

# NICE Webinar Series

NATIONAL INITIATIVE FOR CYBERSECURITY EDUCATION



The Credentialing Economy and What It Means for Cybersecurity Skills

January 19, 2021



CLAIRA

# Story

Digital Economy - Summit Recap Labor Market

Competency Project

Hiring - BASIC



# Summit on the Credentialing Economy

April 2018

Purpose and goals? Themes, attendees,  
energy.

Trust and Verify: Aligning Supply and Demand

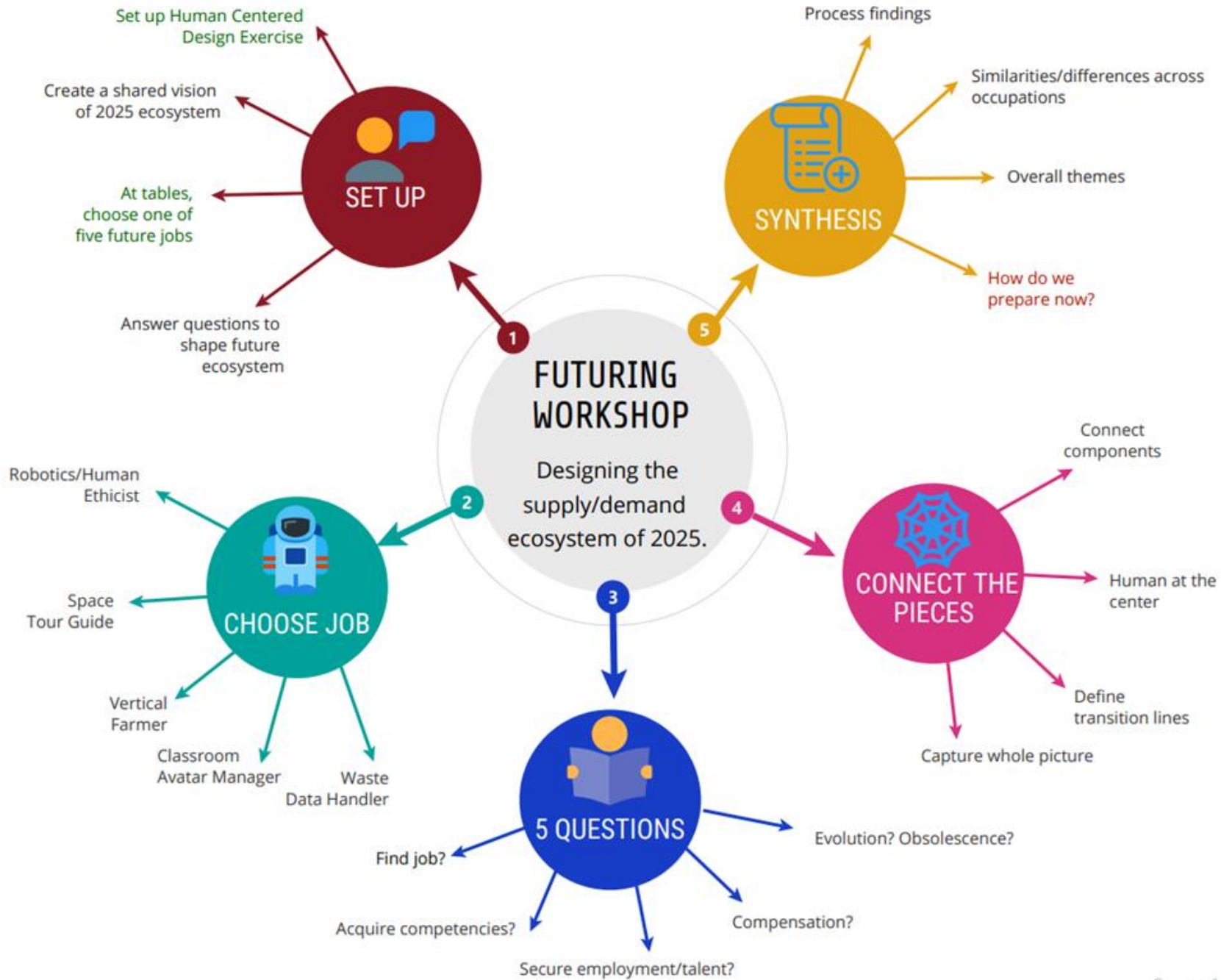
Credentials as Currency: The New Language  
in the Labor Market

Innovation/Disruption: Empowering Learners  
and Disrupting the Status Quo

Cyber?



# The Process



*Technology will create jobs we can't even conceive of yet. 60% of occupations in 2025 will be new. The five examples chosen for the exercise are already emerging and/or very likely to be in high demand in the next 2-3 years.*



### **ROBOT/HUMAN ETHICIST**

With the rise of cloning and other ethically dubious practices, ethicists will be needed to ensure humane progress.



### **SPACE TOUR GUIDE**

Space tourism will be a rising industry where tour guides work to help people live in lunar outposts.



### **VERTICAL FARMER**

In the future, 80% of the earth will be urban, resulting in the necessity to farm straight up to maintain biological balance, optimize space and increase food supply.



### **WASTE DATA HANDLER**

Data is the new commodity and currency. Think of an IT person for information. Waste data handlers will destroy data.



### **CLASSROOM AVATAR MANAGER**

Intelligent avatars replacing classroom teachers, but the human touch will be needed to properly match teacher to student.







## The Competency Project

Purpose and goals Dashboard

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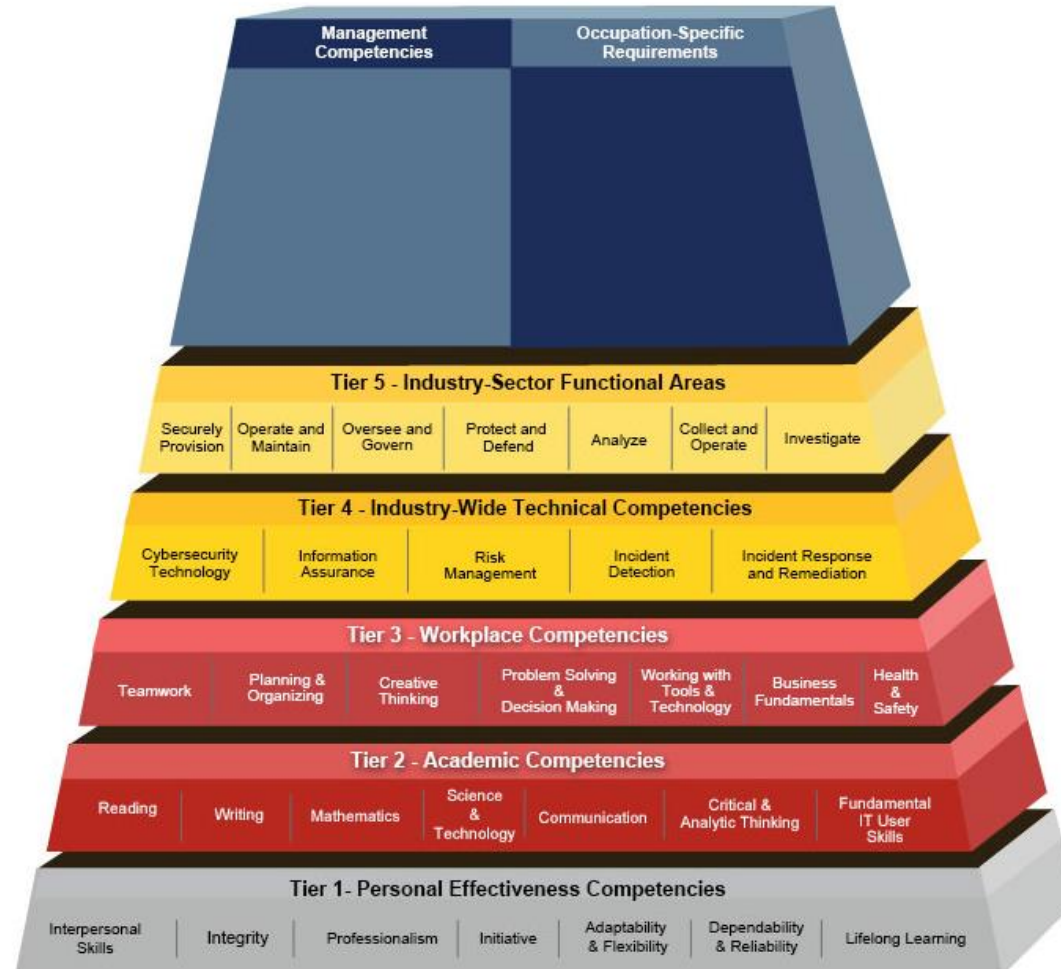
Trends Drivers



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**Cybersecurity  
Competency Model**

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**BASIC Grant**

What we did How?

IT/OT

Manufacturing Energy

Cyber v cyber





Connecting people to work is slow, expensive, biased and imprecise.

# Solution



**Workers select  
what they can do.**

**Employers select  
what they need.  
Claira does the rest.**

# Only Clairra



## PRECISION

Clairra competencies > skills

Skill = teamwork

Competency = demonstrates the ability to work in a diverse team

Industries share 70% of the same competencies. This allows Clairra to shift rapidly to keep up with demand.



## SPEED

Clairra cuts 65% off sourcing time by matching instantly.

Starting with what people can actually do cuts out the guessing and reviewing time.

This rapid, increased feedback drives engagement and network effects.



## DIVERSITY

The way to increase diversity is to hire it. Clairra gets them to the interview.

Removing degree screens and resumes increases diversity by 21%

Clairra's 1000 workers are unemployed, veterans, parents, immigrants.



- 76M people without a college degree in the American workforce
- 58M workers with no resume, not on a job site
- 52% of American jobs are middle-skill = HS diploma < @ < 4 year degree
- 69% of HR executives say their inability to attract this group negatively affects firm performance
- 87% of employers interviewed said 'big job sites' are frustrating and ineffective

# Lexi

She has two years of college

Certified Nursing Assistant

Instacart shopper

No LinkedIn, no resume

Has a long list of valuable  
competencies that are  
generating economic and  
societal value

Just like 44% of the  
American workforce

# Chris

HR small logistics company

Surge capacity since March

He can't fill jobs fast enough

He doesn't have time to write job descriptions, sift through  
resumes and interview

His drivers need a handful of very specific competencies and  
not a college degree

Just like 20M other American companies





# Use Case 1

Talent: Unemployed servers (hospitality)

Employer: Logistics

Grand Rapids, Michigan

## Common competencies

- Strives for efficiency in completing daily tasks.
- Thrives in a fast-paced, outcome-oriented environment.
- Appreciates flexible scheduling and overtime opportunities.
- Prioritizes safety and teamwork in all aspects of daily duties
- Manages point of sale software
- Adapts quickly to stressful and unexpected situations

27/35 interviewed

Company requested 30 more

13



# Katie Hall

Claira.ai

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Corporation for a Skilled Workforce

[skilledwork.org](http://skilledwork.org)



# Q & A

workcred

Connecting credentials,  
competencies, careers, customers

*an affiliate of ANSI*

## The Credentialing Economy and What it Means for Cybersecurity Skills

Karen Elzey, Associate Executive Director, Workcred

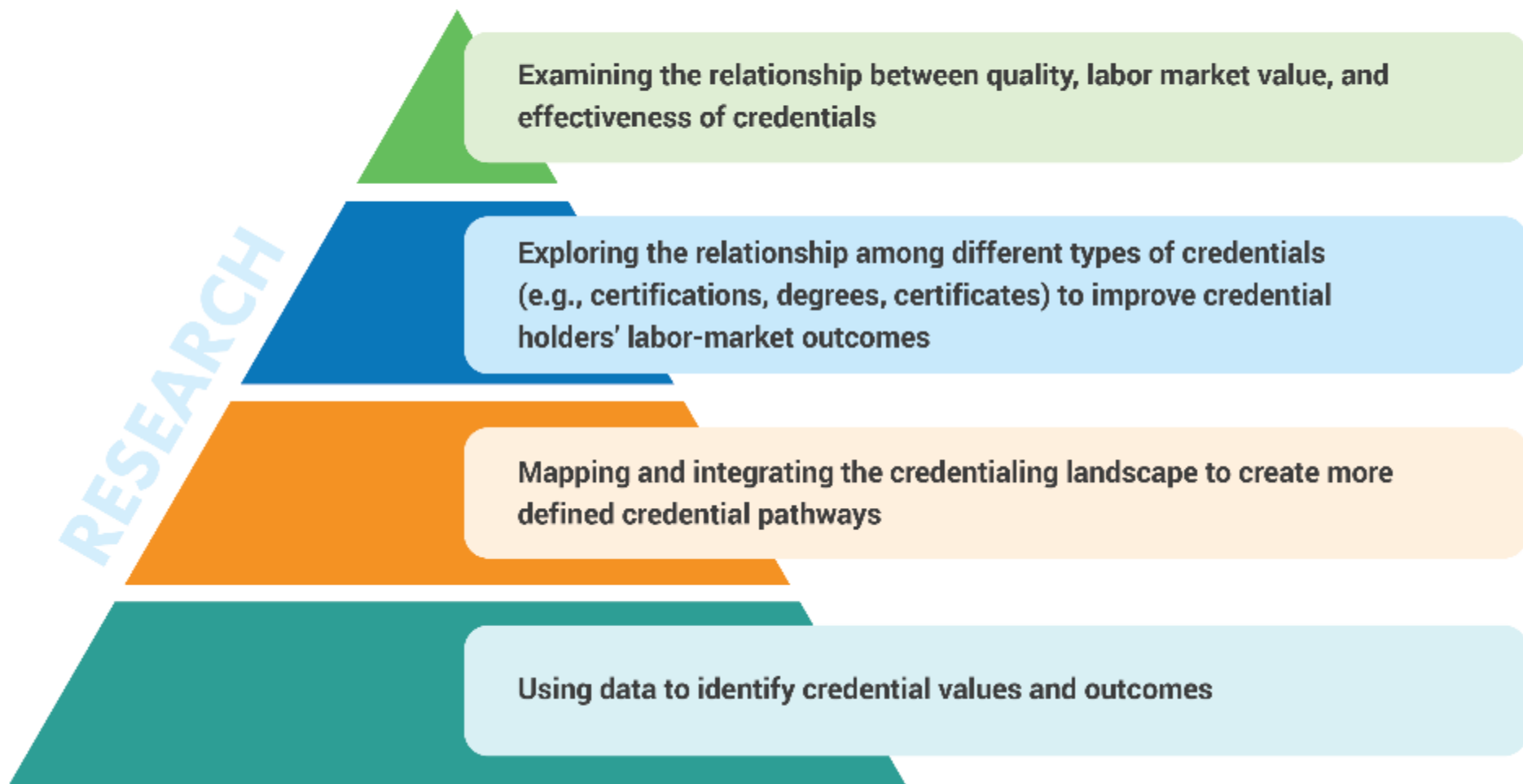
# Workcred Mission & Vision



**Mission:** To strengthen workforce quality by improving the credentialing system, ensuring its ongoing relevance, and preparing employers, workers, educators, and governments to use it effectively.

**Vision:** A labor market which relies on the relevance, quality, and value of workforce credentials for opportunities, growth, and development.

# Workcred's Areas of Research Interest



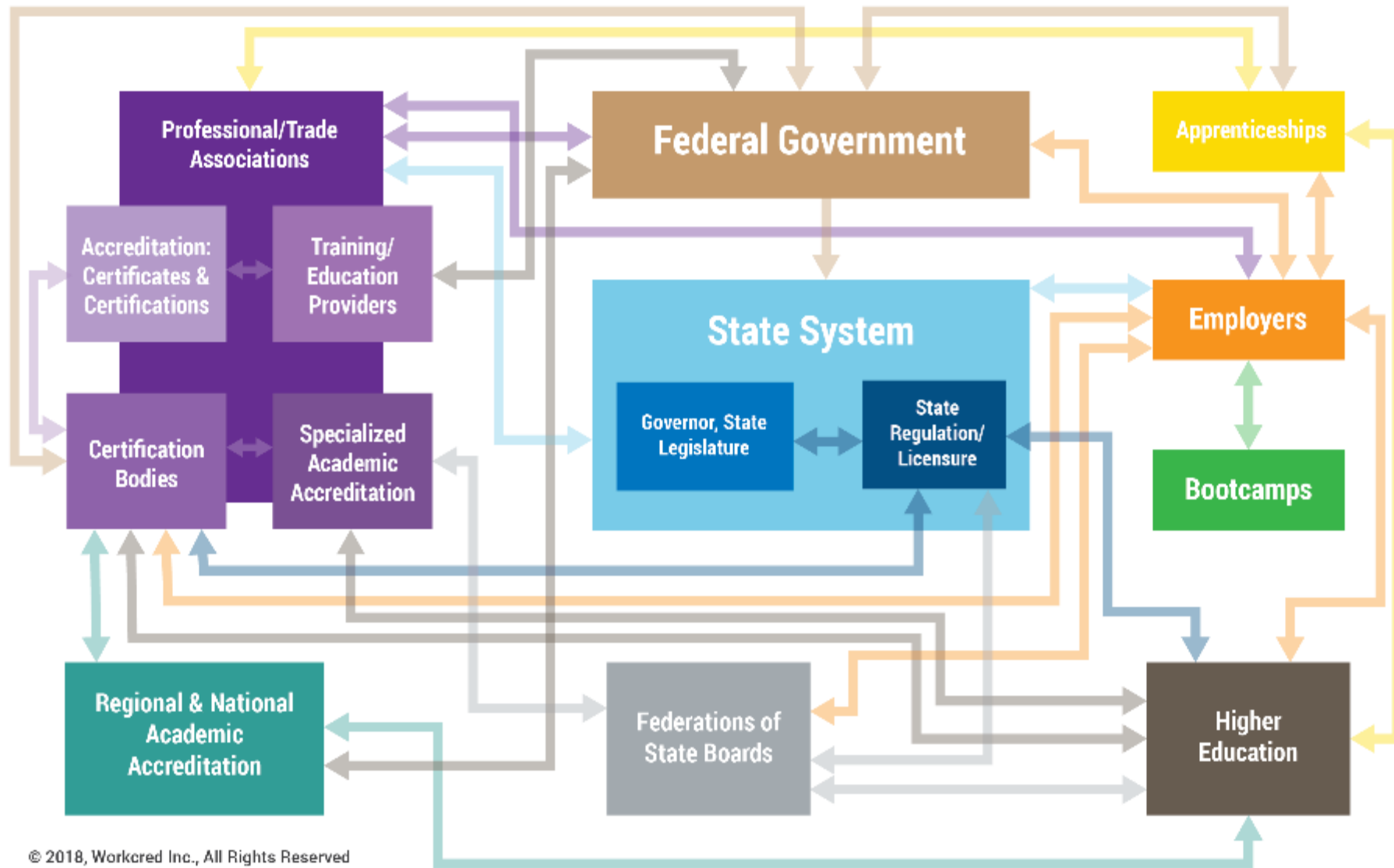
# THE CREDENTIALING SYSTEM



The credentialing system is a confusing maze.

Understanding how to navigate it can be difficult. [Workcred is here to help.](#)

# CREDENTIALING SYSTEM IN THE UNITED STATES



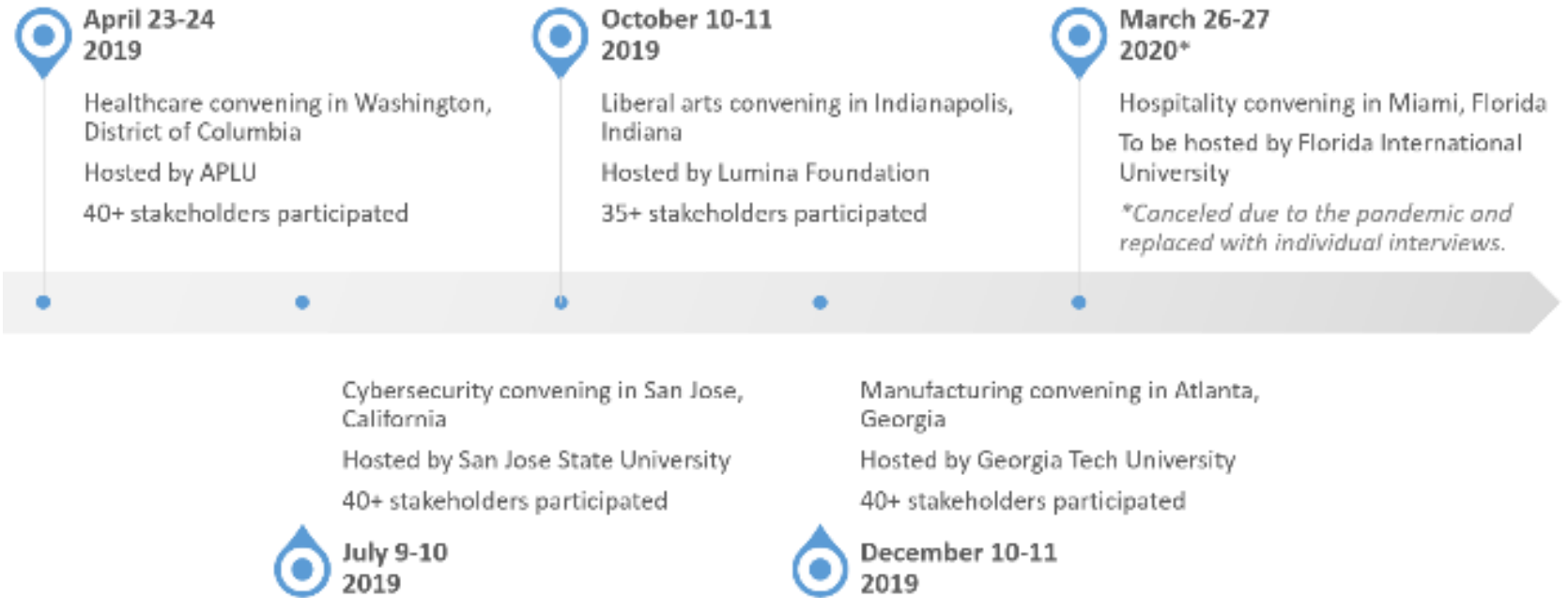
# How Do Credentials Differ?

	<b>CERTIFICATE*</b>	<b>CERTIFICATION</b>	<b>DEGREE</b>	<b>LICENSE</b>
Awarded by	Education and training providers, employers, labor unions, and industry associations	Industry certification bodies	Education institutions	Government agencies
Awarded for	An exam at the end of a training or education course or a one-time assessment	Third-party, independent competency assessment	Course of study	Meeting requirements of an occupation
Indicates	Education/ knowledge/skills	Skill mastery/ competencies	Education, successfully passed courses	Legal permission
Time to complete	Variable, generally less than 2 years	Variable	Variable, generally 2 years or more	Variable
Time and renewal requirements	Often no time limit, no renewal requirement	Time-limited, includes recertification	No time limit, no renewal requirement	Time-limited, renewal generally required
Revocation process	Cannot be revoked	Can be revoked for incompetence or unethical behavior	Cannot be revoked	Can be revoked for incompetence or unethical behavior
Examples	CNC Machinist, Zurich Insurance Apprenticeship	CompTIA Cybersecurity Analyst, Certified Energy Auditor, Medical Laboratory Scientist, MLS(ASCP) <sup>CM</sup>	Bachelor of Science in Engineering, Associate of Arts in Business Administration	Electrician, Professional Engineer, Registered Nurse
Standard for accreditation	ANSI/ASTM E2659-18, a globally recognized American National Standard	ANSI/ISO/IEC 17024:2012, an international and national standard	National, regional, or programmatic	State law defines scope of practice

\* There are many types of certificates. Some examples include: certificates of participation, certificates of achievement, certificates of completion for apprenticeship, and assessment-based certificates.

# EMBEDDING CERTIFICATIONS INTO BACHELOR'S DEGREE PROGRAMS

# Certification-Degree Pathways Project



# Cybersecurity Convening: Takeaways and Lessons Learned

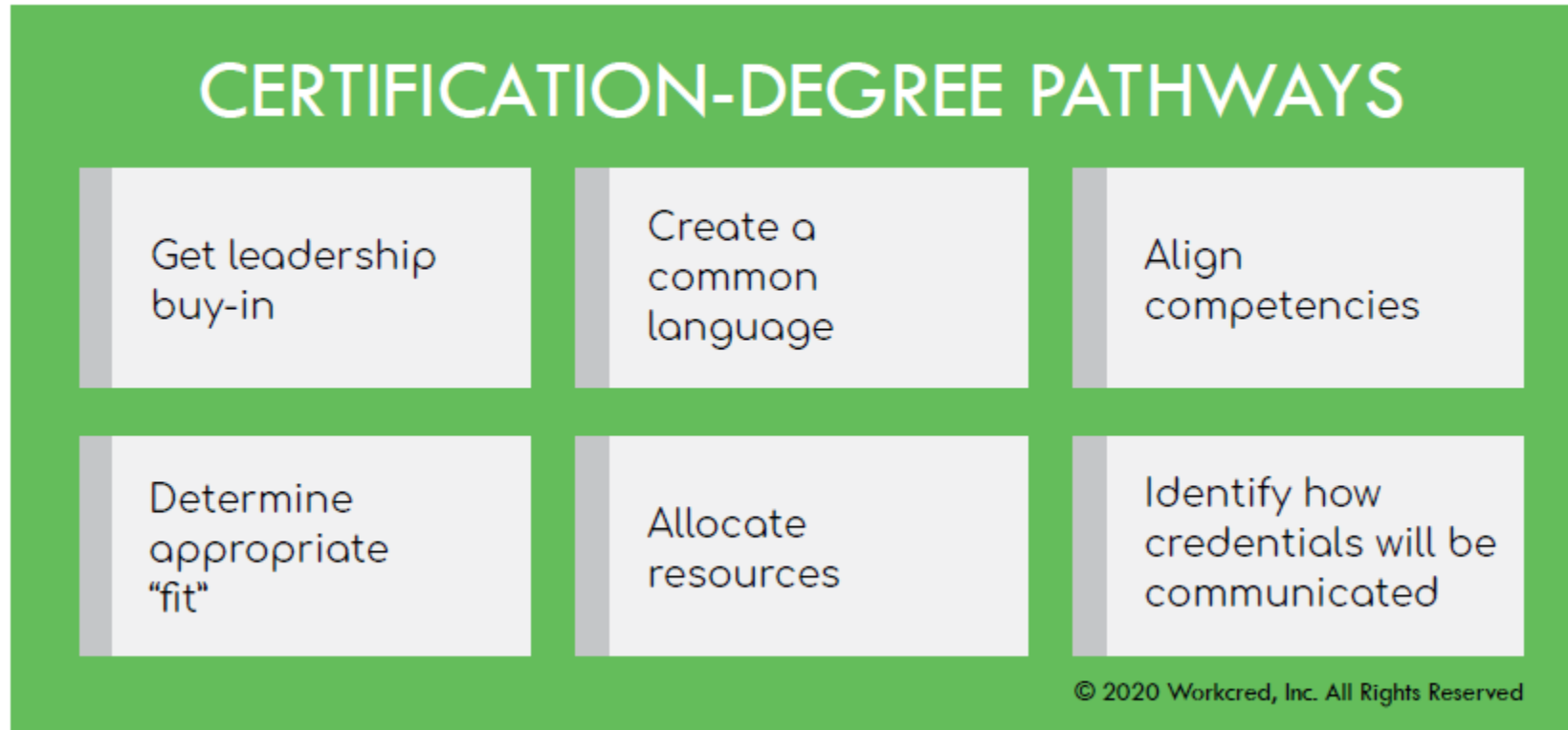
## Opportunities for Cooperation

- Deepening an understanding of certification bodies and how they do their work will help faculty to tighten the alignment between curricula and the job market
- There exists real possibilities for working with credentialing bodies to provide certification opportunities for undergraduates still in school to benefit from more employment opportunities
- Faculty know how to teach and are at the cutting edge of their discipline; certification bodies know knowledge, skills, and abilities (KSAs) and perform job task analyses (JTAs) to stay on top of employer needs; neither party is well-equipped to replace the other, yet their marriage can be incredibly fruitful

## Perceived Barriers

- The challenge of identifying which certifications matter to employers in order to prepare students for employment
- Clarity on return on investment of certifications are needed by universities, government, and students (e.g., will financial aid cover the cost of certifications?)
- Universities and certification bodies use different languages

# Certification-Degree Pathways Framework





# **WORKCRED'S GOVERNMENT CREDENTIALING NETWORK**

# Government Credentialing Network

**Participants:** Represent government agencies with active or developing credential programs

**Some of the objectives of the network are to identify:**

- Where, how, and why the federal government uses credentialing
- The various roles of industry and professional organizations in the creation of workforce credentials and the working relationships between industry and the federal government
- Federal credentialing models and share best practices to build more consistency among federal agencies
- Legislation and regulation affecting credentialing, and provide input to ensure consistency in credentialing terminology and concepts
- Trends and practices through the analysis of big data and new statistics from federal surveys
- The need for and create workshops/conferences focusing on federal agencies and credentialing
- Metrics for evaluating program effectiveness

for more information

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# Q & A

# Thank You for Joining Us!

**Upcoming Webinar:** “Top Ten Ways to Discover a Cybersecurity Career That Is Right for You”

**When:** Wednesday, February 17, 2021, 2:00-3:00PM

**Register:** <https://nist-nice.adobeconnect.com/webinarfeb2021/event/registration.html>

[nist.gov/nice/webinars](https://nist.gov/nice/webinars)