NJ PATHWAYS TO CAREER OPPORTUNITIES SUMMIT

Expanding Innovative Workforce & Education Partnerships

Bally's Atlantic City Hotel & Casino

June 12, 2024

NJ CCC New Jersey Community Colleges

NJBIA New Jersey Business & Industry Association

WELCOMING REMARKS

Catherine Starghill, Esq.

Vice President,

New Jersey Council of County Colleges

Executive Director,

New Jersey Community College Consortium for Workforce and Economic Development

Day 2

TODAY'S AGENDA

The Success of the New Jersey Pathways to Career Opportunities Initiative

Pathways: Equity and Access to High Quality Industry Credentials and Associate Degrees

Credential Transparency for Competencies and Skills: The Benefits to Students, Jobseekers, and Employers

Lunch

Education Pathways and The Future of Work

Industry and Pathways: The Intersection of Education and Workforce Development

Day 2

TODAY'S AGENDA (CONT.)

New Jersey Pathways to Career Opportunities: Centers of Workforce Innovation Highlights

Raritan Valley Community College – Aseptic Processing and Biomanufacturing

Brookdale Community College – Film and Television Production

Camden County College – eSports Production Content Creation Hub

County College of Morris - Robotics and Automation

New Jersey Pathways to Career Opportunities: The Path Forward

Pathways Reception

WELCOMING REMARKS

Christopher Emigholz

Chief Government Affairs Officer

New Jersey Business and
Industry Association

WELCOMING REMARKS

Dr. Brian Bridges

Secretary of Higher Education

New Jersey Office of the
Secretary of Higher Education

THE SUCCESS OF THE NEW JERSEY PATHWAYS TO CAREER OPPORTUNITIES INITIATIVE

Catherine Starghill, Esq.

Vice President,
New Jersey Council of County Colleges

Executive Director,
New Jersey Community College Consortium for Workforce and Economic Development

Dr. Michael McDonough

President,
Raritan Valley Community College


Q&A

PATHWAYS: EQUITY AND ACCESS TO HIGH QUALITY INDUSTRY CREDENTIALS AND ASSOCIATE DEGREES

Dr. Chauncy Lennon

Vice President for Learning and Work and Senior Strategy Advisor,
Lumina Foundation

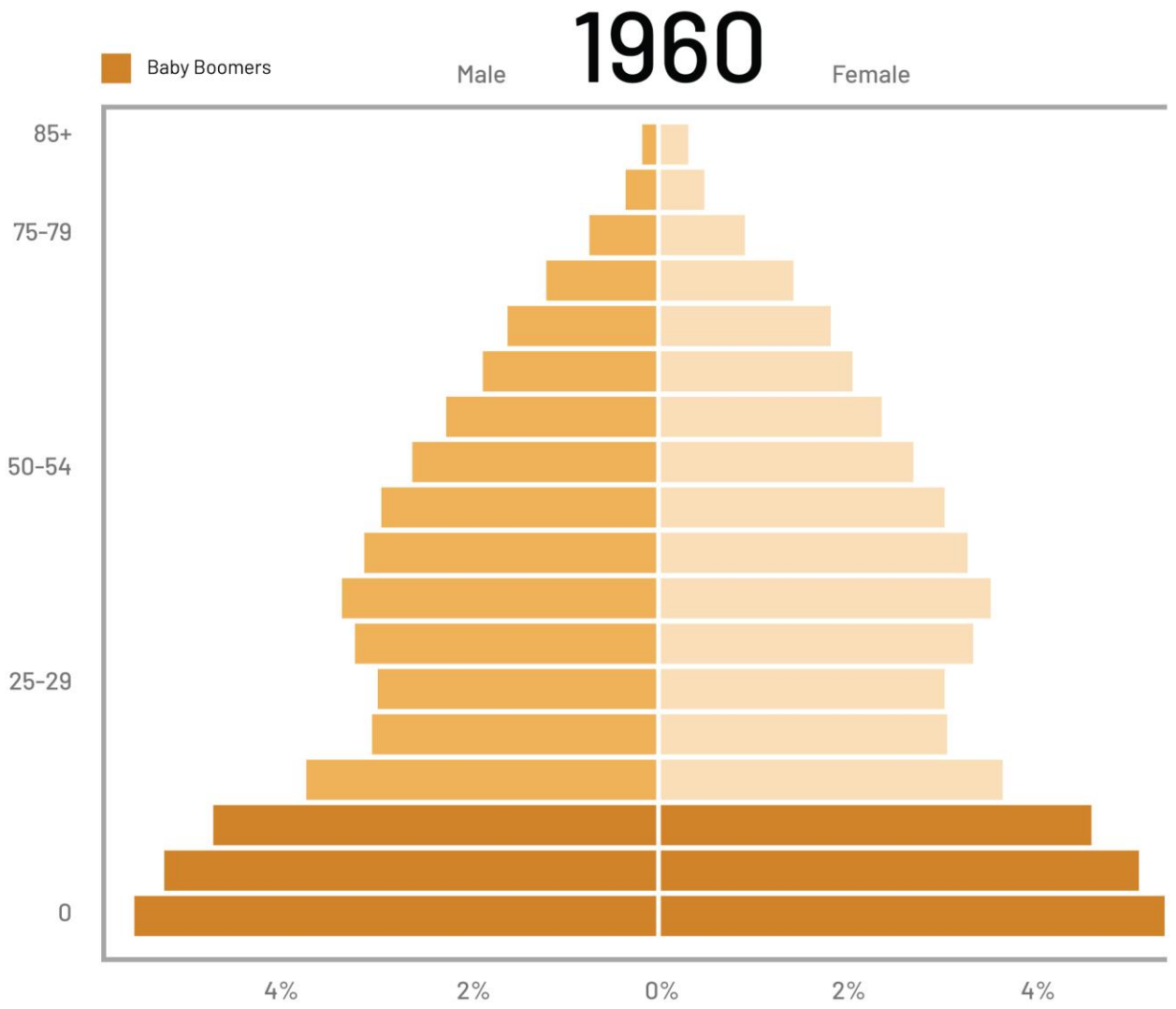
Pathways: Equity and Access to High Quality Industry Credentials and Associate Degrees

Chauncy Lennon
Lumina Foundation
June 12, 2024

Percent of U.S. population by age group

Year 1960

Pew Research Center

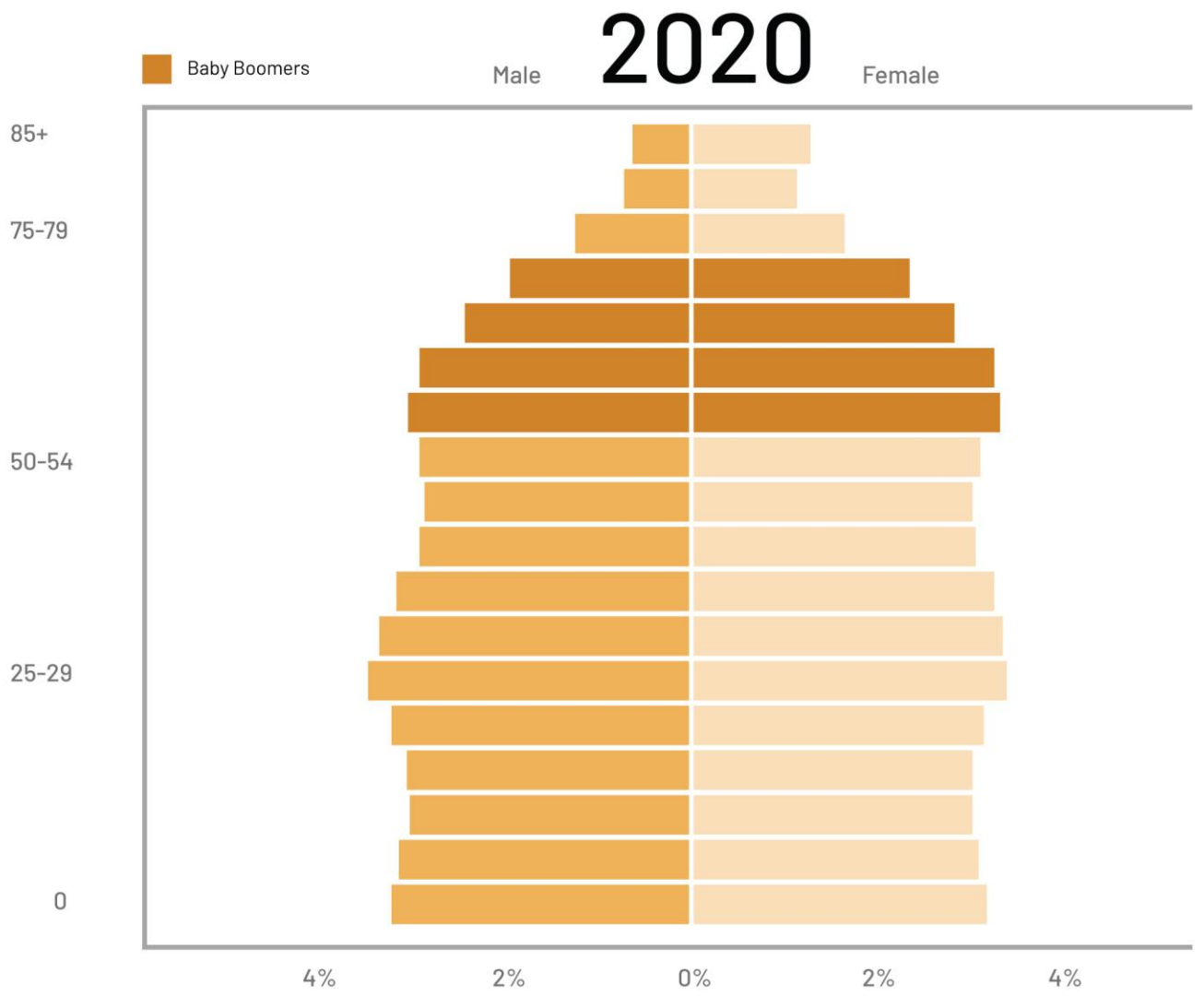


Lumina FOUNDATION

Percent of U.S. population by age group

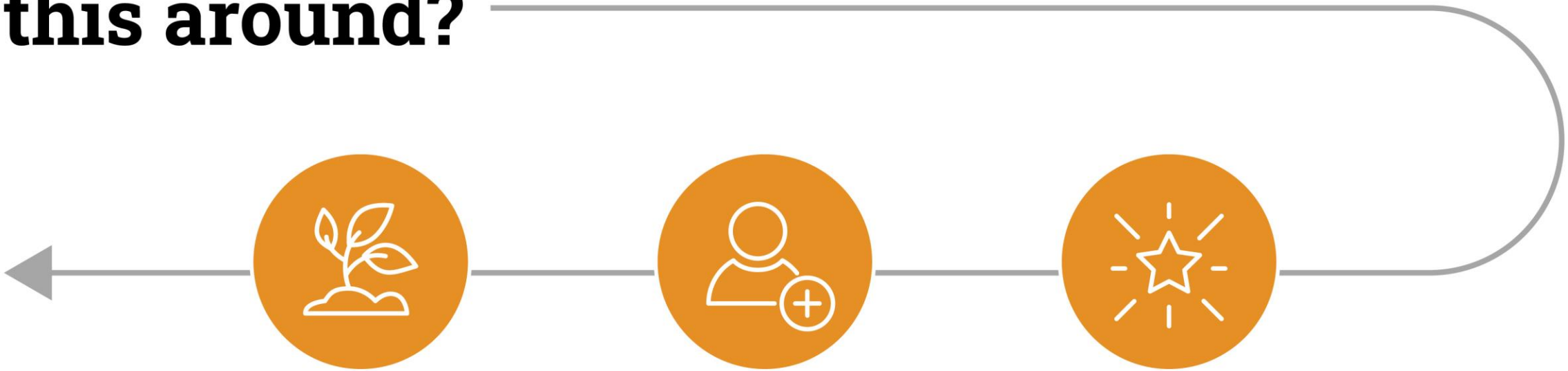
Year 2020

Pew Research Center



Lumina FOUNDATION

How can we turn this around?



"The Workforce of the Future is in the Workforce"

30 Million

People will graduate high school in the next decade

40 Million

Will have some college credit but no degree

50 Million

Adults will have only a high school diploma

Lumina FOUNDATION

US Workforce, 2023-2033

168 Million Workers

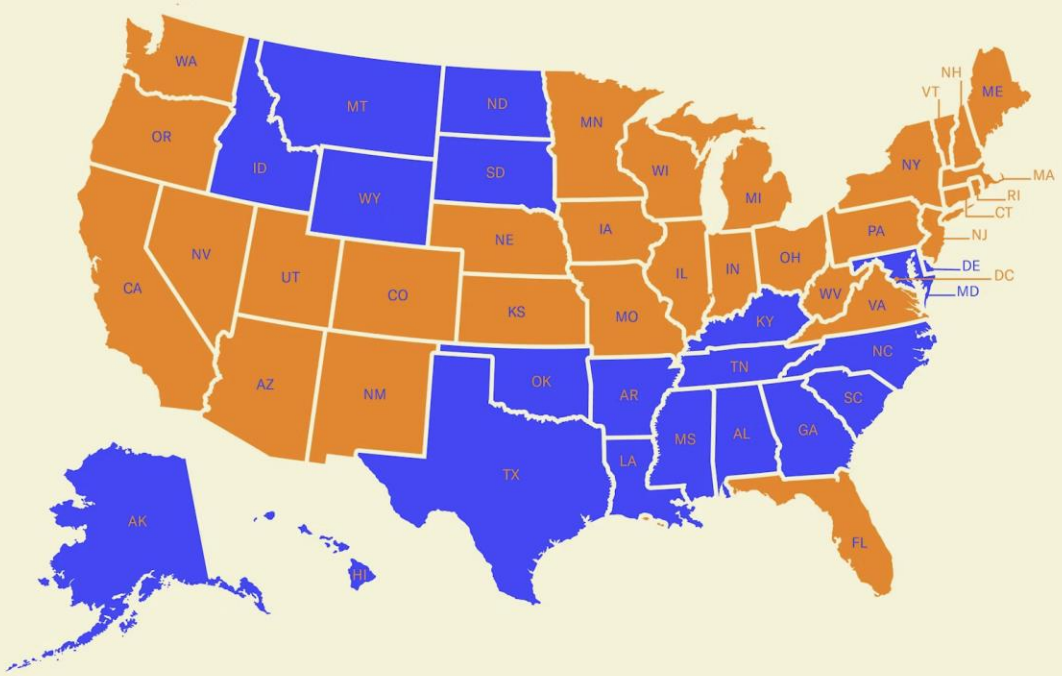
30 Million HS Grads

There are fewer enrolled first grade students than high school seniors in 30 U.S. states

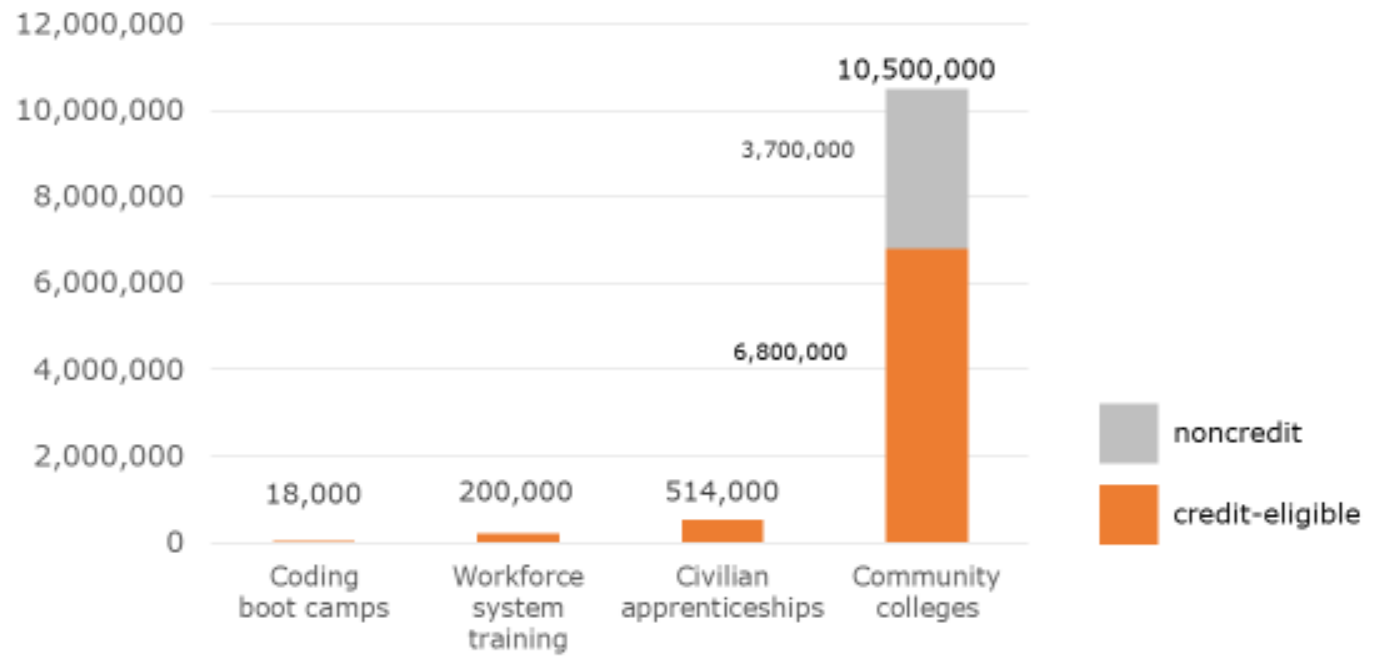
First grade students > high school seniors

High school seniors > first grade student

Source: National Center for Education Statistics, 2021–2022

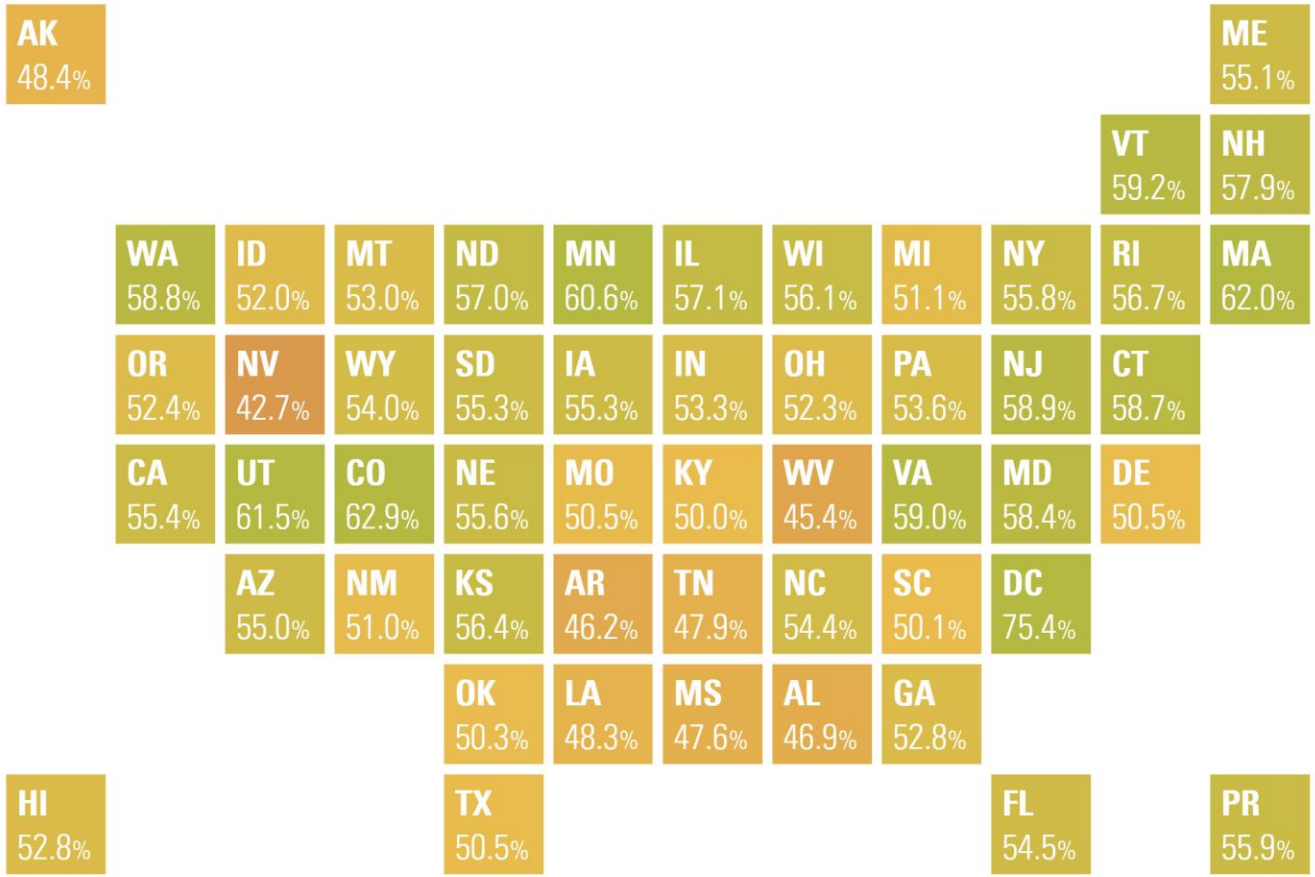


WHERE THE STUDENTS ARE

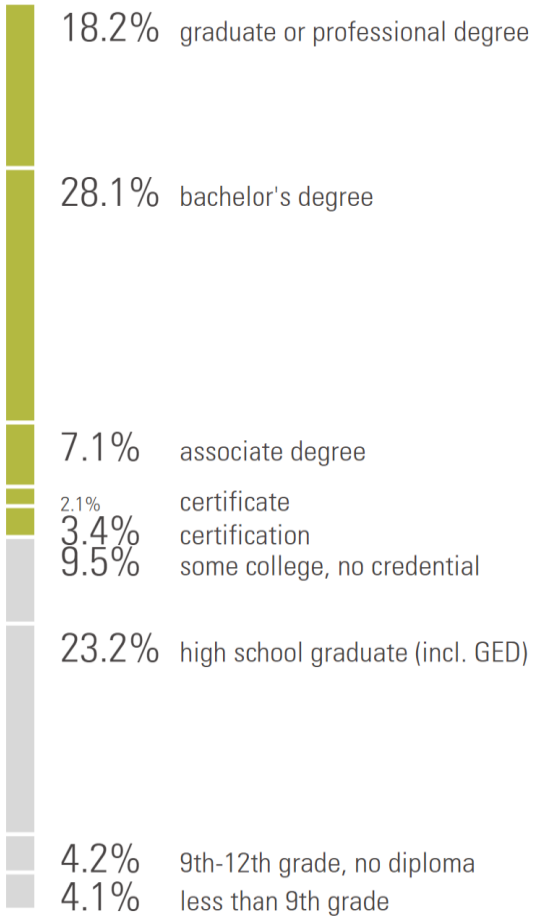


NOTE: Data are for 2019 or 2020. The totals are rounded numbers.

2022 US Credential Attainment: 54.3%

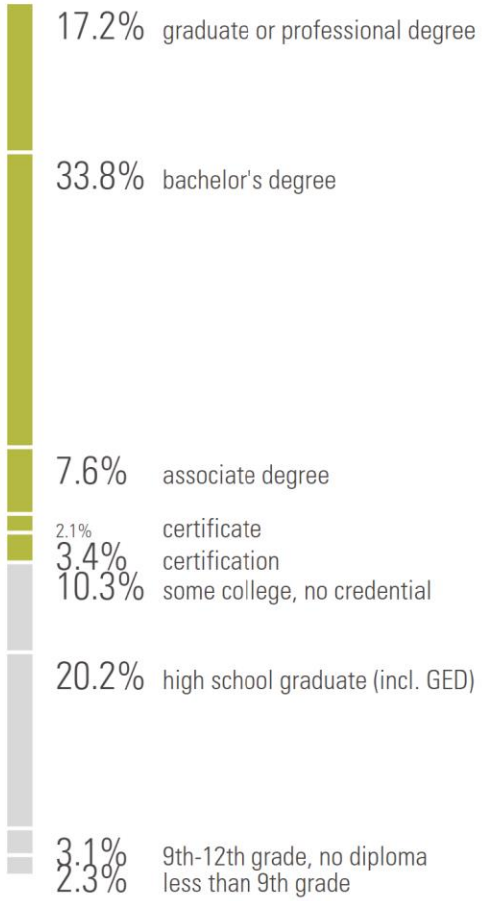


2022 EDUCATION DISTRIBUTION
NJ RESIDENTS AGES 25-64



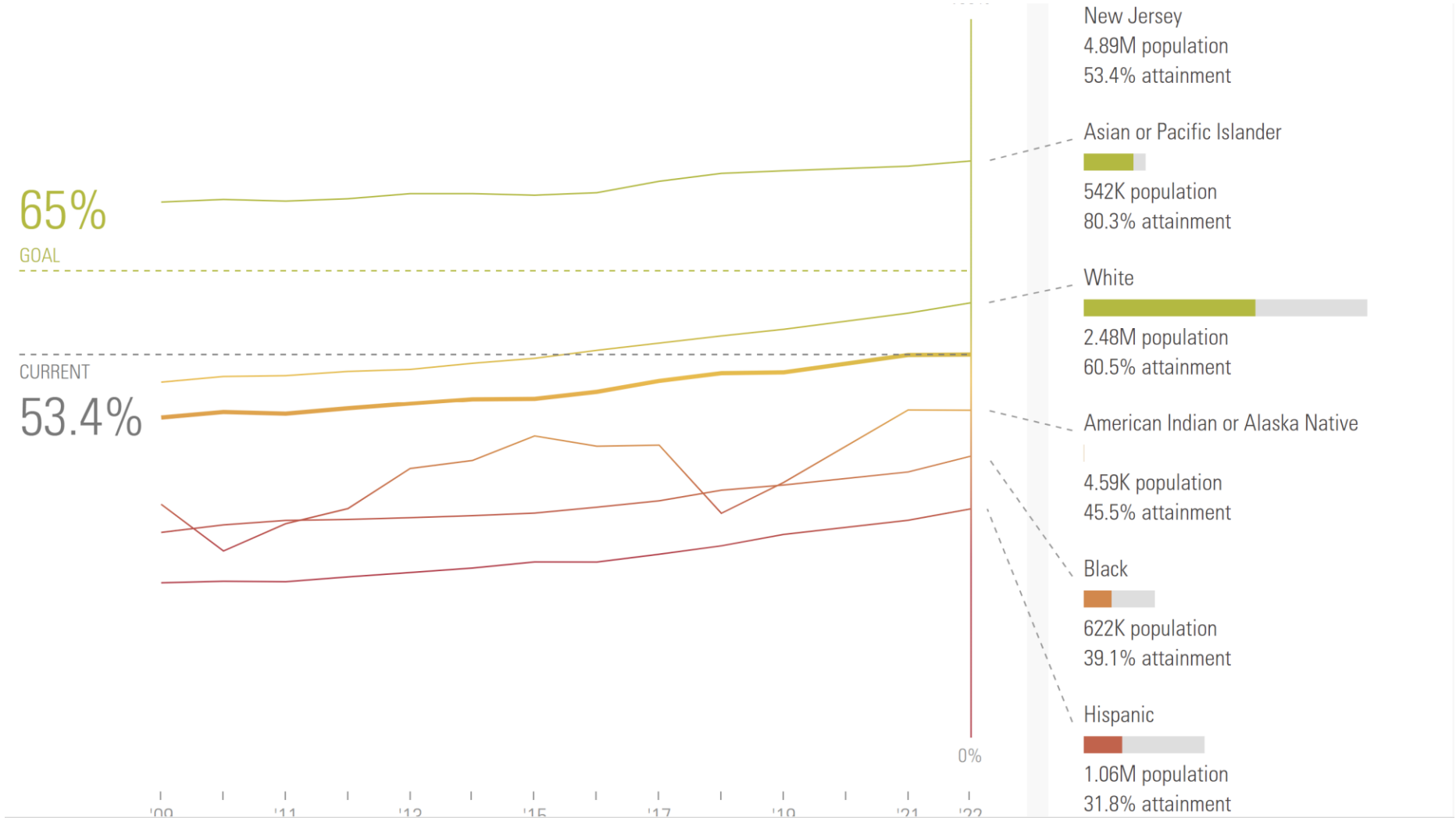
58.9%

2022 EDUCATION DISTRIBUTION
NJ RESIDENTS AGES 25-34



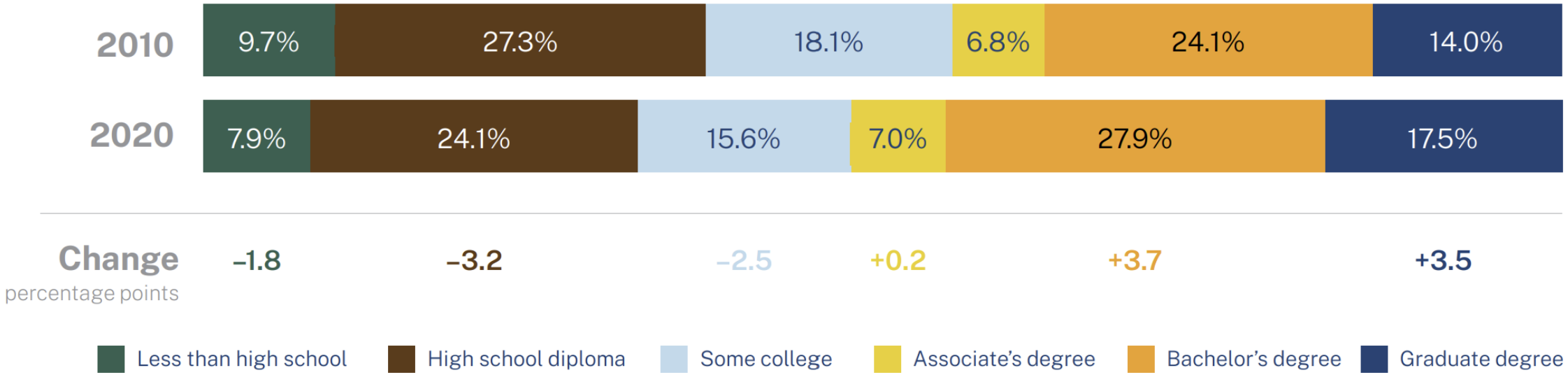
64.1%

NJ Degree Attainment by Race and Ethnicity (2009-2022)



Significant Financial Gains from Attainment

- **14.4 million new college graduates** (with associate's degree or higher)
- **$14.2 trillion in net lifetime earnings gains**
- **Attainment increased** for all racial/ethnic groups**. But, attainment gaps widened** for many racial/ethnic groups**.**
- Attainment parity by race/ethnicity would realize an additional **$11.3 trillion** in earnings



New Jersey, 2010-2020

(Georgetown CEW)

- AA or higher attainment increased by **7.5** percentage points.
- $596 billion in net lifetime earnings gains.
- Attainment equity worsened:

  Hispanic/Latino adults' gap with white adults widened (1.3% pts)

  Black/African American adults' gap with white adults widened (3.5% pts).
- Earnings gains left on the table:

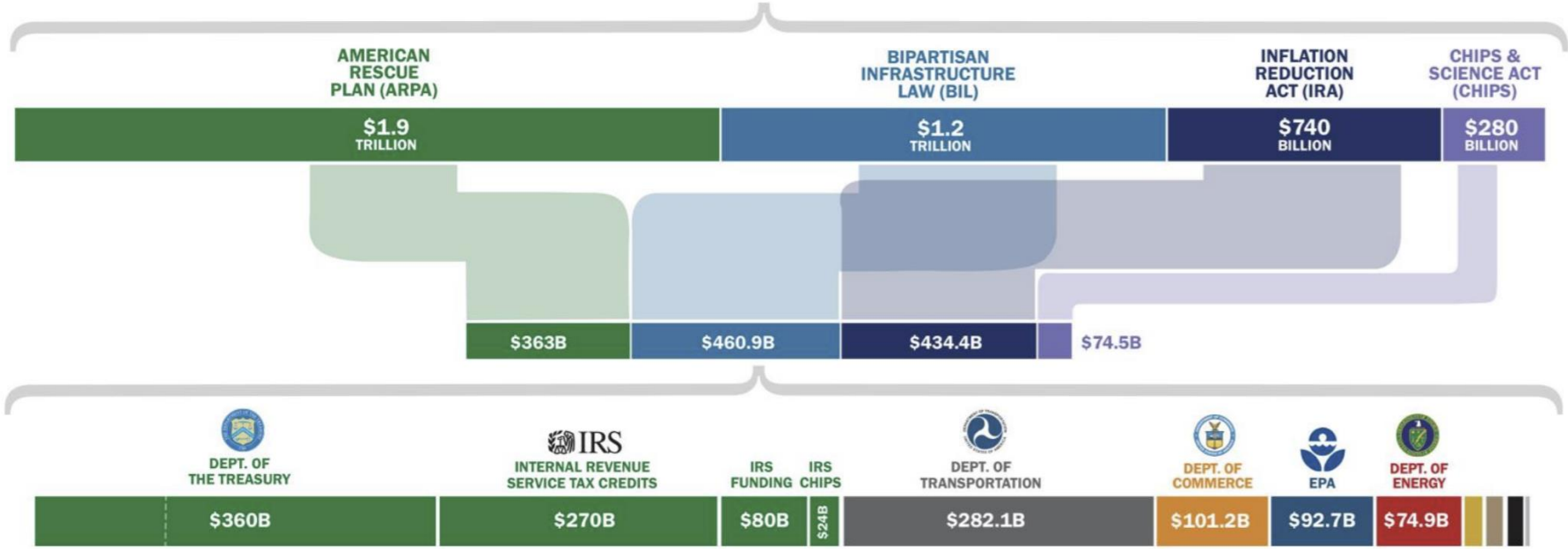
  $373 billion for Hispanic/Latino adults

  $218 billion for Black/African American adults

FEDERAL FUNDING LANDSCAPE

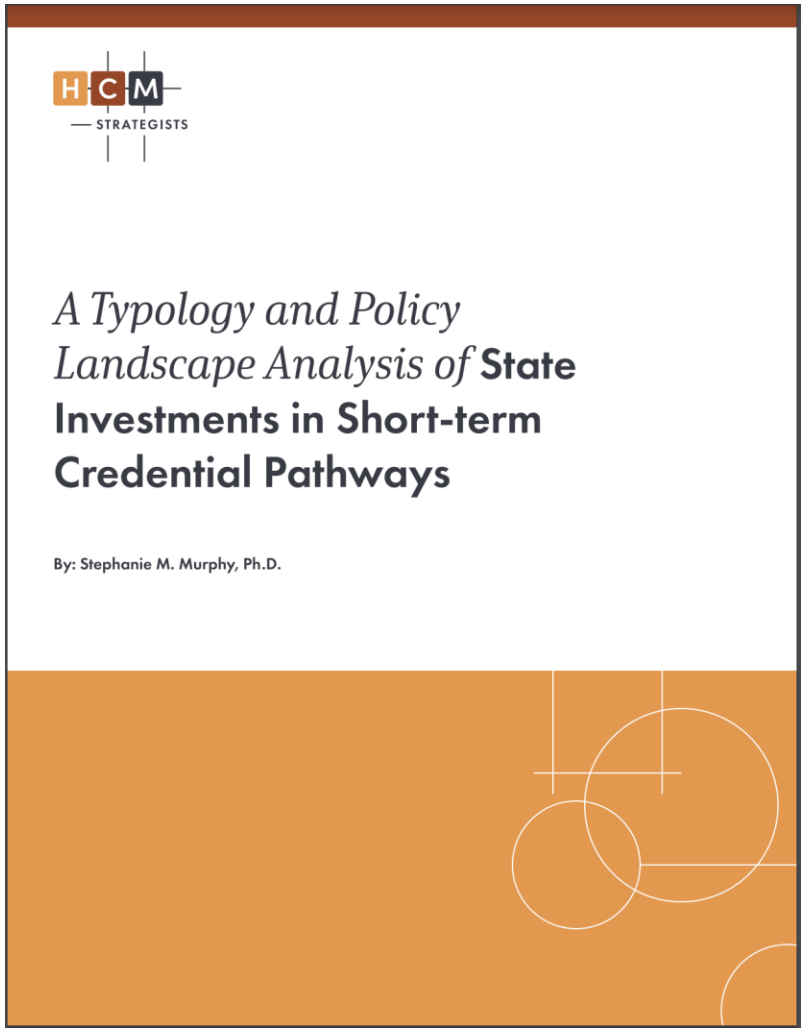
Over 650 Funding Provisions Totaling

~$4.1 Trillion



Up to $1.3 Trillion

Representing ~115 Select Funding Streams



Findings and Analysis: Trends in State Funding of Short-Term Credentials

Our research identified 59 state-led initiatives across 28 states. The investments in these programs total no less than **$3.81 billion.**

Industrial Policy

- "Explicitly target the transformation of the structure of economic activity in pursuit of some public goal." Juhasz, Lane, and Rodrik, 2023

  - Innovation, productivity, economic growth, climate transition, good jobs, geographic regions, exports, etc.

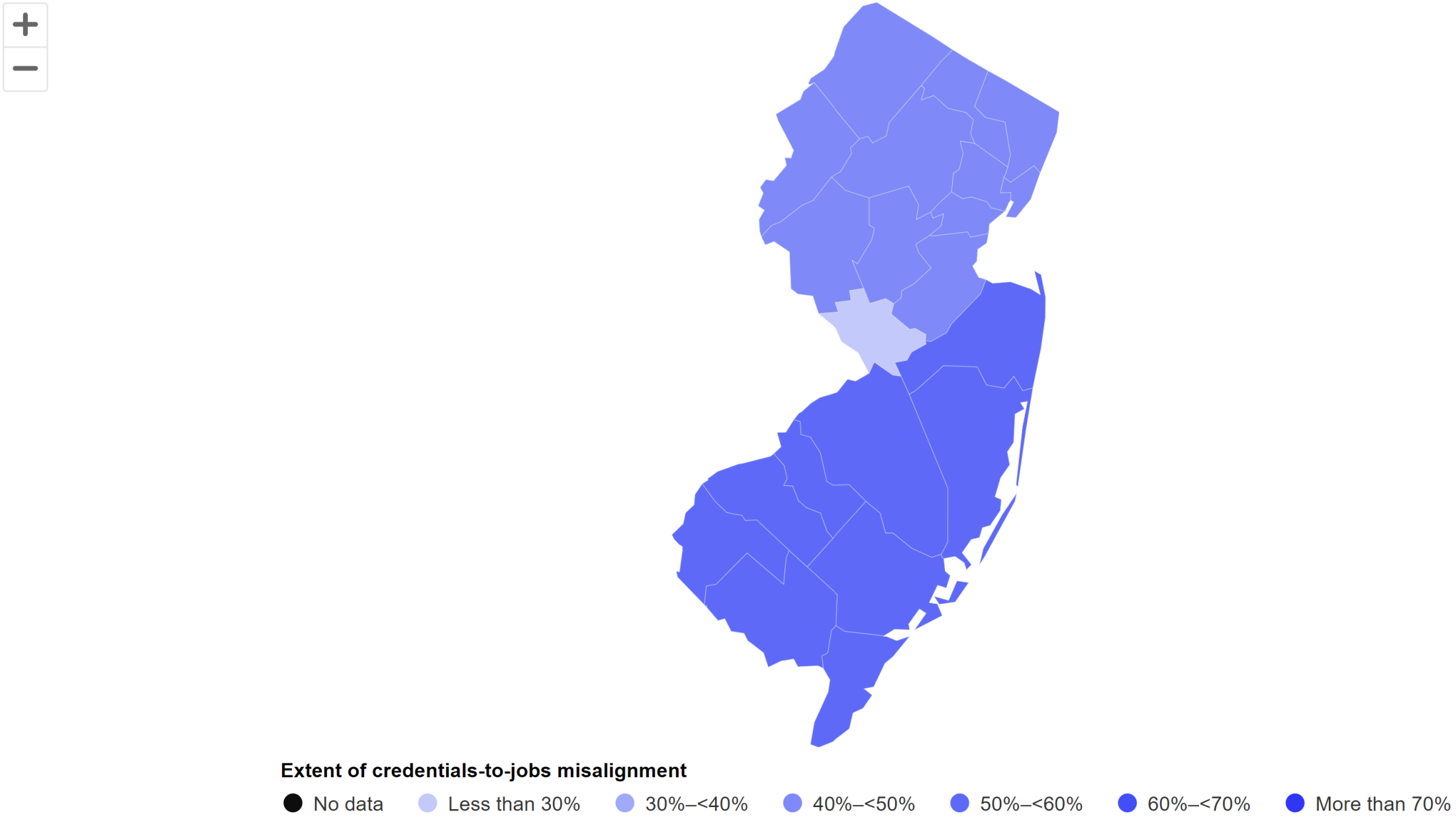
  - Public authorities: “we promote X but not Y.”

  - Conditions: employment and training

What Does This Mean?

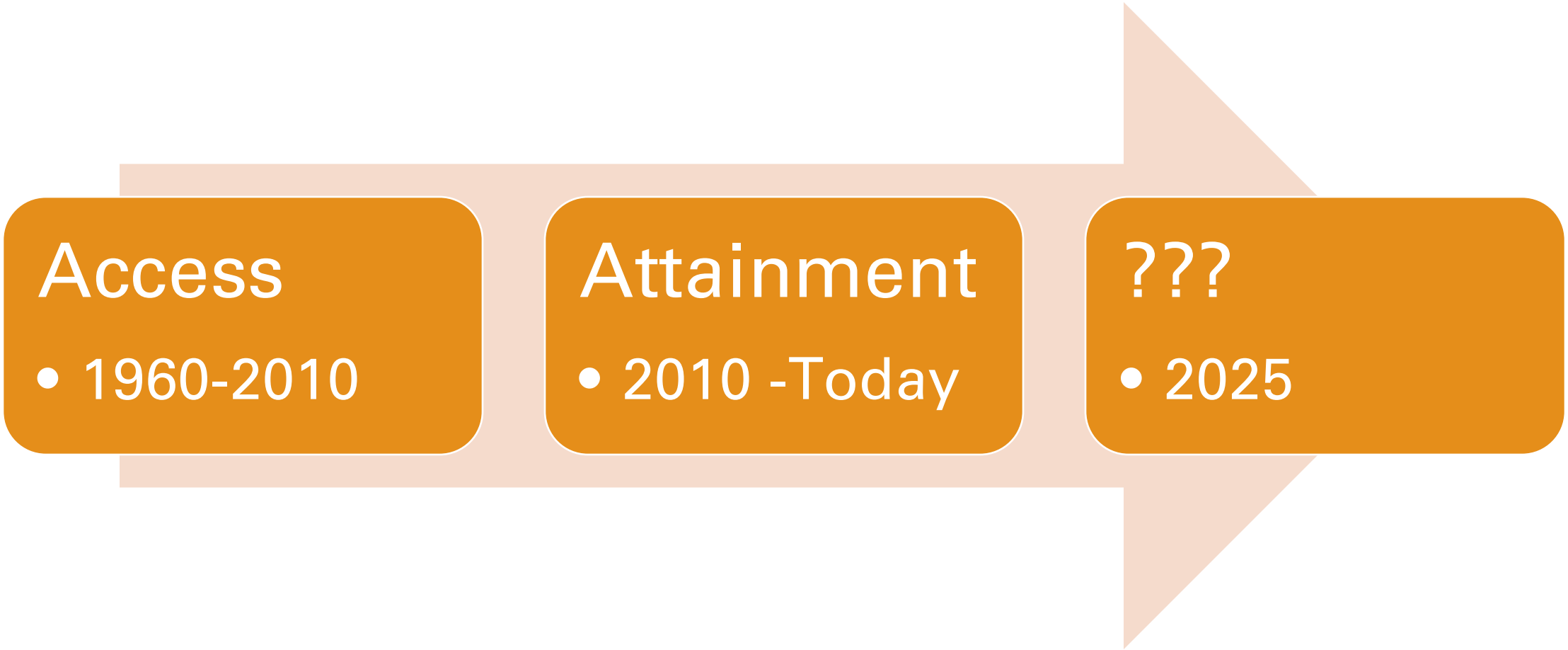
- Money flows through "demand side" agencies
  - Commerce, Transportation vs. Education, Labor
- Supply Chains vs. Formulas
  - Sector partnerships
  - Economic Development and Workforce Development coordination
- Equity
  - Deep system changes needed

Extent of credentials-to-jobs misalignment



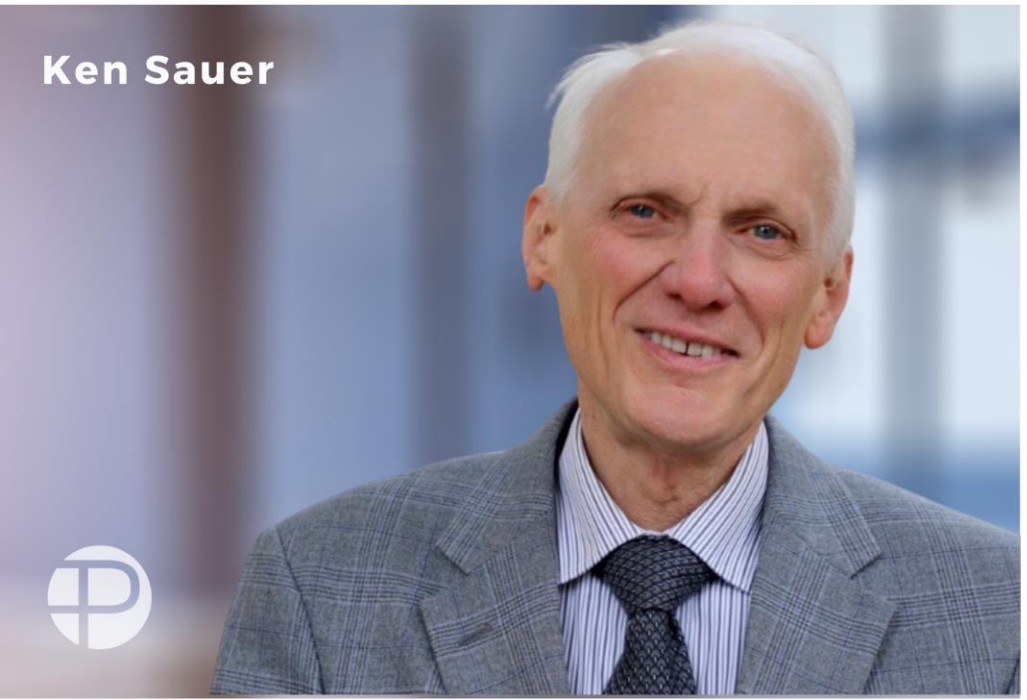
For methodological details, see *The Great Misalignment: Addressing the Mismatch between the Supply of Certificates and Associate's Degrees and the Future Demand for Workers in 565 U*
Labor Markets.

Postsecondary Education




Q&A

NETWORKING BREAK



CREDENTIAL TRANSPARENCY FOR COMPETENCIES AND SKILLS: THE BENEFITS TO STUDENTS, JOBSEEKERS, AND EMPLOYERS

Scott Cheney

CEO,
Credential Engine

Ken Sauer

Senior Associate Commissioner and Chief Academic Officer,
Indiana Commission for Higher Education

Moderated by:
Catherine Starghill, Esq., Vice President, New Jersey Council of County Colleges and Executive Director, New Jersey Community College Consortium for Workforce & Economic Development

Credential Transparency Overview

Scott Cheney, CEO, Credential Engine

Ken Sauer, Senior Associate Commissioner & Chief Academic Officer
Indiana Commission for Higher Education

June 2024

Credential Engine™

INDIANA COMMISSION HIGHER EDUCATION

www.credentialengine.org

The Challenge

The credential ecosystem is large, complex, and confusing

- 1,076,358 unique credentials in the U.S. alone, including degrees, certifications, badges, apprenticeships, licenses, and more
- Nearly 60,000 providers of credentials

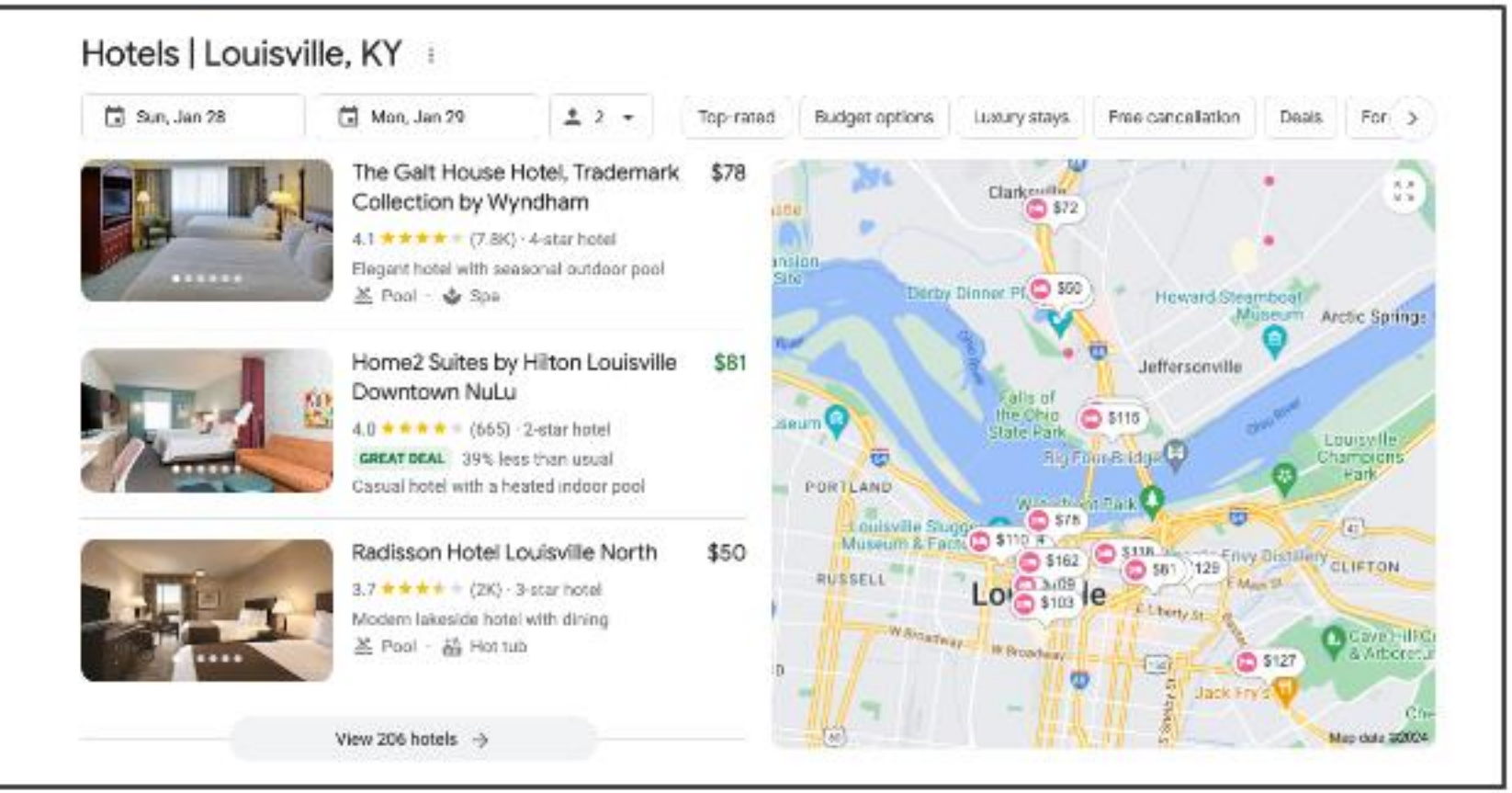
How do I find what programs are offered?

- Credential information is siloed and disconnected
- It's difficult to find comprehensive and quality information

How do I know which program is the right fit?

- So many variables to consider:
  - cost, location, financial assistance, time to completion
  - prerequisites, transferability, stackable to advanced programs
  - target skills and connection to career pathways

The Solution



When you find and book travel, map a route to a destination, or browse for music online, you are tapping into **linked open data** systems on the web.

Linked open data enables the creation of online tools that help consumers plan and optimize their journeys.

We are doing the same for credentials by providing the technologies and tools to make them transparent, connected, and accessible.

Credential Engine is a non-profit whose mission is to map the credential landscape with clear and consistent information, fueling the creation of resources that empower people to find the pathways that are best for them.

Stakeholders Need Transparent Credential Data

Learners & workers

Understand the availability, costs, time, value, and stackability of the different credentials available to make the most effective education and career choices.

Credential providers

More clearly describe the credentials offered, including their quality and value, and how they meet the needs of individuals, businesses, and the community.

Policymakers & thought leaders

Understand the credentials available within a state, identify and promote high-value and in-demand pathways, and improve the quality of statewide data systems.

Employers

Discover and hire people who have the skills and competencies for the jobs of today, and effectively plan for and signal the needs of tomorrow.

Creating a Credential Registry

Transforming credential information into linked open data means it can be shared, connected, and used across applications.

Credential Transparency Description Language (CTDL)

The only common language that describes key features of credentials, credentialing organizations, competencies, and quality assurance bodies. It is the dictionary for describing credentials and includes 1000+ terms and the grammar for using those terms.

Credential Registry

More than a database, the Registry collects and connects credential data described with CTDL and supports and an open applications marketplace by turning credential information into linked open data.

*Publishing data to the Registry is free. The Registry does not collect individual-level data

What Data is in the Registry?

Organizations
- Organization Type
- Location(s), including all addresses and satellite campuses

Credentials Offered
- Degrees
- Licenses
- Certifications
- Stackable Credentials
- Badges
- MicroCredentials

Learning Opportunities
- Programs
- Courses
- Related information, including time to complete

Competencies
- Learning Objectives
- Skills
- What is learned or gained from the Learning Opportunity or upon earning the Credential

Assessments
- Assessments required for a Credential or Learning Opportunity

Support Services
- Academic or Career Guidance
- Physical features or modifications of facilities
- Adaptive technologies or offerings
- Provision of housing, clothing, or learning resources

Financial Assistance
- Financial assistance available to assist in the pursuit or completion of a Credential

Transfer Value
- How value can be transferred from one form of learning in another context, typically credit transfer values

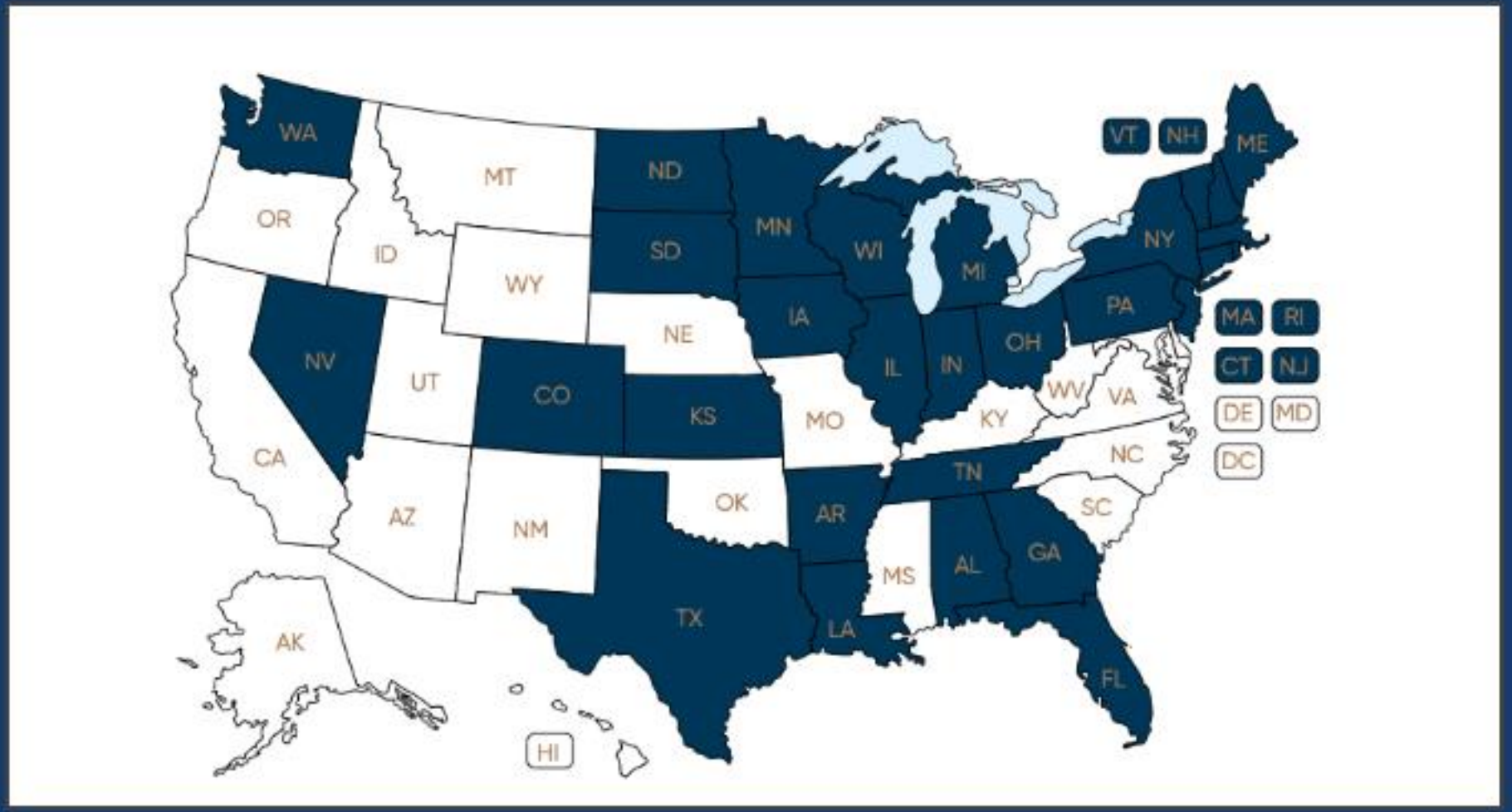
Outcomes Data
- Number of credential awardees
- Number of awardees employed
- Related earnings over one or more time periods

Jobs, Occupations, and Pathways
- Occupations and Jobs can link to Competencies or Credentials, or be combined with other data to create Pathways

Value of the Credential Registry

- Comprehensive, open source of data on credentials, competencies, outcomes, ROI, and more
- Links credentials to one another; connects training programs to licenses and certifications
- Integrates with online tools (LAUNCH) & Learner and Employment Records (LERs)
- View and compare credential information from other states
- Streamlines data collection, breaks down silos, makes data accessible and actionable

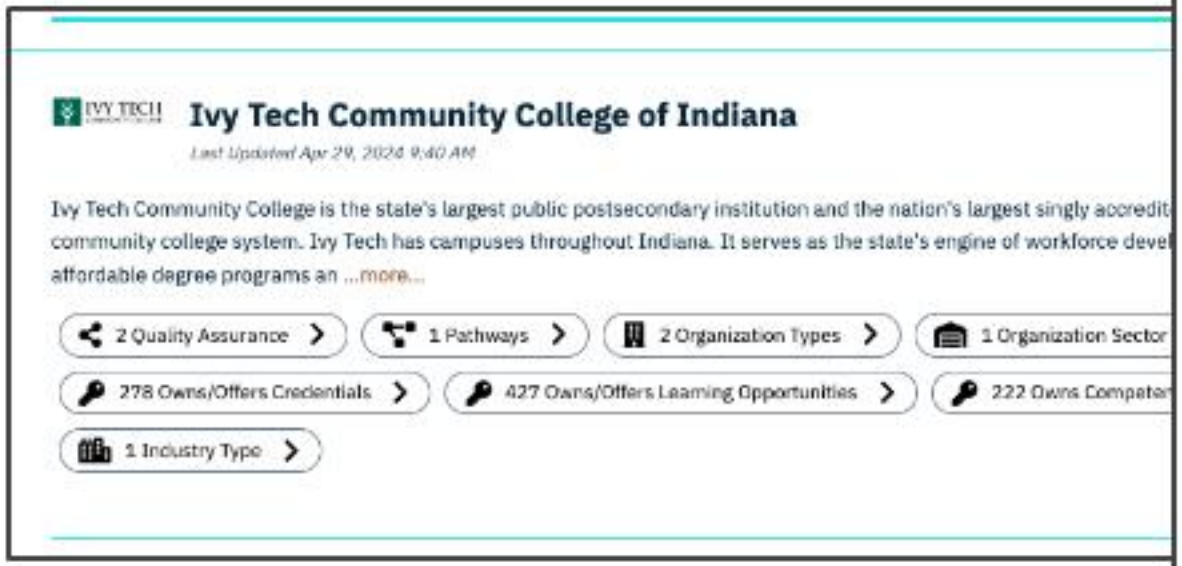
Credential Finder: https://credentialfinder.org

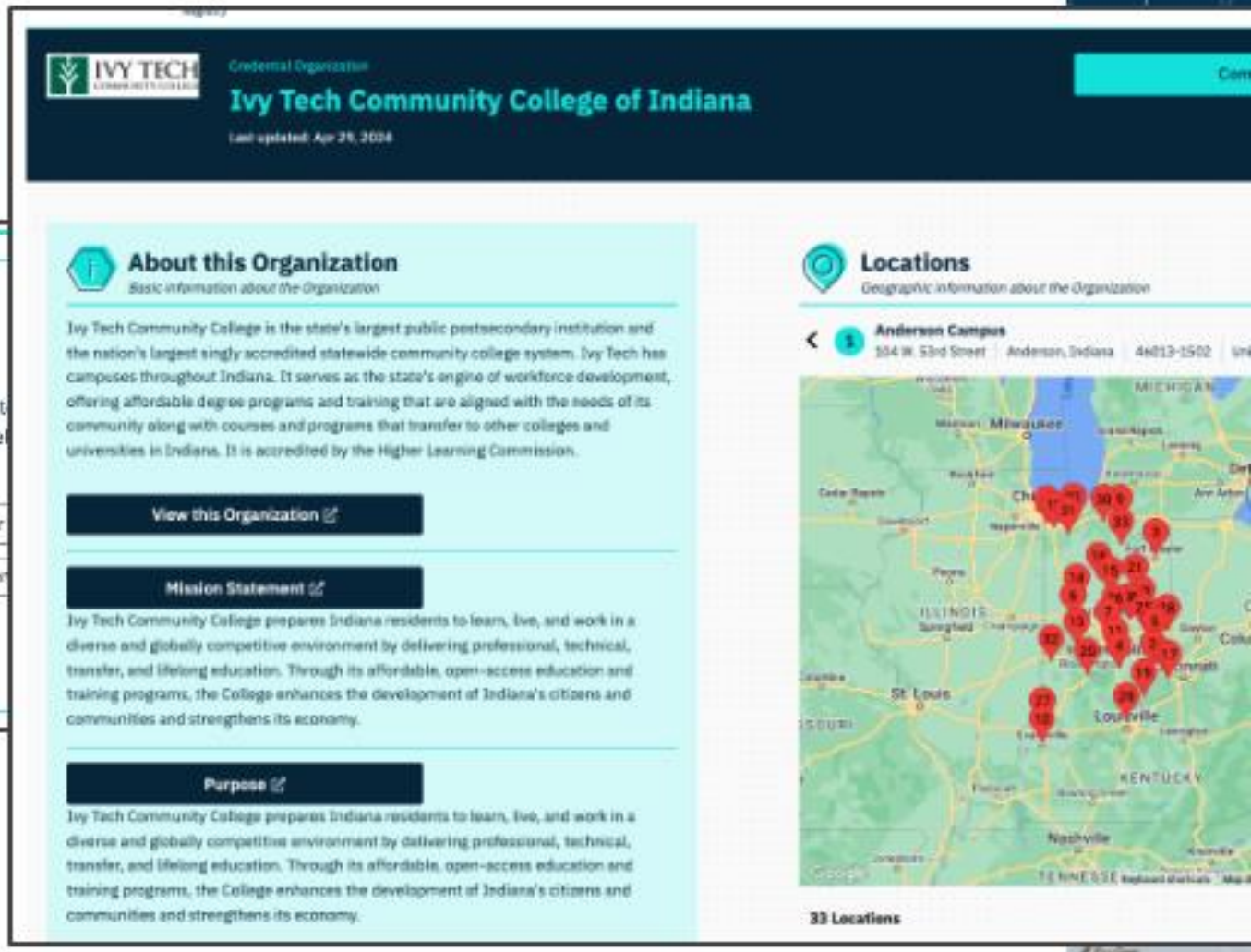


State Partnerships

The work is already underway in over 30 states and regions, and across 2 regional consortia of states.

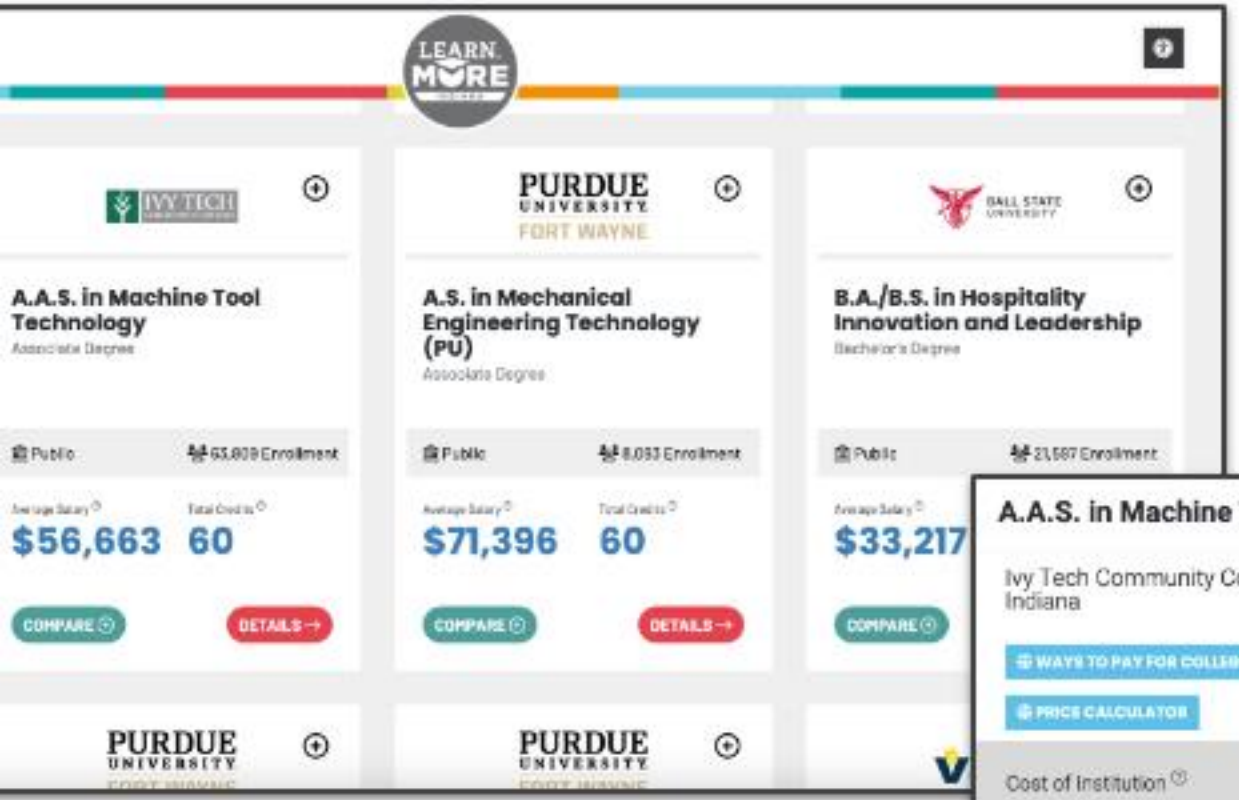
Credential Finder

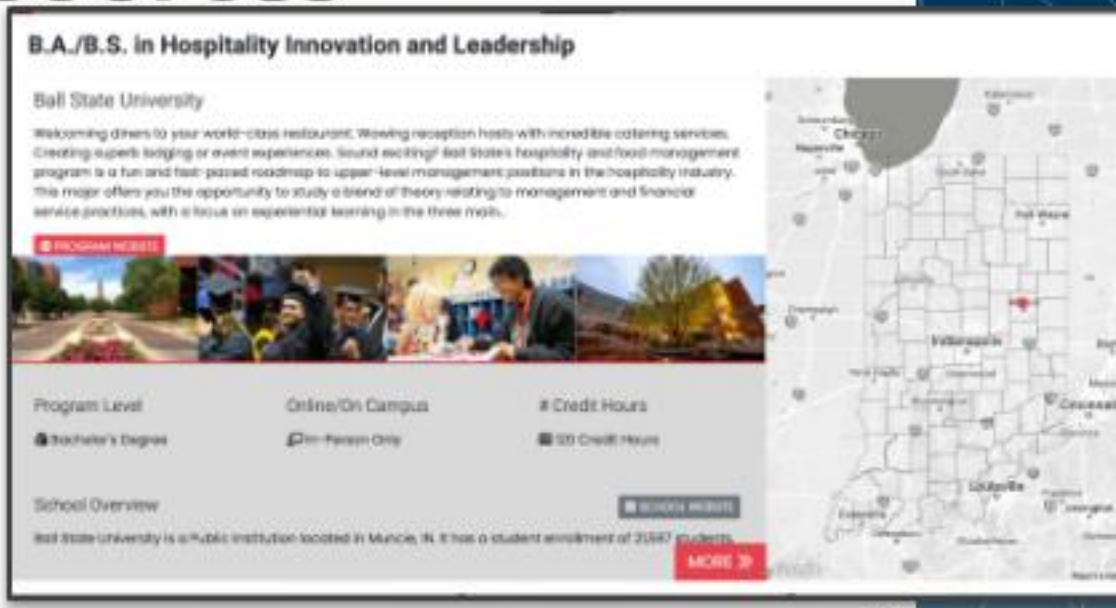




Navigation Tools + Resources

Indiana School Finder





INDIANA TRANSFER COMPONENTS

DUAL CREDIT, DUAL ENROLLMENT
College courses taken in high school

DUAL CREDIT

CREDIT FOR PRIOR LEARNING
AP, CLEP, IB, Cambridge, Portfolios & Military Credit

CPL

CORE TRANSFER LIBRARY – COURSE TO COURSE
88 courses that transfer to all public and some

CTL
88 COURSES

INDIANA COLLEGE CORE – BLOCK TRANSFER
30 credits of general education designed to transfer as a block

ICC
BLOCK TRANSFER

TRANSFER SINGLE ARTICULATION PATHWAYS
Associate + Bachelor's Degree

TSAPs
ASSOCIATE + BACHELOR'S DEGREE

INDIANA COLLEGE CORE

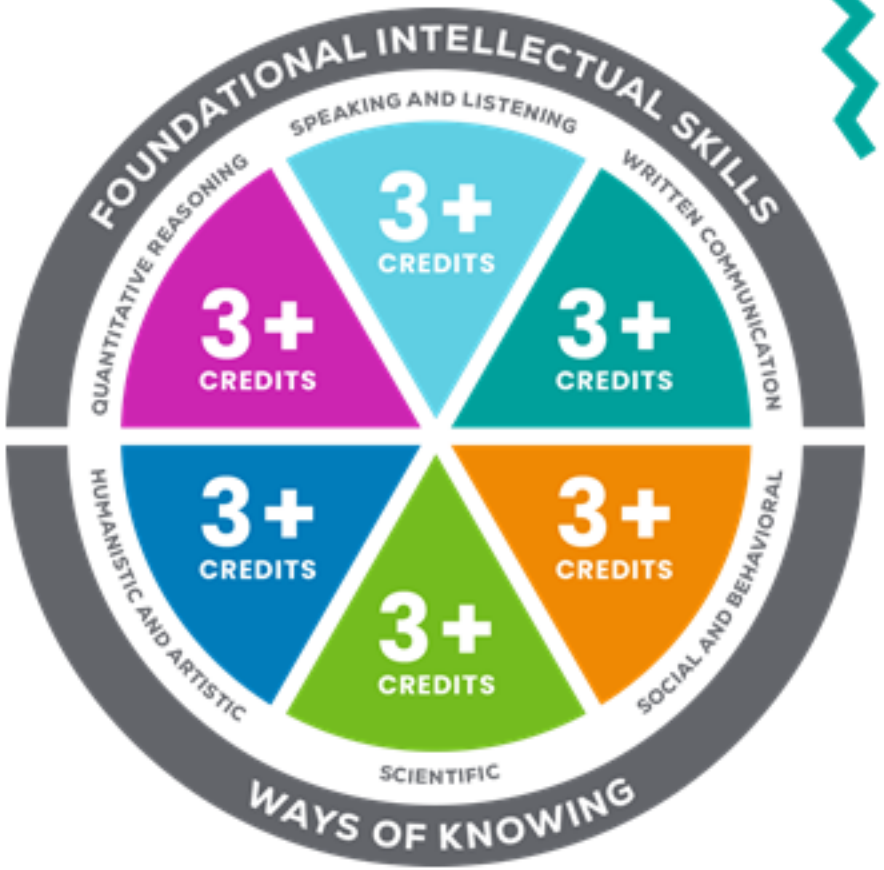
- 2012 legislative mandate
- A block of 30 credit hours of college-level general education coursework that transfers seamlessly to all Indiana public institutions and some private institutions
- Competency-Based

3 Foundational Intellectual Skills

- Written Communication, Speaking & Listening, Quantitative Reasoning

3 Ways of Knowing

- Scientific, Social & Behavioral, Humanistic & Artistic



INDIANA COMMISSION FOR HIGHER EDUCATION

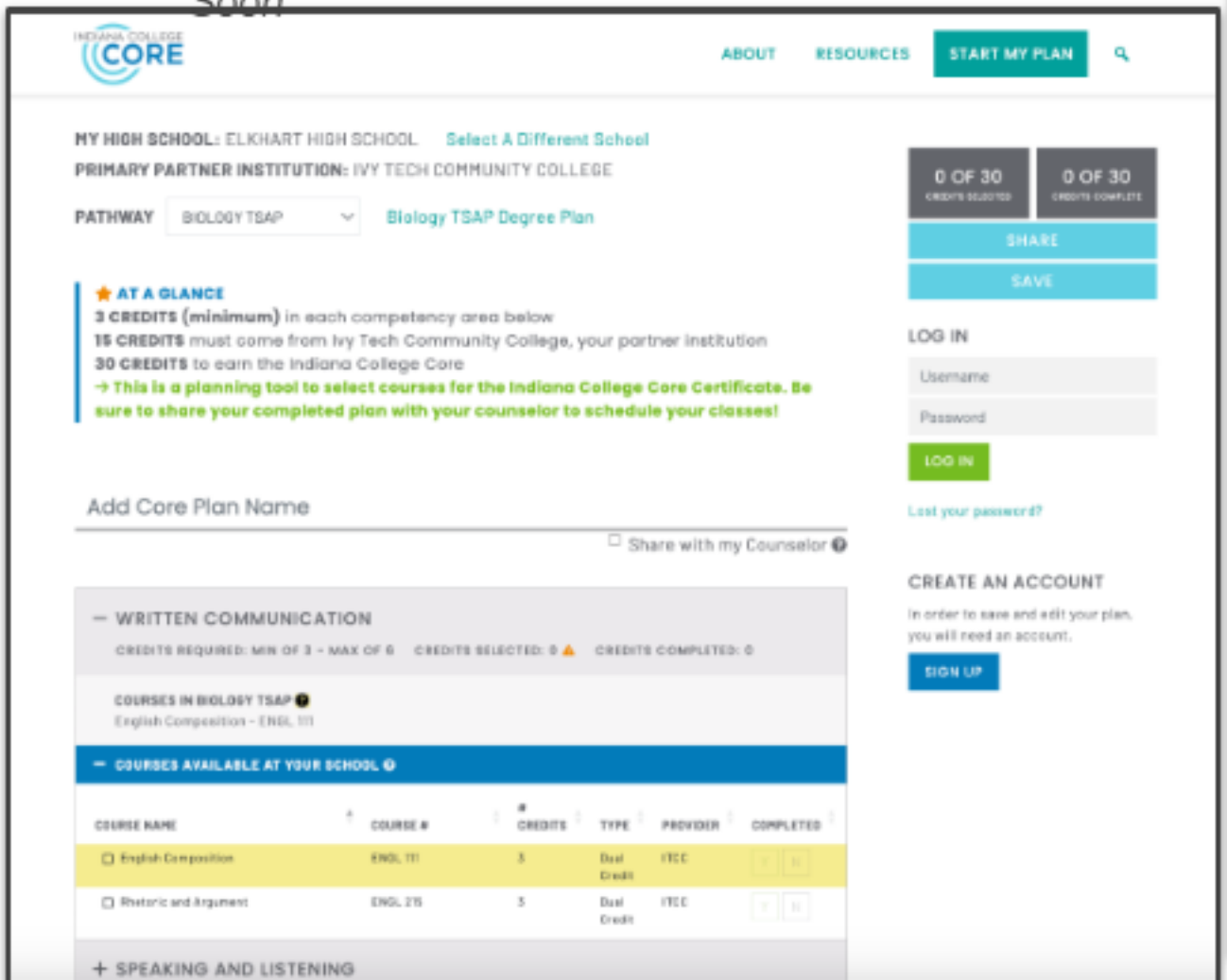
APPROVED PROVIDERS

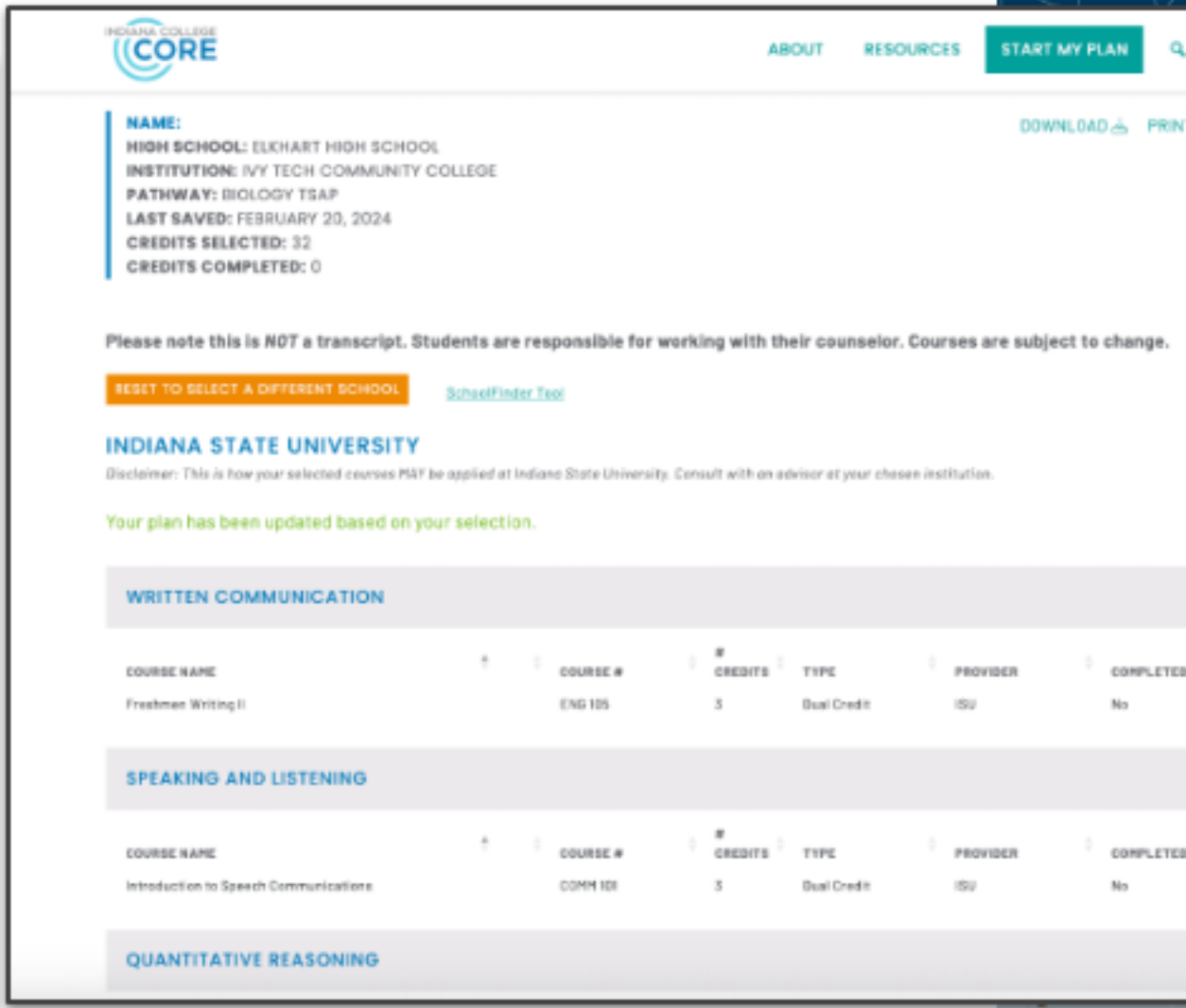
The number of schools that have partnered with a primary postsecondary provider to offer the Indiana College Core:

247 and counting

Navigation Tools + Resources

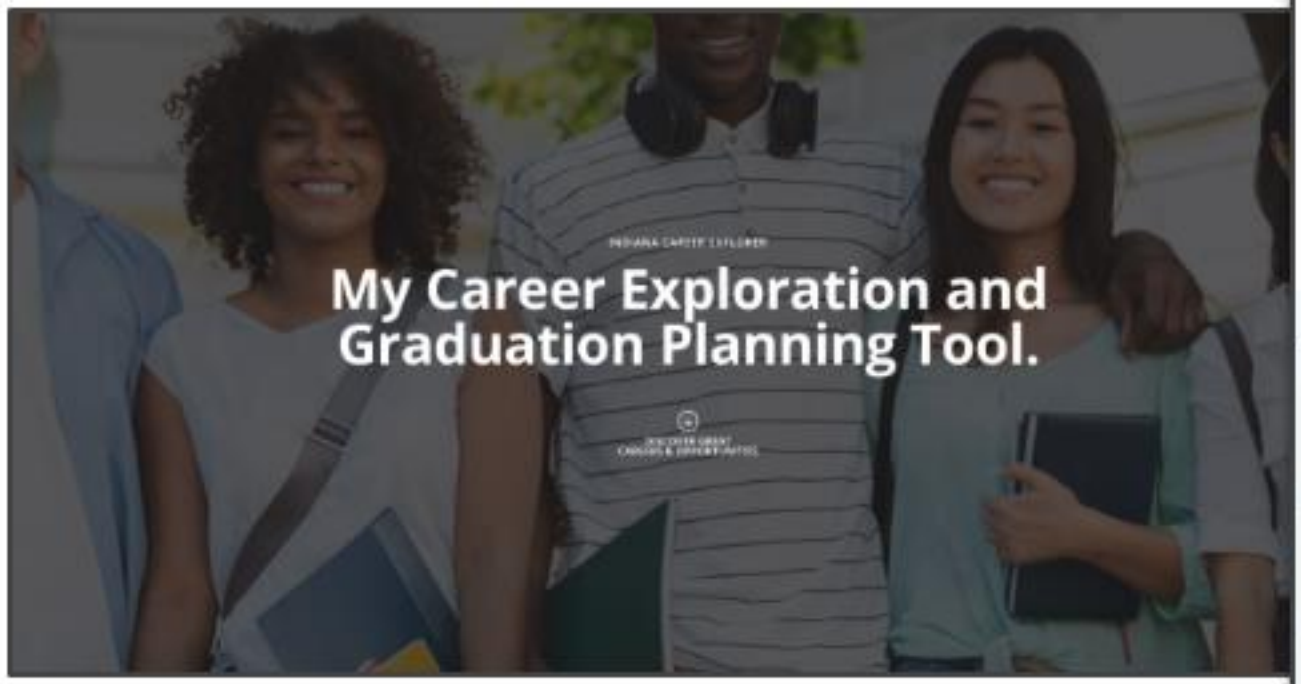
My College Core and *My Career Core Coming Soon*

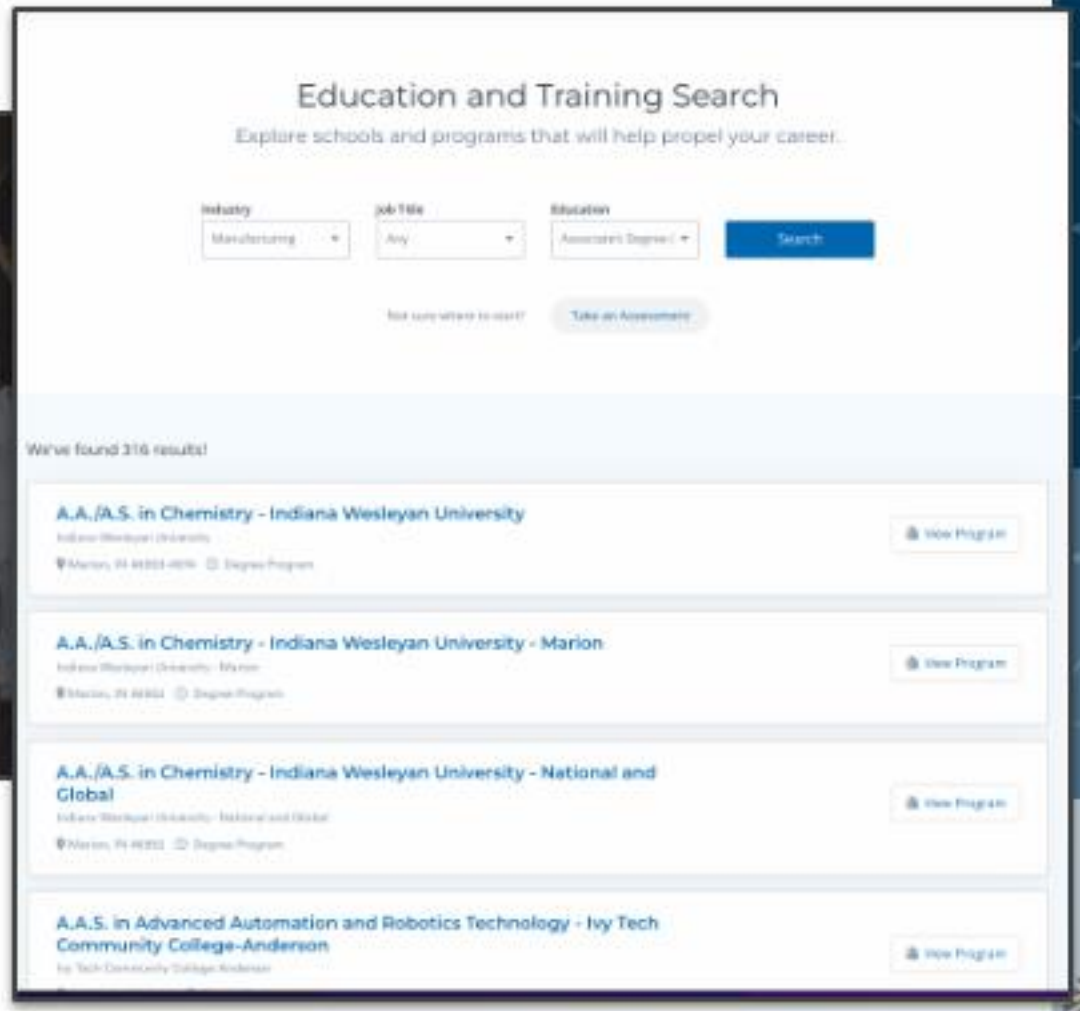




Navigation Tools + Resources

Indiana Career Explorer





Parchment Award

DIPLOMA

Diploma
Associate of Applied Science in Medical Assisting

Issued To
Valerie Edison

Date Acquired:
May 01, 2024

Expires:
Does Not Expire

verified

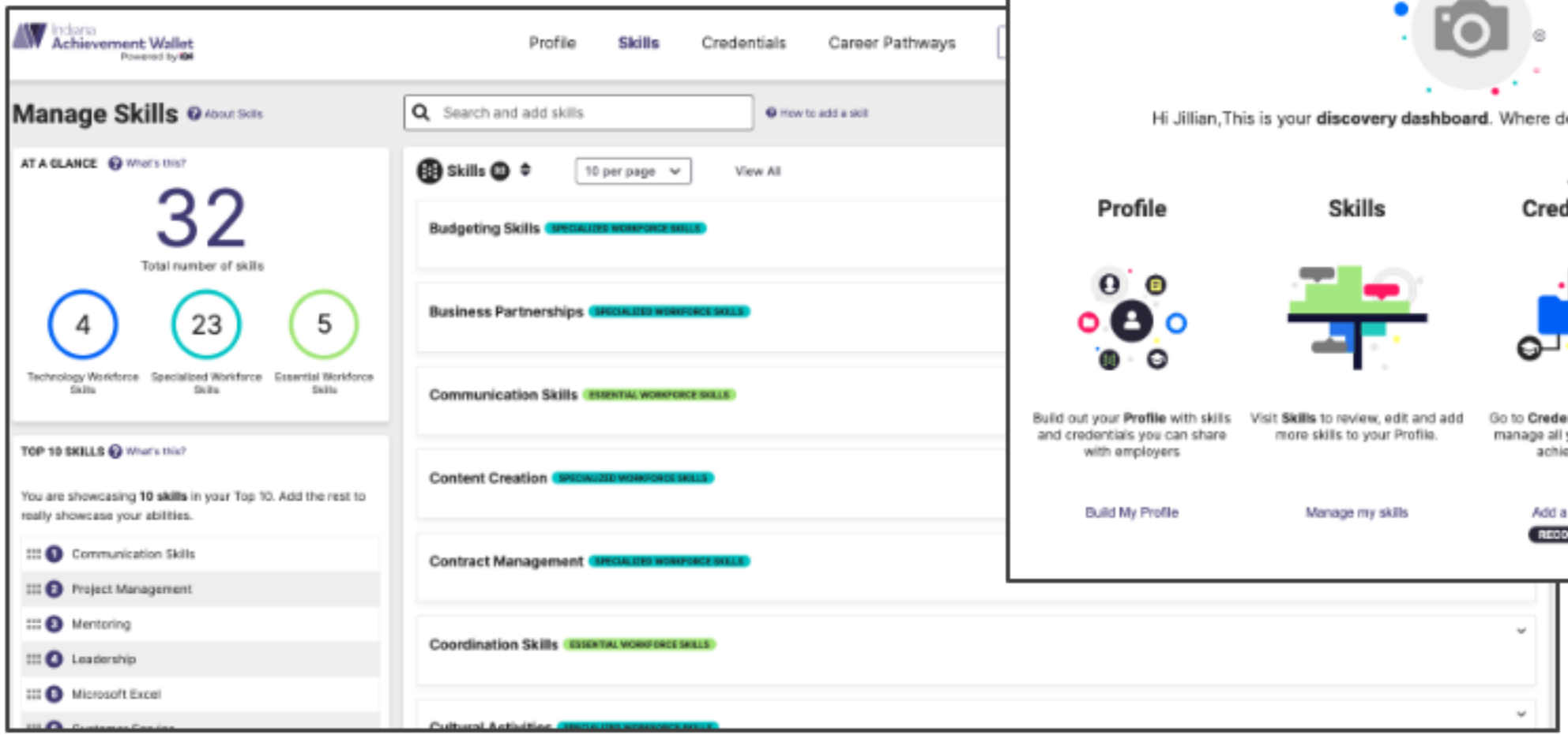
PROGRAM DETAILS

Description
The Medical Assisting program at Ivy Tech offers exciting, hands-on learning where student simulations are as "real-life" as possible. Students in the program get to learn from faculty who are credentialed and have real experience in the field. In additions students have the opportunity to participate in an externship in the community. Classes will focus on patient care, venipuncture, electrocardiogram, vital signs, injections, medical coding, electronic charting and medical records. Students will learn in a variety of settings, including a computer lab, phlebotomy lab, laboratory skills lab, and clinical skills lab with two fully functioning patient exam rooms. This training prepares students to sit for the Certified Medical Assistant certification exam through the American Association of Medical Assistants, which is becoming a credential requirement for most employers. The Medical Assisting program is a selective program (varies by campus). When you apply to the college, you will be accepted into the undeclared program while you complete the prerequisite requirements. The Medical Assisting program accepts a limited number of students each year and there is a separate application process.

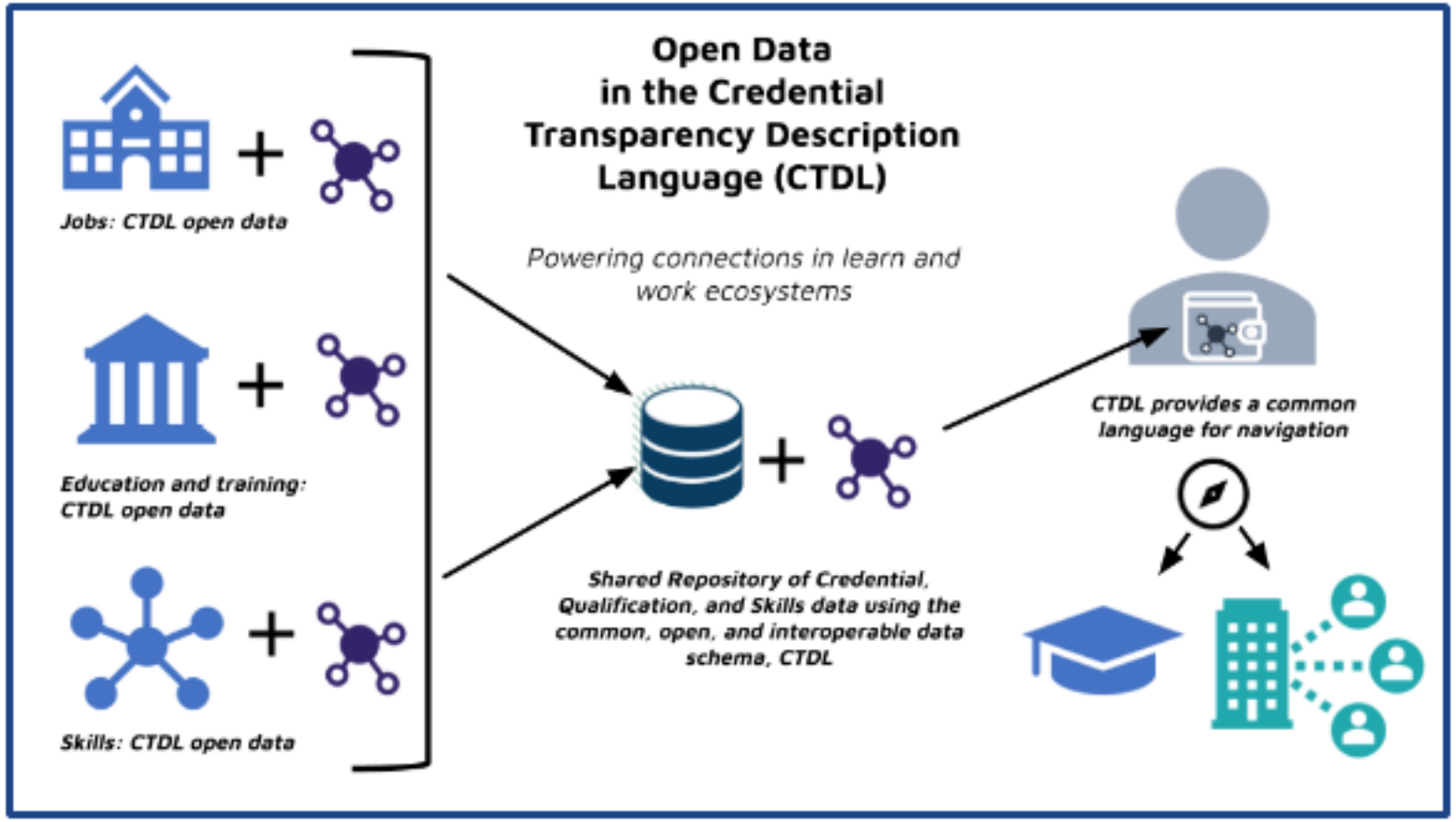
Learning Type
In-Person Only

Navigation Tools + Resources

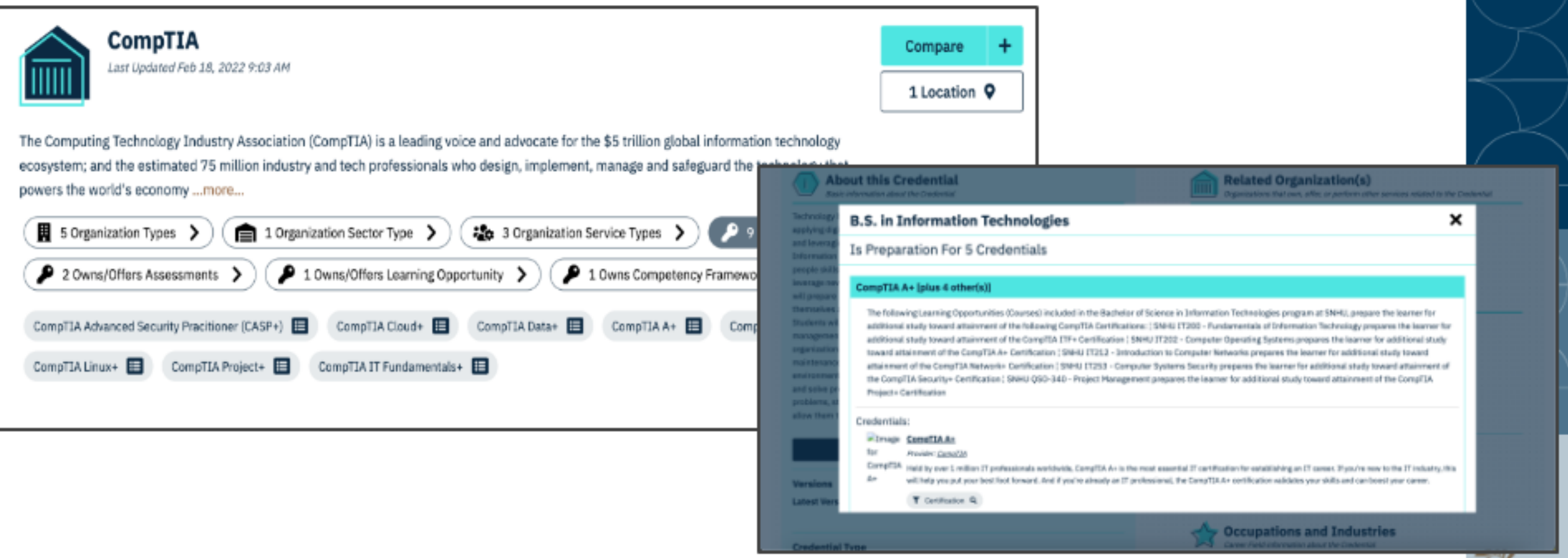
Indiana Achievement Wallet



Power of CTDL in Digital Wallets

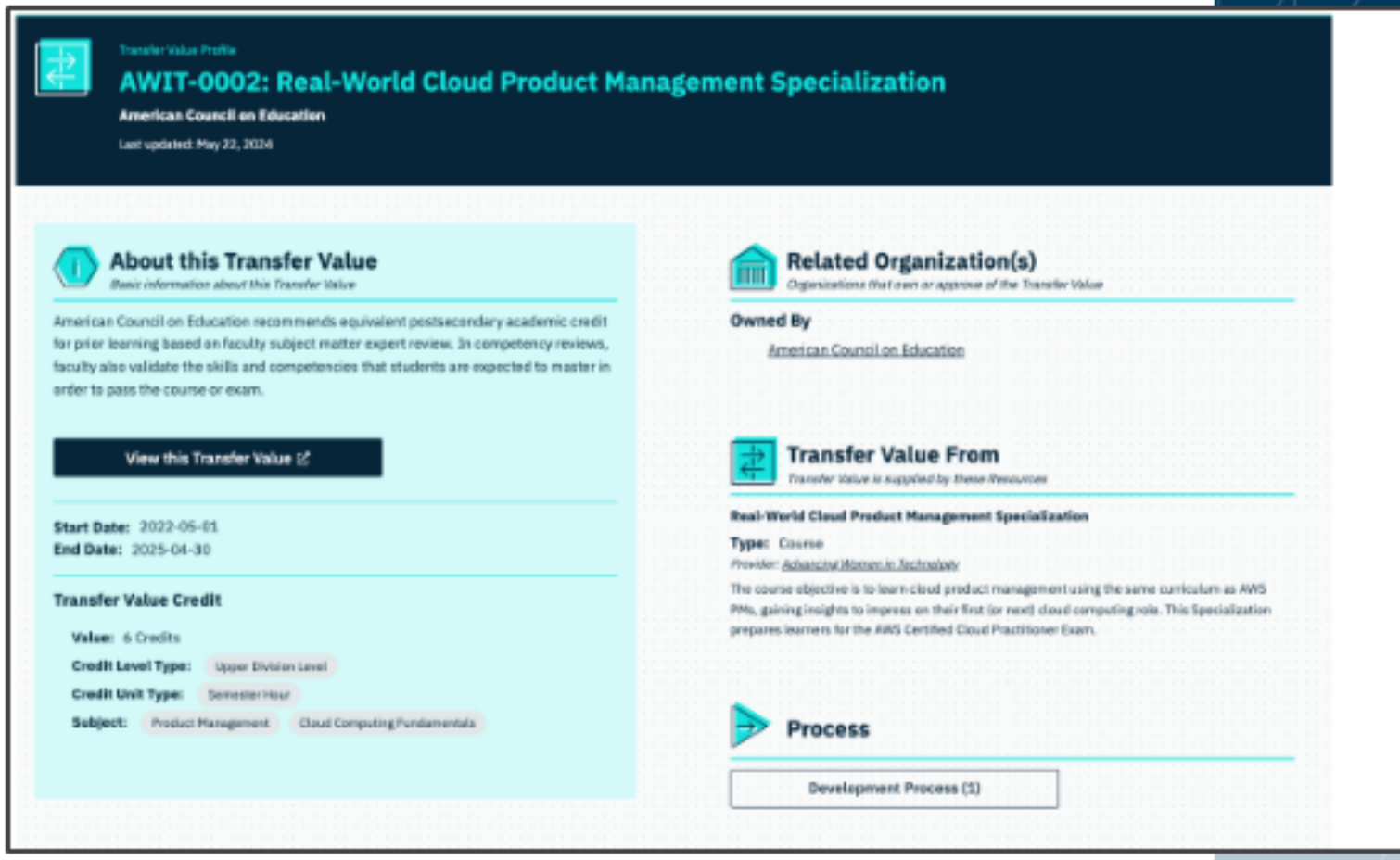


Registry Data: Industry Recognized Credentials



Transfer Values

- *The Credential Registry now contains ACE National Guide, or their recommendations of equivalent post- secondary academic credit for prior learning for over 10,000 learning opportunities.*



Credential Finder Examples:
Anatomy of an ACE CTDL Transfer Value Profile

Name

Owner

Description

Subject Web Page

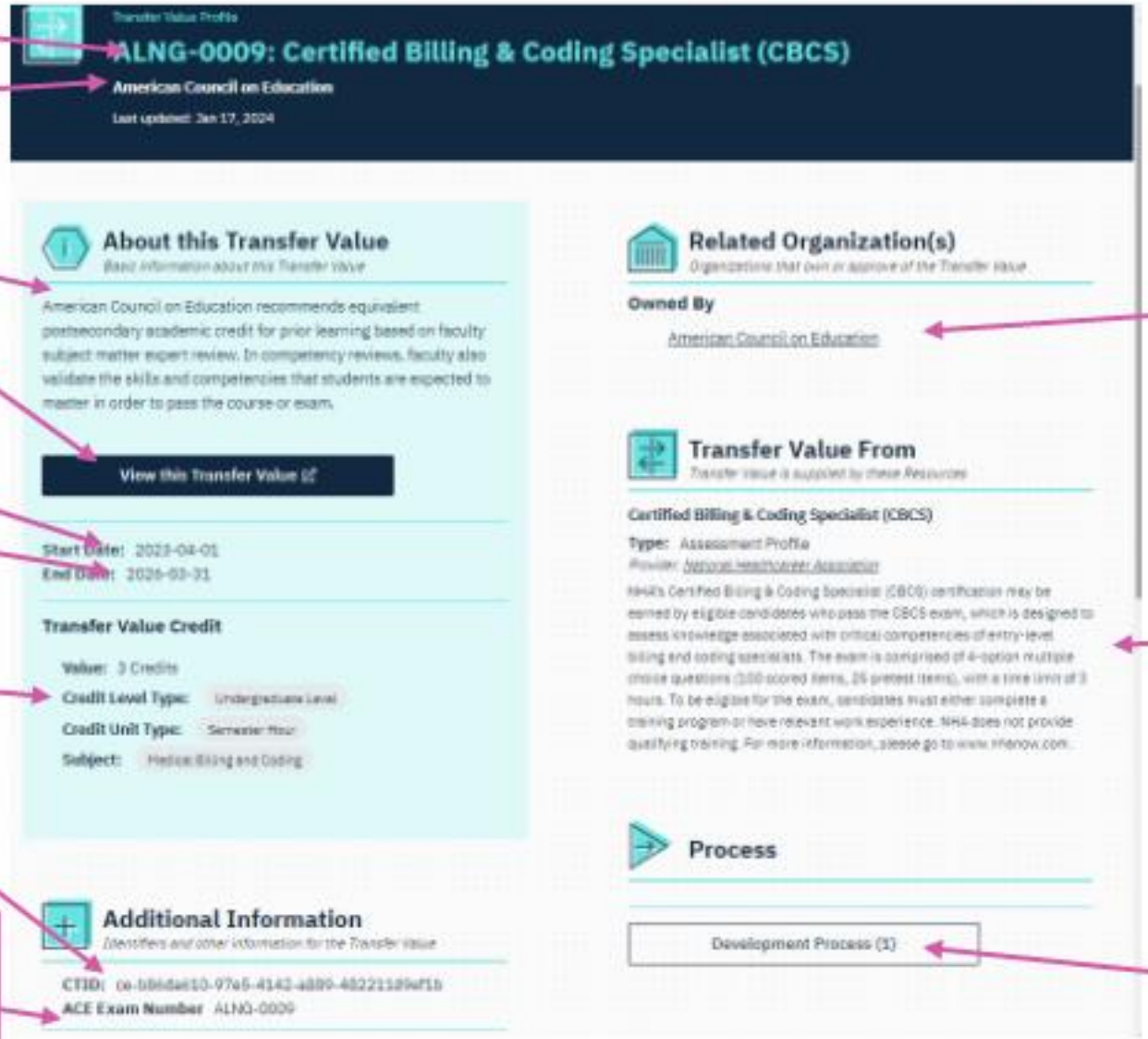
Start Date

End Date

Value Profile:
- Value
- Credit Level Type
- Credit Unit Type
- Subject

CTID

Identifier Value
- Identifier Name
- Identifier Value Code

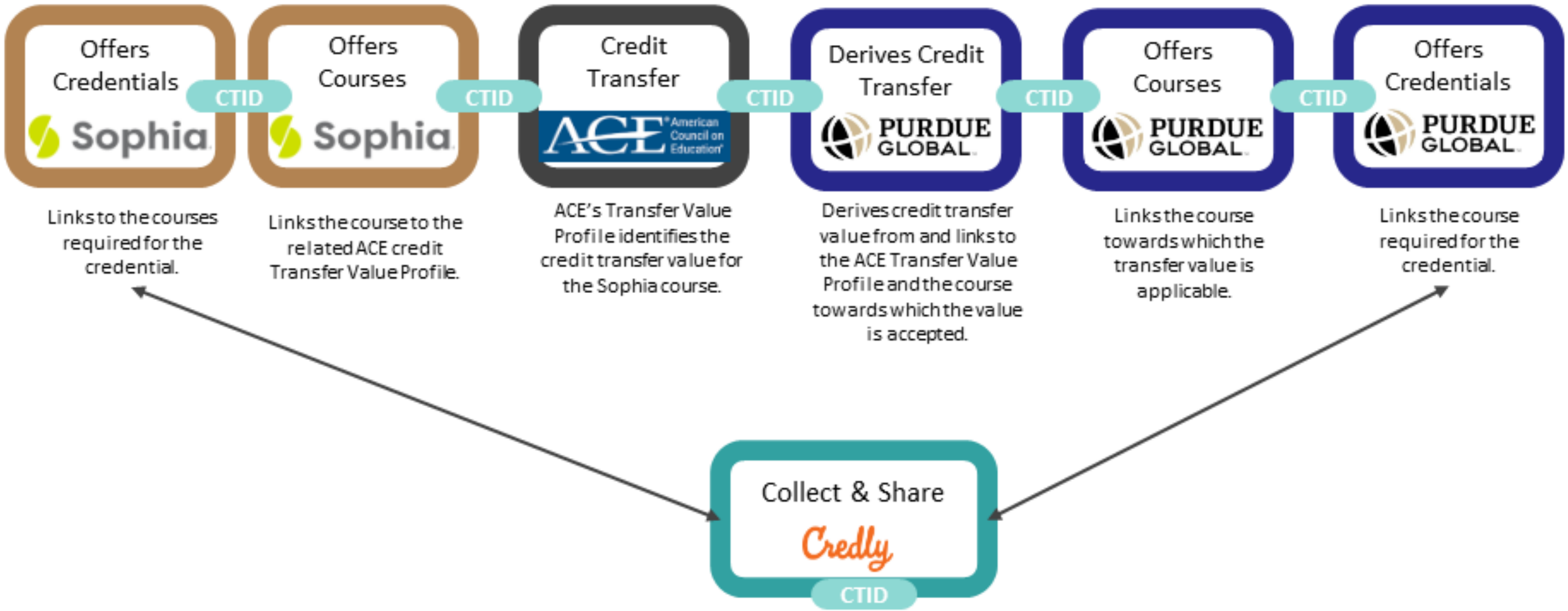


Owned By

Transfer Value From
- Name
- Type
- Credential Organization
- Description

Process Profile
- Development Process
- Description

The Power of CTDL Linked Open Data

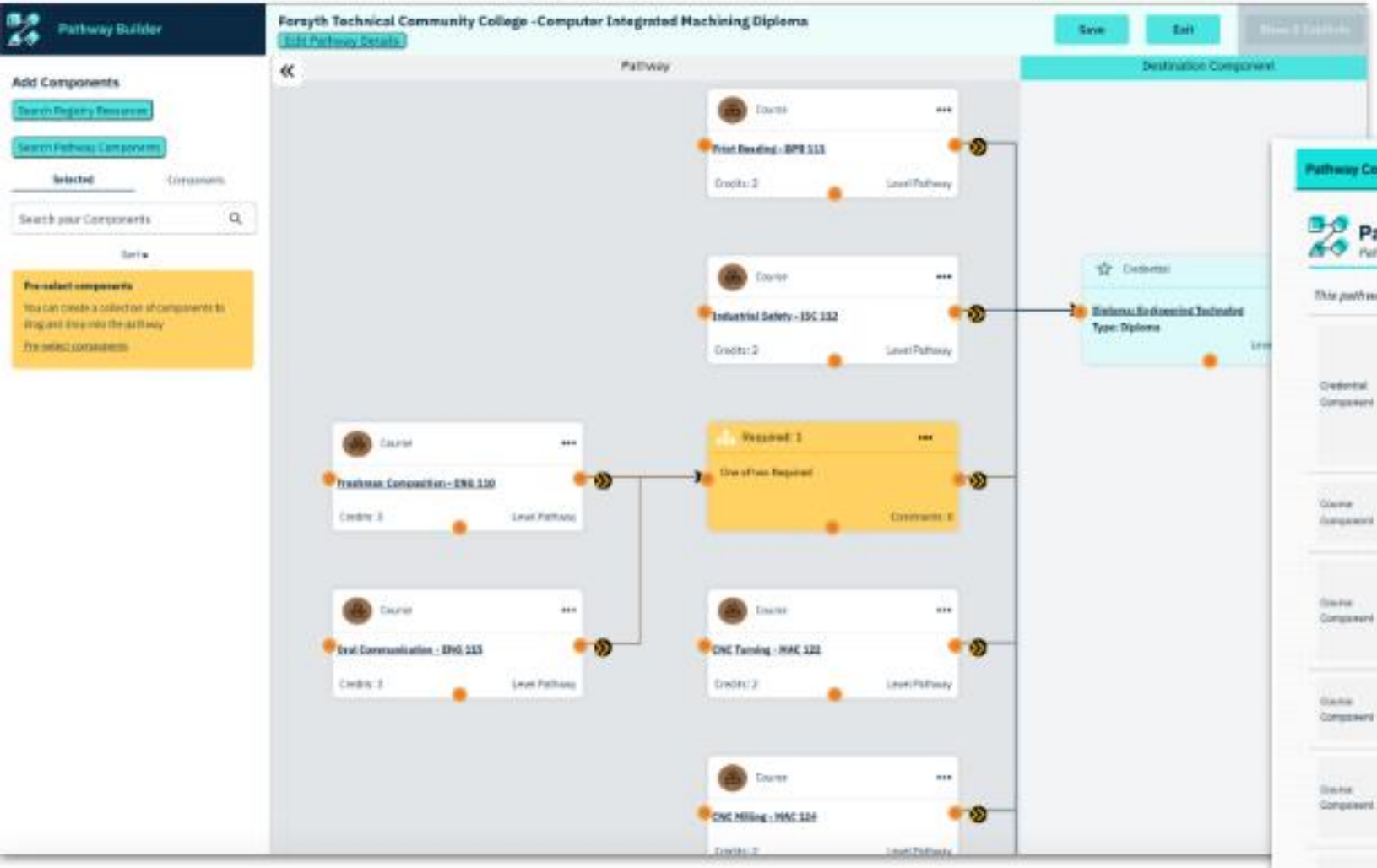


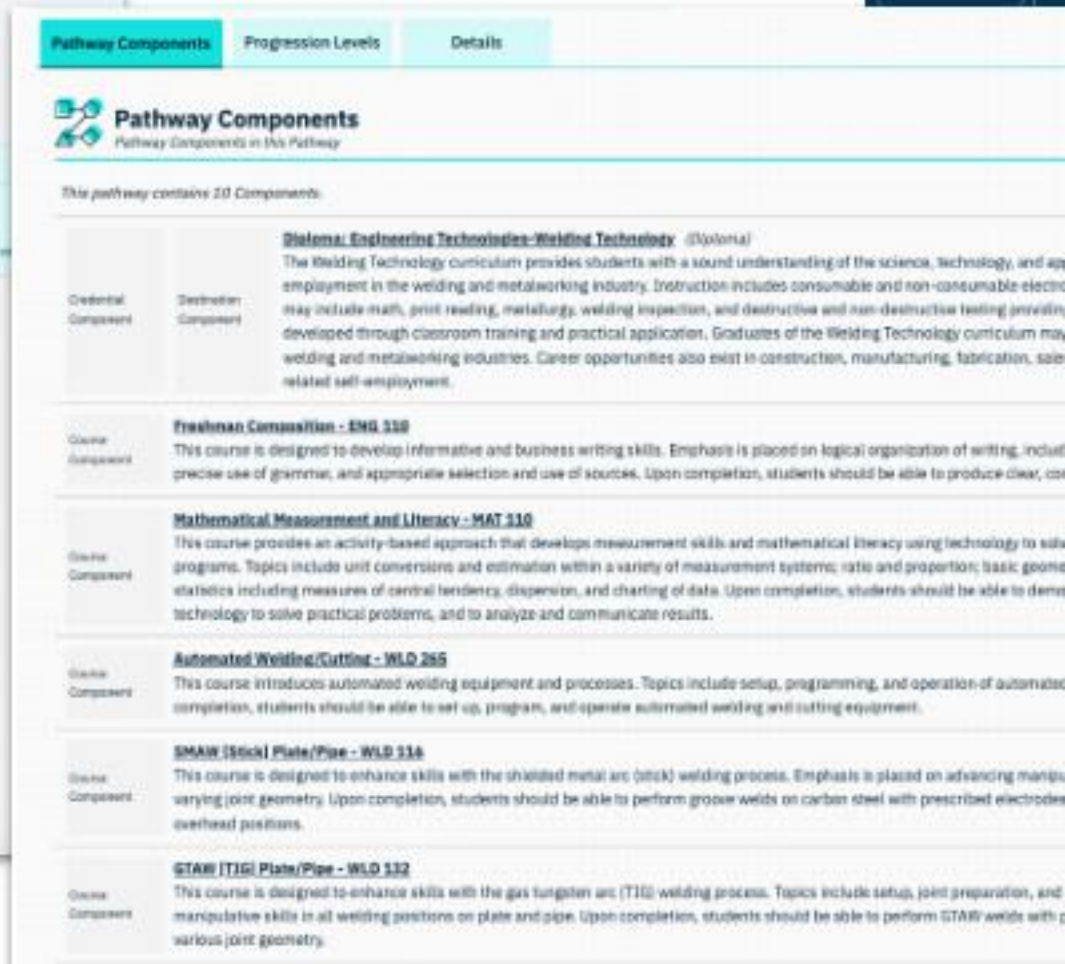
Pathway Builder

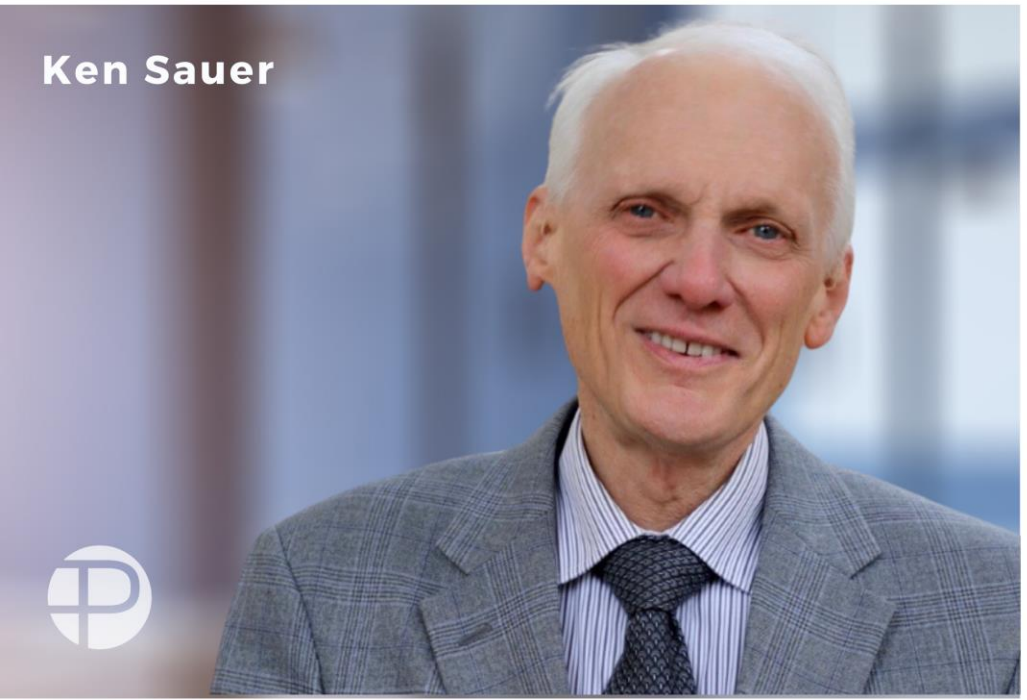
- **Pathway Builder**: New tool to connect credentials, courses, competencies, and jobs - available as linked open data - in detailed pathways that chart journeys from education to the workforce.

https://credentialengine.org/pathwaybuilder

Example Pathway







CREDENTIAL TRANSPARENCY FOR COMPETENCIES AND SKILLS: THE BENEFITS TO STUDENTS, JOBSEEKERS, AND EMPLOYERS

Scott Cheney

CEO,
Credential Engine

Ken Sauer

Senior Associate Commissioner and Chief Academic Officer,
Indiana Commission for Higher Education

Moderated by:
Catherine Starghill, Esq., Vice President, New Jersey Council of County Colleges and Executive Director, New Jersey Community College Consortium for Workforce & Economic Development


Q&A

NETWORKING BREAK


LUNCH

EDUCATION PATHWAYS AND THE FUTURE OF WORK

Charlotte Cahill

Associate Vice President, Education,
Jobs for the Future

Jobs for the Future

Education Pathways and the Future of Work

Charlotte Cahill | Associate Vice President | June 12, 2024

JFF's North Star

In 10 years,
75 million people facing systemic barriers to advancement **work in quality jobs**.

JFF

BUILDING A FUTURE THAT WORKS—FOR EVERYONE.

JFF's approach

Design
solutions

Scale
best practices

Influence
policy and action

Invest
in innovation

BUILDING A FUTURE THAT WORKS—FOR EVERYONE.

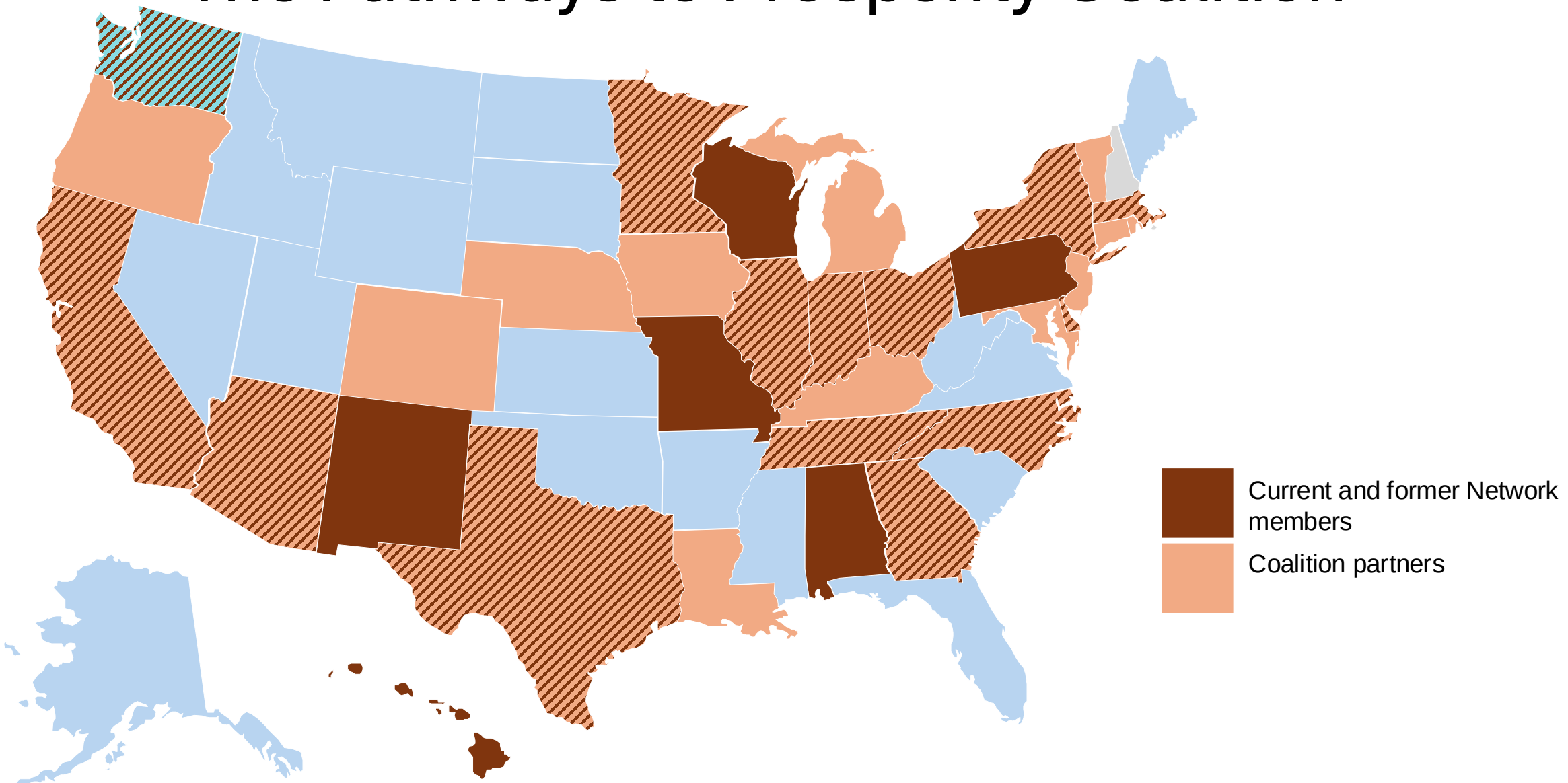
Pathways to Prosperity (PtoP) supports state and regional leaders in designing and implementing **equitable education-to-career pathways systems**

We are boldly reimagining how our education and workforce systems can better prepare young people for careers

JFF

PATHWAYS TO PROSPERITY

The Pathways to Prosperity Coalition



What do we know about the future of work?

01

What's up with AI?

- How workers leverage AI within certain tasks and skills is just as important as how much.
- Because jobs will more likely shift over time, rather than overnight, planning deliberately for transformation is key.
- Our new research offers three new resources to help leaders, institutions, and ecosystems – and workers themselves – prepare.
- Most importantly: every occupation we studied will benefit from doubling down on the uniquely human skills that will be elevated or augmented by AI.

LEARN MORE

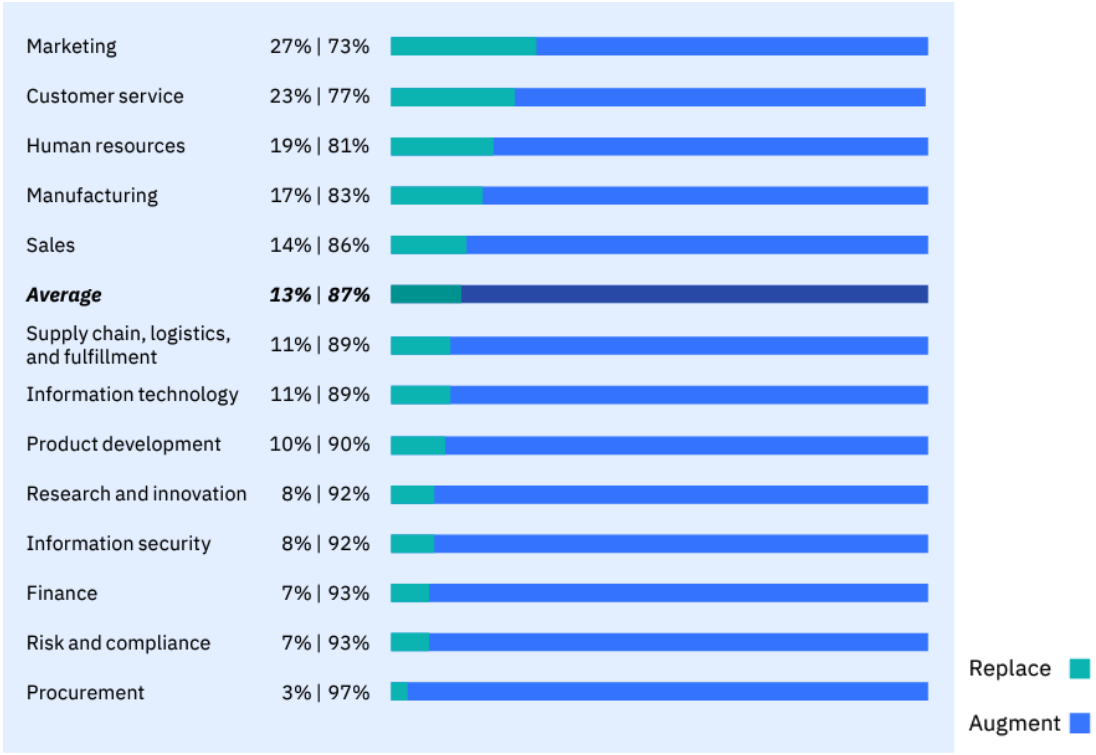
AI is more likely to reshape most jobs than to replace them

80% of the U.S. workforce could have at least 10% of their work tasks affected by the introduction of AI

30% of work hours could be automated due to generative AI

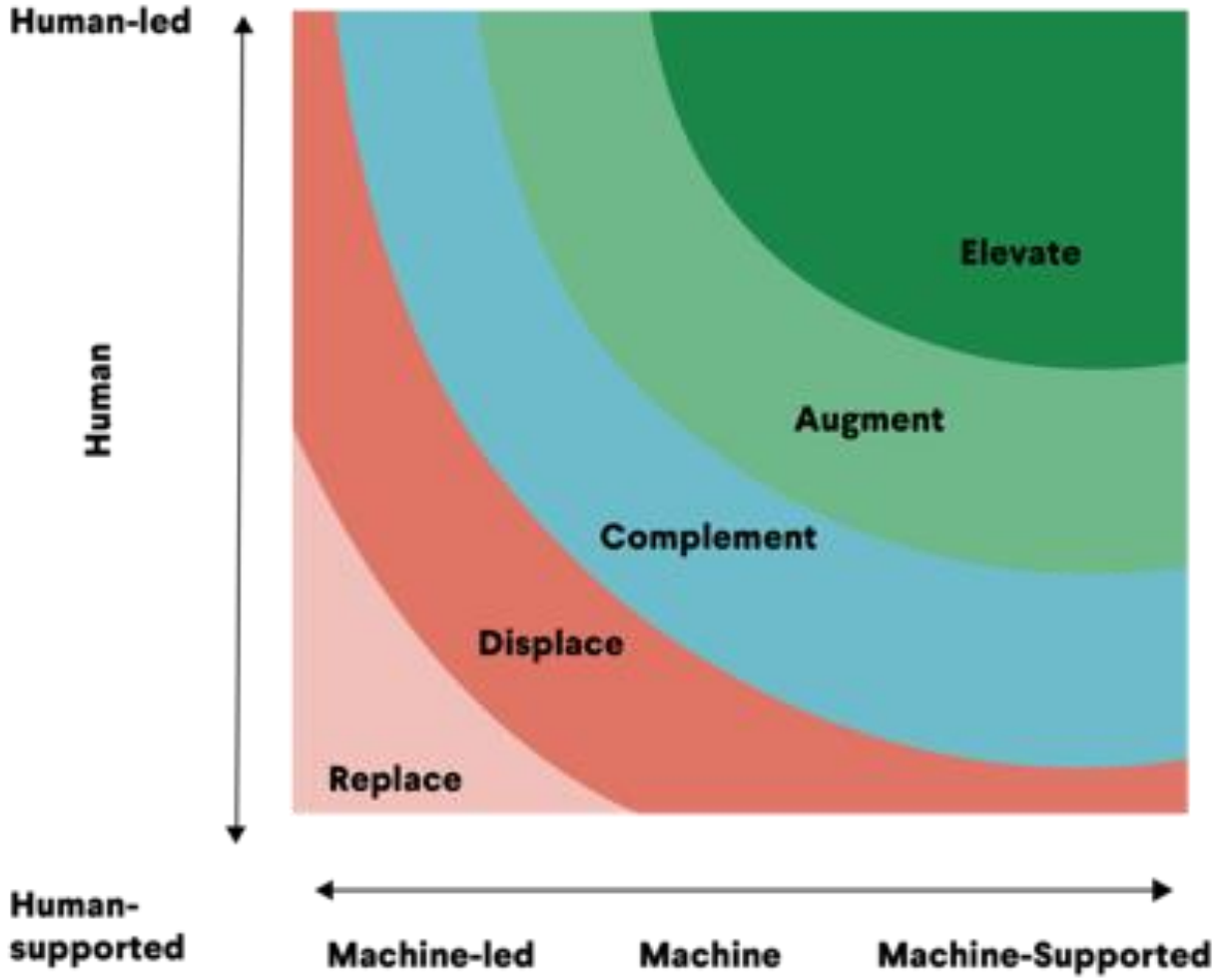
63% of jobs will be complemented by AI-driven technologies (vs 6% substituted)

More execs expect to augment rather than replace employees



Sources: OpenAI, McKinsey, Goldman Sachs, IBM

The AI-Ready Workforce Framework



The AI-Ready Workforce Framework: Types of AI Impact on Common Skills

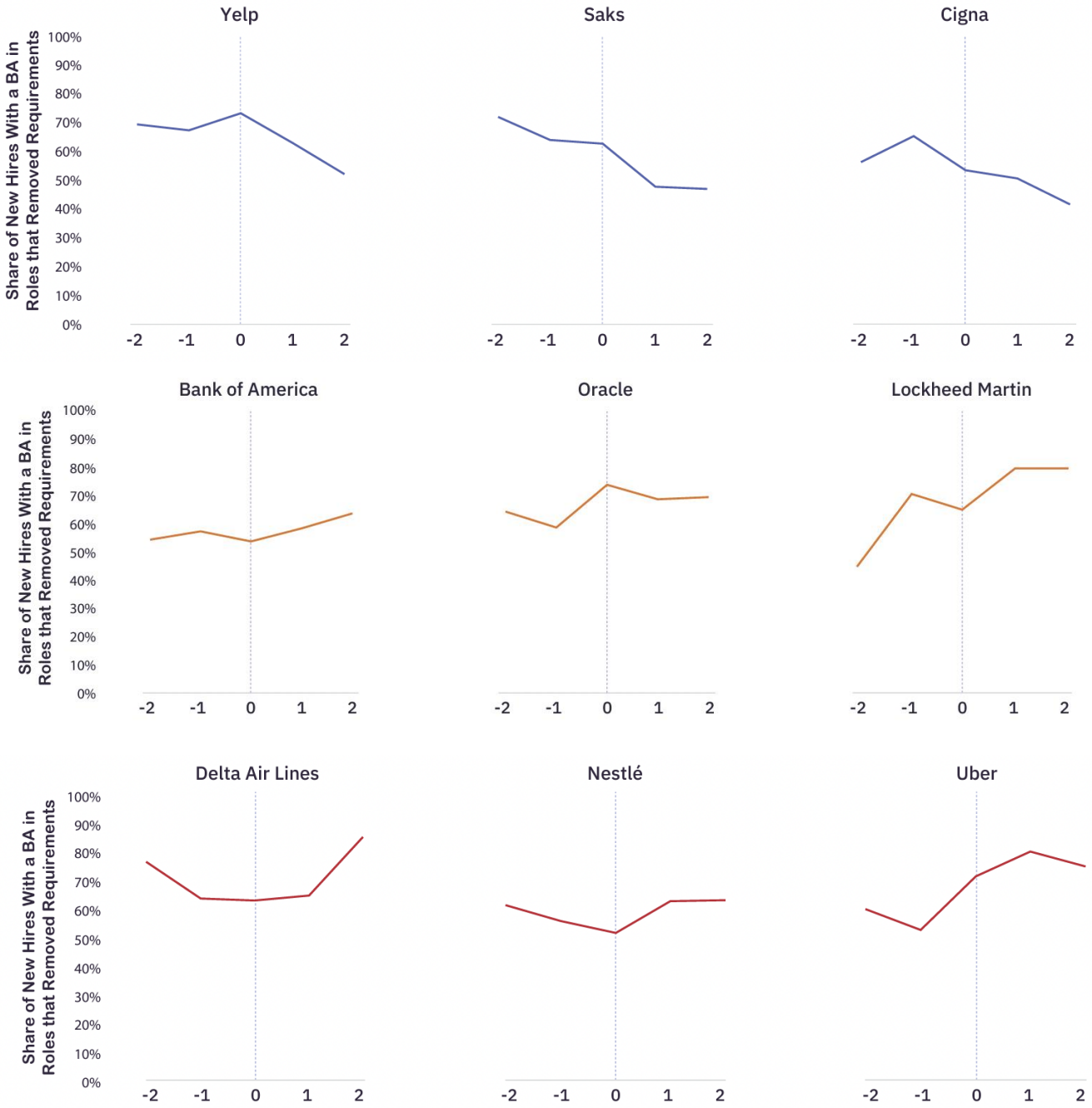
- **Elevate**: Human and interpersonal tasks and skills whose use is significantly increased by AI
- **Augment**: Complex cognitive/analytical tasks and skills whose use is increased by AI
- **Complement**: Machine collaboration tasks and skills on whose use AI will have a neutral impact
- **Displace**: Routine cognitive tasks and skills whose use is decreased by AI
- **Replace**: Routine physical tasks and skills whose use is significantly decreased by AI-driven automation

What about skills-based hiring?

The promise of skills-based hiring

Workers	• 25% increase in salary on average • Access to a larger range of career options
Employers	• Retention rates for workers hired via skills-based hiring are 10% higher than for their peers with degrees • Access to expanded talent pool

Source: Burning Glass Institute, *Skills-Based Hiring: The Long Road from Pronouncements to Practice*



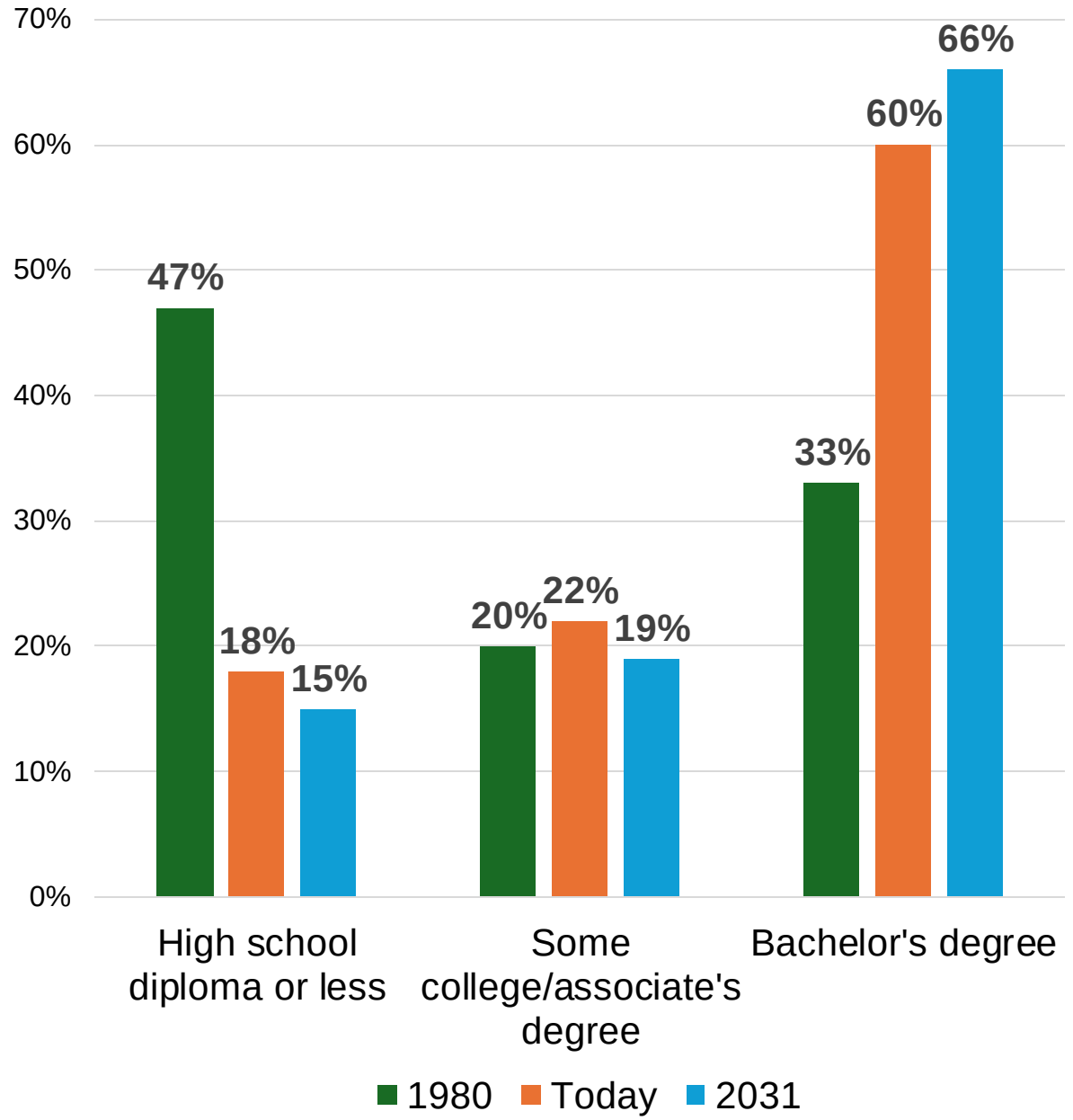
The reality of skills-based hiring

Some companies are leaders, some are doing it in name only, and some are backsliders

Source: Burning Glass Institute, *Skills-Based Hiring: The Long Road from Pronouncements to Practice*

What we do know

The educational attainment distribution of workers in good jobs is changing



Source: Zack Mabel, Georgetown University Center on Education and the Workforce, “What Works: Education, Training, and Work-Based Pathway Changes that Lead to Good Jobs” presentation at Pathway to Prosperity leads meeting, October 23, 2023

By 2031...

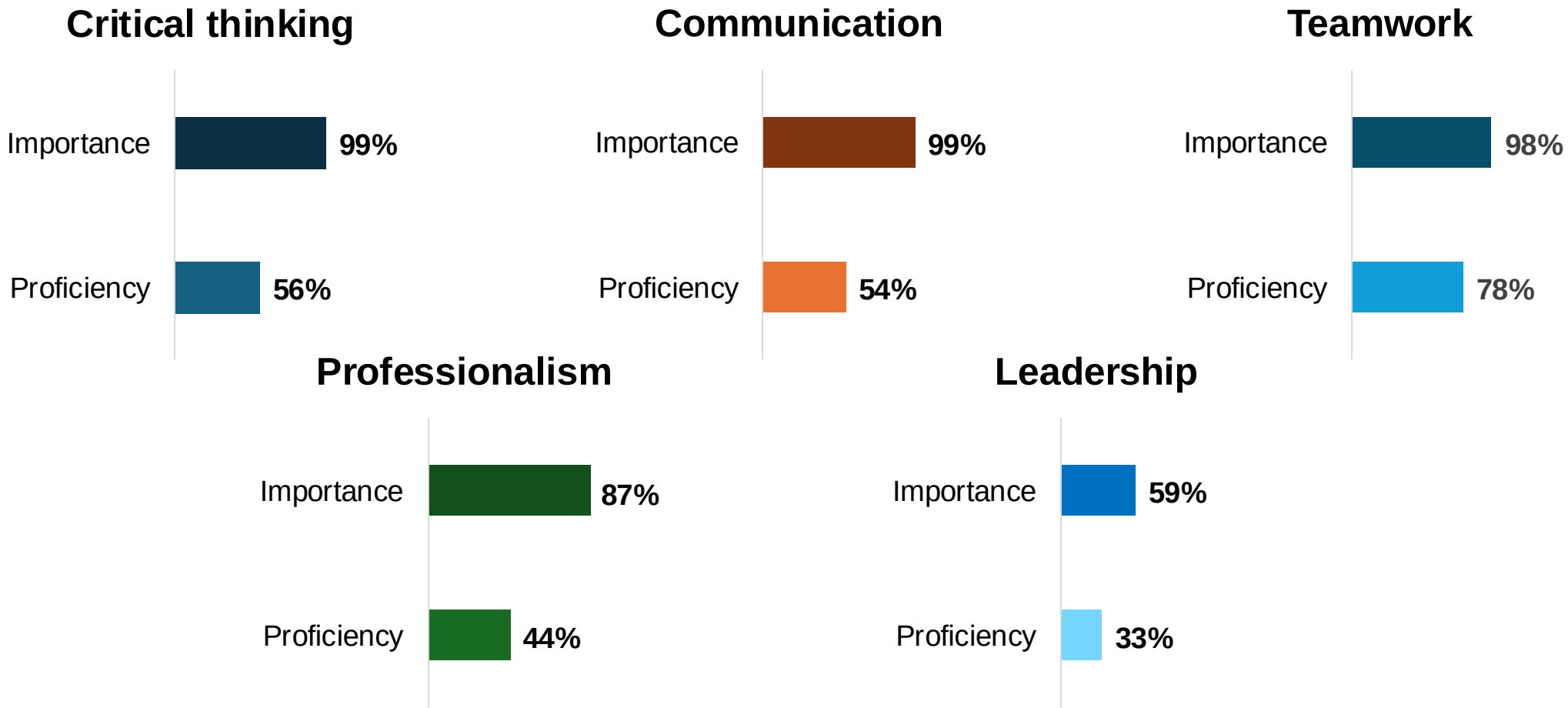
40% of all jobs will require a B.A., and 75% of them will be good jobs

30% of all jobs will be middle-skill jobs, and 40% of them will be good jobs

30% of all jobs will require a high school diploma or less, and 20% of them will be good jobs

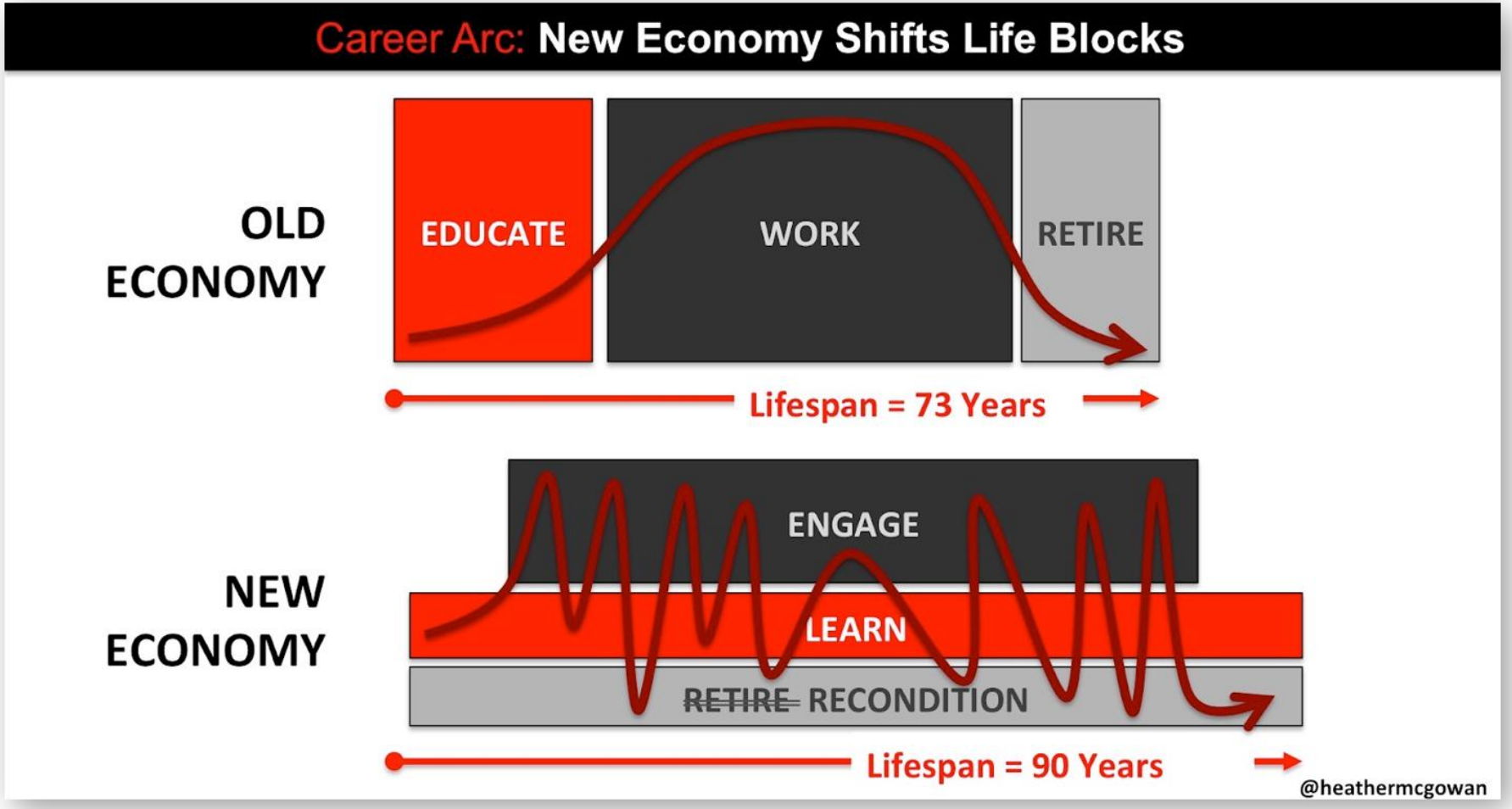
Source: Georgetown University Center on Education and the Workforce and The 74

Employers say recent college graduates lack employability skills



Source: National Association of Colleges and Employers, *Job Outlook 2022*

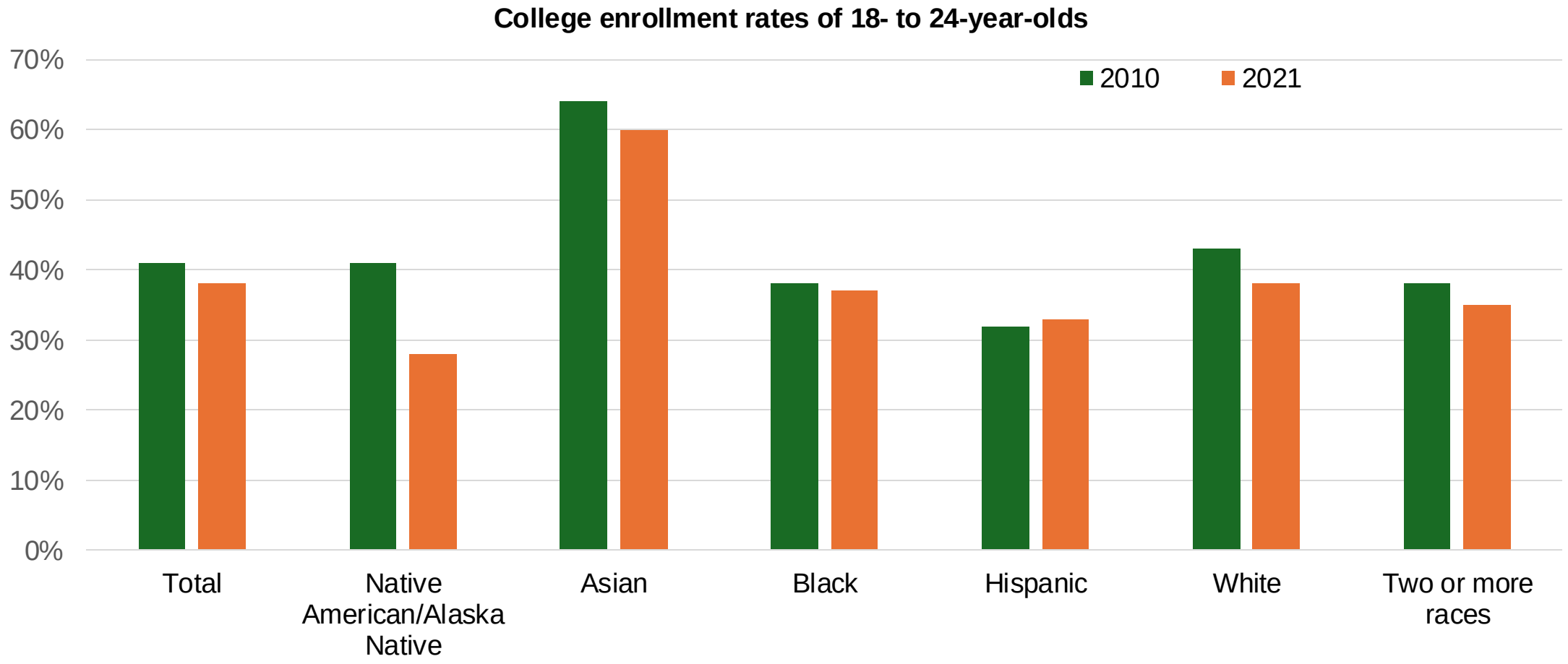
Maybe the most important thing we know



What do we know about our education systems?

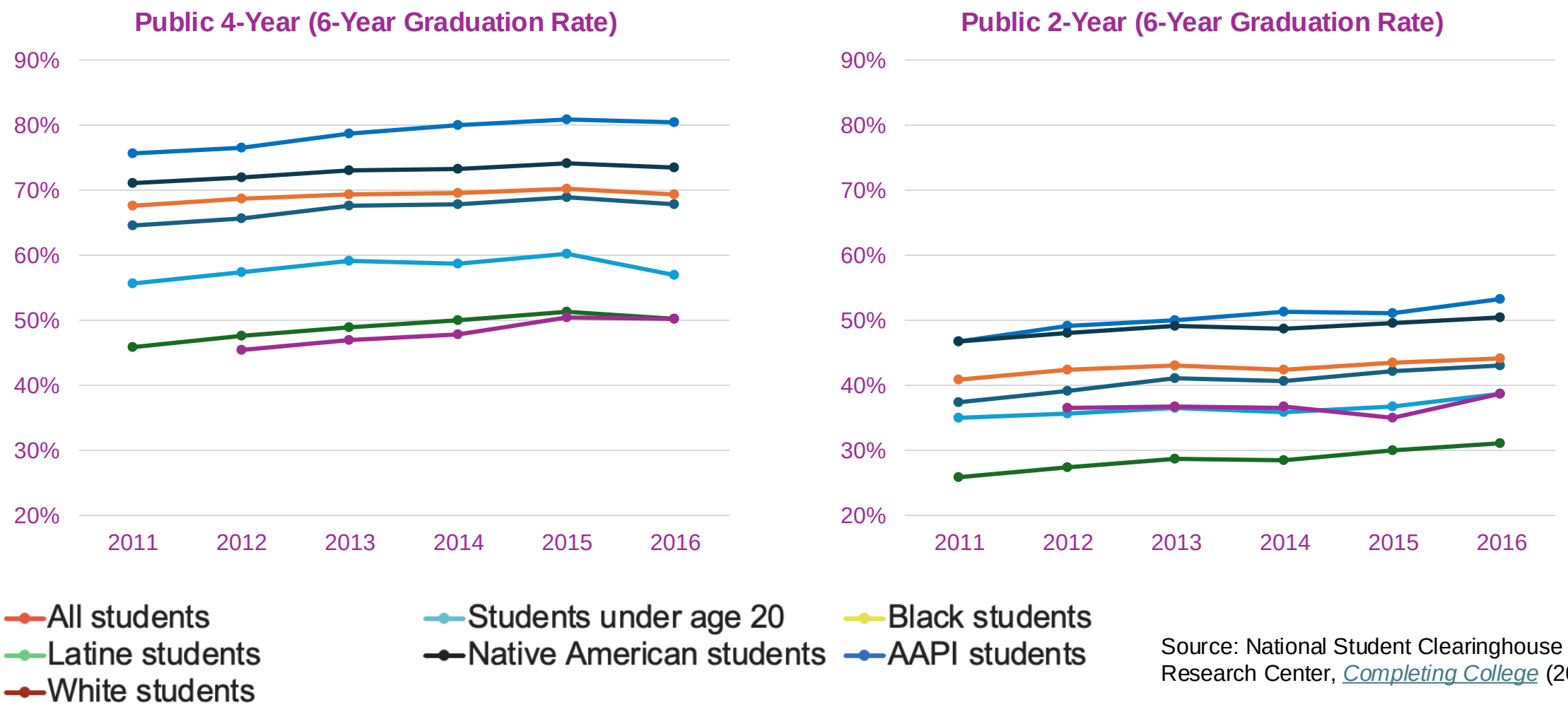
02

College enrollments are declining



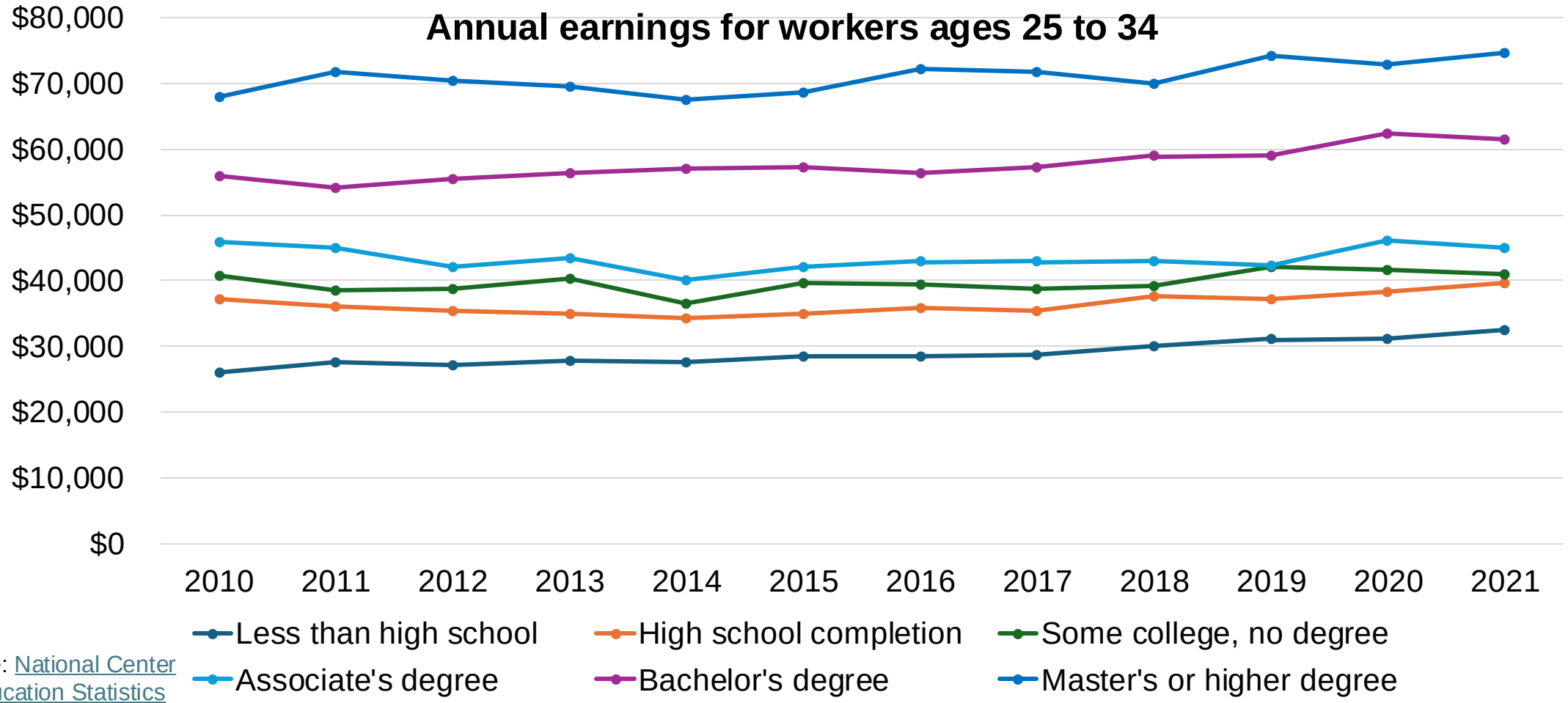
Source: National Center for Education Statistics and National Student Clearinghouse Research Center

And college completion rates have mostly stalled



Source: National Student Clearinghouse Research Center, *Completing College* (2022)

Durable differences in earnings



Source: National Center for Education Statistics

Investing in college is risky

Those who borrowed money for college, but did not complete bachelor's degrees, are much less well off financially and more likely to have regrets about their educational choices than those who completed degrees.

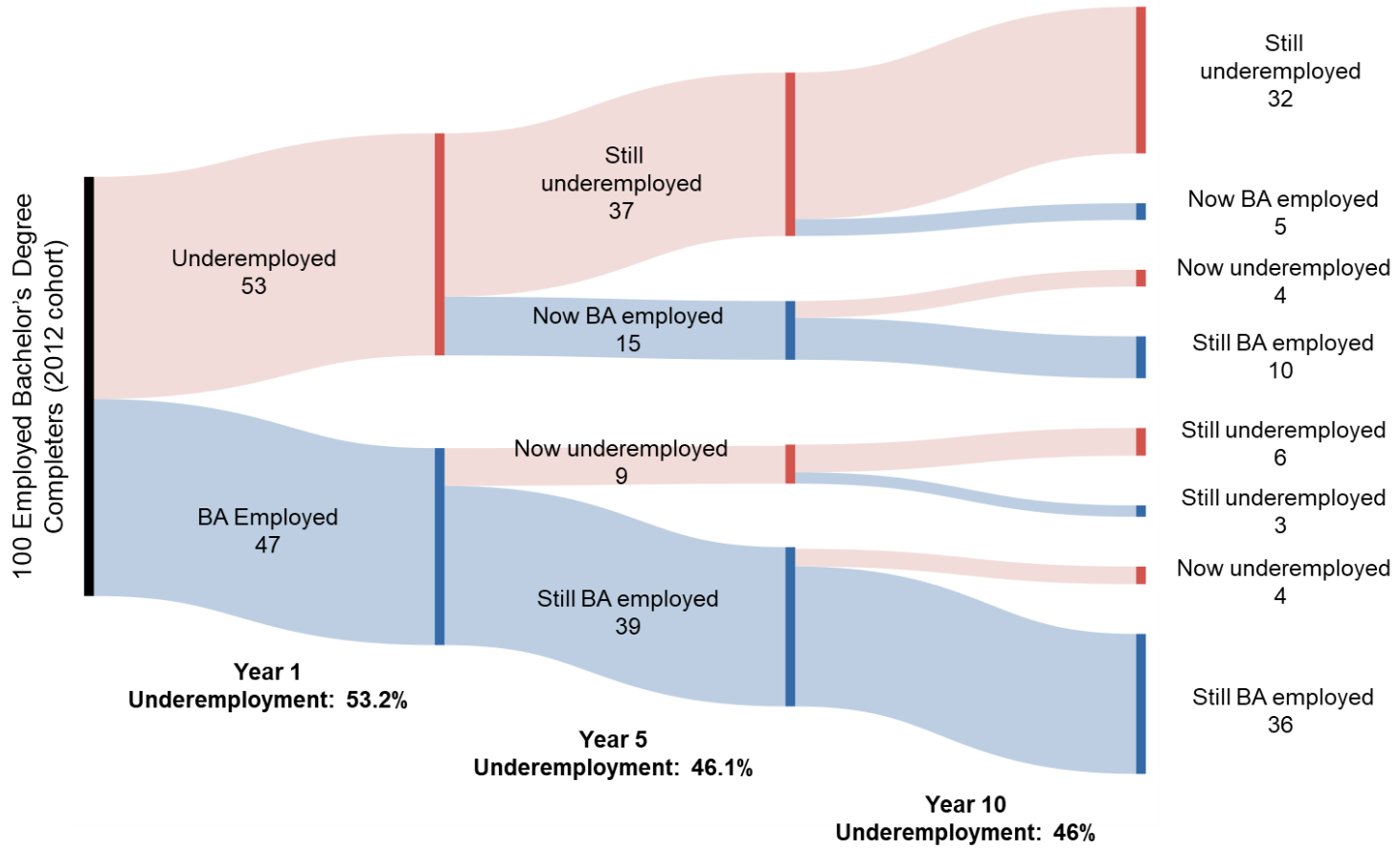
- **60%** More likely to access SNAP benefits
- **57%** More likely to regret their field of study
- **53%** More likely to regret their choice of school
- **97%** Less likely to experience general financial wellbeing
- **94%** Less likely to be homeowners
- **84%** Less likely to be able to cover a $400 expense with cash

Source: Board of Governors of the Federal Reserve System

Underemployment is a challenge

Only about half of bachelor's degree holders secure employment in a college-level job within a year of graduation

Of those who are underemployed, two-thirds remain so 10 years after graduation



Source: Burning Glass Institute and Strada Institute for the Future of Work, *Talent Disrupted: Underemployment, College Graduates, and the Way Forward* and Matt Sigelman, Burning Glass Institute, "How People Rise" presentation at Pathways to Prosperity Institute, October 24, 2023

Majors matter

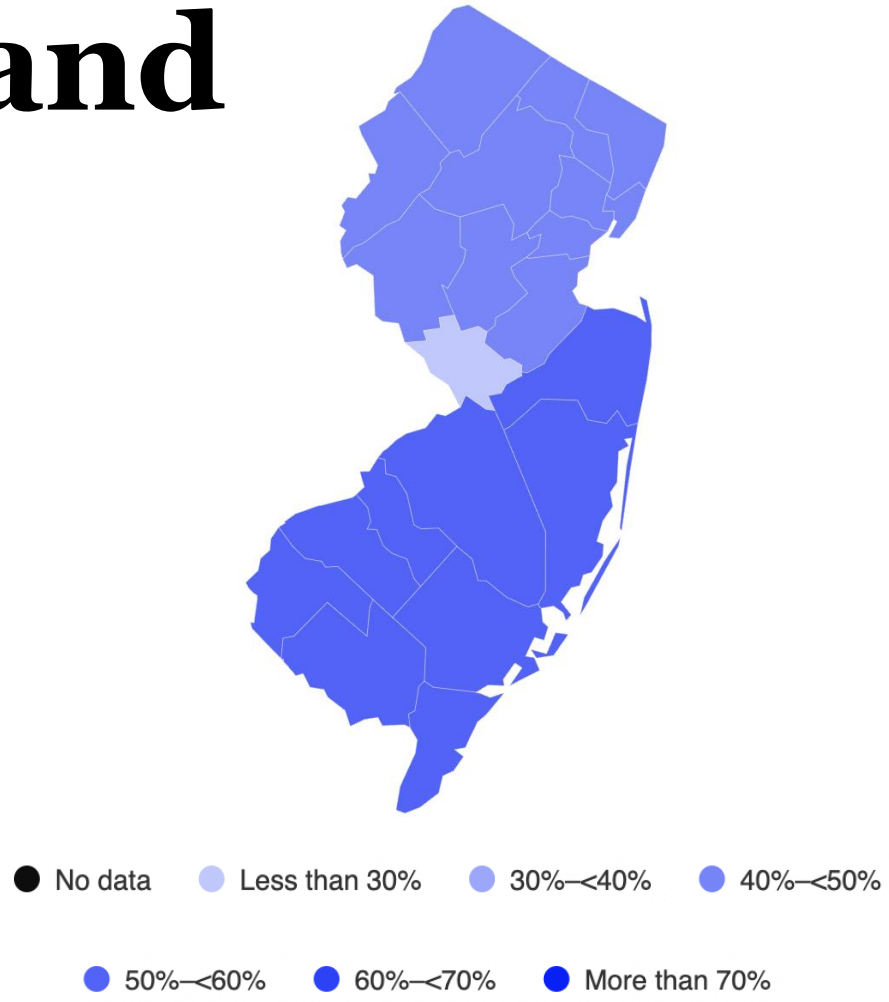
Health, education, engineering, and math majors carry lowest risk of underemployment

Source: Burning Glass Institute and Strada Institute for the Future of Work, *Talent Disrupted: Underemployment, College Graduates, and the Way Forward* and Matt Sigelman, Burning Glass Institute, "How People Rise" presentation at Pathways to Prosperity Institute, October 24, 2023

About half of learners are not earning credentials aligned to labor-market demand

Extent of credentials-to-jobs misalignment in New Jersey

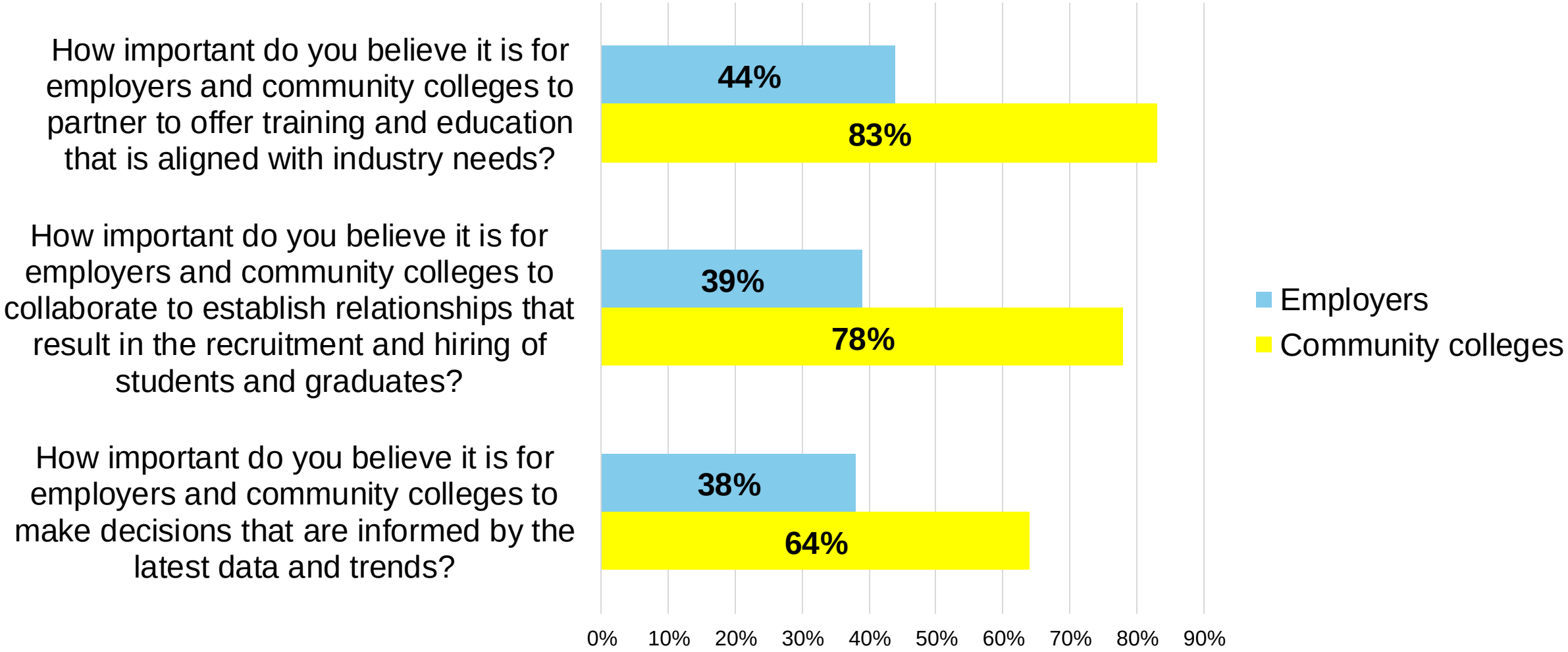
In most of the state, 40-60% of sub-baccalaureate credentials awarded are not directly aligned to local labor-market needs.



Source: Georgetown University Center on Education and the Workforce, *The Great Misalignment*

An ongoing challenge

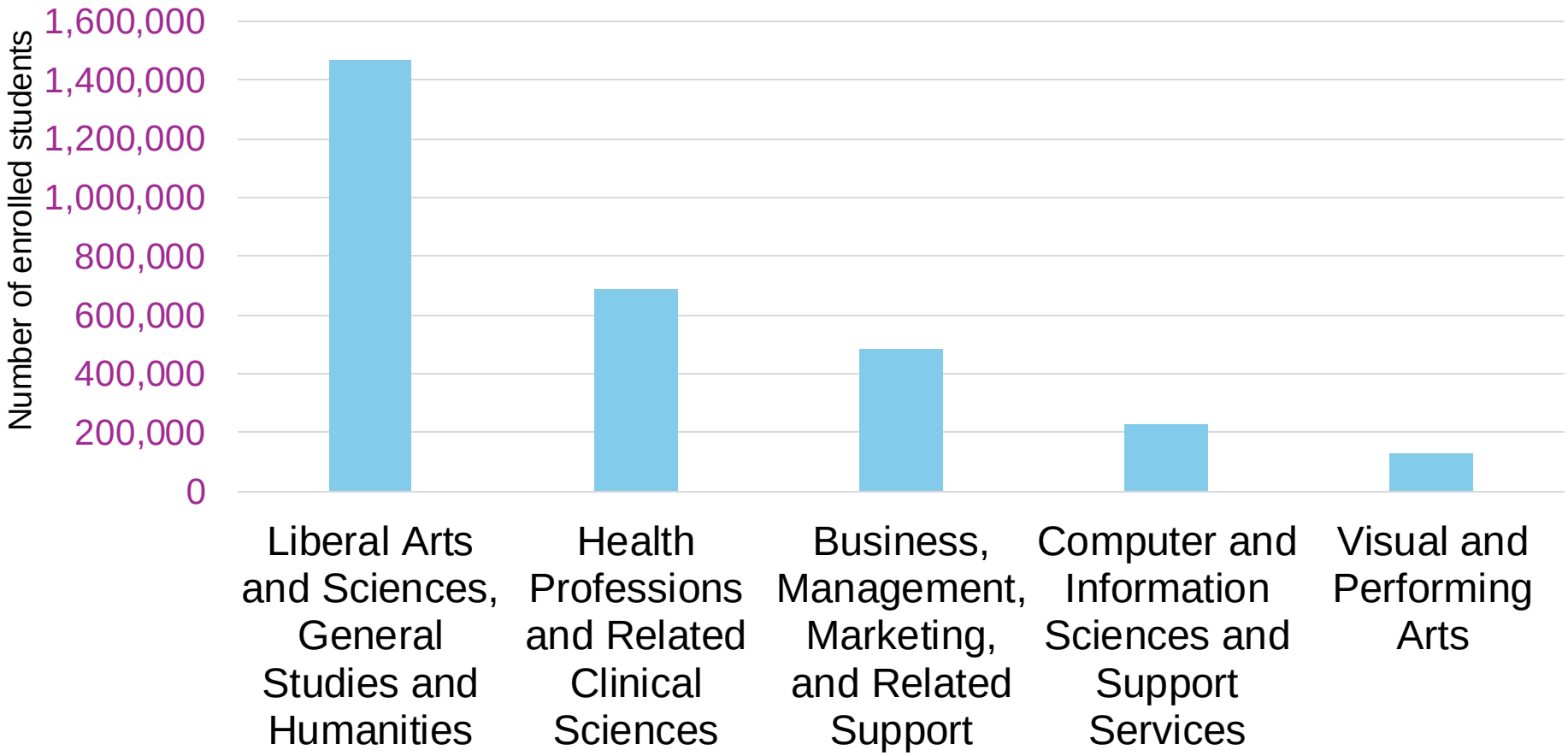
Employers and community colleges disagree on whether these activities are “very important”



Source: The Partnership Imperative

W(h)ither the humanities?

Top 5 Majors at 2-Year Institutions: Spring 2023



Source: National Student Clearinghouse Research Center

What shall we do about all of this?

03

This is the wrong message

We need to reimagine our education and workforce systems

Our systems are not meeting the needs of learners or employers

Systems are siloed, misaligned, and difficult to navigate

Structural and policy barriers impede access to high-quality career-focused learning and early career experiences

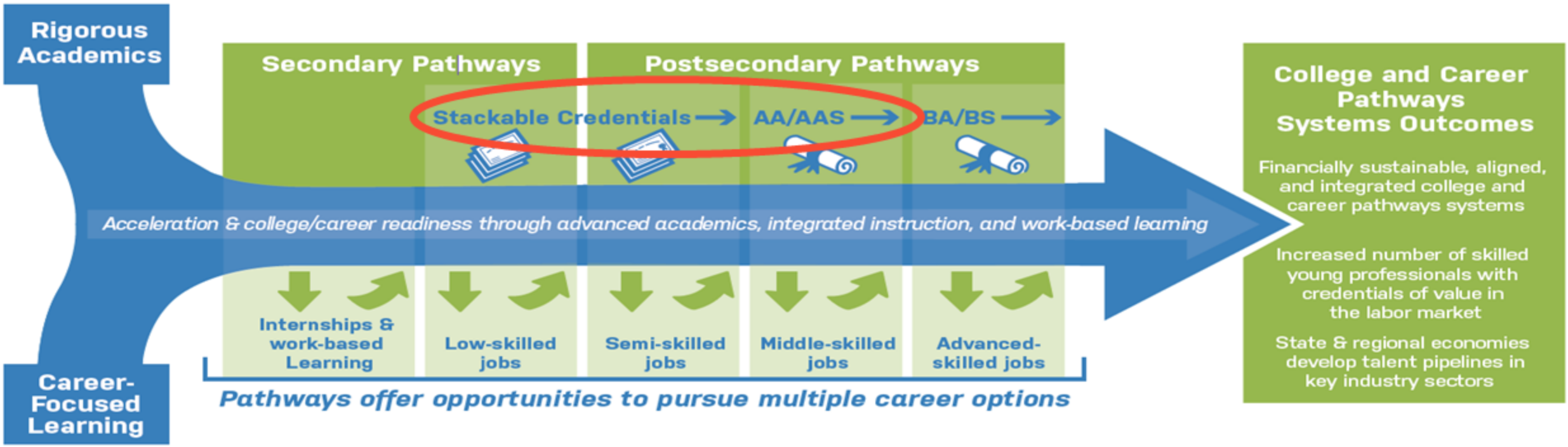
Pathways are too linear to meet the needs of learners over a lifetime

JFF

We need systems, not programs

We’re not playing a zero-sum game

Systems of pathways with multiple on- and off-ramps



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We need to think differently about outcomes

Rethink linear approach to pathways—and their endpoints

Create opportunities for new kinds of leadership and engagement by postsecondary institutions and systems

Look beyond degrees and credentials to focus on good jobs and careers

Intentionally integrate opportunities to build professional social capital

Shift burdens from individuals to systems

The Pathways to Prosperity framework

Five key levers to guide the design of education-to-career pathways that help learners seamlessly advance from high school through postsecondary education to family-supporting careers.

The Pathways to Prosperity framework

Five key levers to guide the design of education-to-career pathways that help learners seamlessly advance from high school through postsecondary education to family-supporting careers.

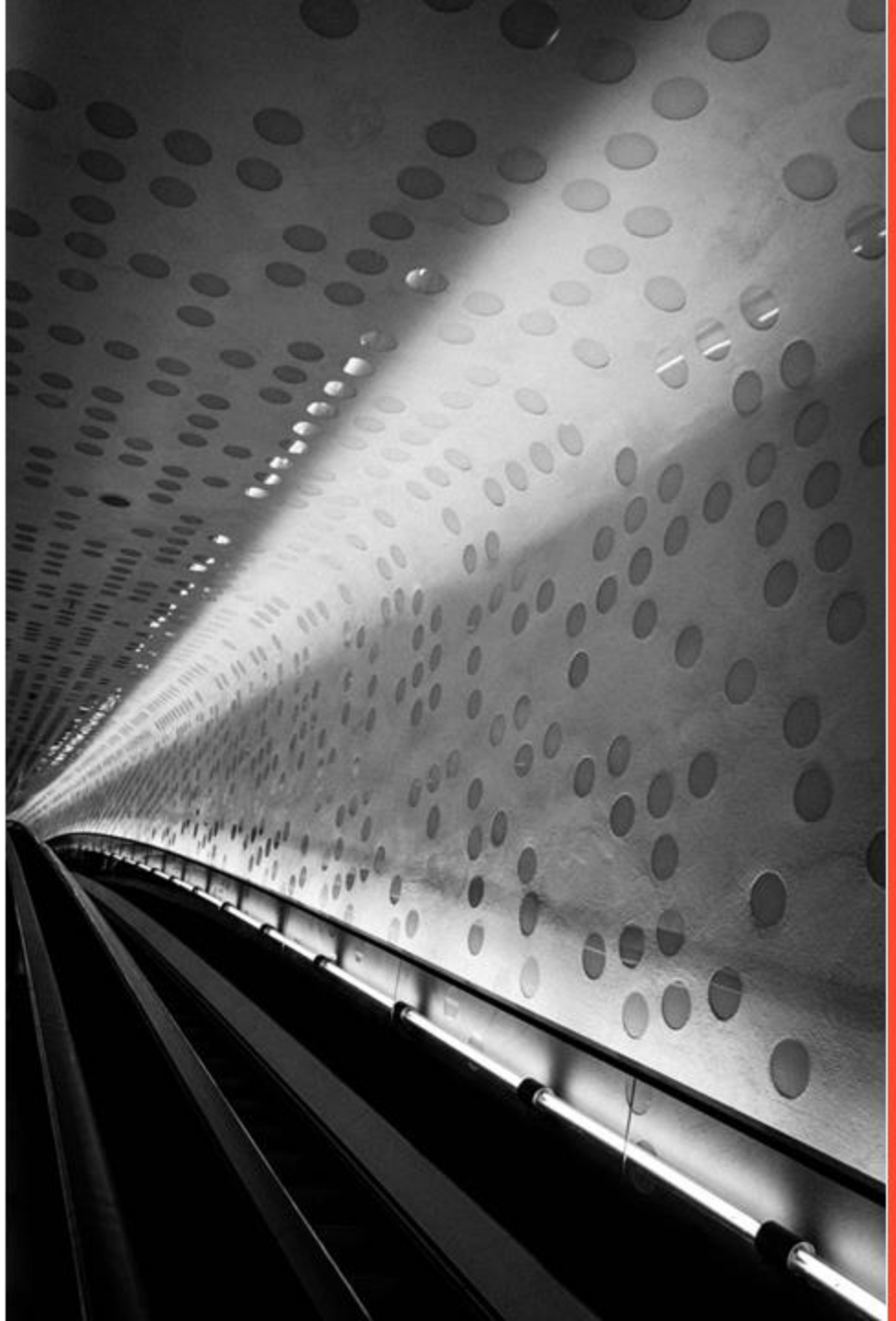
Secondary-postsecondary integration

What it is

Secondary-postsecondary integration erases boundaries between K-12 and postsecondary institutions and systems

Sequence of high school and college courses that incorporates both rigorous core academics and career-focused learning

Strategic dual enrollment courses are embedded in pathways to accelerate students' progress and multiply their options



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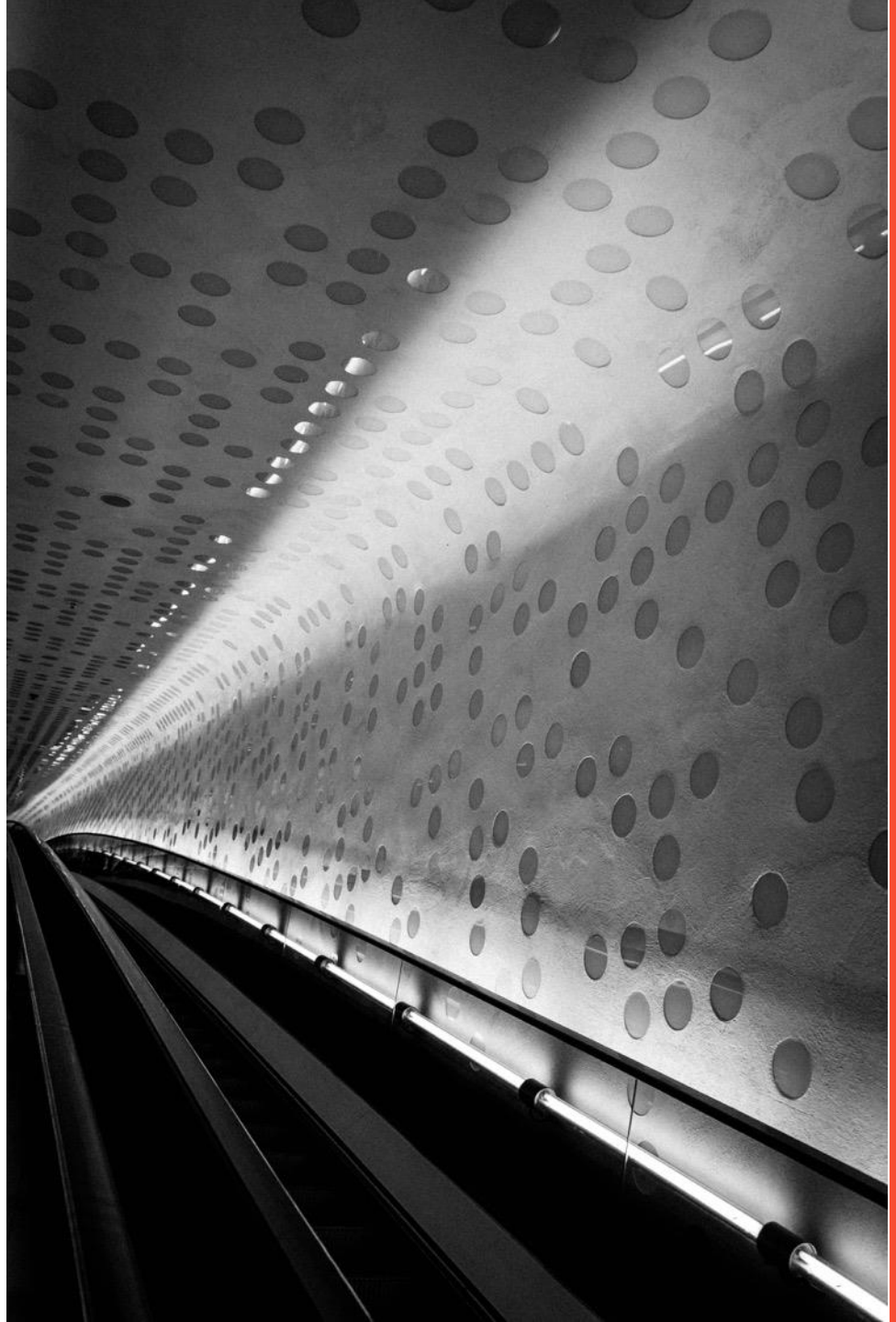
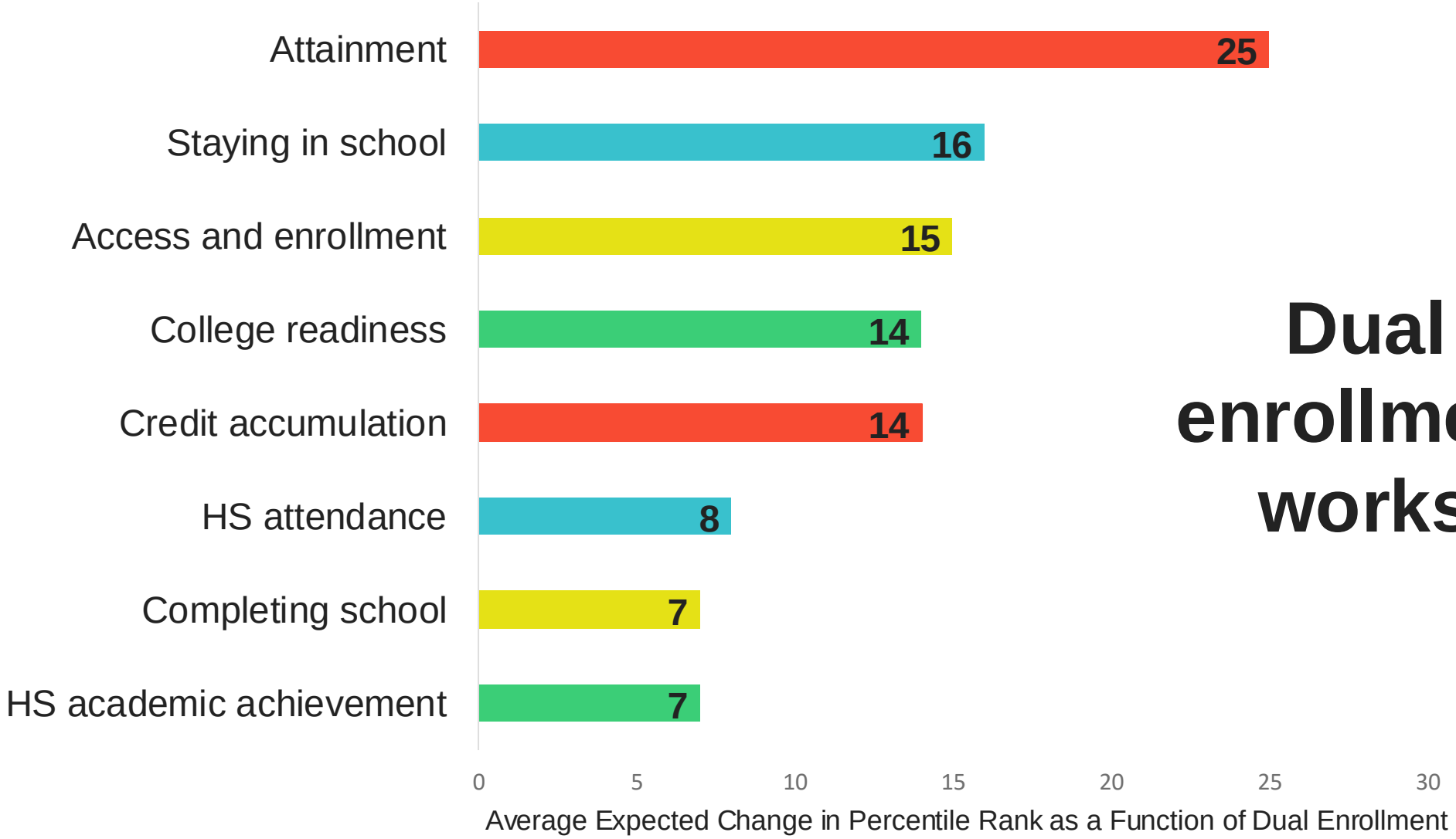


Why it matters



Dual enrollment works

Source: What Works Clearinghouse

Career navigation systems

What it is

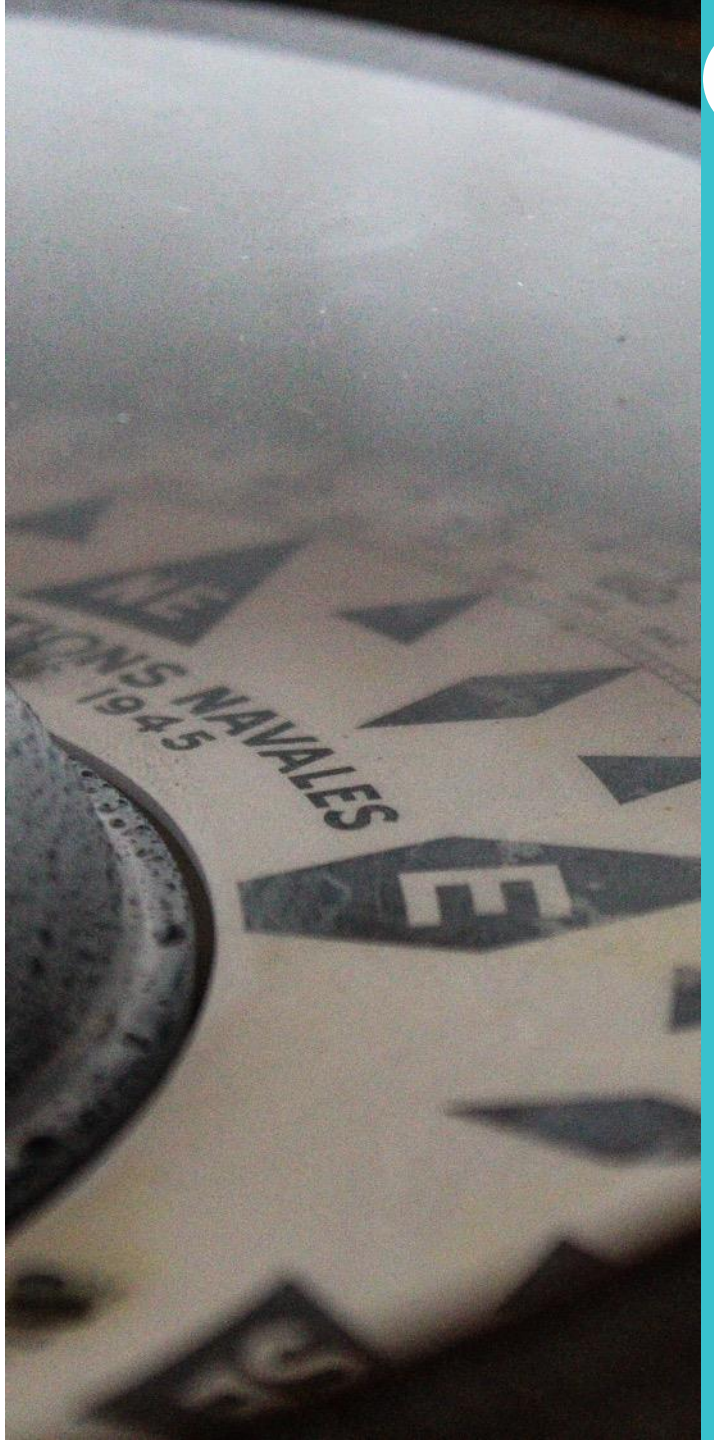
Intentional sequence of college and career advising and exploration activities embedded in pathways

Individualized plans that identify education and career goals and the steps needed to achieve them

Resources and professional development opportunities that enable stakeholders to effectively advise students

Students build professional networks, engage in self-advocacy, identify good jobs and good employers, and combat barriers based on race, gender, and class

Responsive to the real hiring needs of local employers and the future outlook for good jobs and careers



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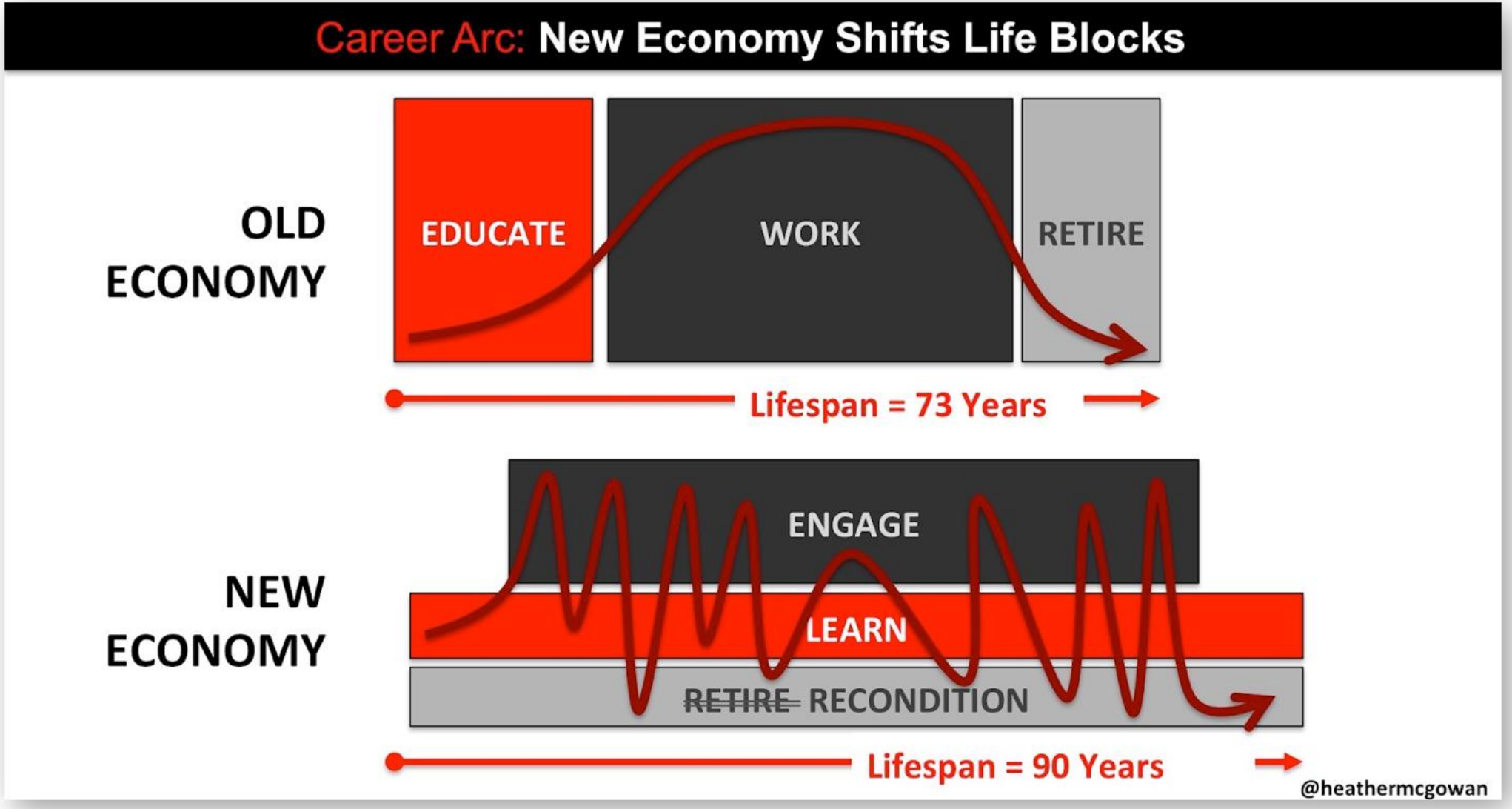


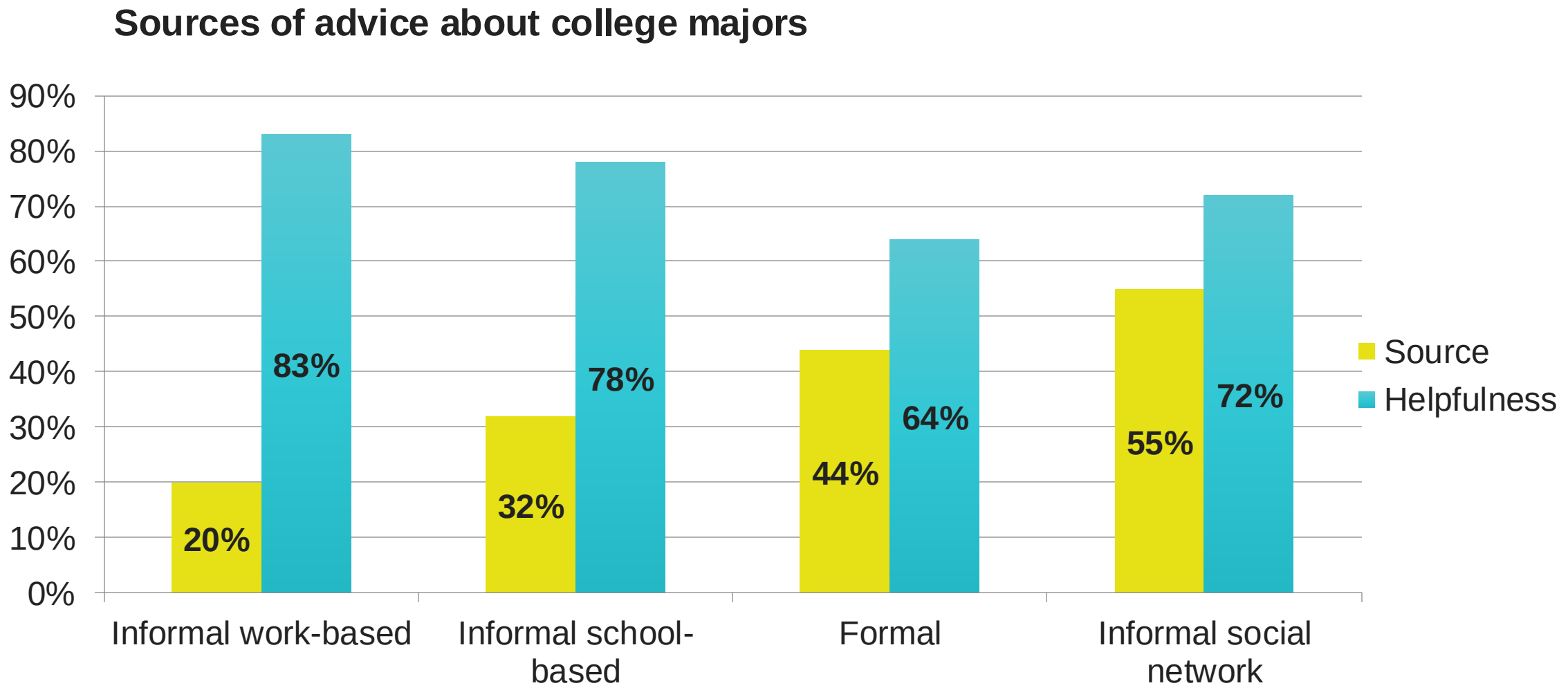
Work-based learning

What it is

Work-based learning is defined as a student or worker completing meaningful job tasks in a workplace that develop readiness for work, knowledge, and skills that support entry or advancement in a particular career field.

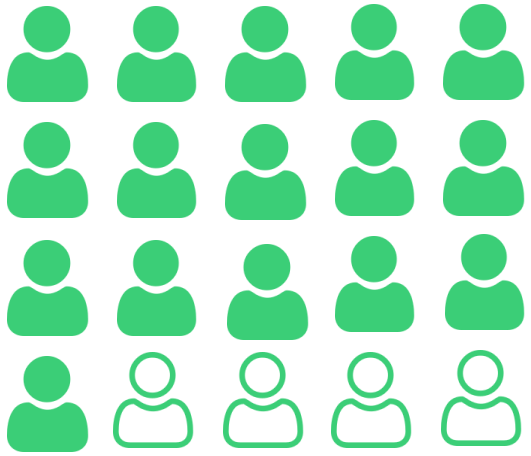
Work-based learning supports a continuum of lifelong learning and skill development for a range of workers and learners—K-12 students, young adults, college students, adult jobseekers, and incumbent workers.

Why it matters for learners



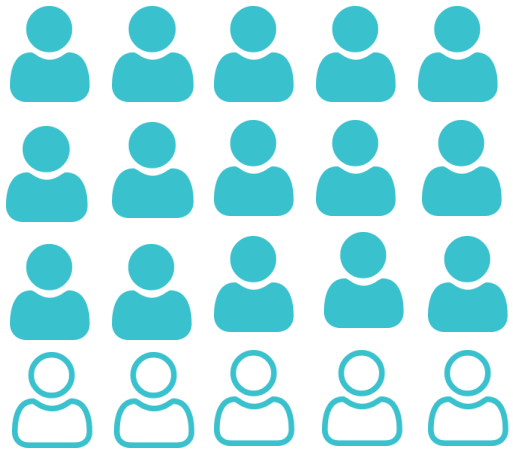
Source: Gallup, Inc. (2017). Major Influence: Where Students Get Valued Advice on What to Study in College.

Why it matters for employers



80% of employers say internships provide higher ROI than any other recruiting method

Up to **60%** of interns convert to full-time employees



Over **75%** of interns who convert to full-time employees are still on the job after one year, as compared to 52% of other employees

Source: National Association of Colleges and Employers

Intermediaries

What it is

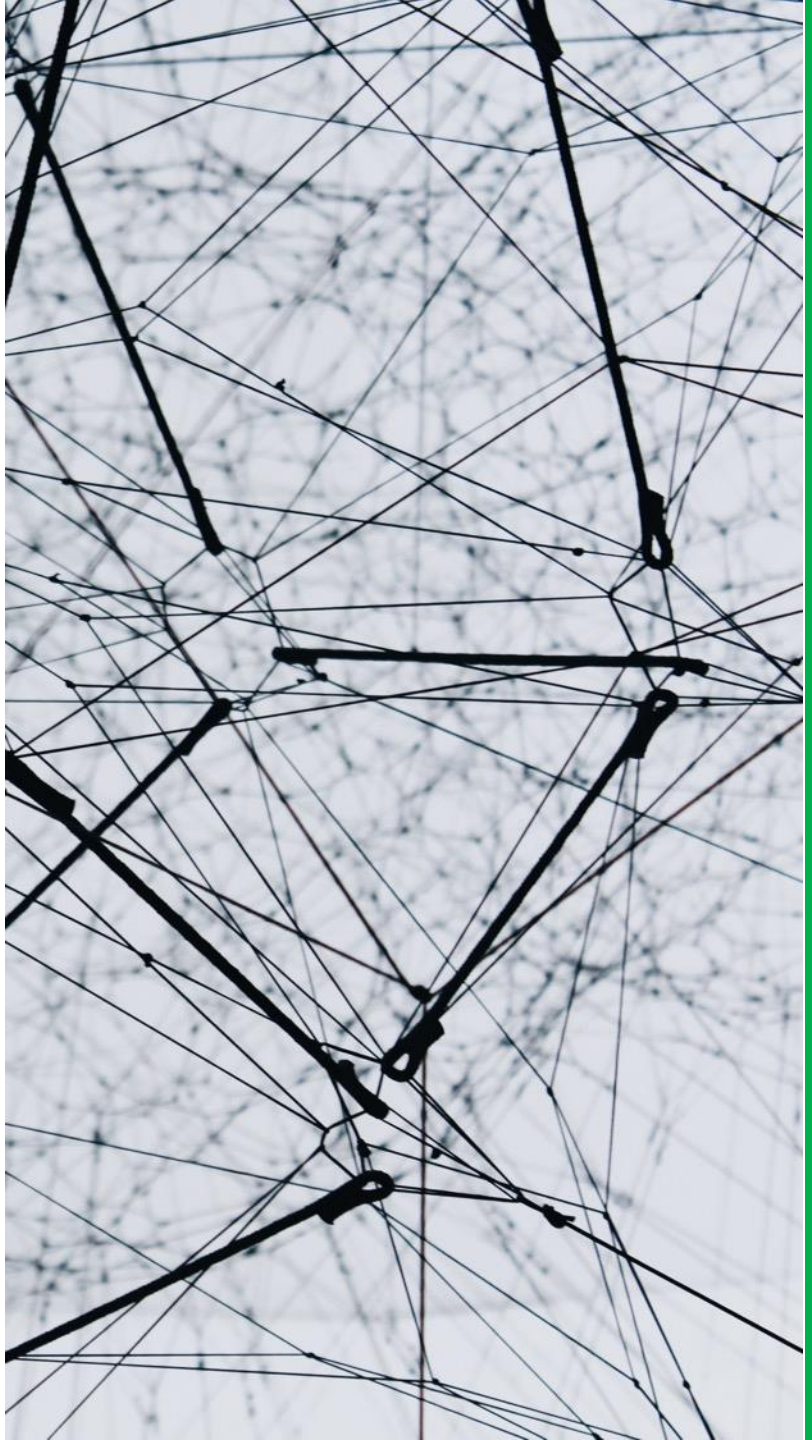
Designed to meet the needs and goals of the community and pathways ecosystem in which they function

Function as the “glue” of a pathways ecosystem

Connect with and network partners to generate outcomes that can only be achieved through coordinated and systemic action

Create conditions where the multiple and complementary motivations of all partners achieve shared goals

Broker and manage work-based learning across partners to ensure equitable opportunities for students



Why it matters

A Region with Pathways	Regional Pathways
Based on one-to-one partnerships	Based on a coalition of aligned actors from multiple sectors
Relies on individual relationships	Relies on infrastructure
Focused on programmatic outcomes alone	Focused on programmatic outcomes **and** systems change
Programs subject to grant funding	Systems designed for scale and sustainability

Leadership and policy

What it is

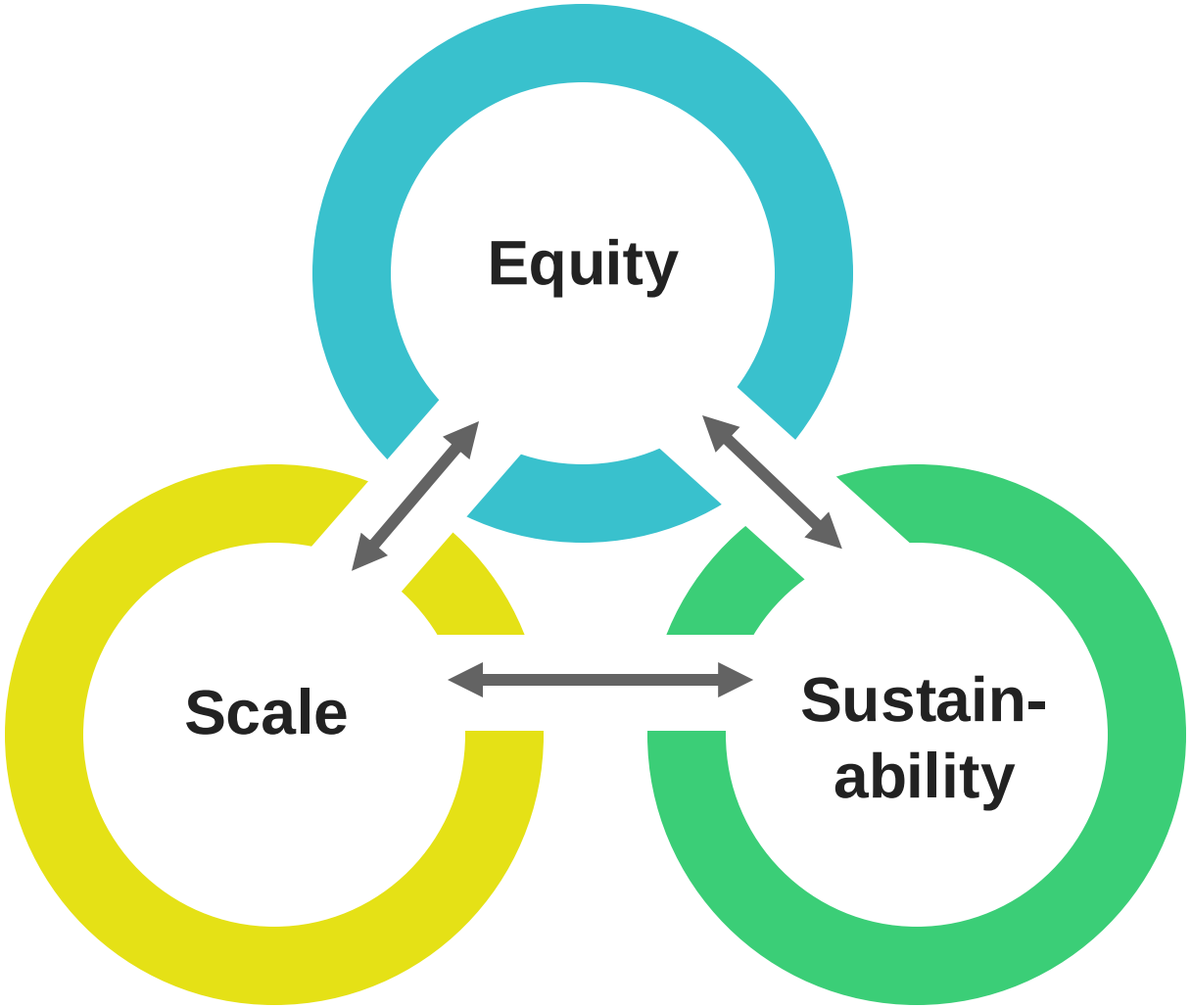
Pathways leaders work collectively to remove policy barriers across systems and institutions and develop and implement new policies that support the implementation of high-quality pathways at scale.

Cross-sector leaders braid existing funding streams and collaboratively seek new funding to support pathways systems.

Leaders communicate a clear vision that is collectively developed by a cross-sector committee of executive-level decision makers.

To sustain and scale pathways, leaders commit to equitable strategies, trusting relationships across stakeholders, data-informed decision making, and the engagement of community members in discussion of key issues.

Why it matters



The Big Blur

A new model that erases the boundaries between high school, college, and careers

KEY FEATURES

Grade levels and high school/college distinction disappear and become a series of learning experiences with embedded work-based learning

Co-designed by K-12 educators, postsecondary educators, and employers

Multiple modes of learning across classrooms and workplaces

Integrated academic and career navigation

Student supports (academic, social/emotional, economic)

Free for students

JFF

Thank you!

Charlotte Cahill

ccahill@jff.org

Learn more, access additional resources, and stay connected to a national conversation:

JFF's Pathways to Prosperity Network

The Pathways to Prosperity Coalition

Jobs for the Future


Q&A

INDUSTRY AND PATHWAYS: THE INTERSECTION OF EDUCATION AND WORKFORCE DEVELOPMENT

Amanda Winters
Program Director, Post-Secondary Education, National Governors Association

Keith Witham
Vice President of Education Philanthropy, Ascendium Education

Paul Fain (Moderator)
Journalist, Work Shift and The Job, and The Cusp Podcast (former reporter & editor for Inside Higher Ed)

NJPathways.org


Q&A


BREAK

NEW JERSEY PATHWAYS TO CAREER OPPORTUNITIES: CENTERS OF WORKFORCE INNOVATION HIGHLIGHTS

Raritan Valley Community College – Aseptic Processing and Biomanufacturing

Brookdale Community College – Film and Television Production

Camden County College – Eports Production Content Creation Hub

County College of Morris - Robotics and Automation

NJPathways.org

Aseptic Processing & Biomanufacturing

Conrad Mercurius, Raritan Valley Community College
Zainab Alali, Raritan Valley Community College
Chrissy Buteas, HealthCare Institute of New Jersey

EDUCATION PARTNERS:

Raritan Valley Community College

Mercer County Community College

Middlesex College

Bound Brook High School

Aseptic Processing & Biomanufacturing

This Biomanufacturing talent pipeline supports a vibrant, growing economy and strengthens the upward mobility of middle-skilled workers. New training and educational opportunities will emerge for high school students, traditional and nontraditional-age college students, underemployed and unemployed adults, incumbent workers, career changers, and underrepresented populations. Creating innovative pathways through partnership development, noncredit to credit articulation agreements, industry-recognized credentialing, and competency-based training is only possible and sustainable through creative and supportive employer partnerships.

PATHWAY CONNECTIONS:

Big Idea Different than the Work Done in Year 1

Connection to High School (Non-Credit)

Connection to High School (Dual Enrollment)

Community College (Non Credit)

Community College (Credit)

Apprenticeship Development

PLA for Apprenticeship RTI

PLA

Connection between Community Colleges (1+1)

Experiential Learning

Connection to CBOs

Adult Learners

Adult Literacy

Connection to 4-Yr College/University

Professional Development

Pilot

Aseptic Processing & Biomanufacturing

Activities:

- Bio Manufacturing Panel (High School counselors, science teachers, CBOs, and Industry Partners)
- Identified High School cohort for pilot program; Bound Brook HS
- Identified Training Material; Virtuosi / ToolingU

Challenges:

- Identifying and securing equipment
- Identifying, Hiring, and Onboarding Instructors
- Creating Train-the-Trainer for instructional support

Solution:

- Utilizing the Coalition Advisory Board to find solutions to gaps.

Ancillary outcomes:

- Private/Public Partnership (Apex, BMS, Everest Life Sciences, J&J, Joule, Legend Biotech, Merck, Minaris, Novartis, and Roche).
- Gift donation from Private partnership.
- Identified credit course pathway in Introduction to Biotechnology.

The virtual learning methodology for aseptic training will be tested and assessed by industry partners and learners of various skill levels. Industry experts will participate in this evaluation process to ensure that the content meets professional standards and practical requirements.

- Students will transfer to degree programs.
- Students will be onboard into entry-level positions (Expected Fall 2025).

PATHWAY CONNECTIONS:

Big Idea Different than the Work Done in Year 1

Connection to High School (Non-Credit)

Connection to High School (Dual Enrollment)

Community College (Non Credit)

Community College (Credit)

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PLA for Apprenticeship RTI

PLA

Connection between Community Colleges (1+1)

Experiential Learning

Connection to CBOs

Adult Learners

Adult Literacy

Connection to 4-Yr College/University

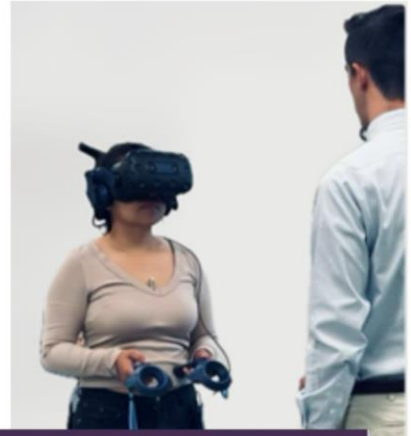
Professional Development

Pilot

Aseptic Processing & Biomanufacturing

Activities:

- Implemented an Innovative VR and 2D Immersive Education Tool
- Hosted one adult group as a Pilot
- Six Learners



Innovative VR and 2D Immersive Education Tool

Virtuosi delivers immediate impact to the bottom line by improving manufacturing velocity and employee retention.

Making Learning a Reality®

*Virtuosi® is the **standard** pharmaceutical education tool designed for the pharma industry.*

Created by QxP technical experts in adult learning, content, and technology; Virtuosi delivers a learning platform that is unmatched. It fosters a paradigm shift in education enabling Pharma 4.0.

PATHWAY CONNECTIONS:

Big Idea Different than the Work Done in Year 1

Connection to High School (Non-Credit)

Connection to High School (Dual Enrollment)

Community College (Non Credit)

Community College (Credit)

Apprenticeship Development

PLA for Apprenticeship RTI

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Connection to 4-Yr College/University

Professional Development

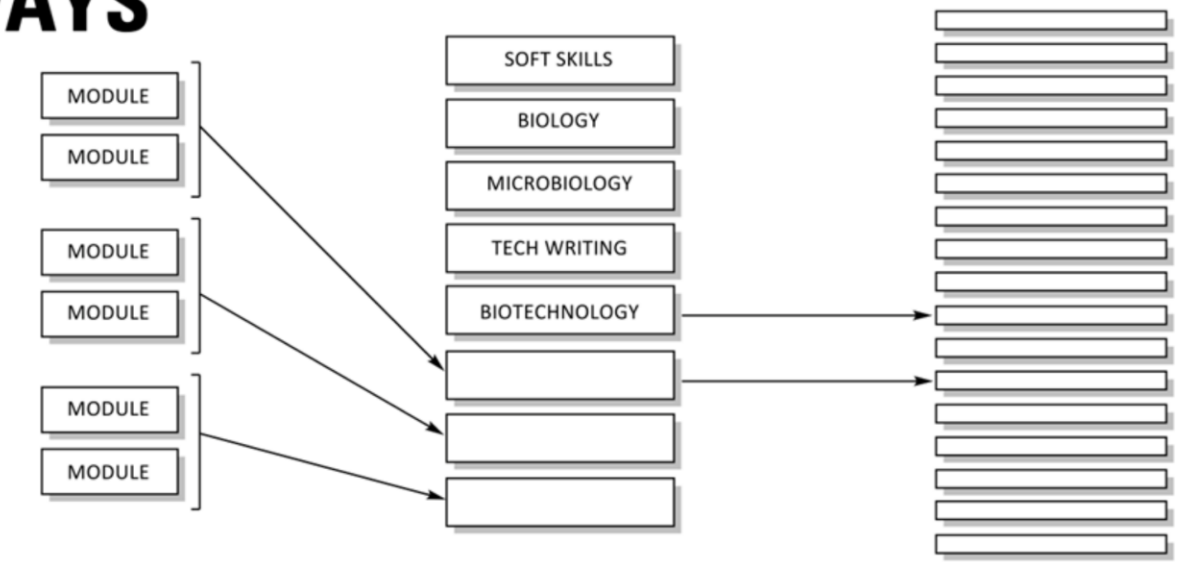
Pilot

Aseptic Processing & Biomanufacturing

Activities:

- Exploration of the creation of Modules that are quick, skills based, and stackable
- Exploration of the development of a 30-Credit Certificate
- Initiate working groups to explore 60-Credit AS Degree options

PATHWAYS



Non-Credit Modules (WDC)
- Quick
- Skills-Based
- Stackable

30-Credit Certificate
- Two-Semester
- Added Content
- Financial Aid-Eligible

60-Credit AS Degree
- Two-Year
- Designed for Transfer
- Pathway to BS, MS, PhD

PATHWAY CONNECTIONS:

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Connection to 4-Yr College/University

Professional Development

Pilot

Aseptic Processing & Biomanufacturing

Activities:

- **Training Strategy Development**
  Established the frame of a GMP Simulated Environment (that allows for Observation, Hands-On training and Qualification)

TRAINING STRATEGY

GMP-like Biomanufacturing Plant

- Develop skills in a GMP simulated environment
  - Observation
  - Hands-On
  - Qualification

PATHWAY CONNECTIONS:

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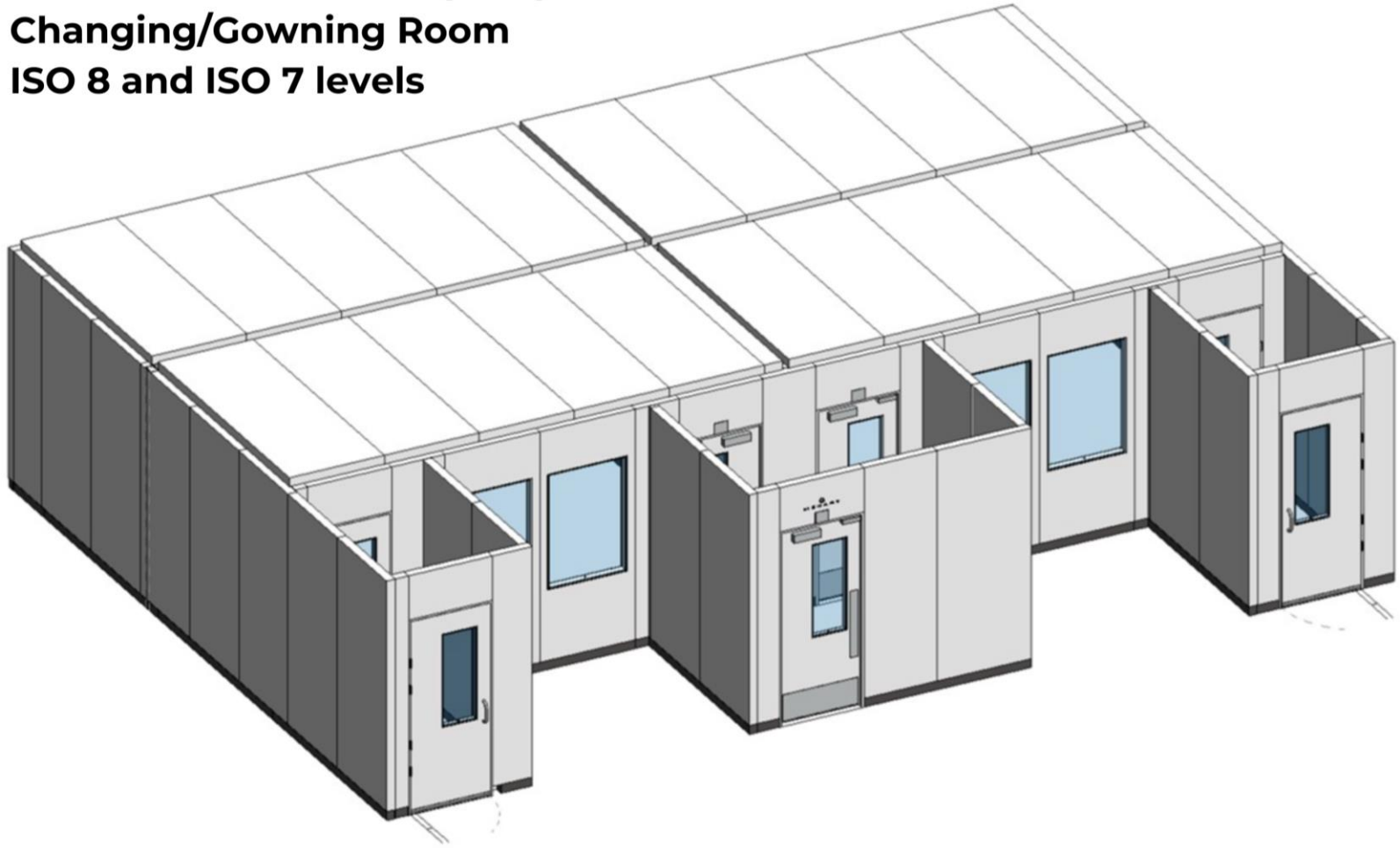
Professional Development

Pilot

Aseptic Processing & Biomanufacturing

Activities:

- Completed design and prep for implementation
- Two Clean rooms
- Training facility that closes the circle
- Clean-Non-Controlled (CNC) area.
- Changing/Gowning Room
- ISO 8 and ISO 7 levels



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Professional Development

Pilot

Aseptic Processing & Biomanufacturing

Activities:

- Steering Coalition Committee
  1. Worked to identify entry points
  2. Formed Sub Working Curriculum Group
- The on-ramps will allow for learners to earn general certificates.

GENERAL CERTIFICATES

- GMP Professional Certificate
- Aseptic Cleaning Certificate
- Aseptic Biomanufacturing Certificate

PATHWAY CONNECTIONS:

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Professional Development

Pilot

Aseptic Processing & Biomanufacturing

Certificates in Aseptic Processing & Biomanufacturing are expected to be offered to students in Fall 2025. Courses for each certificate will be identified with the agreement of the industry partners with curriculum developed accordingly, as well as identifying, hiring, and onboarding instructors.

Activities:

- Identified Curriculum Working Group members from Community college partners and Industry Partners.
- Curriculum Working Group agreed on the initial curriculum.
- Identified the initial non- credit certificates.
- Identified the main courses to be covered in each certificate.

Challenges:

- Identifying the length of the courses.

Solutions:

- Utilizing the Curriculum Working Group to find solutions to gaps.

PATHWAY CONNECTIONS:

- Big Idea Different than the Work Done in Year 1
- Connection to High School (Non-Credit)
- Connection to High School (Dual Enrollment)
- Community College (Non Credit)
- Community College (Credit)
- Apprenticeship Development
- PLA for Apprenticeship RTI
- PLA
- Connection between Community Colleges (1+1)
- Experiential Learning
- Connection to CBOs
- Adult Learners
- Adult Literacy
- Connection to 4-Yr College/University
- Professional Development
- Pilot

Aseptic Processing & Biomanufacturing

Activities:

- **Finalized Steering Coalition Committee**
- **Consisting of one member from each community college partner and one industry partner member.**

THE MAKEUP OF STEERING COALITION COMMITTEE

1 member from each industry partner.

1 member from educational partner.

PLACEHOLDER FOR CHRISSY'S SLIDE

New Jersey Pathways to Career Opportunities: The Centers of Workforce Innovation

ASEPTIC PROCESSING & BIOMANUFACTURING

Chrissy Buteas
President & CEO

HINJ®
HealthCare Institute of New Jersey
ADVANCING GLOBAL HEALTH • LEADING NEW JERSEY'S ECONOMY

Bridging The Gap

- Currently 30,000 unfilled manufacturing jobs in NJ, many in advanced life sciences manufacturing
- Investment in NJ life sciences ecosystem will generate more opportunities with the need to expand the labor pool
- High demand for entry-level employees in life sciences is enormous and continuous - offering a stable and promising career path
- Grade A clean rooms provide wonderful stepping stones for career development and can lead to promotions

Charting New Horizons

- Educate hiring managers on the skills students will learn with a 2-year degree
- The coalition will focus on that effort through NJCCC to help educate internally
- These new positions will inspire new opportunities for employees

Building The Future

- Advocate for programs that create interest in this field
- Create experiential learning opportunities, such as internships/fellowships
- Enhance educational facilities to build programs & real-world work experiences for the students


Q&A

Film and Television Production

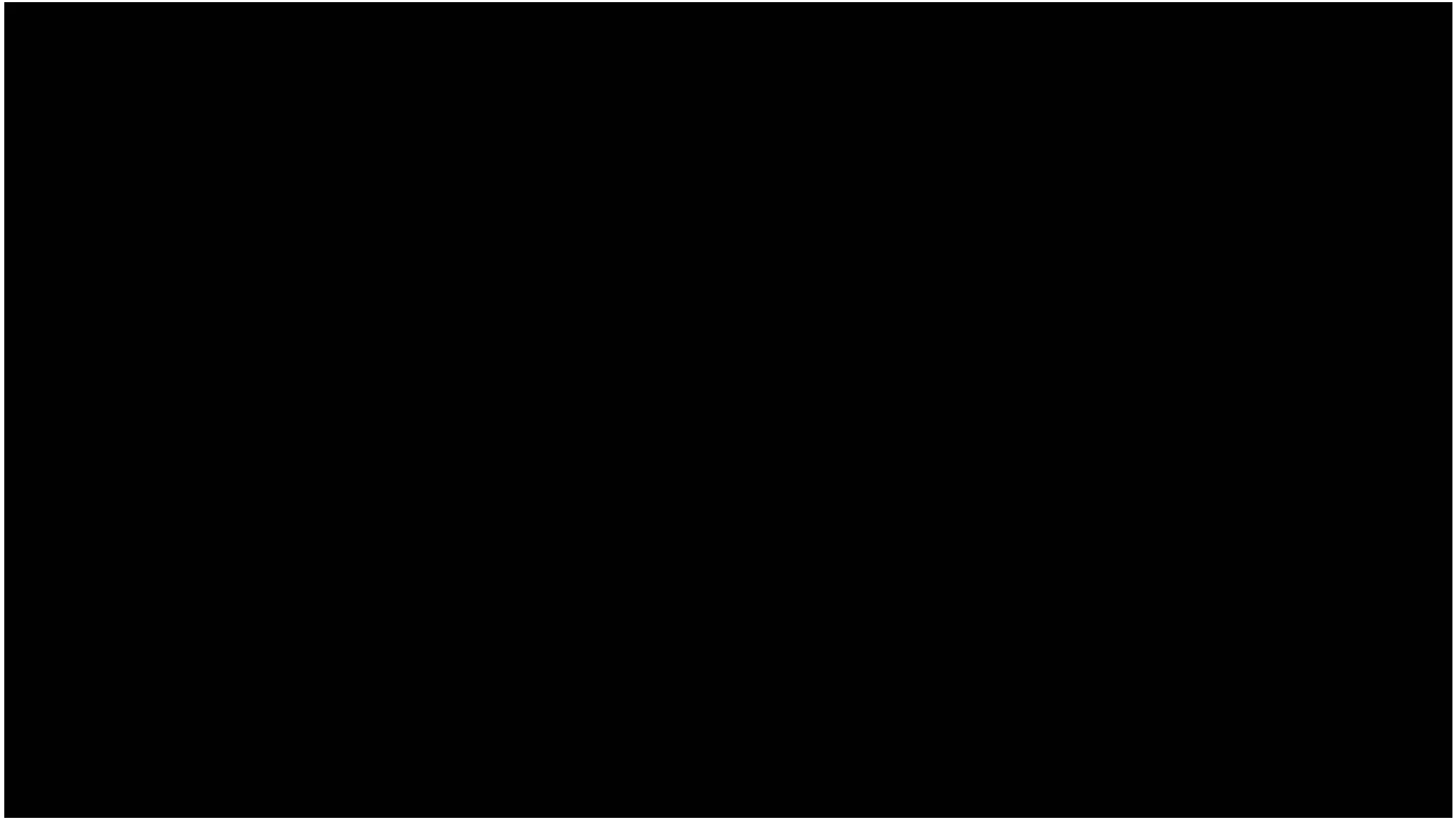
Dr. David Stout, Brookdale Community College
Joan Scocco, Brookdale Community College
Diane Raver, Brookdale Community College

Lights, Camera, Action!

New Jersey
Film Academy

Where the best in the biz begin

NJ Film Commission Promo Video



NEW JERSEY FILM ACADEMY

Center of Workforce Innovation for Film and TV Production

Education Partners:

Brookdale Community College

Camden County Community College

Hudson County Community College

Mercer County Community College

The Film Academy aims to bolster New Jersey's film industry by providing comprehensive training programs that create a qualified workforce. It will offer pathways for students from diverse backgrounds to earn valuable industry recognized credentials and degrees. The goal is to position New Jersey as a leading hub for film and television production, attracting major studios and film content. The Academy's sustainable revenue model will ensure long-term viability without relying heavily on external funding over time.

New Jersey's film industry is experiencing a surge in production

- Palisades Stages-Kearny
- Netflix - Eatontown
- Great Point Studios-Newark
- Cinelease-Jersey City

With plans for other locations in the state such as:

- **Bayonne**
- **Camden**
- **Carteret**
- **East Brunswick**
- **Egg Harbor Township**
- **Newark**
- **West Orange**

- **AND MORE!**

Year One Pathway Deliverables

Curriculum Tracks

On Set Production

- Introduction to Industry
  - Set Design, Construction, and Painting
  - Set Lighting & Electric
  - Grip & Rigging
  - Script Supervision/Continuity.

Production Office and Accounting

- Introduction to Industry
  - Production Accounting
  - Production Office
  - Locations

Hair, Makeup, and Wardrobe

- Introduction to Industry
  - Hair & Makeup for the Screen
  - Costume Design & Wardrobe

Pathway Progress

Activities related to the pathway connection:

- Offering comprehensive training programs in filmmaking.
- Providing pathways for students to earn industry-recognized credentials and academic degrees
- Collaborating with local film studios and production companies to offer internships and job placements

Ancillary activities or outcomes:

- Establishing a state-of-the-art film studio and post-production facilities on campus
- Hosting film festivals and workshops to showcase student projects and foster networking
- Partnering with local schools and organizations to promote arts education and career exploration
- In the pilot year, expanding the ecosystem to include:
- Vocational high schools
- County vocational school districts
- Four-year universities
- Labor unions
- Employers

Pathway Progress

Final deliverable and timeline:

- Final deliverable: A self-sustaining film academy with a robust pipeline of skilled professionals. First courses offered in fall of 2024, aiming to place graduates in key roles across major productions
- Expected achievement: To become self sustaining within 6 years.

Challenges encountered and solutions developed:

- Challenge: Ensuring curriculum aligns with rapidly evolving industry standards
- Solution:
- Procurement of industry gold standard curriculum
- Ongoing consultation with industry professionals and regular curriculum updates

- Challenge: Attracting diverse pool of students from various backgrounds
- Solution: Targeted outreach, scholarships, and flexible scheduling options

Led by Director, Diane Raver, who will work closely with key educational and industry stakeholders, her credentials and relationships over a long film career make her qualified to for implementing the vision set forth by the Board of Directors, with guidance from an advisory board.

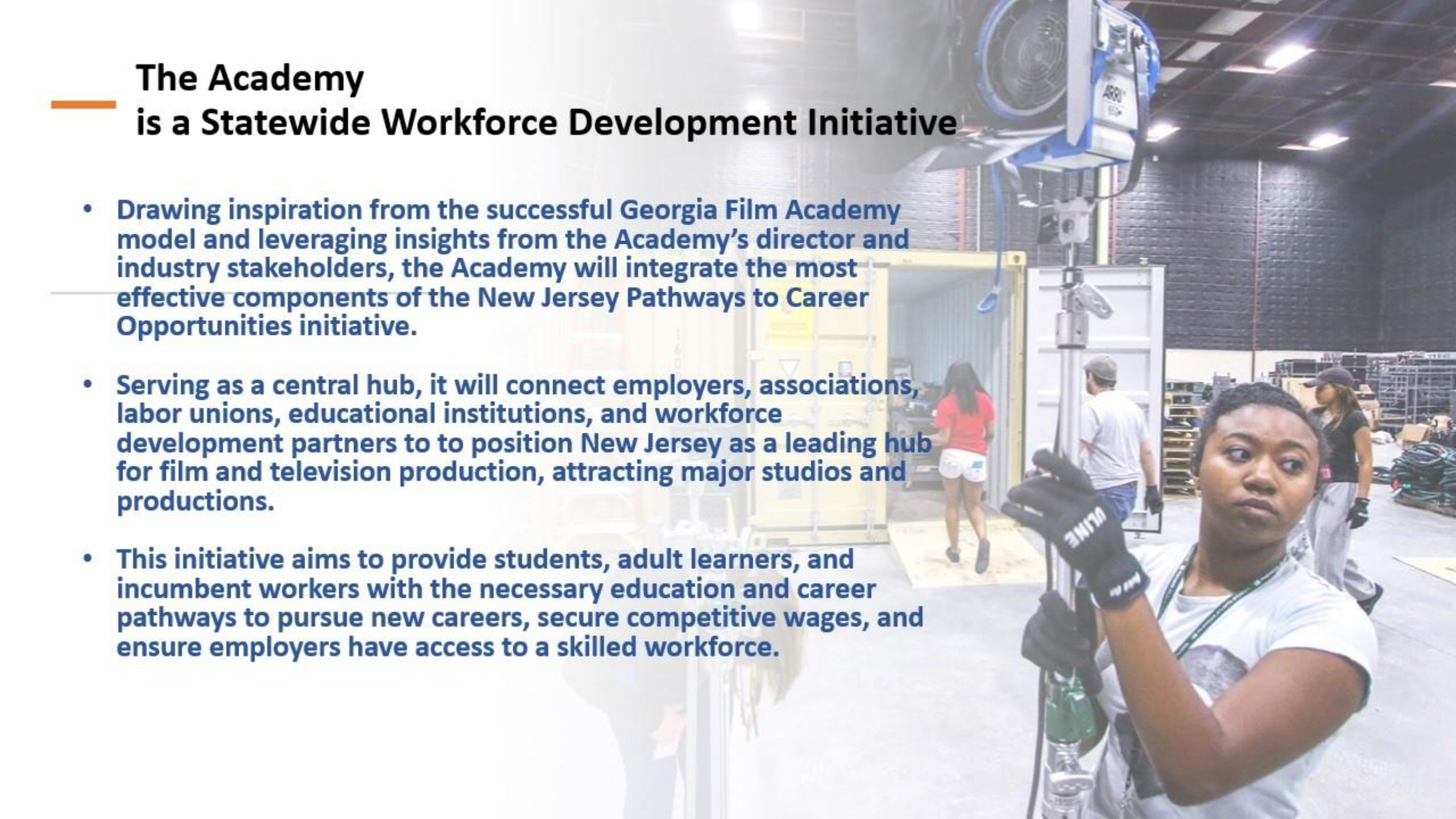
The advisory board will include stakeholders from state and local workforce boards, the NJEDA, industry professionals, and employers.

Additionally, the Director will play a crucial role in fostering communication among all partners to ensure collaboration and alignment of efforts.

The curriculum will be enhanced with high caliber Industry guest lecturers.

The Academy is a Statewide Workforce Development Initiative

- Drawing inspiration from the successful Georgia Film Academy model and leveraging insights from the Academy's director and industry stakeholders, the Academy will integrate the most effective components of the New Jersey Pathways to Career Opportunities initiative.
- Serving as a central hub, it will connect employers, associations, labor unions, educational institutions, and workforce development partners to to position New Jersey as a leading hub for film and television production, attracting major studios and productions.
- This initiative aims to provide students, adult learners, and incumbent workers with the necessary education and career pathways to pursue new careers, secure competitive wages, and ensure employers have access to a skilled workforce.




Q&A

Esports Production – Content Creation Hub Pathway Pilot

David Bruno, Camden County College

EDUCATION PARTNERS:

Camden County College

Cherry Hill East High School

Cherry Hill West High School

Sterling Regional High School

Stockton University

Rutgers University - Camden

The Salvation Army – Kroc Center

Camden Volunteers of America – Delaware Valley

Horizon AVL Esports Integration

Esports Production – Content Creation Hub Pathway Pilot

A new esports career pathway – Esports Production: Content Creation – requires academic programming that has a variety of entry and exit points with career opportunities and advancement opportunities that lead to sustainable wages available to participants as they navigate the pathway.

These pathways will align with supporting local emerging industries, including cybersecurity, data science, and video/audio production, including film and television production.

The pilot project will map prior learning assessments and align key skills to esports-related industry standards, including transferable skills in audio and video production. Horizon AVL Esports Integration has identified the industry credentials, and they have already been embedded into the existing Esports Production AAS degree at Camden County College.

The project will work with the secondary and post-secondary institutions to embed and map those industry standards into the esports-related curricula during the span of the project, and it will also allow for this pathway to become the standard for other NJ Community Colleges to use and scale as needed.

PATHWAY CONNECTIONS:

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Connection to High School (Non-Credit)

Connection to High School (Credit)

Connection to High School (Dual Enrollment)

Community College (Non Credit)

Community College (Credit)

Apprenticeship Development

PLA for Apprenticeship RTI

PLA

Connection between Community Colleges (1+1)

Experiential Learning

Connection to CBOs

Adult Learners

Adult Literacy

Connection to 4-Yr College/University

Professional Development

Pilot

Esports Production – Content Creation Hub Pathway Pilot

Identify entry points into the esports program for high school graduates immediately upon high school completion by seeking dual enrollment opportunities for these esports-related CTE courses: COM-213: Multimedia Editing Lab (3 credits) MUS-133: Audio Recording Techniques (3 credits), and FLM-110: Filmmaking I (3 credits).

Sterling Regional High School, Cherry Hill West High School, and Cherry Hill East High School will explor esports curricula to the ESP.AAS requirements.

Challenges:

Budget for curriculum.

Ancillary outcomes:

- **Interactions with Board of Education members.**
- **Experiential learning opportunities.**
- **In-person high school competitions.**
- **Relationship with Garden State Esports.**

Words of advice:

- **Speed of implementation of new ideas.**
- **Professional development about workforce connections through esports – not just gaming**
- **Board of Educations split on support.**

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Pilot

Esports Production – Content Creation Hub Pathway Pilot

Establish and align industry standards as connected to esports production and content creation to identify opportunities to embed these credentials in both credit and non-credit coursework.

Certifications/Credentialing

- Adobe Certification – Illustrator, Photoshop, Premiere, After Effects
- Career Technical Specialist for Audio/Visual
- DaVinci Resolve
- Potential in Unreal Engine

Credit Courses

- COM-213: Multimedia Editing

Non-Credit Courses

- Streaming for Beginners
- Build Your Own Gaming PC

Ancillary outcomes:

Direct application to the Film & Television Industries

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Pilot

Esports Production – Content Creation Hub Pathway Pilot

Mapping prior learning assessment (PLA) skills, credentials, and certificates to credit curriculum to industry-valued credentials in esports production provides opportunities to career advancement for new populations of adult learners interested in fields related to esports and content creation.

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Professional Development

Pilot

Esports Production – Content Creation Hub Pathway Pilot

Camden County College will work with other NJ community colleges to establish pathways and curriculum mapping.

Ancillary outcomes:

Creation of the "GSE SJ Collegiate Cup" – the first in-person intercollegiate esports league in the nation.

Words of advice:

- **Institutional commitment to esports through academics, not just athletics and student life.**
- **Camden County College will share esports production curricula and pathways across the state, including the sharing of relevant course descriptions and learning outcomes.**
  - **Brookdale Community College**

PATHWAY CONNECTIONS:

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Pilot

Esports Production – Content Creation Hub Pathway Pilot

Ancillary outcomes:

Creation of the "GSE SJ Collegiate Cup" – the first in-person intercollegiate esports league in the nation.

- 4 Colleges/Universities:
  - Camden County College
  - Brookdale Community College
  - Stockton University
  - Rutgers University-Camden
- 3 locations:
  - Camden County College
  - Stockton University
  - Brookdale Community College
  - Finals at Stockton University
- Collaboration - Horizon AVL Esports Integration and Garden State Esports
- Emphasis on "Production" and "Content Creation"
  - High School and Community College students assisted with the stream production.
  - Over 1000 students

PATHWAY CONNECTIONS:

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Pilot

Esports Production – Content Creation Hub Pathway Pilot

Identify entry points into the program for returning adult learners, and exit points with a credential that can quickly lead to quality employment:

- **Enhance program delivery for adult learners and incumbent workers, including services connected to adult literacy in order to connect students with "next level" opportunities in emerging industries.**
- **Build pathways to attract a diverse group of students.**

Ancillary outcomes:

Provided opportunities to work with unique populations, including veterans, justice-impacted, etc.

- **"Video Games for Veterans" Esports Open Gaming**
- **Veteran Video Project**
- **Non Credit Offerings**

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Pilot

Esports Production – Content Creation Hub Pathway Pilot

Working with four-year partners to explore alignment and articulation agreement discussions for the ESP.AAS degree with both Rutgers University-Camden and Stockton University. These early discussions during the development phase ensures the transferability of courses.

Status:

Stockton University – Complete
Rutgers University-Camden: In progress through Digital Studies Degree

Ancillary outcomes:

Preliminary discussions with Rowan University and Neumann University regarding alignment with degree and certificate options at both College of Communication and Creative Arts (BA in Sports Communication and Media) & School of Professional Studies (Esports Business Certificate of Undergraduate Study).

Words of advice:

The approval process takes an extremely long time.

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Pilot

Esports Production – Content Creation Hub Pathway Pilot

Camden County College will provide professional development opportunities to other faculty within NJ based on best practices in the state, including statewide symposium on esports, for sharing this vital information with other colleges in the consortium.

Symposium:

GSE SJ Collegiate Cup at Garden State Esports Spring Finals

Challenges:

Wide spectrum of PD needed in this field.

Esports Production – Content Creation Hub Pathway Pilot

Esports Production – Content Creation Hub Pathway Pilot


Q&A

Robotics and Automation

Tom Roskop, County College of Morris

EDUCATION PARTNERS:

County College of Morris

Morris County Vocational School District

Morris County Organization for Hispanic Affairs (MCOHA)

Robotics and Automation

With the world becoming increasingly connected, staying on top of the latest technological trends in robotics and automation is essential. Currently, training at the level needed to be competitive in the job market is relegated to 4-year degree options and/or job training in a specific automation technology. However, the entry point does not require such extensive education. Targeted technical training can be provided at various entry points to allow for multiple opportunities to engage in this area.

The Robotics and Automation pathway project will provide stakeholders with the opportunity to collaborate on advanced manufacturing and industrial automation initiatives across a spectrum of opportunities.

The Robotics and Automation pathway project will establish a certificate program in emerging technologies focusing on integration and implementation of industrial automation and robotic systems as they relate to manufacturing and adjacent sectors.

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Robotics and Automation

Partnered with Morris County Vocational School District to host Career Exploration Day with recruitment opportunity for the engineering share-time program which occurred on March 22, 2024. Here are the details:

- **Workshops were held in four areas:**
  - **Data Analytics**
  - **Cybersecurity**
  - **Manufacturing**
  - **Robotics & Automation**
- **High school partner will be marketing the programing throughout the county as a recruitment tool to 9th and 10th graders who may be interested in the share-time pathways.**

Challenges:

- **Targeting a suitable demographic to attract and introduce into the pathway.**
- **Logistics for transportation**
- **Coordination of registration.**
- **As MCVSD has experience with recruitment for the above age bracket, with their assistance we have coordinated marketing and registration through them.**

Ancillary outcome:

- **Career Exploration Day serves as a strong recruitment tool for current Share-time programs on our campus, particularly the Engineering Share-time program which comprises our Dual Enrollment connection.**

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Robotics and Automation

County College of Morris has an established Share-time program with high school partner, Morris County Vocational School District, in Engineering called “Engineering Design & Advanced Manufacturing (EDAM)”:

- To connect the Robotics and Automation Pathway to our Dual-enrolled programs, we identified suitable course elective slots in the curriculum to insert our Robotics options.
- Beginning with the AY24-25, students enrolled in the EDAM program will be taking our new course “Robotics & Automation I” in the spring semester of their second year in the program.

Approval of curricular change by our high school partner is on track to be completed by mid-May.

Challenges:

- Working with the appropriate steering committee to identify where robotics courses could be applied, given the scheduling restrictions (AM or PM attendance)

Solutions:

- Remove a course in the program (Statics) which was low-interest and shown to be difficult for high school students who were not initially college math ready.

Ancillary outcome:

- Interest by both parties to discuss splitting up the EDAM program into separate tracks, allowing students to take more electives across various technical areas (such as Robotics).

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Pilot

Robotics and Automation

Non-credit courses will be created that align with the SACA (Smart Automation Certification Alliance) C-101 Certified Industry 4.0 Associate I certification.

Additionally, in order to offer the certification, CCM joined the Smart Automation Certification Alliance (SACA) as an educational institution:

- **Content from the SACA C-level certificate was mapped with learning outcomes for alignment to the certification assessment. This allows for self-contained courses that will culminate in a certification, using the SACA criteria as a summative assessment tool.**

Challenges:

- **Mapping the overlap with our Experiential Learning activity of developing a bootcamp program. A major differentiator was instructional length and scope of student.**

The course(s) will be scheduled for summer delivery by mid-April.

PATHWAY CONNECTIONS:

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Robotics and Automation

A certificate program has been submitted for review by our Curriculum Committee that incorporates courses developed in the Robotics and Automation area, such as Mechanical Drives, Hydraulics, Pneumatics, and Programming.

New courses (Robotics and Automation I & II) developed and submitted to curriculum. They will serve as content area electives in Robotics, as well as capstone for the certificate. These courses will cover content such as Industrial Controls, Manufacturing applications, and PLC Programming:

- Through our research we have mapped requisite entry-level technician skills into the program outcomes, as well as mapped to SACA certification outcomes. As a result, students who complete the 18-credit certificate program will receive the SACA C-101 and C-102 certifications.

Continued research of the viability of instruction at the Associates level and are currently assessing creating a Robotics option to our Engineering Technology AAS Degrees:

- The credit limitations have been a challenge and require extensive conversation between our faculty, advisory board, transfer partners, and our accreditor ABET.

Students in the Non-credit bootcamp will articulate two (2) courses, or seven (7) credits towards the Certificate of Achievement in Robotics, Automation, and Control.

Challenges:

- Mapping certification requirements and reconciling with robust course and program outcomes.

Solutions:

- A holistic approach was used, rather than direct course-to-certification mapping. In this way, certification outcomes are distributed among the course sequence and evaluated in summative assessments in the Robotics & Automation I/II courses.

PATHWAY CONNECTIONS:

Big Idea Different than the Work Done in Year 1

Connection to High School (Non-Credit)

Connection to High School (Dual Enrollment)

Community College (Non Credit)

Community College (Credit)

Apprenticeship Development

PLA for Apprenticeship RTI

PLA

Connection between Community Colleges (1+1)

Experiential Learning

Connection to CBOs

Adult Learners

Adult Literacy

Connection to 4-Yr College/University

Professional Development

Pilot

Robotics and Automation

County College of Morris will offer Robotics Technician as a pathway beginning Summer 2024.

Workforce Development group is currently working with employers to confirm Robotic OJT and RTI compatibility. Currently, 2-3 employers have already been identified, who employ Robotics technicians.

Challenges:

- **Securing employer partners for Robotics is a challenge when looking for pure robotics companies.**

Solutions:

- **Expanding into adjacent sectors who utilize robotics and automation, and that have a need for technicians in the implementation and maintenance of such systems, has provided a pool of employers to explore partnership opportunities.**

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Robotics and Automation

In order to embed the Smart Automation Certification Alliance (SACA) certification into the program, a curriculum map was developed that maps the content of the SACA C-101 certification to the courses in the program:

- **The SACA certification content also informed the development of the Robotics and Automation Bootcamp which aligns with articulated courses on the credit side.**
- **Currently, we are establishing criteria for accepting PLA for college credit (likely through assessment using SACA).**

Challenges:

- **Common assessment tool across the non-credit sides, students prior experience, and the credit learning objectives.**

Solutions:

- **SACA credentialing seems to be the most viable choice as can serve as an assessment tool for all three departments.**

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Robotics and Automation

We endeavored to recruit industry partners for advisory board and work-based structured learning opportunities for college credit. We are currently recruiting and have found some individuals of interest to advise.

Additionally, we are to develop experiential learning outcomes for use in placement. The advisory will be crucial with this, as well as our alignments with our SACA credentialing to determine “levels” indicative with workplace experience.

Another component is to find internship opportunities for students, identify them for placement, and monitor student/employer outcomes. This is underway with assistance from our office of Career Services. Once students are placed into the field, we can satisfy our final objective of monitoring:

- We are still extrapolating the level of skill mastery needed for an internship opportunity and will need some initial data to improve efficacy in this area.

Challenges:

- Not many companies are heavily into robotics and/or are not yet engaged in the technology, even though this is a consistent goal in their planning.

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Robotics and Automation

The development of a non-credit pre-apprentice bootcamp for students in the Robotics and Automation field leading to the SACA C-101 Certified Industry 4.0 Associate 1 credential has been completed.

Next is to develop bilingual marketing materials to be shared with Workforce Board, Non-profits, and other community partners.

Pilot plans include:

- **Recruit veterans and their family members, adults and underrepresented students for the Robotics and Automation bootcamp.**
- **Deliver noncredit pre-apprentice bootcamp to 8 – 10 adults.**

Challenges:

- **Recruiting those interested in entering that sector.**
- **Formalizing companies to work in.**

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Robotics and Automation

Currently identifying potential partnerships. Initial conversation with New Jersey Institute of Technology has shown favorable promise, as we currently articulate with them in various Engineering programs.

In order to make this a straightforward process, we are integrating the various pathway entry points into a current AAS Degree in Mechanical Engineering Technology:

- **However, as conversations continue, we may be looking for further AAS pathway opportunities with other Engineering Technology Degree programs.**

Challenges:

- **The integration due to timeline constraints, accreditation reviews, and various curricular options that can be used.**

Solutions:

- **Discuss the challenge with potential transfer partners, work backwards and try to make holistic changes to the various program curriculums. Some of these proposals will be discussed with our upcoming reaccreditation visit, which will give us sustainability insight towards transfer.**

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Professional Development

Pilot

Robotics and Automation

In order to have adequate training for our faculty, instructors, and high school partners, we identified professional development needs in the area of robotics and automation in manufacturing. Some areas identified are:

- **PLC programming using Rockwell/Allen-Bradley controllers**
- **Visual programming using Universal Robots**
- **Introduction to Robotic Imaging using MIR and FANUC Robots**
- **Microcontroller programming using Arduino**

In order to provide this professional development, we developed curriculum and identified training providers to deliver professional development both remotely and in person.

- **We are targeting Summer 2024 for college faculty and high school teachers.**

Challenges:

- **Training that was generic enough due to technological constraints, yet sufficient to provide industry level exposure.**

Solutions:

- **We reached out to equipment providers that cater to both secondary and post-secondary institutions.**


Q&A


BREAK

NEW JERSEY PATHWAYS TO CAREER OPPORTUNITIES: THE PATH FORWARD

Catherine Starghill, Esq.

Vice President,
New Jersey Council of County Colleges

Executive Director,
New Jersey Community College Consortium for Workforce and Economic Development

NJ PATHWAYS TO CAREER OPPORTUNITIES SUMMIT

Expanding Innovative Workforce & Education Partnerships

Bally's Atlantic City
Hotel & Casino

June 12, 2024

NJ CCC New Jersey Community Colleges

NJBIA New Jersey Business & Industry Association


Q&A

CLOSING REMARKS

Dr. Aaron Fichtner

President,

New Jersey Council of
County Colleges

MONTHLY NEWSLETTER

NJ Pathways to Career Opportunities

The NJ Pathways Initiative UNITES Industry and Education Experts to Break Down Silos for True Collaboration

New Jersey's Community Colleges and the **New Jersey Business and Industry Association (NJBIA)** partnered to launch this unprecedented education and training pathways initiative for strengthening the state's workforce for residents, businesses, and the economy for years to come.

With the New Jersey Pathways to Career Opportunities Initiative (NJ Pathways), New Jersey joins leading states that are transforming their statewide education and workforce development resources to better and more equitably serve students and workers. This transformation includes an intentional commitment to shared goals across the ecosystem of high schools, colleges and universities, employers, labor unions, nonprofits, the public workforce system, and others.

Download our brochure to learn more.

Check Out the First Issue of Our NJ Pathways Newsletter!

NJPathways.org

Become a Partner and Receive This Month's Issue!

OUR NJ PATHWAYS YEAR 1 REPOSITORY IS...

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Expected to Launch in July 2024

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BREAK

RECEPTION & DINNER | 6 PM | VIP LOUNGE