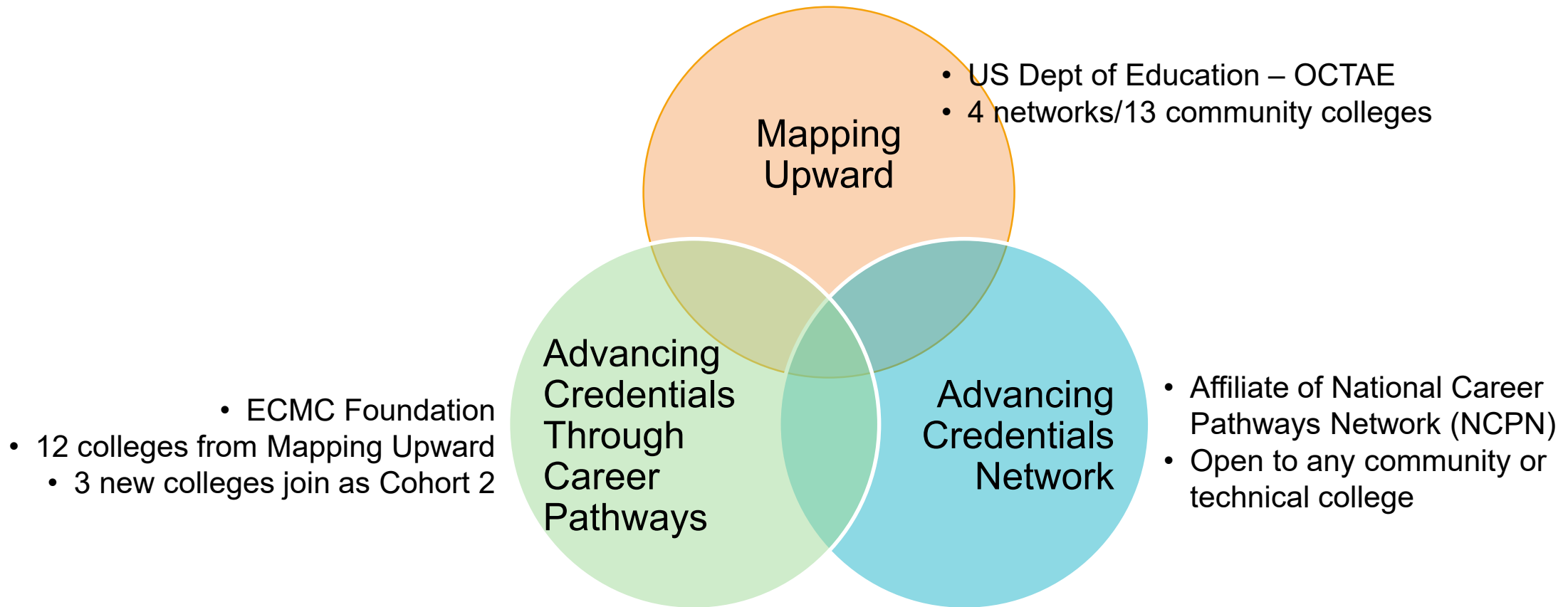


Advancing Credentials THROUGH Career Pathways



Where We've Been, Where We're Headed



Mapping Upward: ED-OCTAE

1. Build capacity of colleges to improve CTE credential attainment rates by offering stackable credentials, a series of shorter pathways to associate degree completion.
2. Help students progress along the education continuum; earn a postsecondary credential with labor market value.

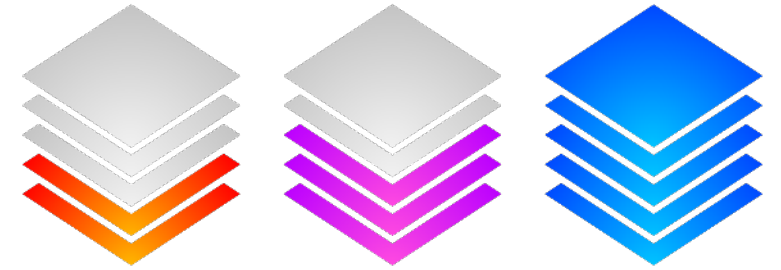


- ✓ Stackable credentials: essential ingredients in a career pathways system
- ✓ Advocates and partners are vital
- ✓ Local context trumps everything
- ✓ Many models – shape and reshape to work for your college



Characteristics of Stackable Credentials

- Developed through active employer engagement
- Responsive to labor market/talent development needs of region
- Link educational certificates to industry certifications
- Support diverse groups of learners
- Provide multiple entry and exit points
- Support work-and-learn models through flexible scheduling
- Provide credentials with labor market value on the path to a degree

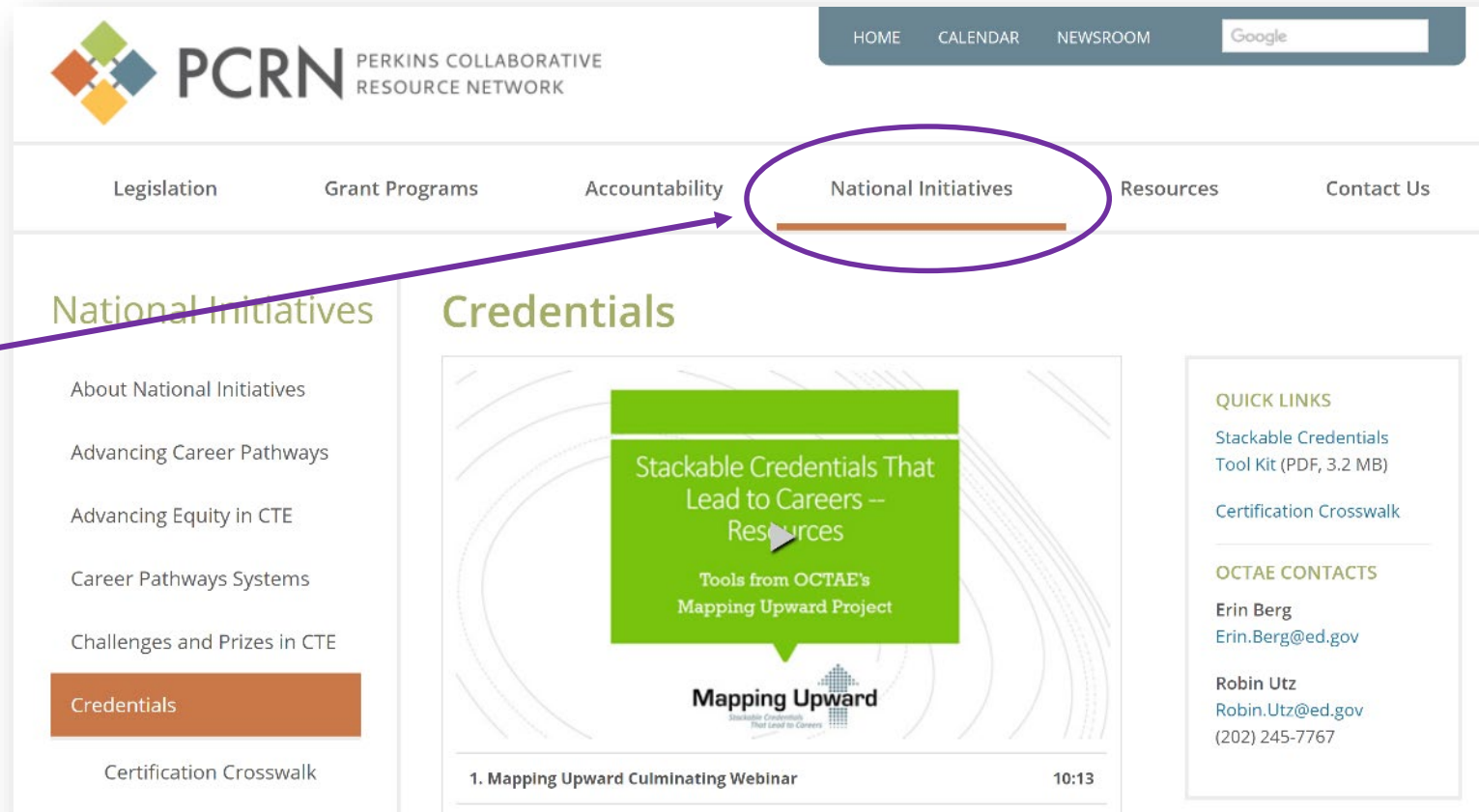


Tools and Resources

- Podcast Series
- Stackable Credentials Toolkit
- Tutorials

Online @ cte.ed.gov:

- > National Initiatives
- > Credentials



Advancing Credentials through Career Pathways

Three key focus areas:

1. Significantly enhancing employer engagement
2. Designing career pathways comprised of industry-validated stackable credentials
3. Establishing institutional policies or practices that support non-credit/credit integration

ECMC
Foundation



15 Cohort Colleges

CALIFORNIA:

Bakersfield College
Reedley College
Shasta College

ILLINOIS:

Rock Valley College

KENTUCKY:

Owensboro Community and
Technical College

MICHIGAN:

Oakland Community College

NORTH CAROLINA:

Catawba Valley Community College
Forsyth Technical Community College
Isothermal Community College
Mitchell Community College
Piedmont Community College
Robeson Community College
Rowan-Cabarrus Community College

PENNSYLVANIA:

Lehigh Carbon Community College
Luzerne County Community College

Advancing Credentials
THROUGH Career Pathways



Ongoing Support

- Technical assistance (TA) to address local needs; guided by action plan
- Dedicated TA coaches; targeted support from subject matter experts
- TA Institutes
- Coaching calls, webinars, workshops, site visits
- Online community of practice
- Toolkits and other resources



Statewide Collaboration Key for Small Programs

- Horticulture changing—environmental constraints, new technologies, customer preferences, labor market trends
- Not easy for small programs to keep up on their own.
- Partnered with peer colleges, industry association, and statewide faculty association in agriculture
- Sustainable Landscape and Landscape Arborist certificates and curriculum; embeds industry-recognized credentials leading to certification
- Approved as statewide model curriculum

**BAKERSFIELD
COLLEGE**



**Reedley
College**

**Shasta
College**

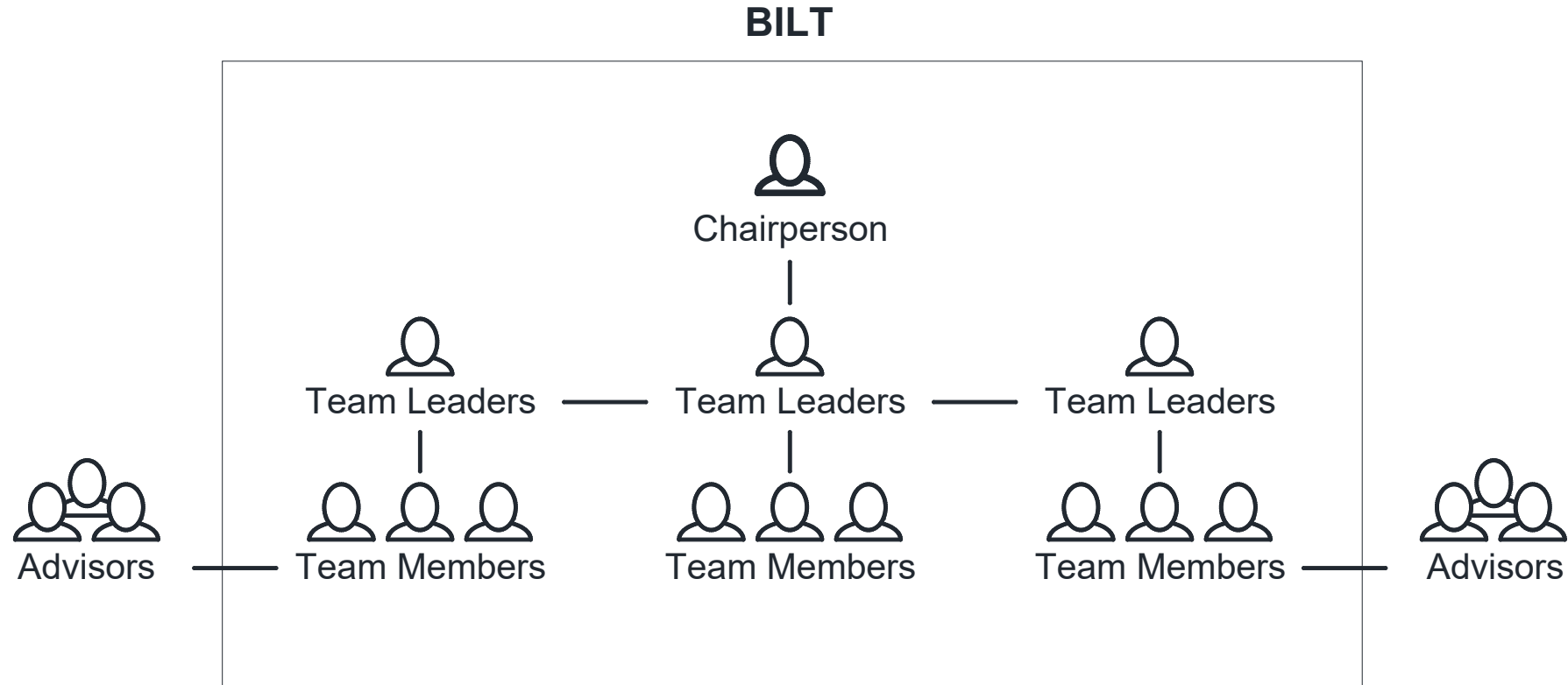


Reinventing Advisory Committees through BILT

- Past model: faculty-led industry advisory committee
- New model: Business Industry Leadership Team (BILT)
- Engage local industry to drive curriculum improvement, recruitment, and community engagement.
- Industry-led team includes chair and committees - critical to team's success and effectiveness
- New BILT collaborated to develop:
 - mission and vision
 - strategic plan/communications plan
 - annual focus area



Business Industry Leadership Team (BILT)



The BILT framework was used to engage a working group of industry partners to drive curriculum development, recruitment activities, and create experiential learning opportunities for students in Advanced Manufacturing programs.



Forsyth Tech's registered Learn and Earn Apprenticeship Program was created in partnership with BILT members as a means of promoting career opportunities in advanced manufacturing while building a talent pipeline for regional manufacturers.



Apprenticeship students upon completion of their summer pre-apprenticeship at Forsyth Tech's Lean Production Simulation lab.

David Dinkins
Department Chair, Advanced Manufacturing
ddinkins@forsythtech.edu



Instructor Jason Norman guides a student on the use of dial calipers during one of Forsyth Tech's pre-apprenticeship classes.

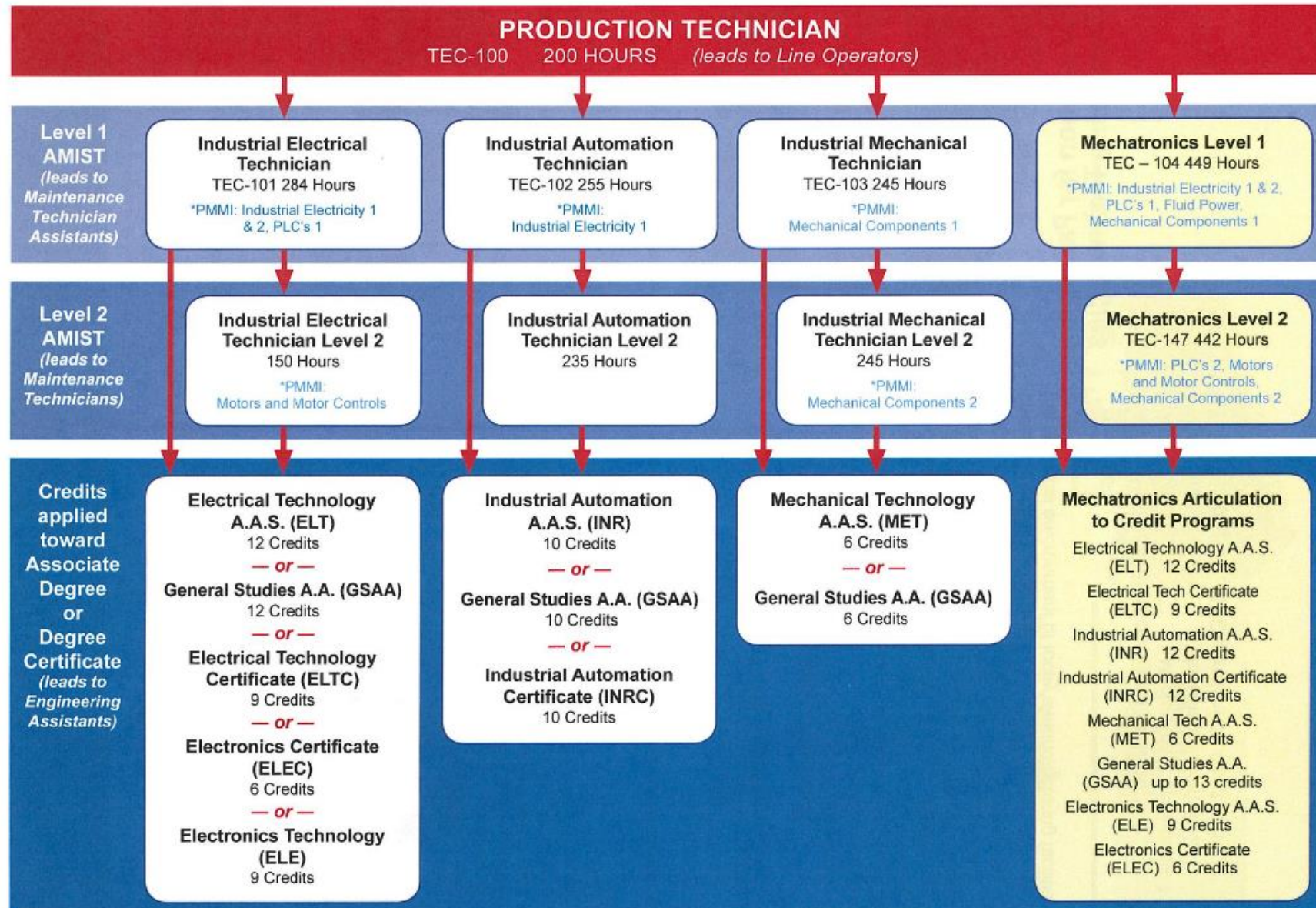
John Carstens
Dean, Engineering Technologies
jcarstens@forsythtech.edu



Forsyth Tech's LEAP apprenticeship students at the Fall 2019 signing ceremony.

Danielle Rose
Coordinator, Apprenticeships
drose@forsythtech.edu

ADVANCED MANUFACTURING TRAINING AND EDUCATION



Manufacturing certificates also available for PLCs, Pneumatics, Hydraulics, FANUC Robotics, Mechanical Drives and Manufacturing Simulation

*Course completers take the related standardized PMMI test(s)

Non-Credit/Credit Integration

- Relationship building—Cross serving faculty and noncredit instructors
- Shared advisory boards
- Faculty champions—As they saw noncredit students become successful support grew
- Programs physically situated in same hallway
- Re-organization of institution—Dean of Employer Engagement/Community Education seat at academic table
- Awareness that rigor was there to award selected credits
- Presently 12–14 credits carry into Industrial Automation, Mechanical or Electrical Technology AAS degrees and 30 credits articulate into a Technical Associates
- Institutional buy-in and belief

Co-Listed Courses

In order to meet the needs of learners in credit and non-credit programs, Mitchell Community College has been co-listing students from each side of the house into the same courses. These courses, listed below, have near or total matches for student learning outcomes. If a student decides to move into a curriculum program aligned with the work completed in continuing education, the College has awarded the appropriate credit.



Title	Con Ed Course ID	Curriculum Course ID
Automation, Intro to	ATR 3115 P35	ATR 112
Electrical: Residential Wiring	ELC 3119 H30	ELC 113
Electrical: Circuit Analysis 1	ELC 3014 H30	ELC 131
Electrical: Commercial Wiring	ELC 3119 H30	ELC 114
Electrical: Industrial Wiring	ELC 3119 H30	ELC 115
Esthetician 1	COS 3102 T75	COS 119 & COS 120
Esthetician 2	COS 3102 T75	COS 125 & COS 126
HVAC: Duct Systems	AHR 3131 H30	AHR 151
HVAC: Servicing	AHR 3131 H30	AHR 133
HVAC: Comfort Cooling	AHR 3131 H30	AHR 113
HVAC: Heat Pump Technology	AHR 3131 H30	AHR 114
HVAC: Heating Technology	AHR 3131 H30	AHR 112
HVAC: Intro to Refrigeration	AHR 3123 H30	AHR 110
HVAC: Refrigerant Certification	AHR 3128 H30	AHR 160
HVAC: Residential System Design	AHR 3131 H30	AHR 211
HVACR Customer Relations	AHR 3131 H30	AHR 180
HVACR Electricity	ELC 3014 H30	AHR 111
Manicurist/Nail Technician	COS 3101 T75	COS 121 & COS 222
Motors and Controls	MNT 3065 P35	ELC 117
Programmable Logic Controllers	ELN 3025 H30	ELN 260

Solutions	Challenges	Results
<ul style="list-style-type: none"> Faculty in courses that traditionally have lower enrollment are teaching at fuller loads. Students earning credit where it's due 	<ul style="list-style-type: none"> Process of awarding credit through the Registrar's office has not been seamless. Educating college entrance advisors on availability 	<ul style="list-style-type: none"> Decrease in course cancellations Fuller sections Faster completion of curriculum credential Decrease in student frustration because they've "already done this in another class" Increase in students transitioning from con ed to curriculum

For more information:

Dr. Camille Reese, creese@mitchellcc.edu



Online @ cte.ed.gov:

- > National Initiatives
- > Credentials



Stackable Credentials



Tool Kit



Prepared by

Center for Occupational Research and Development
in partnership with
Social Policy Research Associates



Prepared for

Community College Career & Technical Education (CTE) Stackable Certificates Initiative
U.S. Department of Education
Office of Career, Technical, and Adult Education

April 2018

Mapping Upward

*Stackable Credentials
That Lead to Careers*



Mapping Upward

CAREER PATHWAY

GATEWAY TECHNICAL COLLEGE

Accounting

Previous Credit

There are many opportunities, both in high school and through previous college, work, and/or military experience, to earn credit at Gateway.

For more information about earning credit in high school and opportunities for credit for prior learning, please see reverse side.

Certificate

Payroll Assistant (12 Credits)
Potential Jobs:
- Payroll Assistant
- Time & Attendance Clerk

Median Income**
\$17.60 per hour
\$36,700 annually
**Based on locally reported wage data

Tax Preparer Assistant (11 Credits)
Potential Jobs**:
- Tax Preparer
- Tax Associate
*Potentially seasonal employment

Median Income***
\$22.86 per hour
\$47,540 annually
***Based on locally reported wage data and potentially seasonal employment

Technical Diploma

Accounting Assistant (28 Credits)

Potential Jobs:
- Accounting Assistant
- Accounting Clerk

Median Income:
\$17.90 per hour
\$37,232 annually

Students who complete this program are prepared to earn industry-recognized certifications, including:
- QuickBooks Certified User
- Microsoft Office Specialist - Excel

Associate Degree

Accounting (63 Credits)

Potential Jobs:
- Accounting Associate
- Bookkeeper
- Staff Accountant

Median Income**
\$23.08 per hour
\$48,006 annually
**Based on locally reported wage data

Bachelor's Degree

Transfer up to 63 credits via existing articulation agreements with colleges such as:

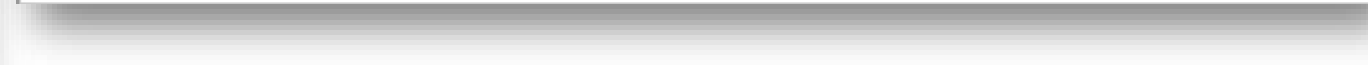
- Cardinal Stritch University
- Herzog University
- Lakeland College
- MSOE
- UW-Cedarburg
- UW-LaCrosse
- UW-Parkside (2x2 agreement)

Salaries and employment data for the Gateway jobs are courtesy of OES.

gtc.edu/accounting

Download a PDF of this career pathway map.

21



Tutorials

- **Tutorial 1:**
Exploring Credit for Prior Learning
- **Tutorial 2:** Breaking Down Silos to Build In-demand Pathways
- **Tutorial 3:** Learning What Works:
Data and Documentation in an Evidence-based World



Podcasts

- **Podcast 1:** Implementing and Sustaining Stackable Credentials Across the Institution
- **Podcast 2:** Aligning Curriculum to Industry Certifications
- **Podcast 3:** Building Lasting Partnerships with Business and Industry



Employer Engagement Toolkit



You are here: / [Home](#)

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[Using This Toolkit](#)

[Knowing Your Audience](#)

[Developing Your Program](#)

[Mining for Deeper Engagement](#)

[Generating Support](#)

[Joining Voices](#)

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Introduction

In a time when information is critical to success and budgets are tied to outcomes, the need for strategic employer engagement with colleges has never been greater. No longer can programs thrive with limited input from local employers. All community and technical colleges must stay informed of—and respond to—industry-specific trends that impact skill sets, national standards, and credentials.

www.advancingcredentials.org/toolkit



What's Next?

The Road Ahead

- Unprecedented change in economy and nature of work due to rapidly advancing technologies
- Current education and training systems are not agile
- Stackable credentials could play a larger role in the workforce development ecosystem



The Jobs Landscape in 2022

emerging
roles,
global
change
by 2022

133
Million

Top 10 Emerging

1. Data Analysts and Scientists
2. AI and Machine Learning Specialists
3. General and Operations Managers
4. Software and Applications Developers and Analysts
5. Sales and Marketing Professionals
6. Big Data Specialists
7. Digital Transformation Specialists
8. New Technology Specialists
9. Organisational Development Specialists
10. Information Technology Services

declining
roles,
global
change
by 2022

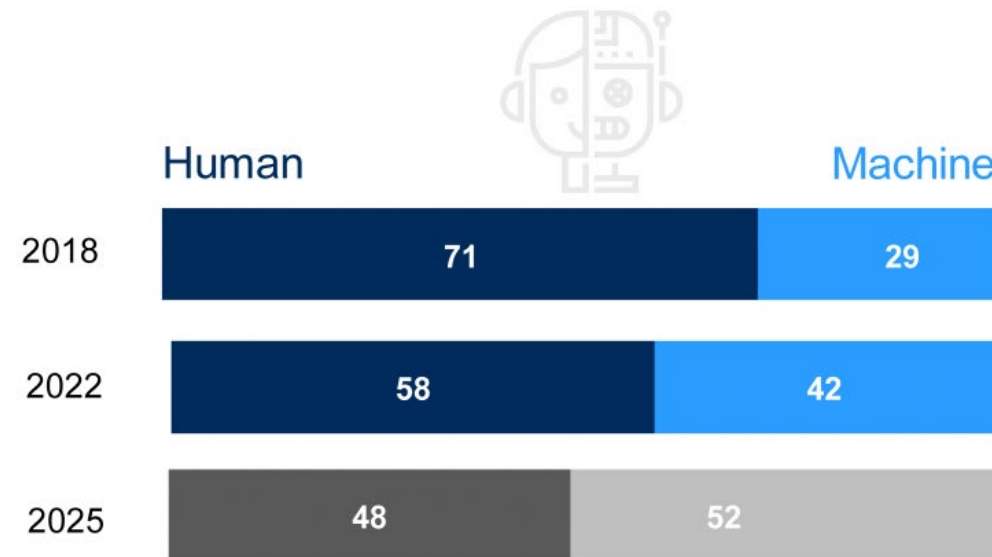
75
Million

Top 10 Declining

1. Data Entry Clerks
2. Accounting, Bookkeeping and Payroll Clerks
3. Administrative and Executive Secretaries
4. Assembly and Factory Workers
5. Client Information and Customer Service Workers
6. Business Services and Administration Managers
7. Accountants and Auditors
8. Material-Recording and Stock-Keeping Clerks
9. General and Operations Managers
10. Postal Service Clerks

Rate of automation

Division of labour as share of hours spent (%)



By 2022 everyone will need
an extra

101
days of
learning

FOW Considerations for Community & Technical Colleges

Institutional: Robust technology infrastructure

Curriculum/Program Development:

Responsive programs aligned to the
technologies of local industry

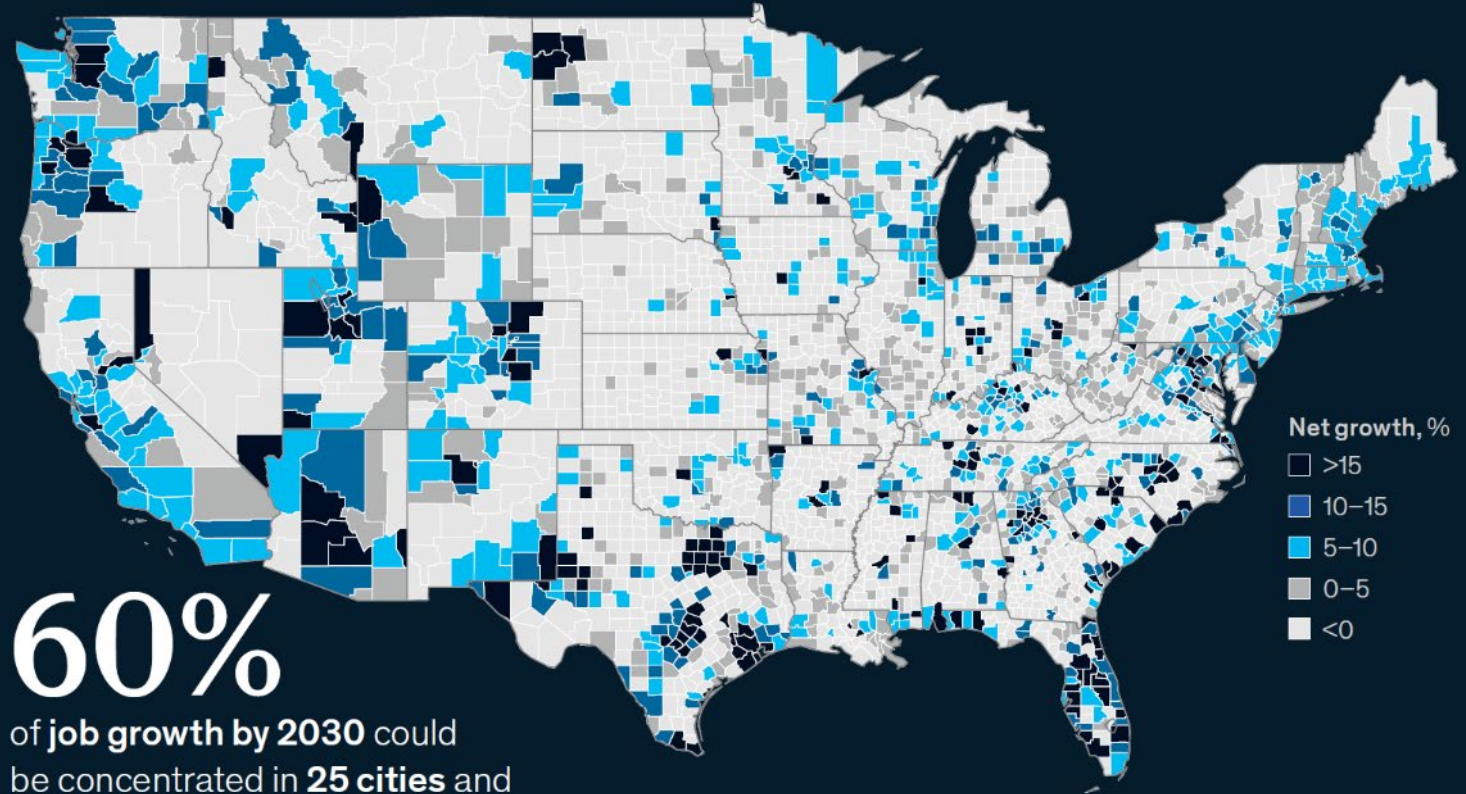
Students: Armed with skills for the Future of Work



The Future of Work in America

McKinsey Global Institute
July 2019

Estimated net job growth in midpoint adoption scenario, 2017–30, %



60%

of job growth by 2030 could be concentrated in **25 cities** and their peripheries

Potential workforce displacement in midpoint adoption scenario, 2017–30

14.7M

Young workers age 18–34

11.5M

Workers over age 50

11.9M

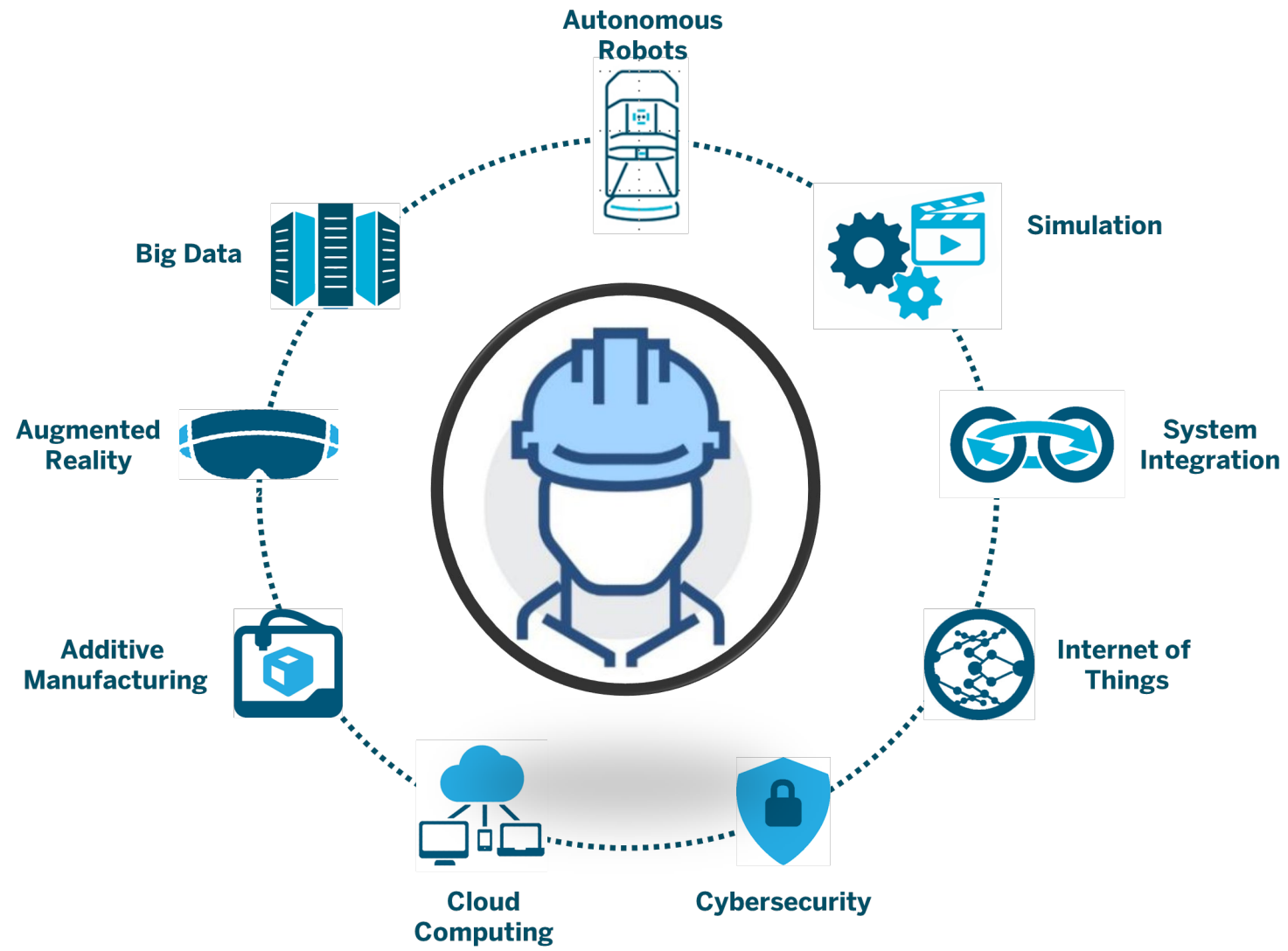
Hispanics and African Americans

4x

Higher displacement risk for workers with high school diploma or less

McKinsey
Global Institute

Source: McKinsey Global Institute analysis



Integrating Industry 4.0: Next Steps for Colleges

1. Reach out to employers; discuss what I 4.0 means to their changing workforce needs
2. Take an audit of what I 4.0 components are already being taught across the college and where
3. Determine which existing curricula can be leveraged or updated across departments and form interdisciplinary teams
4. Use stackable credentials and emerging certifications as tools for upskilling/reskilling/lifelong learning (cross walk and integrate into courses, programs, certificates, degrees)

[NCATC Industry 4.0 Executive Toolkit](#)



Priorities

- Don't ignore the changing nature of work
- Partner with local employers to future-proof your workforce
- Leverage the flexibility and value of stackable credentials to meet the needs of all learners
- Focus on outcomes: for students, for employers, for communities
- Economic mobility for our students is our ultimate goal



New Opportunities

Advancing Credentials THROUGH Career Pathways

Access resources and
collaborate with colleagues
www.advancingcredentials.org

✓ Pathways to Credentials – OCTAE national activity TA opportunity coming soon



Advancing Credentials THROUGH Career Pathways

Contact Us:

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- **Laura Aron:** laura@spra.com

