

**Ventura County Office of Education/VC Innovates  
All County Advisory Meeting**

**April 17, 2017, 6:00-8:00PM**

**INDUSTRY SECTOR: Engineering/Manufacturing & Product Development**

**FACILITATOR:** Karen Brower

**RECORDER:** Wes Holser

**PARTICIPANTS:**

<b>Educator</b>	<b>School District</b>
Dave Gross	OUHSD
Gina Van Ness	ACE
Gloria Rodriguez	SPUSD
Greg Bracy	VCOE
Jeff Lindell	SVUSD
Jesus Vargas	VUSD
Juan Rodriguez	VCOE
Justin Riege	VCOE
Ken Foulks	VUSD
Mario Ramirez	VCOE
Paul Fredette	VUSD
Phil Jones	SVUSD
Roice Bassett	VUSD
Steve Strong	VUSD
Todd Gernheuser	ACE
Trudi Babich	CVUSD
Wesley Holser	VCOE

<b>Industry Partner</b>	<b>Company</b>
Alex Lopez	Chatsworth Products
Alex Rivera	Milgard Mfg.
Bridgeman Carney	Microduino Inc.
Bryce Check	USC/Intel
Cheryl Monzon	NAVFAC EXWC
Douglas Qualls	Towers Metalworks
Fred Paredes	Naval Air Warfare Center
Josh Sarfaty	Aerotek
Manish Desai	Validyne Engineering Corp
Patrick Gallagher	Gold Coast Erectors
Sharon Hobba	Validyne Engineering
Todd Metlen	Blue Ox Industrial Co. Ltd.

## Agenda & Minutes

### Introduction

**6:00-6:20 Salon A, B, C- Welcome and Overview/Dinner;** everyone given a card to fill out “Tell us about the impact the industry/education partnership has had on you.”

**6:20-6:30- Transition to Breakout Rooms**

### Breakout Sessions

**6:30- 6:45- Introductions and Industry overview**

Karen Brower provided the Welcome and opening comments for the Engineering; Manufacturing and Product Development Industry Sector. Karen then provided a few administrative remarks, after introducing herself and Wes Holser.

Then each participant introduced themselves and shared what company or school they represented. Karen reviewed the agenda with group while I collected the note cards.

Karen kicked off the Sector by revisiting the goals and objectives from the Advisory Meeting. We reviewed the concepts of Solvable versus Perpetual problems with the Sector to set boundary conditions for the group’s discussion as well as to focus them on the solvable problems that the Industry partners and the Educators together can influence.

**6:45-7:35- Reciprocity Ring**

Karen explained the use of the Reciprocity Ring, the purpose of the post it notes as well as the related color code.

On schedule she commenced the group exercise by requesting the Industry Partners to share with the Sector attendees their responses to “Identify one trend in your Industry – what are you going to need from employees?”

### **Industry Request / Need**

The following Industry Requests / Needs have been organized into three main themes – Knowledge and Skills, Attributes and Student Career Pathways.

#### *Theme - Knowledge and Skills*

- Our workplace is becoming more digital; application of automated processes and tooling becoming more common – **Douglas Qualls**
- More diversified teaching is needed – **Douglas Qualls**
- The welding industry trends growing for TIG welding, clean room welding and orbital welding skills as well the need for the ability to take measurements and layouts; use tape measure; perform math; and how to use tools - basic skills - **Omar Martinez**
- Unified skills in CAD, Manufacturing and Marketing are required – **Todd Metlen**
- Employees require more general education and some technical skills for

- entry level manufacturing jobs – **Alex Rivera**
- Need more classes on safety awareness, safety basics, Lean Methodologies and Continuous Process Improvements – **Alex Rivera**
- More practical experience with basic tools and equipment that are used in manufacturing is required – **Alex Rivera**
- Welding and Manufacturing Industries – employees need to be able to work with the equipment and tools available on the jobsite – work with what you have – employees need to possess adaptability – **Alex Rivera**
- Trend – Internet of Things (IOT) skills – employees need hands on training and an understanding of the basic concepts – **Unattributed**

#### *Theme – Attributes*

- Employees need a more critical thinking mindset – **Alex Lopez**
- More creative thinking (fearless) is needed – **Todd Metlen**
- Requires the “Ability to Self-Educate” – **Todd Metlen**
- More problem solving skills – the employees need to know how to think outside of the box for solutions; take risks and responsibility – **Manish Desai**

#### *Theme – Student Career Pathways*

- Students need to have knowledge and awareness about career paths in the skilled trades and product engineering – **Unattributed Employer**
- Need to give the students an idea on what trades are available – if they don’t want to go to college - **Unattributed Employer**

### **Industry Partners and Educators Solutions**

The following Industry Partners and Educators Solutions responses have been organized into three main themes of the Industry Request / Need inputs – Knowledge and Skills, Attributes and Student Career Pathways.

#### *Theme - Knowledge and Skills*

- Make shop classes mandatory for middle school and high school students; wood shop / electronics shop / metal shop – Todd Metlen
- Teach the classic root technology that led to the modern solution as a means for increasing adaptability – Unattributed
- Workplace is becoming more digital – employees only know manual controls or only know digital controls – no one knows both now – solution is to teach both - Unattributed
- Schedule periodic meetings between educators and industry partners to develop teaching plans to help meet industry demand – Alex Rivera
- Establishment of a local regional technical training center to support industry needs – Alex Rivera
- Have students do projects to help their communities – such as home building and automobile repair – Todd Metlen
- Currently having students acquire certifications in Welding – SENSE I and SENSE II as well as OSHA safety; need to expand on this - Juan Rodriguez
- Provide more certifications that are based on basic skills; e.g. NIMS, etc. – Ken

Foulkes

- The solution for every student to take “shop class” is to operate cost effective “shop classes” – Justin Reige
- Need nonlinear multidisciplinary projects – Justin Riege
- The “Manufacturing Work Readiness Skills” chart – contains much of the basic skills the Industry Partners mentioned. - Phil Jones.

*Theme – Employee Attributes*

- Solution to problem solving skill – let students fail at the task ; assign harder projects – Justin Riege
- Teachers need to become less risk averse; let the students try bigger projects and don’t dumb down the project – Unattributed.

*Theme – Student Career Pathways*

- Expansion of extension class choices and advertise what is currently available – Douglas Qualls
- Industry partners can participate in school events including open house and back to school nights– Josh Sarfaty
- Industry Partners can showcase companies in the county and related career paths – Josh Sarfaty
- Increase advertisement of the ROP program; open more metal shops or woodworking shops or any trades related shops for students – Omar Martinez
- Plan and market an “Intern Fair” - Phil Jones
- Invite counselors to attend these events with Industry Partners and Educators - Unattributed
- Market the industry based classes to parents – get the parents onboard along with the school counselors. Jeff Lindell
- Develop more career preparation curriculums – provide the student with “pathway to a career” – Jesus Vargas

Karen then requested the Educators to respond to “Based on what you just heard about the Industry Trends what do you require in order to prepare your students for the future of the Industry?”

The following Educator Requests / Needs have been organized into three main themes – Industry Support, School Support, and Other Support.

**Educator Requests / Needs**

*Theme – Industry Support*

- Students need Orbital Welders and stainless steel pipe to learn in demand welding skills - Juan Rodriguez
- We need Equipment and Supplies from Industry as well as feedback on our students social skills or lack thereof - Unattributed
- We need a combined digital version of employer job listings – Phil Jones

- We need consistent input from industry – Justin Riege
- We need sponsorship from our Industry Partners to compete in robotics competitions - Ken Foulks
- Mentors – we need industry trained volunteers to help expand the robotics programs throughout Ventura County – Ken Foulks
- Industry needs to campaign more for trade school training with politicians – unattributed.

*Theme – School Support*

- Collaboration with other instructors in like areas - Unattributed
- We need to get the School Counselors on board – Jeff Lindell and Justin Riege
- Diversified teaching depth vs breadth of knowledge – Unattributed
- We need the Guidance Counselors here - where are the guidance counselors tonight? - Unattributed Educator

*Theme – Other Support*

- Send a CTE rep or teacher to feeder schools for in-service day –Justin Riege
- CTE teachers need to see the counselors – more in-service days – Justin Riege
- Instructors can’t do it all – keep the liaisons doing marketing and outreach.

**Industry Partners and Educators Solutions**

- Local politicians need to be here to understand what the priorities are to provide funding for education - Unattributed

Table of Post its Used on the Reciprocity Ring

<b><i>Industry Partner Request Orange</i></b>	<b><i>Industry Partner Solution Pink</i></b>	<b><i>Educator Request Blue</i></b>	<b><i>Educator Solution Yellow</i></b>
More Diversified Teaching Needed – Douglas Qualls		Orbital Welder Stainless pipe Juan Rodriquez	SENSE I SENSE II OSHA certifications Juan Rodriguez
Workplace becoming more digital. Practical application of automated processes and tooling becoming more common – Douglas Qualls		Give us stuff Equipment Supplies Feedback on social skills or lack thereof	
Ability to Self-Educate – Todd Metlen		Combined Digital employer job list – Phil Jones	
Critical Thinking Mindset – Alex Lopez		Consistent input from industry – Justin Riege	Solution to problem solving skill – let students fail at the task

			- harder projects - Justin Riege
Creative Thinking (fearless) - Todd Metlen			
Welding, TIG welding, clean room welding orbital Ability to take measurements layout use tape measure math how to work tools basic skills- Omar Martinez			
Unified skills in CAD, Manufacturing, and Marketing - Todd Metlen	Expansion of extension class choices and advertyismenmnt of what is currently available - Douglas Qualls		
Knowledge awareness about career paths in skilled trades and product engineering	Industry partners *participate in school events including open house and back to school nights *show off companies in the county and career paths - Josh Sarfaty		Intern Fair Phil Jones
Trend - more general education and some technical skills for entry level manufacturing jobs - A. Rivera			Market the classes to parents - get them onboard and the counselors. Jeff Lindell
I.P. Request more classes and awareness of safety basics and lean methodologies and continues improvements - Alex Rivera			

I.P. Request More practical experience with basic tools and equipment , used in manufacturing - A. Rivera	Make shop classes Mandatory in middle school and high school – Todd Metlen		
Work with what you have – adaptability Name – Alex Rivera	Teach the classic root technology that led to the modern solution		
	Periodic meeting between educators and industry to develop teaching plans to help meet industry demand – A. Rivera		
	Establishment of regional technical training center to support industry needs – A. Rivera		
		Collaboration with other instructors in like areas _name?	
		Sponsorship. We need money to compete in competitions. Ken Foulks	
		Mentors – we need industry trained volunteers to help expand the robotics programs throughout Ventura County – Ken Foulks	Career prep curriculum – “pathway to a career” – Jesus Vargas
		Send a CTE rep or teacher to feeder schools for in-service day –Justin Riege	

		Get Counselors on board – Jeff Lindell Justin Riege	
	Have the students do projects to help their communities – home building Auto repair Design and Architecture – Todd Metlen		
	Advertisement of ROP program, open more metal shops or woodworking or any trades – Omar Martinez		
			Politicians are not here – fund education
			More certifications that are based on basic skills – NIMS, etc. – Ken Foulkes
			More robotics classes to reach more students – many of my students are trained in the very skills listed previously – Ken Foulkes
Trend – IOT Skills – hands on training Understanding of basic concepts			
			Every student taking shop class Solution cost effective shop classes – Justin reige
		CTE teachers need to see counselors – more in-service days – Justin Riege	
		Diversified	Nonlinear



		Teaching depth vs Breadth of knowledge	multidisciplinary projects – Justin Riege
Problem Solving How to think outside of the box for solutions and taking risk and responsibility – Manish Desai			

We wrapped up the Reciprocity Ring and moved on to the Discussion Prompts.

### **7:35-7:55- Discussion Prompts**

Karen proceeded with asking the Educators their Discussion Prompt of “What is one area of growth you have had in your program that you would like to share with the group.”

#### **Educators**

Areas of Growth:

- An area of growth has been in the Welding Education and Training with expanding Welding Certification (SENSE I and SENSE II) along with OSHA safety training.
- Another area of growth with CEC is the planned NIMs manufacturing credential.
- Next Karen facilitated a discussion with the Employers by asking them the Discussion Prompt of “What are your thoughts about the future of your profession or Industry”

#### **Industry Partners**

Thoughts on the Future:

- We are now and will continue to experience talent shortages; some of the Industries are turning to robotics and hiring foreign workers. Ventura County is expensive and many of our prospective employees move out of the area once they graduate.
- Many of us in here tonight are soon to retire in the near future thus creating more jobs with even fewer qualified candidates to hire. It’s a War for Talent.
- In order to fill the pipeline for our Sector we have to grow our own talent locally. How do we keep the local economy viable? Keep the jobs here by developing the talent.

### **7:55- 8:00 Wrap Up**

We concluded the session by reading several of each Industry Partners and Educators successes that had been shared on the participants note cards and thanked the participants for their time and support for this event.

Thank you for your attendance!

**8:00 Meeting adjourned - next meeting TBD**