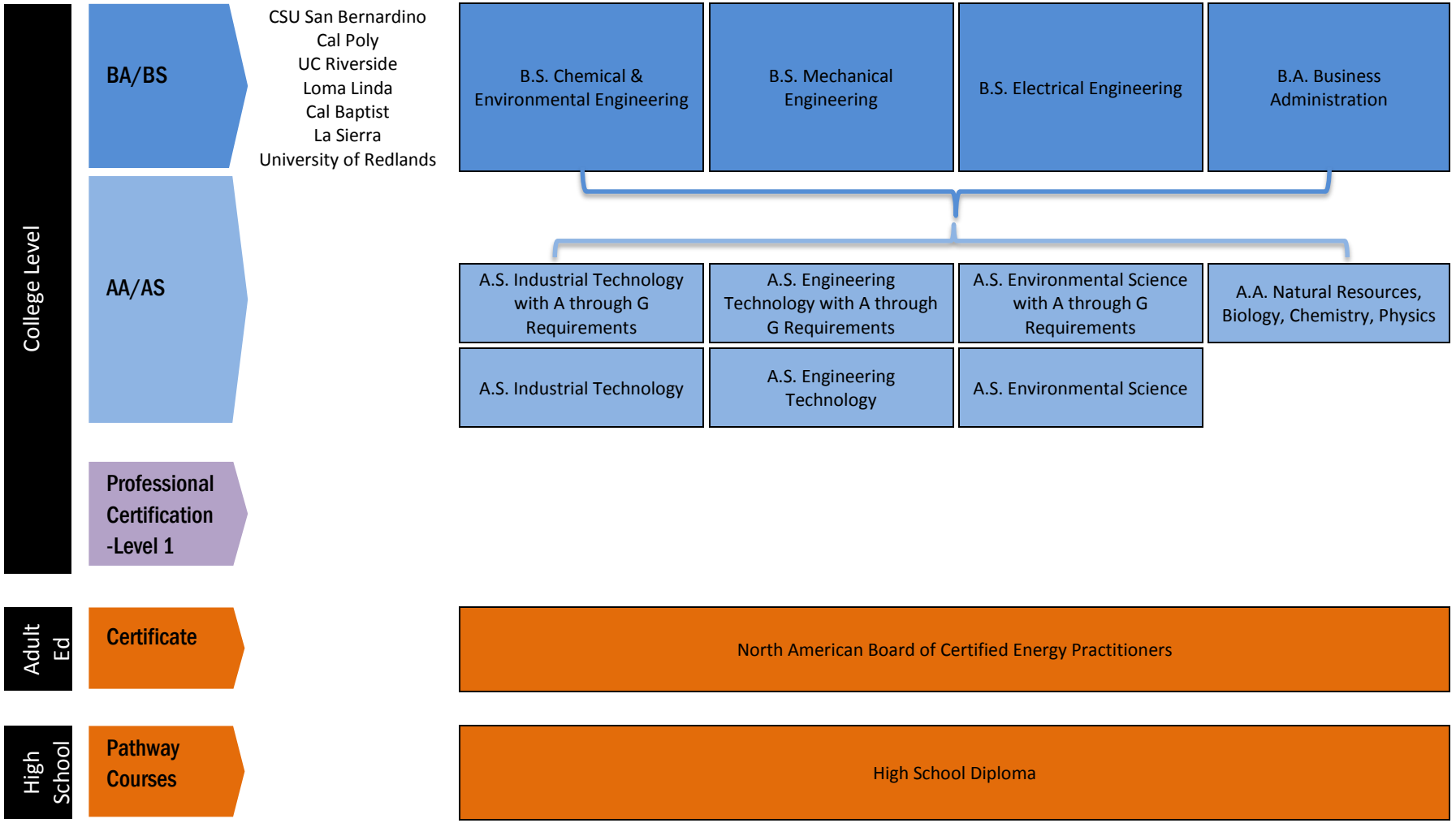
	Timeframe:	
Innovations/ Pilot	**Actions:** ➢ Fast Tracking of Curriculum (Similar to TMCs) • Develop working group of local, regional, and statewide educators to explore the possibility of TMC's related to Advanced Manufacturing • explore the possibility of development of a regional bachelor's degree program related to Advanced Manufacturing ➢ Sharing Curriculum, Resources, and Students • Consider who will receive "credit" for completions o Continue to work the Chancellor's Office on verbiage to clarify all colleges involved in conjoined programs can receive credit for completers • Consider splitting fees and FTEs o Continue to work with regional colleges in the Chancellor's office to establish policy procedures on this • Regional Simulation Centers o Continue to work on the development and inclusion of regional training centers in grant proposal such as the TAA CCT. o Continue to seek support from industry partners in this effort. • Develop an online component o Using Barstow Community College's online experience as a model, work other regional colleges and development and implementation. o Continue to promote BCC online programs as part of conjoined certificates and degrees so that there is not duplication of efforts and expenditures among regional colleges.	*Responsible Parties:*
	Timeframe:	
Leveraging Funding Streams	**Actions:** Identify opportunities for shared costs. ➢ Shared facilities and equipment. ➢ Identify and implement conjoined certificates and degree programs ➢ Maintain direct involvement through committee work, WIBs, grant proposals, and workforce development opportunities.	*Responsible Parties:* DSN CTE Deans Faculty
	Timeframe:	

Proposed Action Plan: Advanced Transportation and Renewable Energy

<table>
<tr><th colspan="3">GOAL: Develop shared pathways for emerging careers</th></tr>
<tr><td rowspan="2">Partnerships</td><td><u>Action Plan</u>:
Develop and expand partnerships
➢ 4-Year partners for transfer and bridge programs
➢ K-12 partners for outreach/career exploration, curricular alignment, dual enrollment, bridge programs, and professional development for teachers
➢ Industry partners for internships and jobs
➢ Involve IEEP</td><td>Responsible Parties:</td></tr>
<tr><td colspan="2">Timeframe:</td></tr>
<tr><td rowspan="2">Pathways & Curricular Alignment</td><td><u>Action Plan</u>:
Develop common courses/curriculum
➢ Review curriculum inventory
➢ Develop model curriculum
• Determine how to incorporate STEM
• Hold regional working meetings
o Bring CC and HS Faculty together</td><td>Responsible Parties:</td></tr>
<tr><td colspan="2">Timeframe:</td></tr>
<tr><td rowspan="2">Outreach</td><td><u>Actions:</u>
Develop and implement outreach plan
➢ Create outreach materials
➢ Hold regional/sub-regional career fairs</td><td>Responsible Parties:</td></tr>
<tr><td colspan="2">Timeframe:</td></tr>
<tr><td rowspan="2">Innovations/ Pilot</td><td><u>Actions:</u></td><td>Responsible Parties:</td></tr>
<tr><td colspan="2">Timeframe:</td></tr>
<tr><td rowspan="2">Leveraging Funding Streams</td><td><u>Actions:</u>
Identify opportunities for shared costs.
➢ Shared facilities and equipment.</td><td>Responsible Parties:</td></tr>
<tr><td colspan="2">Timeframe:</td></tr>
</table>


Advanced Transportation Pathways
College Level
BA/BS
AA/AS
Professional Certification -Level 1
Adult Ed
Certificate
High School
Pathway Courses
CSU San Bernardino
Cal Poly
UC Riverside
Loma Linda
Cal Baptist
La Sierra
University of Redlands
B.A. Administration, Supply Chain and Transportation Management
B.S. Chemical & Environmental Engineering
B.S. Mechanical Engineering
A.S. Automotive Technology with A through G Academic Requirements
A.S. Advanced Transportation with A through G Academic Requirements
A.S. Automotive Technology
A.S. Advanced Transportation
ASE Certifications also completed in most college level programs
Automotive Service Excellence (ASE) Certifications
NATEF
High School/ROP Automotive Programs

Energy / Renewable Energy Pathways



Proposed Action Plan: Public Safety

GOAL: Explore developing stronger pathways for fire fighters and police officers		
Partnerships	**Action Plan**: ➢	*Responsible Parties:*
	Timeframe:	
Pathways & Curricular Alignment	**Action Plan**: Update labor market information ➢ Determine if anecdotal evidence of job growth is true – does it merit work as a shared pathway ➢ Include Administration of Justice and Fire Explore POST control numbers	*Responsible Parties:*
	Timeframe:	
Outreach	**Actions:**	*Responsible Parties:*
	Timeframe:	
Innovations/ Pilot	**Actions:**	*Responsible Parties:*
	Timeframe:	
Leveraging Funding Streams	**Actions:** Identify opportunities for shared costs. ➢ Shared facilities and equipment. ➢ Shared training plans Identify funding streams.	*Responsible Parties:*
	Timeframe:	

Proposed Action Plan: Agriculture and Water

GOAL: Explore educational and career pathways in this sector		
Partnerships	**Action Plan**: ➢	*Responsible Parties:*
	Timeframe:	
Pathways & Curricular Alignment	**Action Plan**: Update labor market information ➢ Drill down to IE labor market – what is available in the IE and how do programs align?	*Responsible Parties:*
	Timeframe:	
Outreach	**Actions:**	*Responsible Parties:*
	Timeframe:	
Innovations/ Pilot	**Actions:**	*Responsible Parties:*
	Timeframe:	
Leveraging Funding Streams	**Actions:** Identify opportunities for shared costs. ➢ Shared facilities and equipment. Identify funding streams.	*Responsible Parties:*
	Timeframe:	