



Strong Workforce Program Information & Communications Technologies Regional Advisory Committee Proceedings

April 6, 2018

SETA – Sacramento Employment and Training Agency
925 Del Paso Boulevard, Sacramento CA 95616

Introduction

California is investing in the [Strong Workforce Program](#) to help fill the growing demand for “middle-skill” positions that require more than a high school diploma, but not necessarily a 4-year college degree. One million more associate degrees, certificates, or industry-valued credentials will be needed by 2025 to meet the projected industry demand.

The objective of the Strong Workforce Program is to offer more [Career Education](#) (CE) opportunities and to improve the outcomes of CE programs for both students and employers. The ability to connect the needs of students, educators and employers remains critical to building a strong regional workforce and a competitive economy while providing an opportunity for workers to gain skills and income mobility.

With these objectives in mind, the Los Rios Community College District, in partnership with Valley Vision, and in collaboration with Sierra College and the Yuba Community College District, is investing a portion of its Strong Workforce allocation to form Regional Advisory Committees. The objectives of Regional Advisory Committees are to build a strong partnership between educators and employers that:

- provides timely information on skills gaps and workforce needs;
- improves the efficiency of the advisory process for educators and employers;
- reflects a regional view of workforce needs and assets;
- and provides opportunities for more systemic engagement.

Regional Advisory Committees will help inform decisions on needed investments and enhancements for CE programs.

In partnership with the **Los Rios Community College District**—and in collaboration with Sierra College and the Yuba Community College District—Valley Vision has been engaged to convene Regional Advisory Committees for Career Education (CE) across ten industry sectors in 2017 and 2018. This project is a **Strong Workforce Program** investment. The purpose of Regional Advisory Committees is to build a strong partnership between educators and employers that provides timely information on skills gaps and workforce needs; improves the efficiency of the advisory process for educators and employers; reflects a regional view of workforce needs, opportunities, and assets; and enables more systemic engagement.

The Strong Workforce regional advisory project is linked to Valley Vision’s work with the region’s four workforce innovation boards on a **Regional Planning** process to help streamline and strengthen employer participation in guiding education and workforce investments.

These projects support the **Capital Region Workforce Action Plan**. With funding from JPMorgan Chase & Co., the Center of Excellence at Los Rios and Valley Vision conducted region-wide economic analysis identifying **promising industry clusters** of opportunity for driving job creation and regional economic competitiveness. Workforce assessments identified critical **skills gaps, high-demand occupations, and investments** needed to build a skilled and competitive workforce. More information can be found on Valley Vision’s [website](#).

Overview

The spring Regional Advisory Committee meeting for the Information & Communications Technology (ICT) sector was held on April 6th at SETA. The focus of the advisory meeting was sharing information and best practices on work-based learning experiences, and on how employers and educators can partner to offer these valuable skill-building opportunities to students. Prior to the meeting, faculty was invited to submit proposals for new or updated curricula for Advisory Committee review. Review of the proposals was conducted during breakout sessions covering the following program areas:

- Cyber Security/Networking
- Software Development/Web Development
- Office Applications/ Big Data and Data Analytics

Meeting Proceedings

Introduction and Welcome

The meeting was opened at 9:00 AM with welcome and introductions; an overview of the agenda and statement of the purpose of the meeting was given. Markus Geissler, Deputy Sector Navigator for ICT-Digital Media in the Greater Sacramento Region, recapped the fall advisory meeting, held November 3, 2017, and covered his goals moving forward. The role of the DSN is to work with the region's colleges and employers to create alignment around and deliver on workforce training and career pathways. As the new DSN for ICT in the region, Markus emphasized the need for a continued connection between education and industry. Ongoing partnerships between employers and educators will help broaden the pipeline for ICT workers and expand work-based learning opportunities for students.

Information and Communication Technology Cluster Definition

Information and Communications Technology (ICT) is the convergence of computer networking and telecommunications. The ICT umbrella organizes technologies related to telecommunications, computing, networks and other high-tech fields. ICT job functions impact all businesses, regardless of industry type or size of employment. However, there are a core set of industries primarily engaged in ICT activities that can be used to define the industry cluster. Subsectors include:

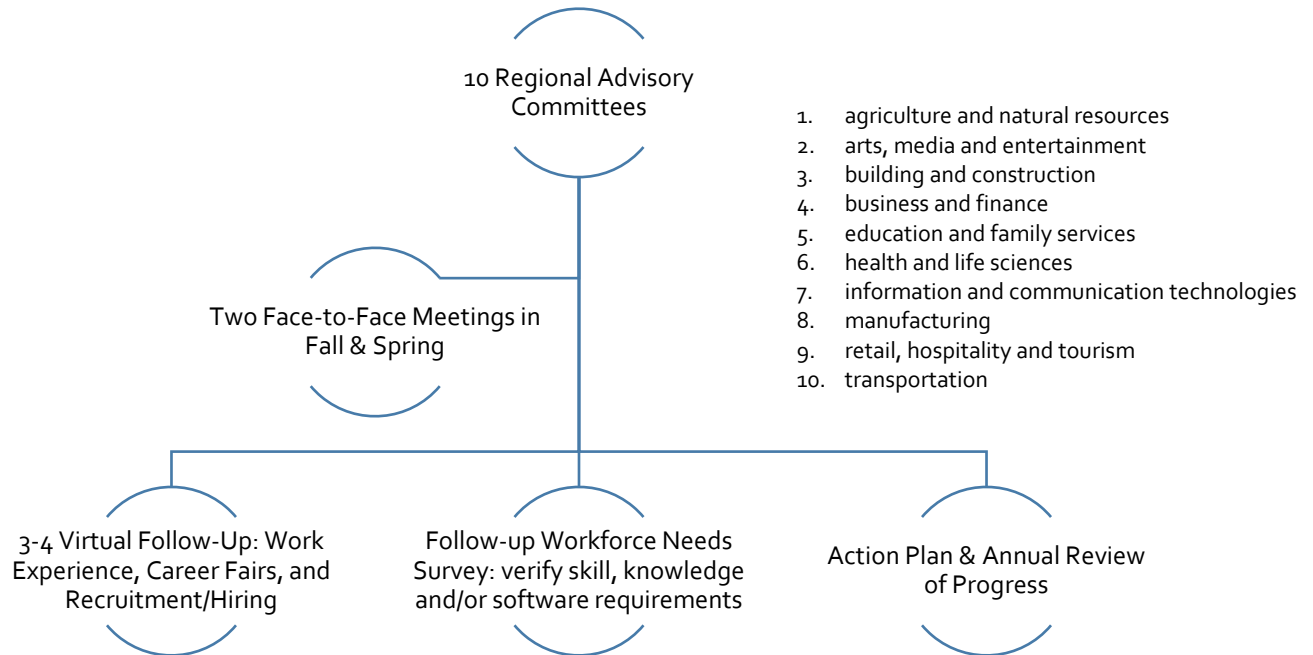
- *ICT Component Manufacturing*
- *System Programming, Design, Management and Training Services*
- *System Repair and Maintenance Services*
- *Telecommunication/Data Processing Center*

Source: Center of Excellence

An overview of Valley Vision's role in regional workforce development was provided by Tammy Cronin, Project Leader for Valley Vision. She gave a brief background on the partnership between Valley Vision and the Center of Excellence at Los Rios Community College District to conduct a region-wide economic analysis. The analysis identified the most promising industry clusters for driving job growth and regional economic competitiveness. This work was supported with funding from JPMorgan Chase & Co. and resulted in the Capital Region Workforce Action Plan.

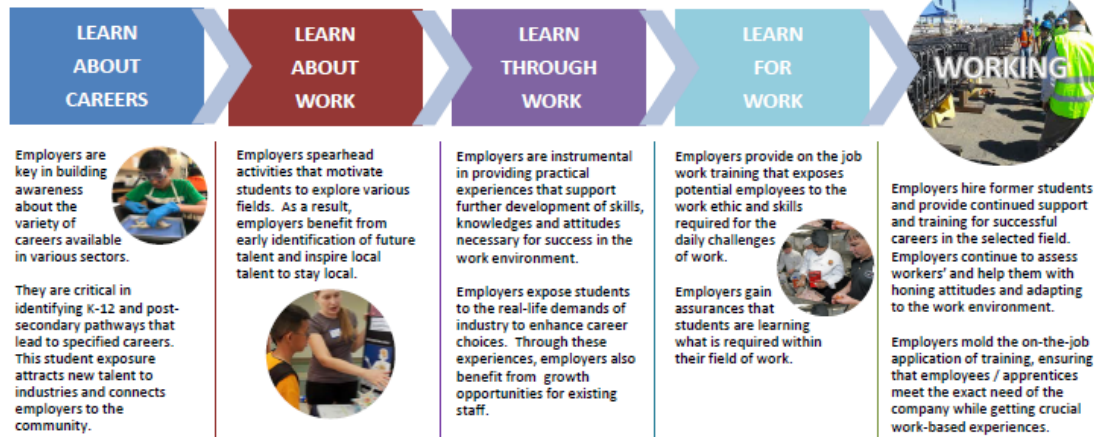
Steps being taken to implement the Action Plan include Valley Vision's work with the region's workforce development boards and other system partners on regional system planning; examining the impacts of the digitalization of skills and how to prepare for a new future of work; and fostering regional industry advisory bodies to contribute industry knowledge and demand-driven data to workforce and education

system planning. The framework outlined for Regional Advisory Committees, as depicted below, is one method of building industry/education partnerships. The purpose of Regional Advisory Committees is to elevate a regional view of industry trends and workforce needs, to improve efficiencies in the advisory process, and to build regional-scale partnerships between education and industry.



Following these comments, Markus introduced the next speaker. Kelly Mackey, apprenticeship consultant, Division of Apprenticeship Standards, Department of Industrial Relations at the State of California Labor and Workforce Development Agency, discussed the importance of leveraging apprenticeships to build a skilled ICT workforce. She emphasized that all signs are pointing to a shortage of IT workers, and a skills gap will increase pressure on current employers. She also highlighted the significant move to connect apprenticeships to community college credit, therefore by completion of an apprenticeship, students can obtain associates degrees as well. As non-traditional sectors like IT, civil services, advanced manufacturing, healthcare, and clean energy continue to incorporate and grow apprenticeship programs, transitioning students directly into the workforce becomes a much more achievable task. Kelly noted that apprenticeships can be developed by any size employer, from a company of 5 to 500 or more. She and her team are ready and willing to support all employers’ efforts to build apprenticeship programs.

Employer Led Work-Based Learning



Employer Led Experiences



Panel Discussion

Markus gave an overview of the importance of the Strong Workforce initiative. He framed the discussion around the need to reinforce and support the following types of work-based learning programs throughout the K-12, and college experiences:

- Internships
- Apprenticeships
- Classroom Speakers, Activities, Employer Relationships
- Job Site Visits/ Shadowing/Field Trips
- Active Employer Engagement
- Industry Certification

Markus invited a panel of representatives of industry and education to discuss current partnership activities, perspectives on workforce needs, and current goals and objectives regarding the future of work. Participating on the panel were:

- **Carol Bernardo**, Program Coordinator, Work Experience Education & Internships, Cosumnes River College
- **Katy Hensley**, Work-Based Learning Coordinator, Sacramento City Unified School District
- **Cathy Koumelis**, Program Manager, ARUBA - a Hewlett Packard Enterprise Company
- **Susan Wheeler**, Workforce Planning and Education Relations Strategist, Human Resources, Diversity & Inclusion, SMUD

Highlights from Panel

The panelists noted that close to 80,000 students are currently enrolled in the regions' seven community colleges. From an employer perspective, it's critical to have a standardization of practices amongst colleges for coordination of work experience and internships. Employers find it challenging to navigate individual requirements of various schools and colleges. Community colleges are striving to make this process of connecting with students easier for employers by pre-screening students for minimum qualifications, gathering references, and checking academic standards. In addition, the incorporation of 21st-Century Skills for the New World of Work into everyday community college curricula, combined with work-based learning opportunities, will help better prepare the incoming workforce.

High schools are a prime example of the opportunity to lead on providing work-based learning experiences to the regions younger students. As the next generation of the workforce, it is imperative to keep employers engaged in work-based learning opportunities and involved with high school education. Students need paid opportunities, and to learn from talented professionals in fields that can provide them a good livelihood later in life. Some of the best experiences students have come from hands-on interactions with employers; it gives a different context to the learning experience.

Both the Sacramento Municipal Utilities District (SMUD) and ARUBA have supported work-based learning of the type the Strong Workforce Program advocates. SMUD has utilized their connection with local colleges and high schools to participate in capstones projects and other classroom-based models. Most recently, SMUD allowed students to assist with research and analysis of the development of a security operations center. ARUBA, on the other hand, has been an active champion of providing coding camps through summer programs. By collaborating with CRANE, Aruba helps students learn the technical skills they currently employ in their business.

Summary of Breakout Sessions

Following the presentations and panel discussion, participants split into three breakout groups to review and discuss curriculum proposals submitted by faculty. The purpose of each breakout group was to review the proposals, validate the need for new or enhanced curricula, and for faculty to receive input on their proposals, in particular from employers of ICT workers.

Breakout 1: Cyber Security/Networking

Proposal	Comments
CISN 325: Windows Server Infrastructure: High Availability and Virtualization	<ul style="list-style-type: none">• New course in development• Dual enrollment opportunity with high schools• Need pathway or "next step" identified
CISS 302: Essential Personal Computer and Device Security	<ul style="list-style-type: none">• Course for cyber security certificate• Covers what you should do with your own personal device to protect your employer's network• Complements other elective courses in cyber security track• Employer who works for cybersecurity firm noted that this should become a required course for her entire organization

CISN 306: Advanced Network Systems Administration	<ul style="list-style-type: none"> • Course update to reflect changes in Microsoft systems. • Refreshing courses to current industry standards
CISN 117: Wireshark TCP/IPv4 and 6 Network Analysis	<ul style="list-style-type: none"> • Protocol analyzer / packet sniffer; useful for networking and security to analyze traffic. • Currently included as portion of another class • Creating new course to become standalone, more in-depth hands-on course • Will be required course for certificate or degree

Outcome: Proposals confirmed to be on track and approved to move forward.

Breakout 2: Software Development/Web Development

Proposal	Comments
CIS - Information Technology	<ul style="list-style-type: none"> • Introduction of Certificate of Achievement
Software Development/Web Development	<ul style="list-style-type: none"> • Introduction of full stack programmer certificate

Outcome: Proposals confirmed to be on track and approved to move forward.

Office Applications/ Big Data & Data Analytics

Proposal	Comments
CIS/IT Data Analytics Program	<ul style="list-style-type: none"> • Business Information Systems • Spreadsheets in a Business Environment • Database Management • Elementary Statistics • Data Visualization - Fall 2018 • Python - for many uses - Spring 2019 • Select 6 units from the following: <ul style="list-style-type: none"> ○ System Analysis and Design ○ Project Management Concepts and Software ○ Internship in Computer Information Systems

Outcome: Proposals confirmed to be on track and approved to move forward.

Closing Remarks + Next Steps

Following the breakout sessions, participants returned to the main room for final comments and closing remarks. Markus Geissler thanked participants for attending the meeting and spending their valued time to contribute to building the future ICT workforce. It was noted that the next Regional Advisory Committee meeting will be held in the fall of 2018. The meeting adjourned at 12 noon.

Meeting Agenda

**Information and Communications Technologies
Regional Advisory Committee Meeting
April 6th, 2018, 8:30 am – 12:00 noon
SETA, 925 Del Paso Boulevard, Sacramento**

AGENDA

9:00–9:10 am Welcome + Overview

- ❖ **Tammy Cronin**, Project Leader and Portfolio Manager, Valley Vision
- ❖ **Markus Geissler**, PhD, Deputy Sector Navigator, ICT/Digital Media, Greater Sacramento Region, Doing What MATTERS for Jobs and the Economy, California Community Colleges

9:10–10:15 am Panel Discussion: Creating the ICT Talent Pipeline

How Capital Region Companies are providing Innovative Work-Based Learning Opportunities, Addressing Skills Gaps, Engaging in Partnerships

- ❖ **Carol Bernardo**, Program Coordinator, Work Experience Education & Internships, Cosumnes River College
- ❖ **Katy Hensley**, Work-Based Learning Coordinator, Sacramento City Unified School District
- ❖ **Cathy Koumelis**, Program Manager, ARUBA - a Hewlett Packard Enterprise Company
- ❖ **Susan Wheeler**, Workforce Planning and Education Relations Strategist, Human Resources, Diversity & Inclusion, SMUD

10:15 –10:45 am Leveraging Apprenticeships to Build a Skilled ICT Workforce

- ❖ **Kelly Mackey**, Apprenticeship Consultant, Division of Apprenticeship Standards, Dept. of Industrial Relations, CA Labor and Workforce Development Agency
- ❖ **Eric Elberg**, Staff Services Manager II, Division of Apprenticeship Standards, Dept. of Industrial Relations, CA Labor and Workforce Development Agency

10:45–11:40 am Breakout Session Discussions

- ❖ Cyber Security/Networking
- ❖ Software Development / Web Development
- ❖ Office Applications / Big Data Analytics

11:45 am –12:00 Noon Breakout Group Reporting/Next Steps

Participant List

Information and Communications Technologies Regional Advisory Committee Meeting

Participant List

First Name	Last Name	Organization
Scott	Adrian	City of Roseville
Al	Ahmadi	American River College
George	Akiyama	Caltrans
Paul	Akuna	Caltrans
Jared	Amalong	Sacramento County Office of Education
Kevin	Anderson	Sacramento City College
Jorge	Avila	California Department of Technology
Saeed	Bakhshi	Caltrans
Michael	Bell	Nexus Machine Design
Carol	Bernardo	Cosumnes River College
Sherry	Chang	Intel Corporation
Oliver	Chen	Intel Corporation
Kirsten	Corbin	American River College
Tammy	Cronin	Valley Vision
Clay	Dagler	Franklin High School
Susan	DeHerrera	Franklin High School
Linda	Dewberry	Sheldon High School
Walter	Di Mantova	Powerminds Inc.
Marjorie	Duffy	Cosumnes River College
Larry	Dumais	American River College
Eric	Elberg	Division of Apprenticeship Standards, Dept. of Industrial Relations,
Randall	Fairchild	Florin High School
Markus	Geissler	Deputy Sector Navigator, ICT-Digital Media
Terri	Griffin	Placer County Office of Education
Paula	Hanzel	Sacramento City USD/Elk Grove USD
Rebecca	Hayes	American River College
Katy	Hensley	Sacramento City USD
Barbara	Hernesman	SynergyNexGen
Todd	Higley	Antelope High School
Amanda	Kelly	Intel Corporation
Roy	Kim	SETA
Cathy	Koumelis	Aruba, a Hewlett Packard Enterprise company
Natalie	Lenhart	Linked Learning Alliance

Kelly	Mackey	Division of Apprenticeship Standards, Dept. of Industrial Relations,
Katherine	McMillan	Sacramento Public Library
Lauren	Mechals	SETA
Gabriel	Meehan	Sacramento City College
Theresa	Milan	Los Rios CCD
Shawn	Monsen	Sierra College
Tammy	Montgomery	Los Rios Community College District
Coleen	Morehead	Align Capital Region
Pamela	Murawski	Office of Water Programs
Randy	Nordell	American River College
Annette	Nylander	Sierra College
Christina	Overmiller	Sierra College
Karen	Parks	Sacramento City College
Lance	Parks	Cosumnes River College
Joel	Powell	Cosumnes River College
April	Qian	Sacramento State University
Lynette	Rodriguez	EGUSD
Marsha	Rogers	Sierra College
Jennifer	Schieck	Private criminal defense firm
Blaine	Smith	NFNRC at LRCCD
Mayank	Sood	SMUD
Clarence	Stokes	American River College
Rodney	Stone	Air Resources Board
Elizabeth	Swithenbank	Folsom Lake College
Jennifer	Teeters	Fortinet
Leroy	Tripette	Cristo Rey High School Sacramento
Theophile	Tuyishime Intime	Rwanda Online
Harsh	Verma	R Systems
Mike	Vocker	Sheldon High School
Jessica A.	Walker	Digital Feel Good
Susan	Wheeler	SMUD
Miela	Zitelli	Sacramento City College



LET'S TALK ICT!
Information and Communications Technologies
Regional Advisory Committee Meeting
April 6th, 2018, 8:30 am – 12:00 (Noon)
SETA, 925 Del Paso Boulevard, Sacramento



Agenda

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- 09:10–10:15 am:** Panel Discussion: Creating the ICT Talent Pipeline
- 10:15 –10:45 am:** Speakers: Leveraging Apprenticeships to Build a Skilled ICT Workforce
- 10:45–11:40 am:** Breakout Session Discussions/Curriculum Analysis
Cybersecurity/Networking
Software Development/Web Development
Office Applications/Big Data and Data Analytics
- 11:45 am –12:00** Breakout Group Reporting/Next Steps

Welcome + Overview

Tammy Cronin- Project Leader and Portfolio Manager, Valley Vision

Markus Geissler- PhD , Deputy Sector Navigator, ICT/Digital Media, Greater Sacramento Region, Doing What MATTERS for Jobs and the Economy, California Community Colleges

Panel Discussion: Creating the ICT Talent Pipeline

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- ❖ **Katy Hensley**, Work-Based Learning Coordinator, Sacramento City Unified School District

Leveraging Apprenticeships to Build a Skilled ICT Workforce

Kelly Mackey, Apprenticeship Consultant
Division of Apprenticeship Standards
Dept. of Industrial Relations
CA Labor and Workforce Development Agency



Introduction to the California Apprenticeship Initiative

Eric Elberg, Staff Services Manager II

Division of Apprenticeship Standards, Dept. of Industrial
Relations

CA Labor and Workforce Development Agency



Breakout Sessions

- Cyber Security/Networking (Shasta A)
- Software Development/Web Development (Aspen)
- Office Applications/ Big Data and Data Analytics (Shasta B)



Next Steps

- Minutes will be distributed via email
 - Attach to curriculum proposals for Chancellor's Office approval
- Next Industry Regional Workforce Advisory Committee Meeting: early November 2018
 - Possible focus areas
 - Aligning Pathways from School to Work
 - Importance of Industry Certification
 - Submit your suggestion to markus.geissler@crc.losrios.edu

Announcements

- **Sierra Security Summit**
 - Saturday, April 28th & Sunday, April 29th; starts at 12 noon
 - Hacker Lab Rocklin, powered by Sierra College
- **Greater Sacramento Mayors Cyber Cup**
 - Saturday, April 28th, 9:00 am to 1:00 pm
 - Sierra College
 - Awards ceremony at 1:30 pm at Hacker Lab Rocklin
- **Greater Sacramento CyberCamps**
 - June 18-22 & June 25-29
 - Four regional community colleges
 - www.ict-dm.net/saccybercamps

Industry Partners wanted for ICT Council

For More Information Contact

Markus Geissler

at markus.geissler@crc.losrios.edu

Thank you and see you next Fall!



Sacramento
Employment and
Training
Agency



LOS RIOS
COMMUNITY
COLLEGE
DISTRICT