LARC FACULTY INNOVATION HUB LAUNCH

Fall Summit





Agenda



Today's Summit Results

Introduce new data and thinking: "The jobs and skills that will drive the post-pandemic recovery."

Learn about the 5 New Economies (Remote, Logistics, Automated, Readiness, and Green) and brainstorm with other faculty the implications for your disciplines, and how this can inform and prioritize regional Innovation Hub curriculum projects.

Inform attendees of the strategic role of the Faculty Innovation HUB within the new LARC, and what the results have been to date.



Initial conversation and strategic thinking to inform potential curriculum projects 2022-2023

Potentially driven by 5 New Economies.

SETTING THE STAGE

Mike Murphy
BrandIQ
Convener, Facilitator, Innovation Partner





The world has changed, but have we?

As technological leaps revolutionize the job market and communication,

the educational system should keep up with these changes to teach the relevant skills the labor market requires



We have entered the 4th Industrial Revolution, which has disrupted industry and education

The 4th industrial revolution is characterized by:

Fusion of technologies that blur the lines between the physical, digital, and biological spheres

Disruption of traditional ways of conducting business, production, consumption, and education

Increased automation and artificial intelligence

Increased ability to work and socialize via mobile technology

Acceleration of innovation in technologies like remote working

There is a need to up-skill/re-skill workers to keep up with evolving technologies, even all of us!

Inequality represents the greatest societal concern associated with the 4th Industrial Revolution

There is a rising gap in wealth between those dependent on capital, versus dependent on labor

There is a need for highly skilled workers for "new collar jobs"



This requires us to work differently with industry

We must co-create with employers to design curriculum and bring changing, real-



01

05



Technology continues to disrupt, and no industry is safe

02 Employees and employers face an urgent need to be proactive about skilling for the future

Go beyond employer advisory council roles: partner with employers for curriculum cocreation and work-based learning

O4 Students will have access to "upto-date" tools, making them more competitive in the labor market

Many CE programs do this to varying degrees, but these practices need to be improved and accelerated

......and should include "applied" General Education disciplines/curriculum

Faculty Curriculum Innovation Hub Can Lead!

ENSURING STUDENT SUCCESS

If community colleges can provide up-to-date, contextualized curriculum and programs that meet students needs, they can capture lost market share and remain competitive.

STUDENTS NEEDS

- Livable wages in LA
- Avoiding overwhelming debt
- Relevant skills/competencies for the future
 Flexibility/lifestyle fit

"NEW" Career Education

INDUSTRY NEEDS

- Adapting to the 4th industrial revolution
- Highly skilled workers
- New skills/upskilling/re-skilling workers for evolving technologies

EMBRACING INNOVATION AND EQUITY

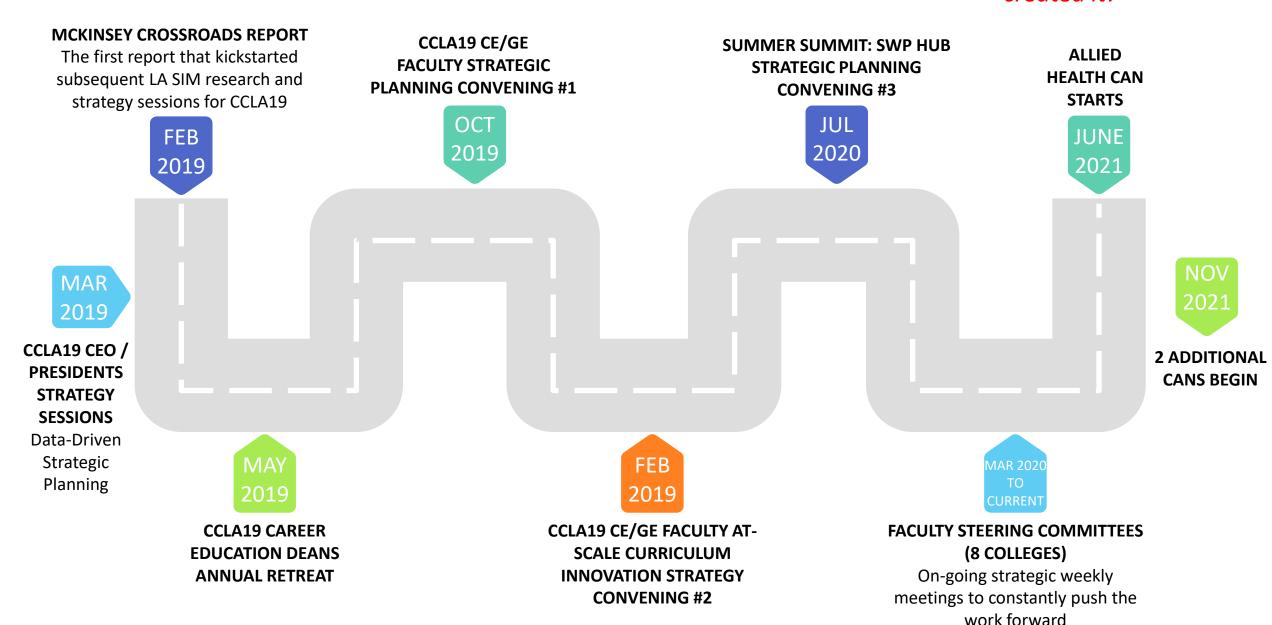
For Career Education to be relevant to a diverse student body, community colleges need to embrace a culture of innovation, so that they can constantly update curriculum and programs to meet industry needs.

PROVIDING INDUSTRY WITH SKILLED WORKERS

Major shifts in the world market are demanding workers with new skills that are currently not being taught in many schools. Community colleges have an opportunity to teach these skills.

How did this SWP project come about?

15 LA colleges created it!





Cerritos College

Citrus College

Compton College

East Los Angeles College

El Camino College

Glendale Community College

Long Beach City College

Los Angeles City College

Los Angeles Harbor College

Los Angeles Mission College

Los Angeles Pierce College

Los Angeles Southwest College

Los Angeles Trade Tech College

Los Angeles Valley College

Mount San Antonio College

Pasadena City College

Rio Hondo College

Santa Monica College

West Los Angeles College

The CCLA19 Academic Resource and Professional Development Innovation Hub

Provide a 'space' for:



Regional acceleration of the delivery of career education programs and faculty professional development

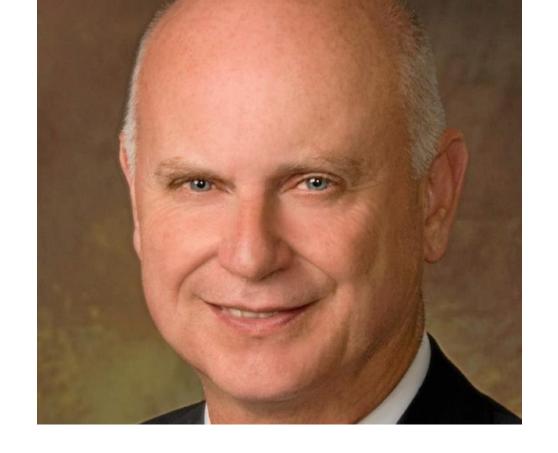


CE/GE cross-college/cross-discipline collaboration, sharing best practices and innovations for "at-scale" curriculum projects in "co-creation" with Los Angeles regional employers



Keynote:

The Importance of the Faculty Innovation Hub in helping the Los Angeles region achieve its goals



Dr. William (Bill) T. Scroggins

Mt. SAC President and CEO

Announcement:

LARC
Chancellor's
Regional Request



Salvatrice Cummo

Executive Director, Economic and Workforce Development, PCC

INNOVATION HUB STEERING COMMITTEE UPDATE

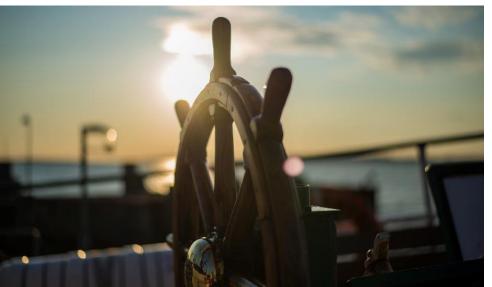
Sal Veas

SMC Business Chair

Lance Heard

Mt SAC Administration of Justice Professor, Department Co-Chair, Public Safety Programs At-Large Representative, Academic Senate for California Community Colleges (ASCCC)





Faculty Top 3 Goals/Priorities



Invest & support faculty that want to innovate

Create Time, Space and Framework For Collaborative regional 'At-Scale' Innovation To Happen in high growth, middle-skill occupations



Effective teaching practice coursework

Professional Development beyond local flex time, to Improve Teaching Practices



Solving innovation barriers

Employer Engagement Co-Creation to meet their needs Enrollment, completion, stackable skills, work-based learning, pathways into middle-skill level jobs

Systems change with respect to workforce development refers to efforts and initiatives that go beyond providing direct services to individual jobseekers and aim to transform how organizations effectively support employers and the workforce,

especially in high growth, high demand, higher wage jobs.

GOVERNANCE & ROLES

Created Steering Committee Guiding Principles, Roles & Governance Structure.

COMMUNICATION STRATEGY

Co-created Communication Strategy for CAN creation.

EMPLOYER ENGAGEMENT

Brainstormed ideas for employer engagement for LARC consortium RFA response (increasing student employment outcomes & work-based learning).

HUB OPERATING GUIDELINES

Co-created Hub Operating Guidelines.



HUB FALL SUMMIT

Planned Fall 2021 Summit content.

ASCCC

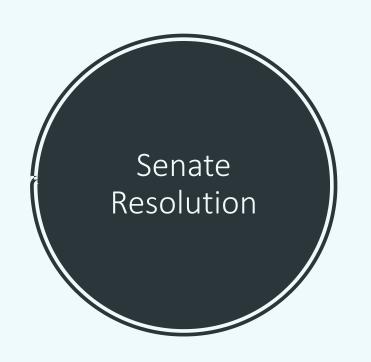
Acquired ASCCC Support
Resolution 21.01 (Lance Heard,
MT SAC, ASCCC Exec. Council).

ORANGE COUNTY

Gained commitment in Orange County from four colleges (Goldenwest, Saddleback, Coastline, NOCE) to plan an OC Faculty Retreat.

NEW FUNDING SOURCES

Conducted funding sources analysis of 125 California foundations & determined top 12 foundations for potential Innovation Hub financial partnerships.



Collaborate with Regional Consortia

Spring 2021

Resolution Number:

21.01

Contact:

Christy Coobatis

Category:

Career Technical Education

Resolved, That the Academic Senate for California Community Colleges collaborate with the regional consortia and the state and regional directors to empower and engage regional faculty leaders by working with the faculty leaders on regional boards, providing professional learning for career technical education faculty, sharing and developing new and emerging curriculum, and discussing how to streamline curriculum processes to move at the speed of industry and business so that students can be prepared for the jobs of tomorrow.

Timing and Making it All Work



Guiding Principles/Values: Steering Committee

The whole is greater than the sum of its parts.

1

The steering committee unites CE/GE faculty in a structured, collaborative framework that inspires other faculty.

2

The steering committee should be recognized as a direct connection (liaison) to local Senates about academic and professional matters (10+1) to improve primacy in curriculum.

- O How will the Deans use what is created?
 - Managing the interaction between Deans and faculty to ensure and inspire primacy



Role of Steering Committee

1

REGIONAL PRIORITY RESULTS

Established as the only organized LARC CE/GE cross-discipline, cross college faculty group representing all 19 colleges, that meet regularly to support regional strategic priority results



HUB-SUPPORTED PROJECTS

This body performs the function of assessing Hub supported curriculum projects. Once assessed, the projects are recommended for development in cooperation with the steering committee and sustained by ongoing steering committee coordination.



ADVOCATES FOR HUB

Committee members individually and collectively serve as advocates for the Hub and share new LARC Innovation Hub curriculum development frameworks and other important Hub resources/outcomes locally at colleges in the region



GUIDANCE ON GRANTS

The committee provides guidance on assigned grants to ensure results are achieved



DESIGN INPUT

Provide design input into faculty retreats and regional faculty summits which serve as professional development for local faculty cohorts



SECURE FUNDING

The committee helps secure financial support from multiple funding sources



MAINTAINING WORKFLOW

The committee fills essential roles and functions, as a standing regional faculty committee, to maintain effective work-flow by serving as Cocreators of operating plan for CANS, communication strategies for CAN Recruitment, retreats, convenings and other ad-hoc meetings and workshops



ENSURING LEGACY

The committee serves to fulfill one vision of the Hub by establishing a framework so that it may
Collaborate with SWP projects to ensure legacy of projects get leveraged across the region.

ALLIED HEALTH UPDATE

Monica Thurston

ELAC Allied Health Chair
Program Director, Health Information Technology, Health Occupations
Medical Assistant, Pharmacy Technology and Non-credit Allied Health
Programs

Dr. Dorothy Hendrix

ELAC Allied Health Department Health Information Technology Program





Allied Health CAN Member Colleges









Aracely Molina







Representing county employer Rafael Nava Joel Morgan



Reyna Hernandez Liselda Fabian



Cory Benz **Gabriel Newman**

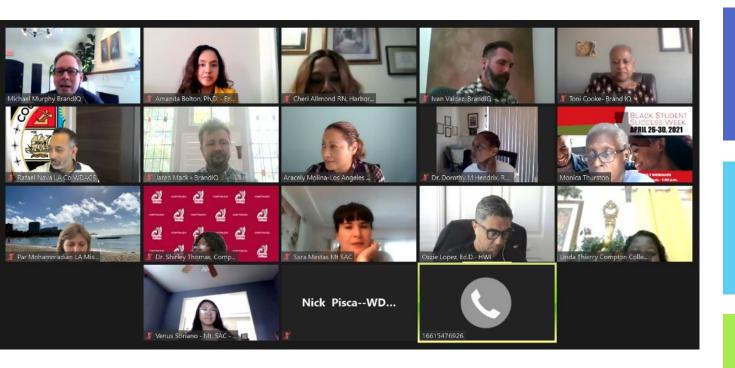




Cristiany Villasenor Joel Moreno Simi Sihota



Value of Allied Health CAN

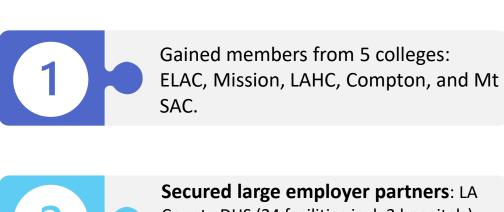


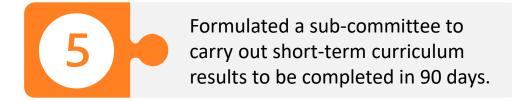
The Non-Credit CNA/Allied Health Career Ladders Reimagination Working Group was a direct response to the shortage of first-line healthcare workers in the Los Angeles area.

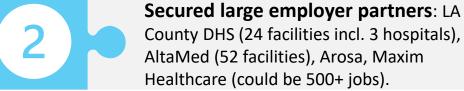
This is particularly crucial in addressing the negative impacts of COVID-19 on California regional populations.

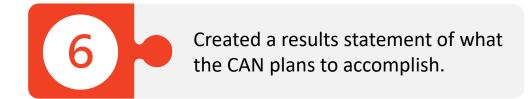
The Certificate of Completion Program will help to build a **healthcare-centric regional workforce** and demonstrate the value of hands-on skill development/in-person instruction.

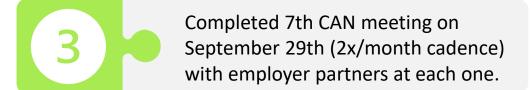
Initial Results for Allied Health CAN (June-Sept)

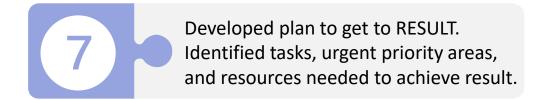


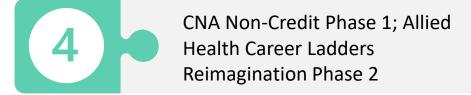


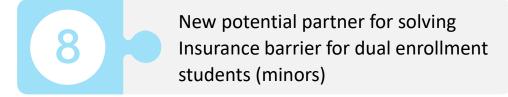












Allied Health Results Statement







Develop and implement a CNA program as an entry point to a successful career and educational pathway in healthcare.

Curriculum begins Fall 2022

The program will be recognized and expand beyond the career model throughout the state of California, nationally and globally.

The program will accomplish this by working together collaboratively to promote effective outcomes (complete program, certificate, employment, and a livable wage) and mastering transferable skills.

Mapped Plan Phase 1



COSMETOLOGY CAN UPDATE

Charlene Brewer Smith

ECC, Cosmetology Professor

Debbie Perret

SMC Cosmetology Chair

Maria Morrish

Citrus Cosmetology Professor





Cosmetology CAN (working group)

Recent global events have changed the way career education (CE) is delivered

- This presents an opportunity to better meet the needs of employers
- To infuse technology into programs that may not otherwise be clear candidates for innovation
- To ensure the decisions that community colleges in LA Region are student centric
- To assist the Los Angeles/Orange County community colleges in adjusting to new health and safety requirements prompted by the pandemic

3 Focuses

Direct care, due to legal and licensing requirements in which students must complete a certain number of clinical hours.

Demonstration of highly refined skills, which will also require readjustment considering the move toward online and/or hybrid instruction.

Applies to programs that require students to work with specialized equipment.

Cosmetology CAN Core Participating Colleges







Maria Fischer



Richard Allen



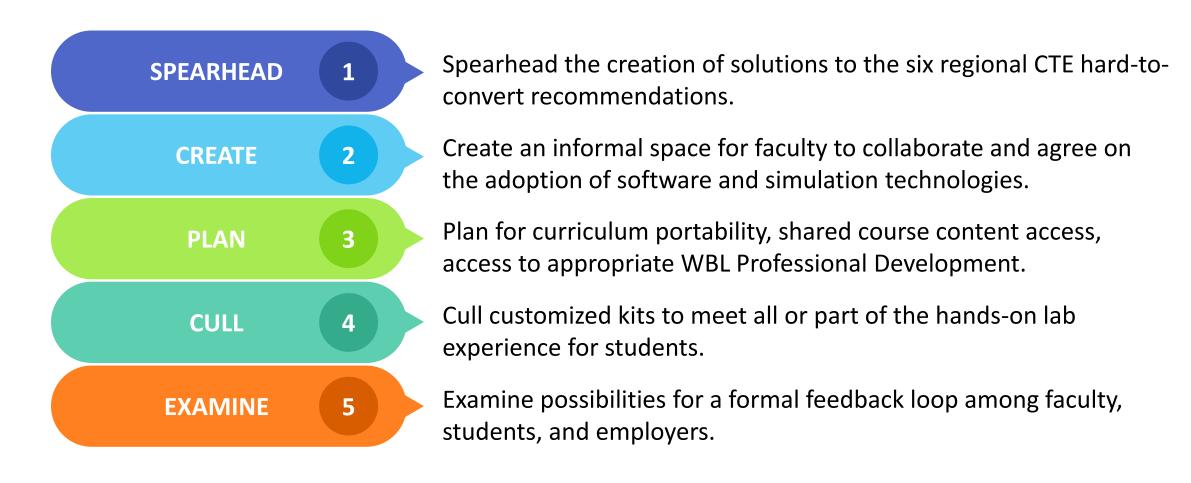




Rossi Petrova

Charlene Smith

What Will The Cosmetology CAN Be Doing?





AFTER THE STORM

The Jobs and Skills That Will Drive The Post-Pandemic Recovery

Dr. Amanda Bolton

Senior Strategist, BrandIQ





Five Distinct Fields Will Shape The Post-Pandemic Recovery

THE LOGISTICS ECONOMY

Supply chains failed under sudden new demands of pandemic.

Will be growth in advanced logistic skills, advanced manufacturing, and Internet of Things will become more critical to creating efficient & resilient chains.

THE READINESS ECONOMY

Pandemic has shown weaknesses in health care, cybersecurity, insurance & other fields that provide social resilience.

Roles like cybersecurity experts, software engineers, patient care, project managers and other organizers of work will be in demand.

THE AUTOMATED ECONOMY

Pandemic will likely accelerate adoption of automation & artificial intelligence. Employers will prioritize automation over hiring back low-value workers. Jobs developing—and driving—automation will thrive.

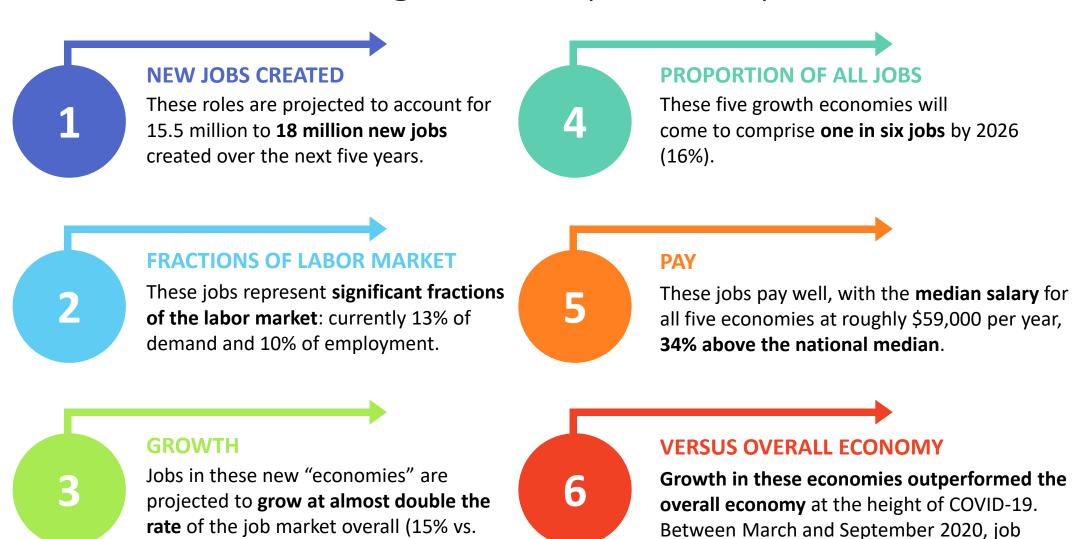
THE REMOTE ECONOMY

Shift to remote work forced by pandemic likely to be permanent. **Dependence on data, software, and networks will drive change**, while eventually artificial and virtual reality will play a larger role.

THE GREEN ECONOMY

Ambitious climate goals & incentives speeding up Nation's energy system to renewables.

Burning Glass - Key Takeaways



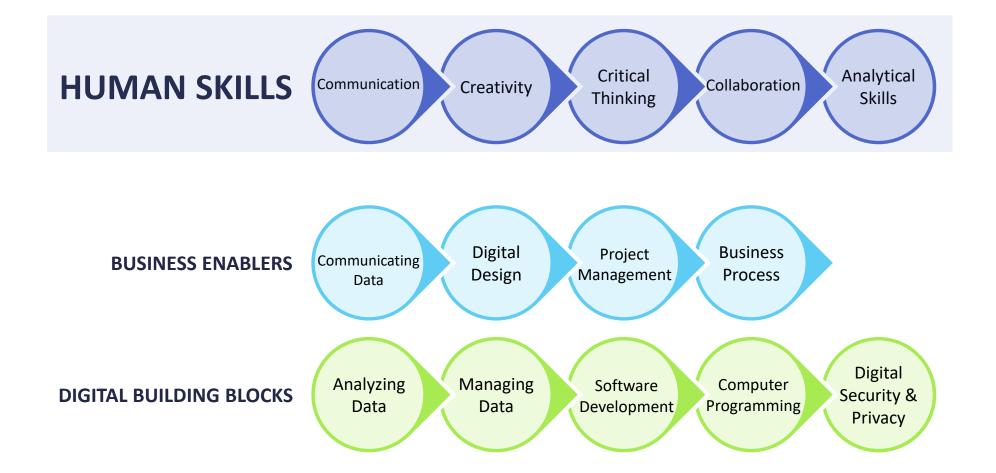
8%).

burningglass

postings in these economies were up 11% even

as the overall market fell -12%.

14 Foundational Skills Key for All Graduates





Implications



Government financial aid can be structured to encourage working learners to pick up individual skills as needed, rather than drop out of the workforce to gain a degree.

By leveraging the skills likely to drive the recovery, policy can encourage faster, more equitable growth.

Shortages of key skills can create bottlenecks that can slow a recovery.

If employers see these skill demands on the horizon, they can both create more effective talent pipeline externally and internally, preparing their workforces to switch to new and promising technologies. We have a higher education system that is still primarily focused on providing degrees to traditional students.

A more flexible, bite-sized approach could give community colleges the chance to broaden its base and meet the needs of these new economies.

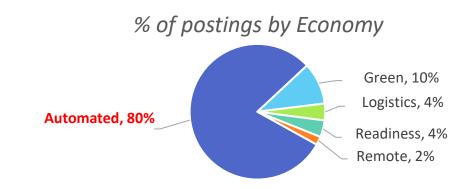




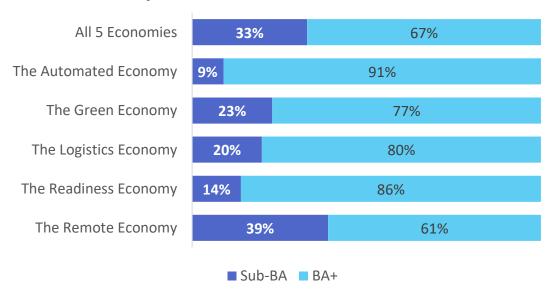
CENTERS OF EXCELLENCE Initial Lens on Localized Relevance

25%

of online job postings in LA County were within one of the five Recovery Economies (260,628 of 1,037,378 online job postings in 2020)



156,914 (60%) of these postings required a *minimum education level*



Top Skills Shared by ALL Recovery Economies

- ✓ Customer service (57,672 postings)
- ✓ Sales (51,077 postings)
- ✓ Scheduling (41,079 postings)
- ✓ Budgeting (28,880)



OUTRO

Dr. Amanda Bolton

Next Steps

- The slides from today will be emailed to each of you next week
- If you are interested in playing a more active role in the Innovation Hub, please reach out to BrandIQ, abolton@brandiq.biz
- Advocate for the Faculty Innovation Hub at your college
- CAN working groups Allied Health and Cosmetology will be receiving communication from BrandIQ next week.
- Next Retreat Winter 2022, Desert





LARC Faculty Innovation Hub: Summary

11/18/2021

The Jobs and Skills That Will Drive The Post-Pandemic Recovery



Green Economy

Sustainability
Architecture &

Interior Design



Readiness **Economy**

Public Health (e.g., contact tracing)



Logistics **Economy**

Programming



Remote Economy

Work-from-Home Flexibility



Automated Economy

A.I.

Predictive/Big Data

Programming

Robotics

Implications for Center of Education

- Nationally recognized industry-specific certifications or badges to help in career progression
- Position students for career readiness, not just transfer; demonstrate value to employers even without B.A./B.S.
 - o Industry-relevant technical skills AND soft skills (e.g., communication, language studies, etc.)
 - CC can meet the increasing demand of residents who wish to upskill
 - Work with Employer Partners to discern specific skill sets
 - What does Stackability look like?
 - Data Literacy across all pathways
- Increase understanding of CE's role
- Flexibility
 - Leveraging Guided Pathway Clusters
 - Break down Credit -vs- Non-Credit barriers
- Bridge connection between High-Touch & Automation

Faculty Questions for the COE

How do we tie curriculum to 5 New Economies?
What are the Foundational Skills?

Can CC support the advanced training the 5 New Economies require?

How do we train soft skills?

How do we produce novel solutions around accounting, team teaching, and internal competition for resources?

How many jobs and age groups are needed?

Faculty Questions for the COE



Given the Great Resignation, where are people going? What do they wish to learn?



What jobs are there for community college students? Are they appealing?



Who is getting hired? Can funding be better secured if we can track employment?



Could Automation apply to any industry?

Necessary KSAOs

- Emotional Intelligence
- Active Listening
- Empathy & Compassion
- Plain Language & Relatability
- Customer Service & Retention
- Basic Coding Skills
- Financial Skills
- Resume-creation
- Maintenance of Psychological & Physical Well-Being



The role of LARC WEDD & Faculty Innovation Hub

- Lead projects
- Bringing people together with Purpose
- Giving Faculty Members a voice
- Space for Collaboration
 - Integrating empathy into collaborative efforts & translating that into classrooms
 - Pool together all the colleges
 - Showcase work, faculty and employer discussions
- Grants for seed money. (i.e., Good Jobs Challenge)
- Secure large regional employers
 - Changing employers' minds of what a community college student can do for them
- Internship Clearing House

Initial Curriculum Project Ideas

Creating Pre-designed Modules on Specific Topics/Soft Skills (e.g., empathy)

- Applicable to all industries
- All colleges could use them
- Faculty & Students could collaborate
- Pull in GE faculty to integrate into soft skills modules

Partner with Industry already in the space

- No need to reinvent the wheel
- Define it more on what we are doing
- Assess needs & suggestions for improvement
- How to use industry products for specific needs

Appendix -

5 New economies Discussion Deep Dives

What 5 New Economy Areas and suboccupational areas are most relevant to the 19 LA community colleges?

- Green Economy: Architecture & Interior Design, Sustainability
- Readiness Economy: Public Health –
 Contact Tracing

Exercise 1 GROUP: AMANDA

What are some implications for CE?

- Least prepared in Automated Economy
- Have not bridged connection b/t high touch & automated; need to figure out how high touch plays into automation
- Could help in readiness economy to help students be more prepared to launch, engage with companies & get jobs
- Need for nationally recognized industry specific certifications and/or badges that can help get jobs or further career
- Students will need to be positioned for careers (as opposed to be positioned for transferred) because that's what is done in CE
- Reposition students as of value to employers, even if job doesn't require BA
- CE programs need to create technical skills that employers are looking for
- Concerned that there will not be support/funding for other industries not included in the 5 New Economy Areas. There are legacy technologies that programs are built on.
- Lack of understanding of CE. CE at the heart of the diversity initiative.

What are the questions you have as faculty for the COE as they continue to analyze the data?

- Who is getting hired and how can we track those students? Can we get a better way to track employment? How can we track entrepreneurship across trades since they don't get tracked with EDD data?
 - Can secure more funding if students are tracked better
- What jobs are there for community college students? Recovery areas are so broad, hard to determine where their students can fit in. Difficult to translate the economies into something the student would want/appealing to student.
- Automation could apply to any industry. Need to be more specific.

BA+ and Sub BA-what are the skills needed?

- CE students at community colleges will not just be technical experts but will have broader appreciation/understanding of context (creation of a more well-rounded student)
- Communication: Being able to articulate yourself, sell your ideas, communicate what you are doing especially if we are working remotely
- Customer service: Have to be able to land & keep customer, learning how to evaluate customer/client, assessing their needs, how will you move forward with providing service of what they will need
 - Emotional intelligence, listening skills, empathy/compassion, plain language when relating to people
- Basic coding skills
- Financial skills: When you make money, what do you do with it? Understand what to charge, what overhead is. Knowing how to make money
- Legalities/OSHA of different industries/quality control
- Maintaining physical & mental health

Exercise 2-GROUP: AMANDA

What could the role of the LARC WEDD & Faculty Innovation Hub be? What might be good places to focus?

- To lead projects
- Giving faculty members a voice
- Space for collaboration integrating empathy into collaborative efforts & translating that into classrooms

Any ideas for initial curriculum projects? (opportunity areas)

- Creating pre-designed modules on specific topics/soft skills (e.g., empathy).
 Could be applicable to all industries. All colleges could use them.
 - Faculty & students could collaborate
 - Can pull in GE faculty to integrate into soft skills modules
- Partner with industry that is already in the space. Don't need to reinvent the wheel. Define it more on what we are doing, assess needs, suggestions for improvement. How to use industry products for specific needs.

What 5 New Economy Areas and suboccupational areas are most relevant to the 19 LA community colleges?

- Logistics and Remote: already offered at C.C. so can be low hanging fruit
- Anything with A.I. predictive data;
 recognize trends with a lot of data
- Green will continue to grow; to sustain as a business you need to be more green

Exercise 1 - GROUP: IVAN

What are some implications for CE?

- Some people don't know the foundation of learning; CC can teach them the foundation
- We need to steer away from transfer and get them into the workforce
- People are coming back to CC to upskill but also to fill in the gaps/fill in the blanks
- For language studies, people come back to CC to brush up in a language or make themselves more marketable
- Students and teachers don't know what the jobs of tomorrow are; but we do need to teach soft skill; soft skills are embedded in language classes
- A lot of students don't have communication skills: rude, on phone all the time, etc
- Online courses create accessibility to education/upskilling
- CTE course do teach soft skills in classes
- Adding the human element in courses teaches important soft skills

What are the questions you have as faculty for the COE as they continue to analyze the data?

- How many jobs, and age groups, are needed: **age data will help us**
- "The Great Resignation" people like working remotely now; people don't want to commute to work/go to school now that they can from home – people are quitting jobs because they don't want to go back to a place of employment: Where are they going to go? What do they want to learn?
- The 5 economies seem like advanced training; more than Community College training

Exercise 2-GROUP: IVAN

What could the role of the LARC WEDD & Faculty Innovation Hub be? What might be good places to focus?

[INSERT TEXT HERE]

Any ideas for initial curriculum projects? (opportunity areas)

[INSERT TEXT HERE]

BA+ and Sub BA-what are the skills needed?

- Soft Skills! C.C. can teach soft skills before transferring. C.C. can teach soft skills
- Going the traditional path doesn't teach you how to write a resume
- C.C. has the ability to tell student there are different options for them

What 5 New Economy Areas and suboccupational areas are most relevant to the 19 LA community colleges?

[INSERT TEXT HERE]

Logistics – Amazon buying property near Mt SAC

Infrastructure - the development of the Alameda corridor, rail, road along the 710

Programming, Robotics, Common Degree – "Automation" – Everything Connected to Logistics.

New BA's in New economies if not present at CSU's. New Pathways and partnerships with employers.

8-14 Colleges have Engineering

Exercise 1 - GROUP: MIKE

What are some implications for CE?

[INSERT TEXT HERE]

Flexibity – to move seamlessly designing core skill sets to move more NIMBLY into other pathways (leverage Guided Pathways clusters

Work with Employer partners to know what those skill sets are

Leverage and Lean into Non-Credit for this and transition to credit when appropriate. Break down the barriers between credit and non-credit faculty and have collaborative conversations (think ESL)

Data across ALL industries - What is stackability? --- Data literacy in EVERY PATHWAY — Future Soft Skill; Microsoft Office Suite too!

Exercise 1 - GROUP: MIKE

What are the questions you have as faculty for the COE as they continue to analyze the data?

COE data often does not connect directly to the disciplines. Then how do you tie the curriculum to these 5 Economies.

Desire to Train Soft skills, and have depts that COULD do it. **However, usually mapping disciplines does match well with the bundles**.

Clean the disciplines first!! Align the disciplines to the New Economy. (but they are designed today for the old economies. Challenge: this is not how people and disciplines are regrded today.

We need Novel solutions around accounting, team teaching. Solve internal competition for resources. This is for the chancellors office.

CCCCO Industry Sector Crosswalk-Go down to Learning Module Level

COE/BrandIQ sits at the center of all this. (think Rosetta Stone) We don't have GREEN economy people at colleges to even talk to. The support organizations are better placed to have these conversations.

What are the foundational skills that make a person competent with skills in a New Economy.? Mapping programs to new Economies. Many programs and disciplines need to come together for the ONE student. MANY to ONE.

BA+ and Sub BA-what are the skills ne	Shaha.

[INSERT TEXT HERE]

Exercise 2 - GROUP: MIKE

What could the role of the LARC WEDD & Faculty Innovation Hub be? What might be good places to focus?

Grants for seed money. (ie Good Jobs Challenge)

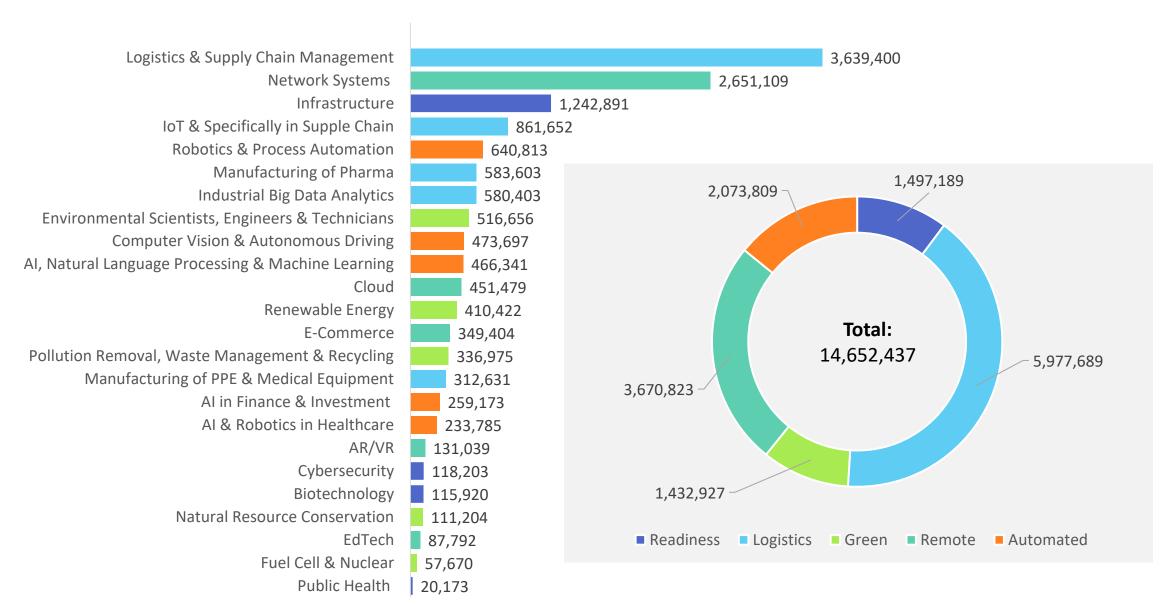
Also, Large regional employers.

Bringing people together with purpose. What is the thing that is getting people together? Everyone agrees that internships WBL and other applied learning are super important. INTERNSHIP CLEARING HOUSE. Showcase work, faculty and employers discussing together. Pool together all the colleges. Changing employers' minds of what a community college student can do for them.

Any ideas for initial curriculum projects? (opportunity areas)

[INSERT TEXT HERE]

Specific Jobs That Will Drive The Recovery By Economy



The Remote Economy: CE Jobs

E-Commerce (365,504)

Laborer / Warehouse Worker

\$25,181 (2020 JOBS: 217,871)

Lifting Ability

Inventory Associate

\$26,760 (2020 JOBS : 147,633)

- E-Commerce
- Lifting Ability

Network Systems

Computer Operator

\$41,066 (2020 JOBS: 3,273)

- ServiceNow
- Performance Management
- Software Maintenance

Cloud

Repair / Service Technician

\$88,526 (2020 JOBS : 649)

- ServiceNow
- IBM Cloud
- Microsoft Visio

AR/VR

Customer Service Representative

\$39,698 (2020 JOBS : 128)

- Virtual Reality (VR)
- Graphics Processing Units (GPU)
- Key Performance Indicators (KPIs)

EdTech

Bookkeeper / Accounting Clerk

\$38,096 (2020 JOBS : 36)

- Accounts Payable / Accounts Receivable
- Customer Checkout

The Green Economy: CE Jobs

Renewable Energy (19,433)

Solar Sales Representative

\$41,097 (2020 JOBS: 12,089)

- Renewable Energy
- Energy Sales
- Energy Consulting

Solar Installer

\$33,761 (2020 JOBS: 7,344)

- Roofing
- Solar Systems
- Electrical Work

Environmental Scientists, Engineers, and Technicians

Environmental Technician

\$34,387 (2020 JOBS: 10,244)

- Performance Analysis
- Process Control
- Emissions Monitoring

Pollution Removal, Waste Management, and Recycling (10,975)

Water Treatment Specialist / Waste Water Operator

\$39,464 (2020 JOBS: 6,783)

- Plant Safety
- Ion Exchange
- Analytical Testing

Hazardous Materials Worker

\$35,042 (2020 JOBS: 4,192)

- Debris and Litter Control
- Equipment Maintenance

Natural Resource Conservation

Forest / Conservation Technician

\$35,855 (2020 JOBS: 5,013)

- Disaster Response
- Database Management
- Survey Instruments

Fuel Cell and Nuclear

Power Distributor / Plant Operator

\$53,128 (2020 JOBS: 928)

- SQL
- Data Warehousing
- Extraction
- Transformation and Loading (ETL)
- Schematic Diagrams

The Logistics Economy: CE Jobs

Logistics and Supply Chain Management

Warehouse / Distribution Supervisor

\$39,293 (2020 JOBS: **7,009**)

- Operations Management
- Process Improvement
- Key Performance Indicators (KPIs)
- Third-Party Logistics (3PL) Programs

Manufacturing of Pharma

Laboratory Technician

\$35,878 (2020 JOBS: 2,508)

- Inventory Management
- Inventory Control
- Informed Consent Procedures

Industrial Big Data Analytics

Customer Service Representative

\$33,543 (2020 JOBS: 2,342)

- Big Data Analytics
- Big Data
- Business-to-Business

IoT and Specifically in Supply Chain

Production Worker

\$32,407 (2020 JOBS: 1,437)

- Quality Assurance and Control
- Information Security
- Electromechanical Assemblies

Manufacturing of PPE and Medical Equipment

Production Worker

\$28,350 (2020 JOBS: 1,428)

- ISO 14001 Standards
- Quality Management
- Ergonomics

The Automated Economy: CE Jobs

Robotics and Process Automation

Repair / Service Technician

\$46,762 (2020 JOBS: 3,284)

- Performance Analysis
- Conveyor Systems
- Electrical Diagrams / Schematics
- Technical Support
- Servo Drives / Motors

Robotics Technician

\$46,316 (2020 JOBS: 3,168)

- Microsoft Operating Systems
- SQL
- Conveyor Systems
- Oscilloscopes
- Servo Drives / Motors

Computer Vision and Autonomous Driving

Automotive Service Technician / Mechanic

\$51,026 (2020 JOBS: 2,114)

- Business Development
- Vehicle Inspection
- Customer Contact
- Repair

AI, Natural Language Processing, and Machine Learning

Automotive Service Technician / Mechanic

\$73,962 (2020 JOBS: 283)

- Artificial Intelligence
- Python
- Machine Learning

Medical Coder

\$52,528 (2020 JOBS: 8)

- Speech Recognition
- Coding Quality

The Readiness Economy: CE Jobs

Infrastructure

General Engineering Technician / Technologist

\$52,868 (2020 JOBS: 2,626)

- Welding
- Masonry
- Nondestructive Testing (NDT)

CAD Designer / Drafter

\$48,329 (2020 JOBS: 2,430)

- Geographic Information System (GIS)
- Information Systems
- Land Survey
- Computer-Aided Design (CAD) Software

Public Health

Registered Nurse

\$63,943 (2020 JOBS: 748)

- Influenza
- Anesthesiology
- Communicable Disease knowledge

Biotechnology

Production Worker

\$38,036 (2020 JOBS: 389)

- Cell Culturing
- Chemical Engineering
- Bioreactors