



National Institute on Scaling Work-Based Learning

Pre-Meeting for the NGA Policy Academy Cohorts

Monday April 8th, 2019

Point Clear, Alabama



Welcome

Pre-Meeting for the NGA Policy Academy Cohorts

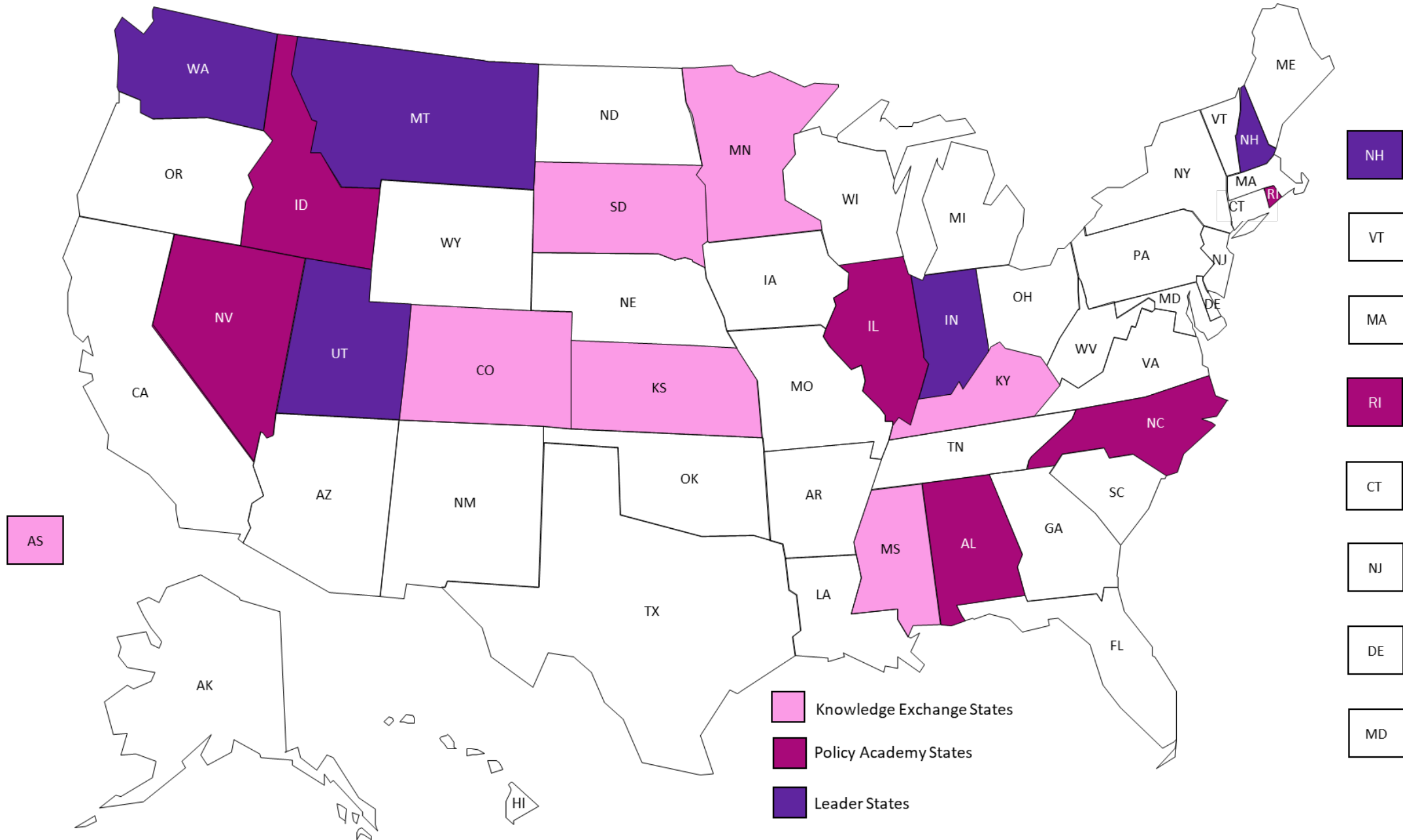
Monday April 8th

8:30 – 9:30 AM

Welcome

Speakers:

- ***Martin Simon***, Interim Director, Economic Opportunity Division, NGA Center for Best Practices
- ***Meghan Wills***, Program Director, Economic Opportunity Division, NGA Center for Best Practices
- ***Rachael Stephens***, Senior Policy Analyst, Economic Opportunity Division, NGA Center for Best Practices





State Exchange: Best Practices from the Policy Academy Cohorts

Pre-Meeting for the NGA Policy Academy Cohorts

Monday April 8th

9:00 – 10:15 AM

State Exchange: Best Practices from the Policy Academy Cohorts

Moderator:

- *Kristin Baddour*, Policy Analyst, Economic Opportunity Division, NGA Center for Best Practices

Table Topics

Room	State Presenter
Equity in Work-Based Learning	<i>Nick Moore</i> , Alabama
The Continuum of Work-Based Learning	<i>Emily Rusca</i> , Illinois
Dashboard Development	<i>Caroline Sullivan</i> , North Carolina
Rural Opportunities	<i>Shannon Lewis</i> , Montana
Branding and Marketing	<i>Matt Thompson</i> , Idaho

You will have the opportunity to go to two facilitated table conversations.

Please split your state teams to maximize conversation opportunities.



State Team Time

Pre-Meeting for the NGA Policy Academy Cohorts

Monday April 8th

10:15 AM – 12:00 PM

Room	State
Azalea A	American Samoa
Azalea A	Mississippi
Azalea B	Colorado
Azalea B	Kansas
Azalea C	Minnesota
Azalea C	Kentucky
Azalea D	Alabama
Azalea E	Nevada
Azalea F	North Carolina
Magnolia 3	Montana
Magnolia 5	Indiana
Magnolia 6	New Hampshire
Magnolia 7	Washington
Dogwood	Utah
Boardroom 1	Idaho
Hospitality Parlour 4126 *	Illinois
Hospitality Parlour 4106 *	Rhode Island

* In a different building- shuttle is provided



Maintaining Momentum: Building on Policy Academy Achievements

Pre-Meeting for the NGA Policy Academy Cohorts

Monday April 8th

1:00 – 2:30 PM

Maintaining Momentum: Building on Policy Academy Achievements

Moderator:

- *John Guerriero*, Policy Analyst, Economic Opportunity Division, NGA Center for Best Practices

Speaker:

- *Kimberlee Carlile*, Director of Industry and Talent Initiatives, Utah Governor's Office of Economic Development

TALENT READY UTAH

KIMBERLEE CARLILE, DIRECTOR OF TALENT INITIATIVES
GOVERNOR'S OFFICE OF ECONOMIC DEVELOPMENT



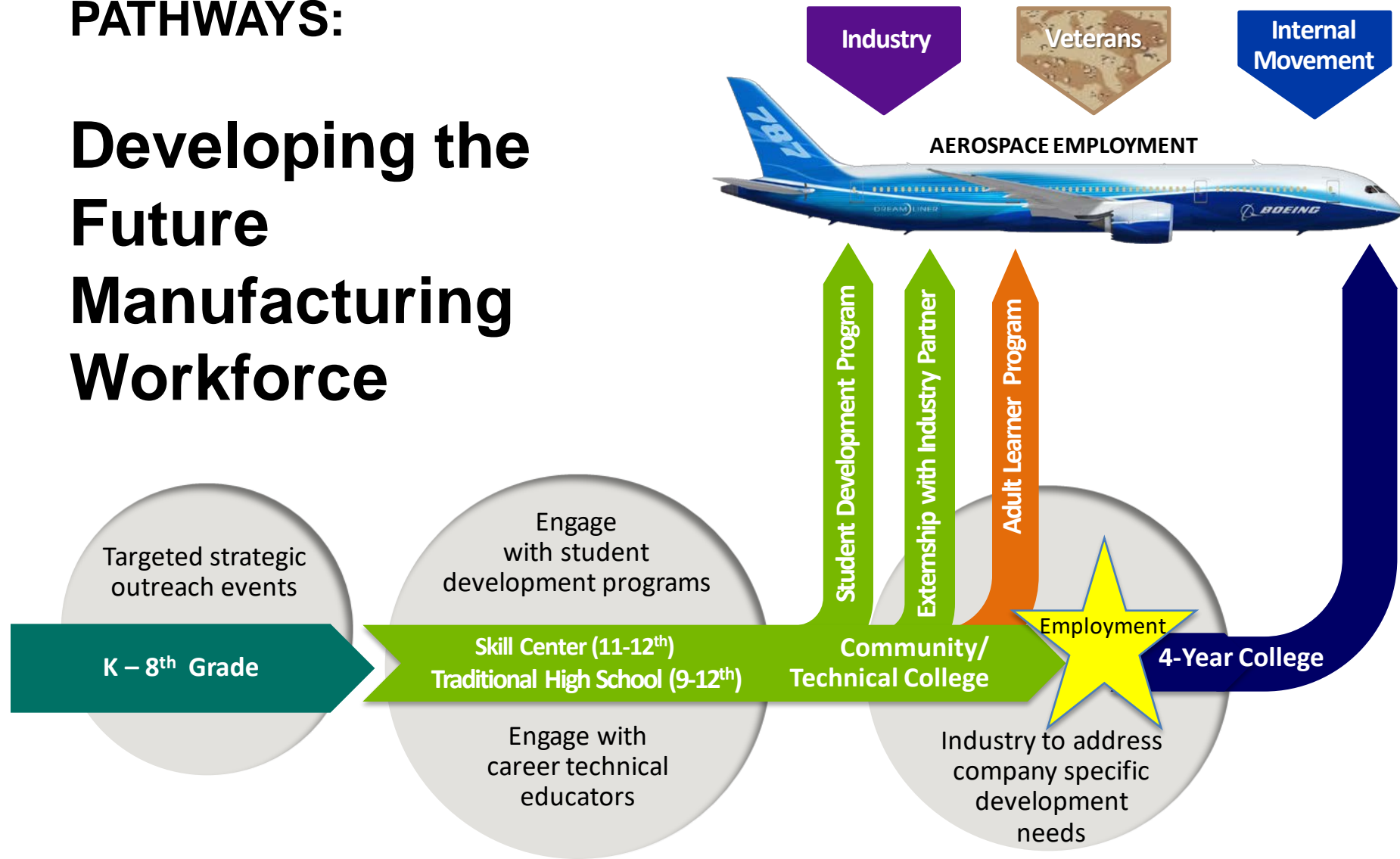
TALENT READY
— UTAH —
BUILDING OUR WORKFORCE

2016 NGA Policy Academy Working Committee

Education	Governement	Industry
State Board of Education	Governor's Education Advisor	Salt Lake Chamber
Utah System of Technical Colleges	Governor's Office of Economic Development	Women Tech Council
Utah System of Higher Education	Department of Workforce Services	DellEMC

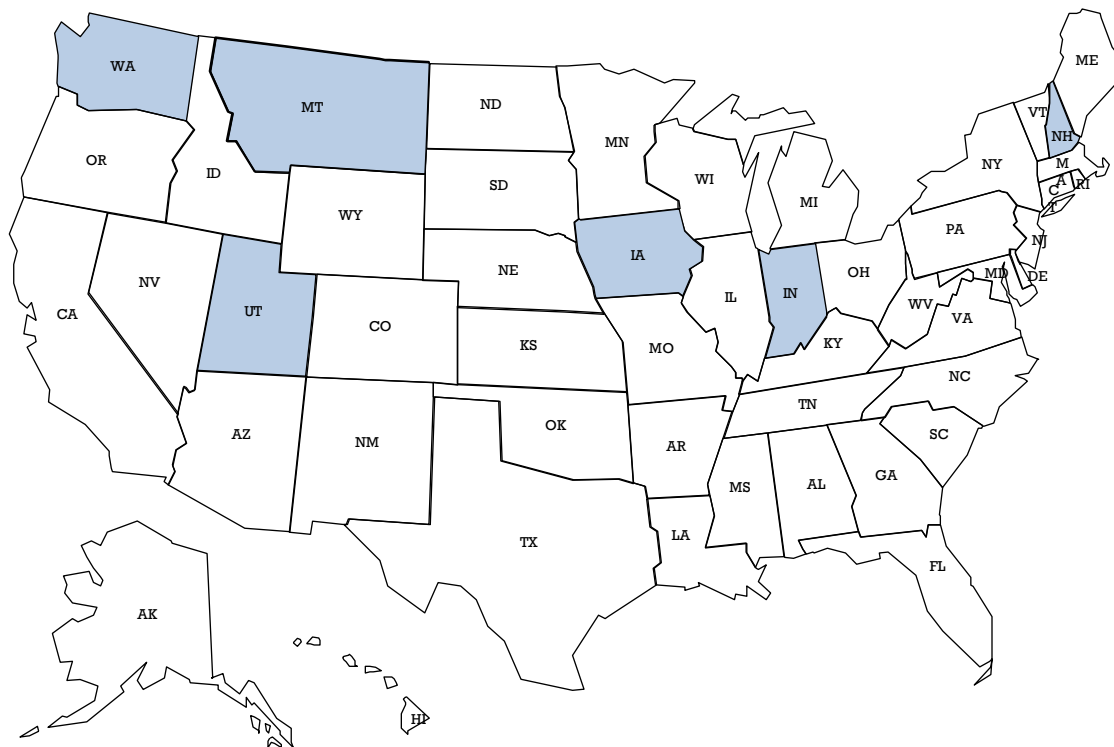
UTAH AEROSPACE PATHWAYS:

Developing the Future Manufacturing Workforce



NGA Policy Academy on Scaling Work-Based Learning

- **Indiana**
- **Iowa**
- **Montana**
- **New Hampshire**
- **Utah**
- **Washington**



Strategic Planning

- Work-based learning definition
 - Work-Based Learning is a continuum of awareness, exploration, preparation and training activities that combine structured learning and authentic work experiences implemented through an industry and education partnership.
- Branding
 - Silicon Slopes Tech Summit
- Scaling best practices
 - Pathway Programs

Scaling Pathways

Medical Innovations Pathway:

Education Partners	Companies	Students/Year	Adult Learners
8	10	50	30

Diesel Tech Pathways:

Education Partners	Companies	Students/Year
14	53	120

Scaling Pathways

- Utah Tech Pathways:

Education Partners	Companies	Students/Year
11	15	50

- AEC Pathways:

Education Partners	Companies	Students / Year
7	20	40

TALENT READY UTAH

OUR MISSION:

Focus and optimize the efforts of business partnerships to increase capacity for education that meets workforce needs.

OUR GOALS:

1. Increase the number of employers investing in work-based learning partnerships with education.
2. Develop talent to meet the growing demand leading to high-skill, high-wage jobs in the state.

Funding and Resources

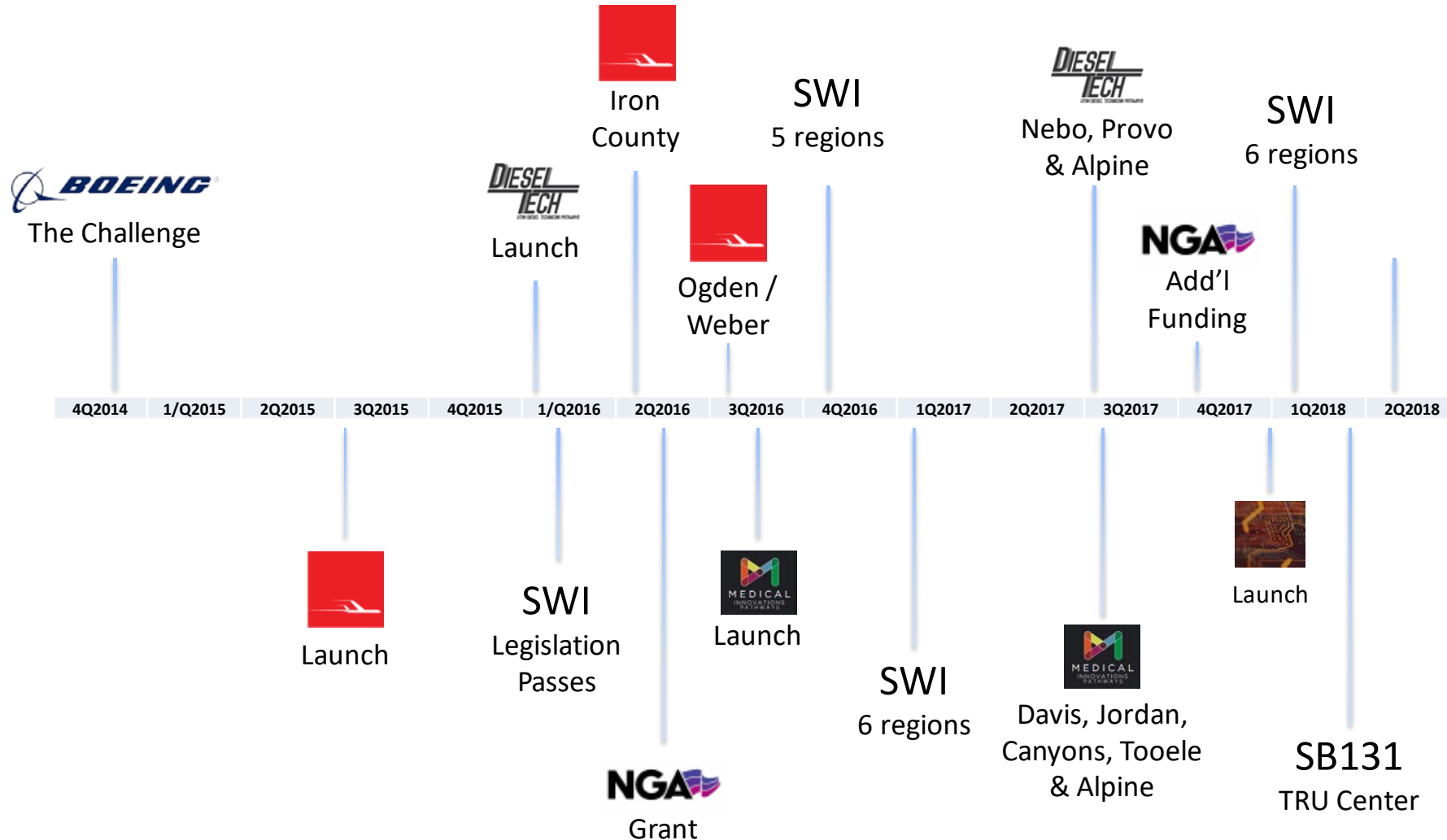
- Strategic Workforce Investment:
 - 27 projects
- Talent Ready Utah Grants:
 - 30 projects

Necessary Partnerships

- Education:
 - CTE
 - Superintendents
 - Commissioners Offices/Board of Education
- Industry:
 - Needs and Champions
- Government/Community:
 - Governor Support
 - Legislature
 - Chambers
 - Trade Organizations



TALENT READY UTAH TIMELINE



What's Next

- Pathways
- Utah Works
- Talent Ready Apprenticeship Connection
- Online Platform



THANK YOU

talentreadyutah.com

TALENT READY
— UTAH —
BUILDING OUR WORKFORCE



State Team Time

Pre-Meeting for the NGA Policy Academy Cohorts

Monday April 8th

2:45 – 4:45 PM

Room	State
Azalea A	American Samoa
Azalea A	Mississippi
Azalea B	Colorado
Azalea B	Kansas
Azalea C	Minnesota
Azalea C	Kentucky
Azalea D	Alabama
Azalea E	Nevada
Azalea F	North Carolina
Magnolia 3	Montana
Magnolia 5	Indiana
Magnolia 6	New Hampshire
Magnolia 7	Washington
Dogwood	Utah
Boardroom 1	Idaho
Hospitality Parlour 4126 *	Illinois
Hospitality Parlour 4106 *	Rhode Island

* In a different building- shuttle is provided



Pre-Meeting Wrap-Up

Pre-Meeting for the NGA Policy Academy Cohorts

Monday April 8th

4:45 – 5:15 PM



National Institute on Scaling Work-Based Learning

Tuesday, April 9th – Wednesday, April 10th, 2019

Point Clear, Alabama



Welcome and Overview of Day One

National Institute on Scaling Work-Based Learning

Tuesday April 9th

8:00 – 8:30 PM

Welcome and Overview of Day One

Speakers:

- ***Martin Simon***, Interim Director, Economic Opportunity Division, NGA Center for Best Practices
- ***Meghan Wills***, Program Director, Economic Opportunity Division, NGA Center for Best Practices
- ***Rachael Stephens***, Senior Policy Analyst, Economic Opportunity Division, NGA Center for Best Practices

The National Governors Association

Founding

Founded in 1908, the National Governors Association is the voice of the nation's governors and one of the most respected public policy organizations in the country. The association's members are the governors of the 55 states, territories and commonwealths.



What We Do

Through NGA, governors identify priority issues and deal with matters of public policy and governance at the state, national and global levels. Our research arm, NGA Solutions, helps in developing and implementing innovative solutions to public policy challenges. Our advocacy team ensures that states are a strong voice in Washington, D.C. We also provide total consultative services, including management and technical assistance to both new and incumbent governors, their senior executive staff and trusted advisors.

NGA Solutions: The NGA Center for Best Practices

Services:

- State Technical Assistance
- Multi-State Policy Academies
- Research & Published Reports

Policy Areas:

- **Economic Opportunity**
- Education
- Environment, Energy & Transportation
- Health
- Homeland Security & Public Safety



Economic Opportunity Division Content Areas

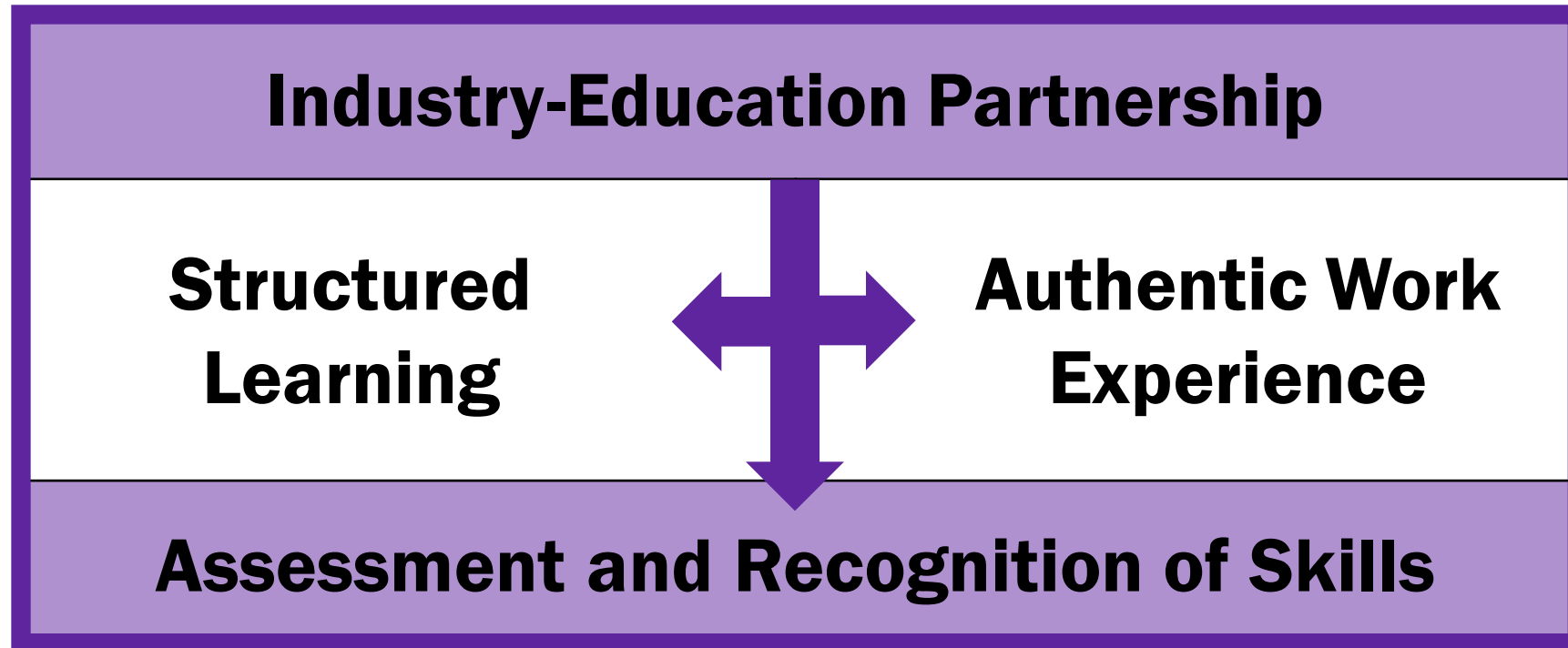


Why Work-Based Learning?

Businesses struggle to find the skilled workers they need to be competitive in the global economy

Many individuals lack the training and education necessary to fill these open jobs

High-Quality Work-Based Learning



Benefits of Work-Based Learning

Participating Young People

- Apply content learned in the classroom
- Explore career options and make informed decisions about education and work
- Build “soft skills”
- Gain work experience that can launch a career
- Interact with and learn from adult mentors

Businesses

- Nurture student interest in careers in their industry
- Build partnership with schools
- Ensure that education curriculum develops essential skills
- Increase employee retention and productivity
- Audition potential job applicants
- Develop highly skilled workforce

NGA Policy Academy on Scaling Work-Based Learning

States will expand high-quality work-based learning opportunities for youth and young adults to enter middle-skill STEM jobs

- ✓ Embed work-based learning into state education and workforce systems
- ✓ Increase number of work-based learning programs and participants, deliver positive outcomes to more employers and individuals
- ✓ Ensure students and learners on all pathways have access to work-based learning opportunities

Elements of State Systems Change

Vision & Communication

Statewide vision for scaling high-quality work-based learning and broad stakeholder support:

- Governor
- Education & workforce systems
- Business & industry

Data & Measurement

Data collection & measurement of scale and quality of WBL programs:

- Number of programs and participants
- Outcomes
- Growth over time

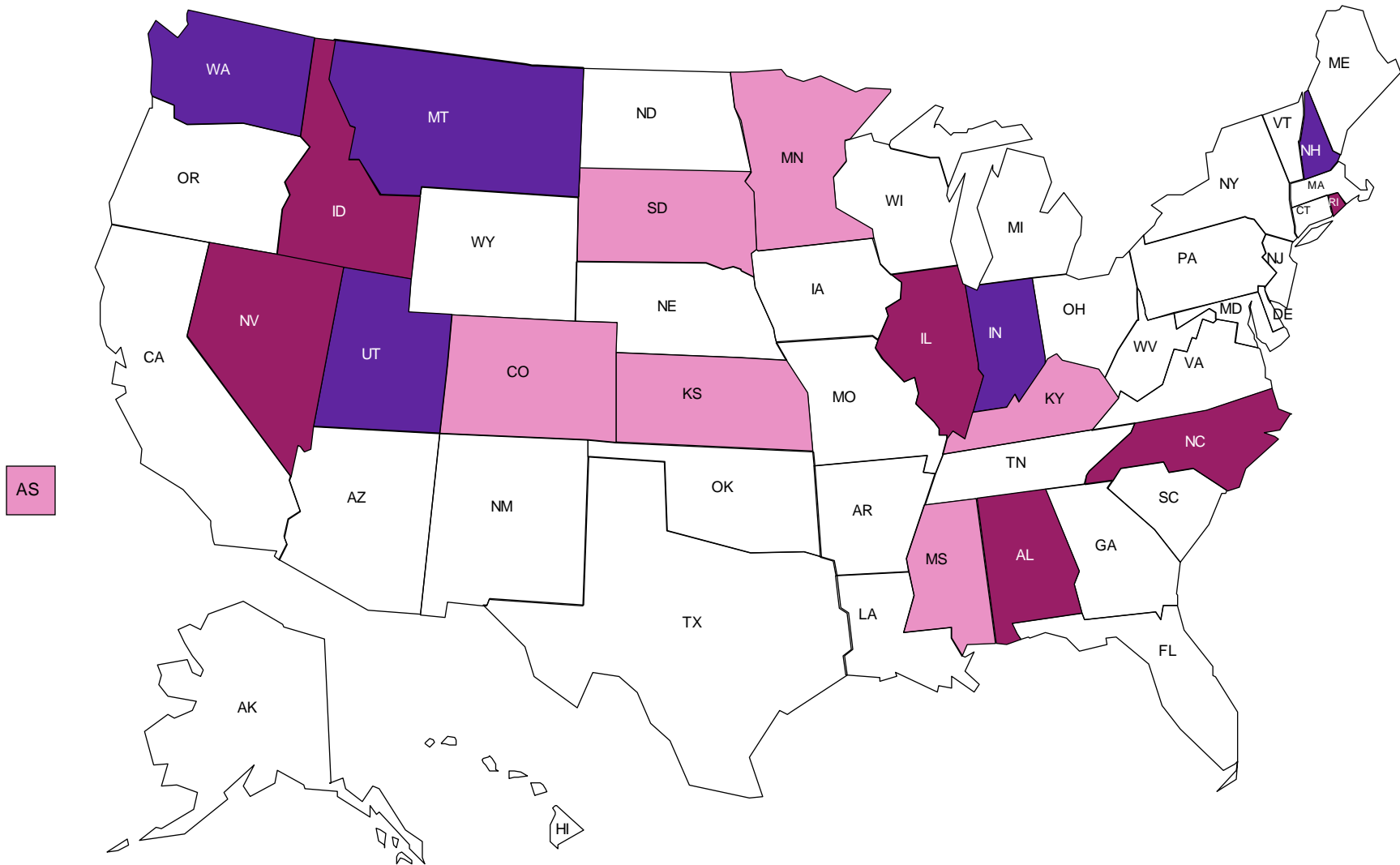
Resources & Policy

Policies and resources to sustain work-based learning:

- Policy and process changes in state agencies
- New or reallocated funding

NGA Participating States

- Leader States
- Policy Academy States
- Knowledge Exchange



Best Practices: Vision & Communication

- Establish a clear vision and measurable goals for work-based learning, with leadership from the governor
- Task a cross-agency leadership team with overseeing progress to vision and goals
- Secure buy-in from key stakeholders at the state and local levels, including employers
- Communicate benefits of work-based learning to students, parents, educators, employers

Best Practices: Data & Measurement

- Focus on data & measurement from the beginning and work with state education/workforce data system experts
- Establish a common statewide definition for work-based learning; collect data across systems based on this definition
- Capture baseline data on scope and quality of existing work-based learning efforts
 - Start with an inventory of programs and measure participation
 - Identify gaps in what data can be gathered
 - Develop metrics to measure quality
- Develop systems and protocols for sharing, gathering, and storing data from multiple agencies and institutions

Best Practices: Resources & Policy

- Build capacity across systems and at local level to implement and sustain expansion of work-based learning
 - Cross-agency task forces, councils, or dedicated committees
 - Dedicated offices housed in or attached to the governor's office
- Partner with state legislature to implement policy changes
 - New programs, employer incentives
 - Permanent staff, advisory boards
 - Funding for WBL entities to issue sub-grants, support new pilot programs, etc.
- Identify resources beyond pilots/incentive funds to sustain efforts over long term



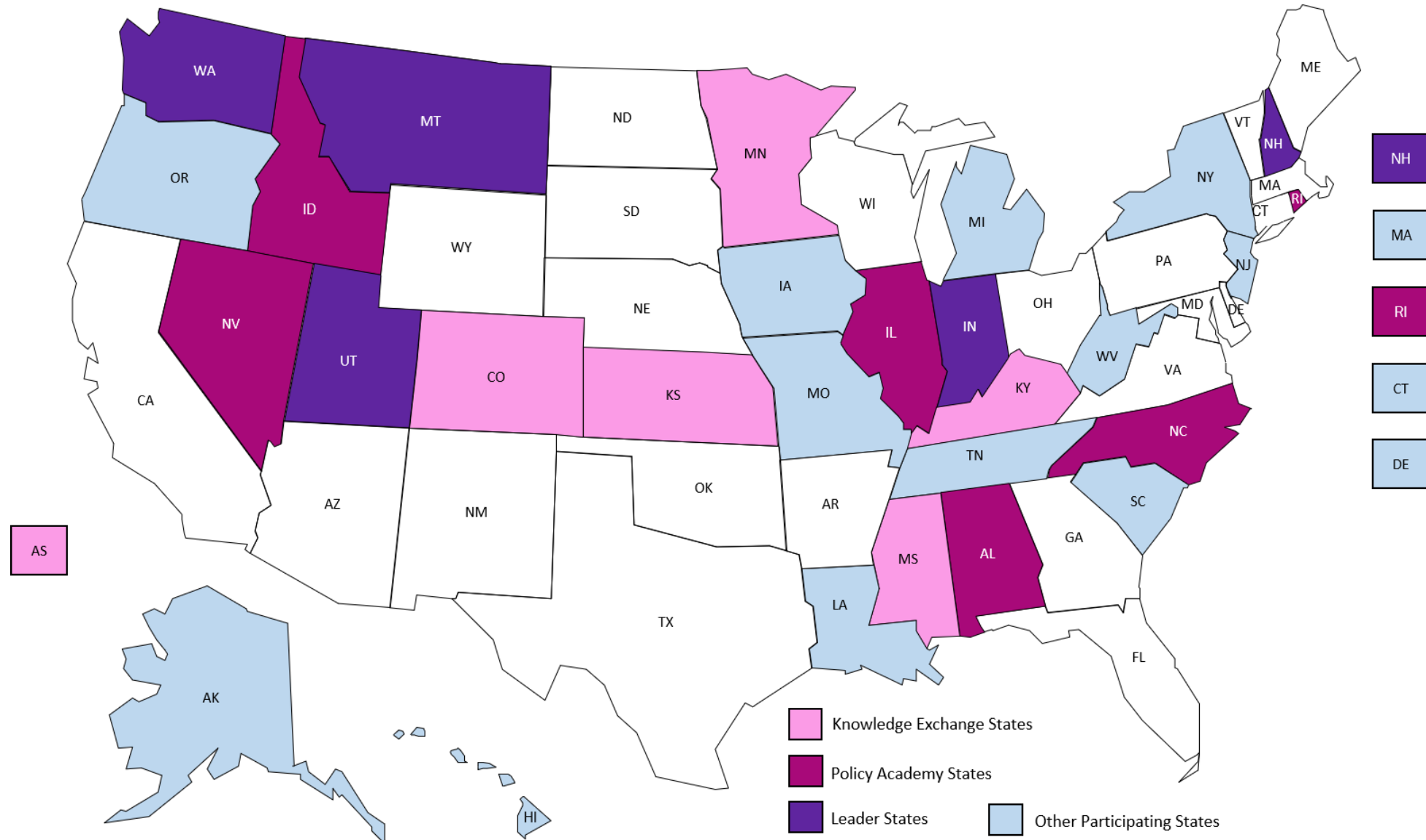
State Introductions

National Institute on Scaling Work-Based Learning

Tuesday April 9th

8:30 – 9:15 AM

States Participating in the Institute



State Introductions

One person from each state will introduce themselves and others from their state, and share:

- *One area of success* in work-based learning;
- *One major question or challenge* you would like to address or learn about during the Institute.



Achievements and Lessons Learned Through NGA's Policy Academy on Scaling Work-Based Learning

National Institute on Scaling Work-Based Learning

Tuesday April 9th

9:15 – 10:15 AM

Achievements and Lessons Learned

Speakers

- *David Etzwiler*, Chief Executive Officer, Siemens Foundation
- *Shannon Lewis*, Director, Montana State Workforce Innovation Board
- *Randall Brumfield*, Chief Academic Officer, Idaho State Board of Education
- *John Russ*, Area Manager, Idaho Department of Labor
- *Rachel DeVaughn*, Assistant Executive Director of Work-Based Learning and Special Initiatives, Mississippi Community College Board



NGA Policy Academy on Scaling Work- Based Learning *Montana – Leader State*

April 9, 2019
Point Clear, AL

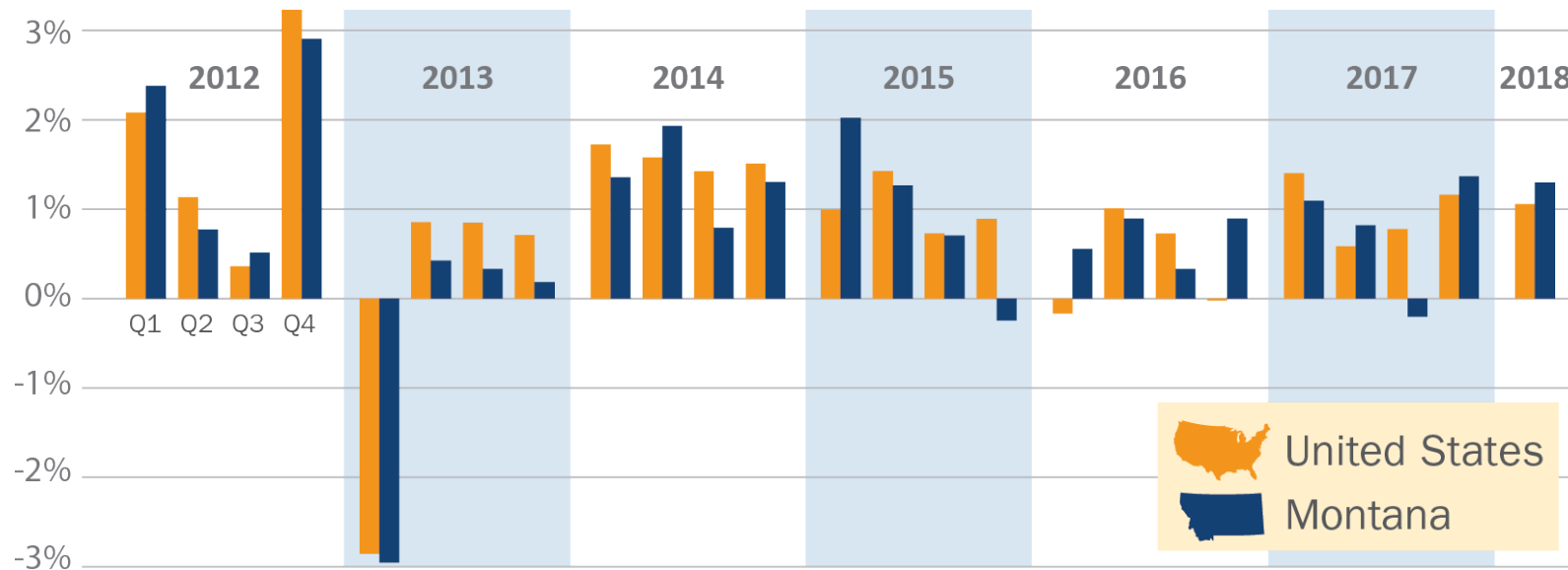
Shannon Lewis
SWIB Director



Montana's Economy is Growing

Personal Income Growth by Quarter

Montana and the United States

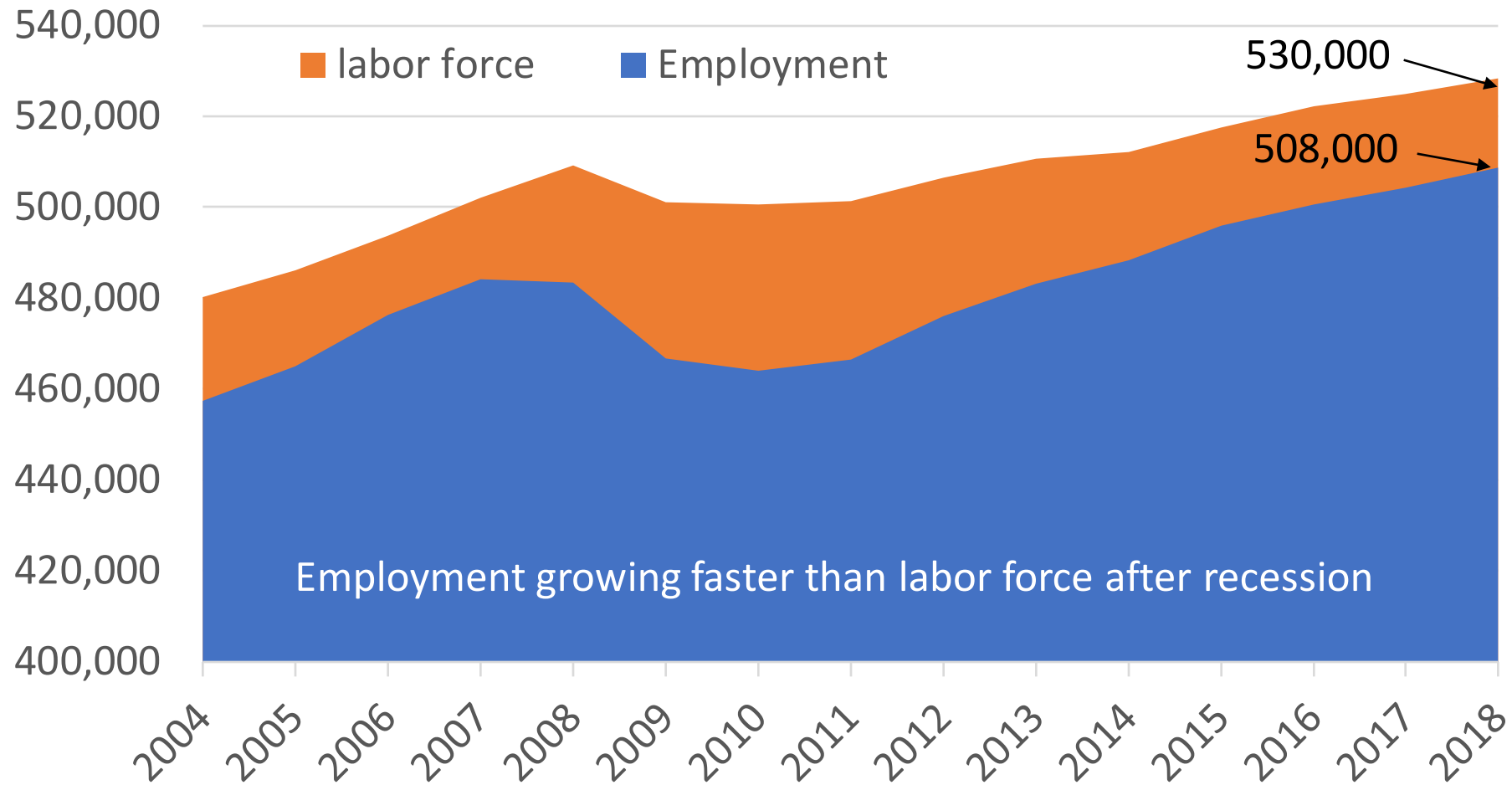


Source: Bureau of Economic Analysis (BEA), U.S. Department of Commerce (DOC)

Montana's Personal Income Growth **11th** Fastest Among States.



Employment and Labor Force Growing



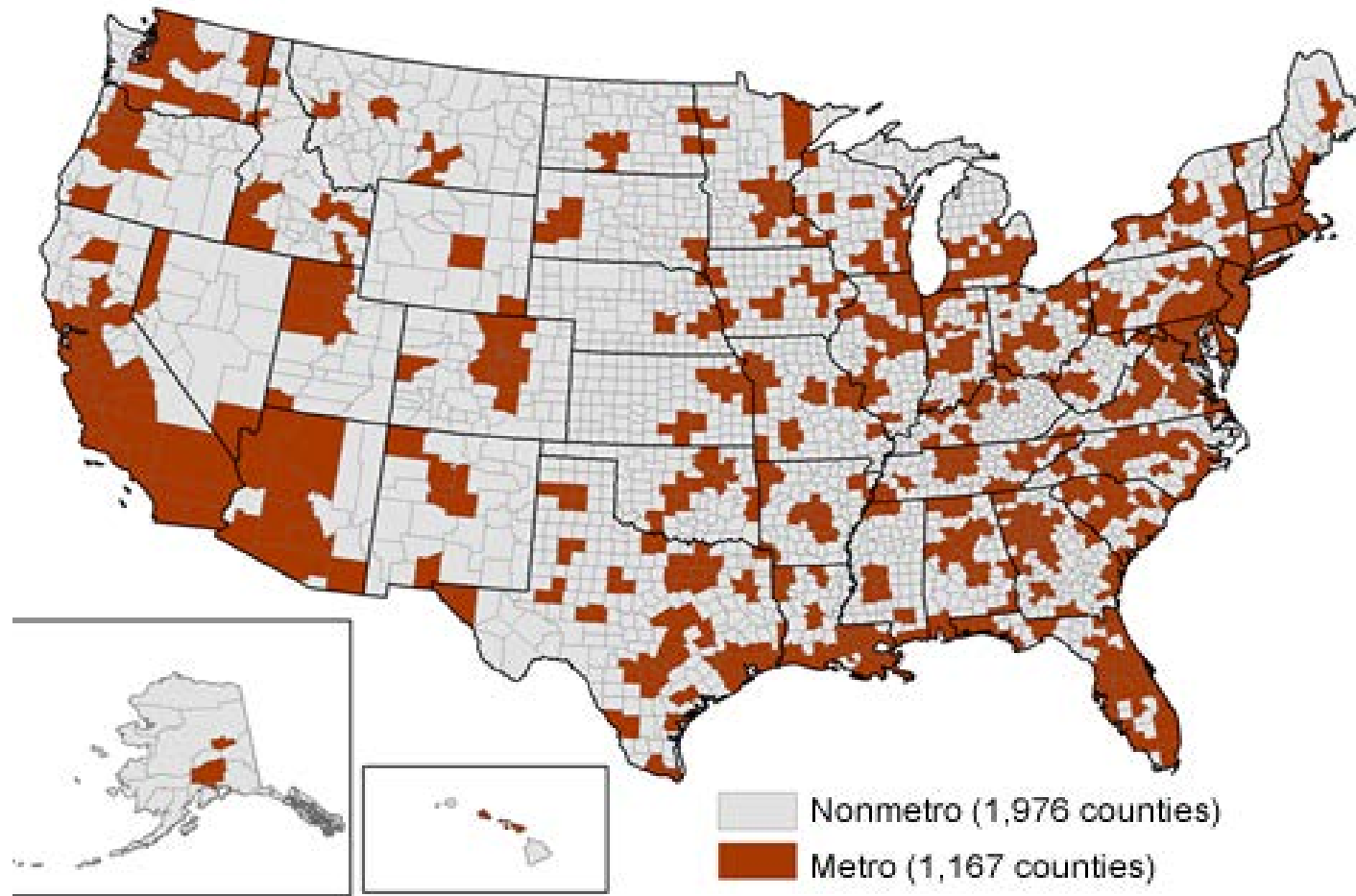


Unemployment Rate Falling





Montana is BIG. . . and RURAL



Source: USDA, Economic Research Service using data from the U.S. Census Bureau.



Montana's Definition of WBL

Work-based learning is a continuum of activities that engage employers and extend the classroom into the workplace, connecting acquired knowledge and skills to a student's future employment—







Montana's Vision for WBL

To scale and enhance high-quality WBL experiences in Montana to:

- Serve Montana's priority workforce development needs;
- Create sustainable talent development pipelines for Montana's high-demand industries;
- Foster career (and college) readiness for Montana's youth and young adults; and
- Ensure alignment of education, government, community, and business resources toward priority employer needs.



Montana's WBL Framework

Clear Work-based Learning Partnership Agreement

A **clear** articulation of the work-based learning partnership between the participant, the educational institution or intermediary organization, and the sponsoring employer. The agreement describes terms and expectations of the experience, including learning objectives aligned with a career pathway, duration, and the financial or educational compensation afforded to the participant.

Authentic Work Experience Component

Participant engages in an **authentic** work experience that is of value and relevant to the sponsoring employer partner(s) workforce needs. Participant is supervised and mentored in the completion of assigned tasks and projects.

Structured Learning Component

Participant engages in **structured** learning activities to enrich and enhance knowledge, skills, and abilities. That includes curricula linked to the sponsoring employer's skills needs and the concepts participants encounter in the workplace.

Culminating Assessment and Recognition of Skills

The experience culminates in an assessment to gather sponsoring employer feedback and garner formal **recognition** of participants' learning and acquired skills. A partner educational institution or third party intermediary organization carries out the assessment to ensure that recognition is aligned with the attainment of a credential or progress along a career pathway.





Montana's WBL Accomplishments

NGA Phase I Accomplishments

- Convened cross-sector stakeholders to define WBL and develop a strategic plan to expand work-based learning;
- Held statewide Governor's Symposium to share resources and develop statewide capacity to deliver high-quality work-based learning;
- Increased awareness among educators, employers, businesses, students and parents of WBL and experiential learning opportunities and the benefits of WBL; and
- Aligned funding opportunities with expansion of apprenticeship and work-based learning infrastructure.



Montana's WBL Accomplishments

NGA Phase II Accomplishments

- Stakeholders have a common understanding of work-based learning and a shared statewide vision for incorporating high-quality work-based learning into education and workforce training programs.
- Statewide, stakeholders understand the value of work-based learning and are building opportunities for growth and stronger relationships between education, training, and industry partners.



Montana's Current Work

- Governor Bullock continues to support workforce development initiatives throughout the state, including WBL. He's convened the Future Ready Cabinet comprised of cabinet members, the Superintendent of Public Instruction, the Adjutant General of Montana's National Guard, and the Commissioner of Higher Education.
- Work-Based Learning partners are developing a "playbook" for business and industry leaders interested in engaging in WBL.
- Montana is moving forward with a combined plan for WIOA and Perkins V, which will emphasize WBL along with workforce investment and career and technical education.



How Will We Know We're Successful?

- All Montana students will have access to high-quality WBL experiences across the continuum that prepares them for college and/or career.
- Increased engagement from business and industry leaders with local school districts to develop opportunities for students.





Challenges

Data systems that are aligned to measure participation and effectiveness of WBL programs with meaningful data to better understand the gaps and areas for improvement.







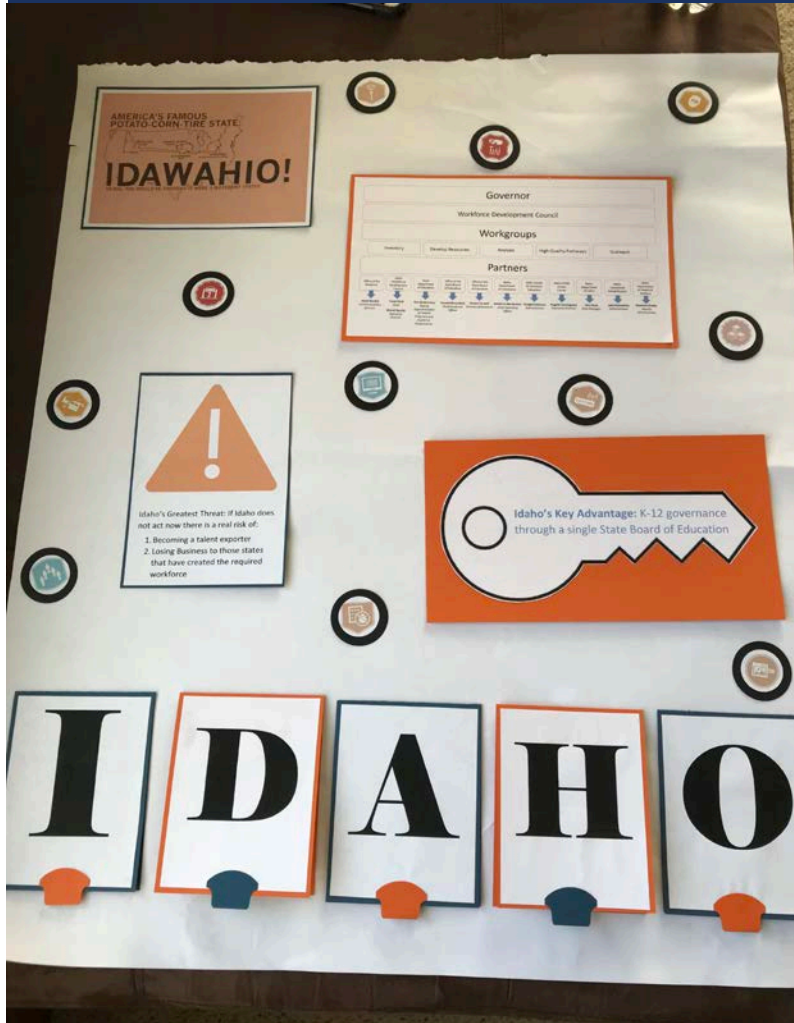
IDAHO HIGHLIGHTS- POLICY ACADEMY STATE

RANDALL BRUMFIELD AND JOHN RUSS

POLICY ACADEMY THEMES

- Breaking Down Silos
- Working Collaboratively
- Patience with One Another

BEFORE & AFTER



POLICY WINS

- Prior Learning Assessment
- Advanced Opportunities
- Lumina Grant
- Senior Project - defined to include work based learning
- Micro-certification/badge definition
- Mastery-Based Learning Expansion

POLICY – STILL TO DO

- Further refinement of Advanced Opportunities
- Making WBL part of the institutionally designated general education credits

Work Based Learning Asset Map

Idaho LEADER

Learn.Do.Earn.

Get Started – leader.nextsteps.idaho.gov

	Learning About Work			Learning Through Work			Learning At Work	
Category	Career Education	Employer Engagement	Externships	Internships	Pre-Apprenticeship	Co-op	On-the-Job Training	Apprenticeship
Definition	Teachers bring career information into the classroom.	Students learn by directly engaging with potential future employers.	Short practical work experiences to “ground-truth” theory.	A short-term position providing experience and exposure. May be paid or unpaid and for-credit or non-credit.	A program that teaches basic technical and job-readiness skills to prepare for an apprenticeship.	Structured method of classroom learning integrated with workplace experience where credit is received for both.	Individuals are taught by other employees how to complete a task while doing the job.	An “earn while you learn” model where on-the-job training is coupled with related instruction. Wage gains are incorporated and the experience culminates in industry-recognized credentials.
Activities	Career Counseling Pathway Planning Presentations examining growth careers Industry Speakers Interviews with current employees	Host a tour for middle school/high school students or participate in school-organized career fairs. Provide an opportunity for students to job shadow. Become a mentor through the STEM Action Center’s Mentorship Portal.	Host a teacher during the summer to bring real-world experiences into the classroom.	Connect with college & career advisors at high schools to reach high-school interns.	Partner with an industry association to develop a program to teach workplace skills.	Connect with a local community college or other postsecondary institution to identify cooperative education opportunities in areas of in-demand skills.	Partner with the Idaho Department of Labor, Division of Vocational Rehabilitation and/or Department of Health & Welfare to hire Veterans, individuals with disabilities, and other individuals seeking work.	Develop registered apprenticeship programs for hard-to-fill positions.
				Connect with postsecondary institutions to reach college interns.	Host a competitive job-skill-building event requiring potential apprentices to collaborate on project-based activities.			Expand apprenticeship programs to School to Registered Apprenticeship to engage high school students.

Apprenticeship
Idaho

Teacher
Externship Pilot

University of
Idaho Co-op
Expansion

NGA Policy Academy on Scaling Work- Based Learning

Mississippi –
Knowledge Exchange
State

April 9, 2019

Point Clear, AL



MISSISSIPPI WORKS: BUILT TO PREPARE, CONNECT, AND SUSTAIN A HIGH-QUALITY WORKFORCE FOR ECONOMIC GROWTH



PREPARE

HIGH-PERFORMANCE WORKFORCE

Education is preparation. Whether entering the job market for the first time, filling skills gaps for a career change, or seeking new credentials for new opportunities, Mississippi's workforce will be prepared at every education level for occupations with higher earning power.



CONNECT

WORKFORCE ON DEMAND

The Workforce on Demand model gives Mississippi businesses a unique advantage by identifying the right labor pool, connecting the pool with jobs, and verifying skills to ensure the right person for the right job is found at the right time.



SUSTAIN

BUSINESS AND INDUSTRY ENGAGEMENT

By aligning workforce strategies, such as apprenticeships, with hiring cycles, Mississippi businesses can capitalize on a precision workforce. This creates a pipeline that channels the state's high-performance workforce into occupations that fulfill dynamic industry needs.



Mississippi's Labor Force is Skilled and Ready to Work

PREPARE

- EDUCATION** Early Childhood Academies • K-12 • Community Colleges
Universities • Complete to Compete • MS Scholars
MS Tech Masters• Dropout Prevention
- TRAINING** MS Apprenticeship Program • MDE Certification Processes
MS Training Academies • WET Training Fund • WIDA/Smart Start
and Career Pathways • MS Works Training Fund
- AWARENESS** Job Scout • Get on the Grid • Pathways to Possibilities
- SUPPORT** Families First• Childcare Voucher System • Rehabilitation Services
MS Department of Human Services

CONNECT

- MS Development Authority • MS Department of Employment Security
Local Economic Developers • Community College Board
MS Works App • MS Grad Jobs • MS Tech Jobs

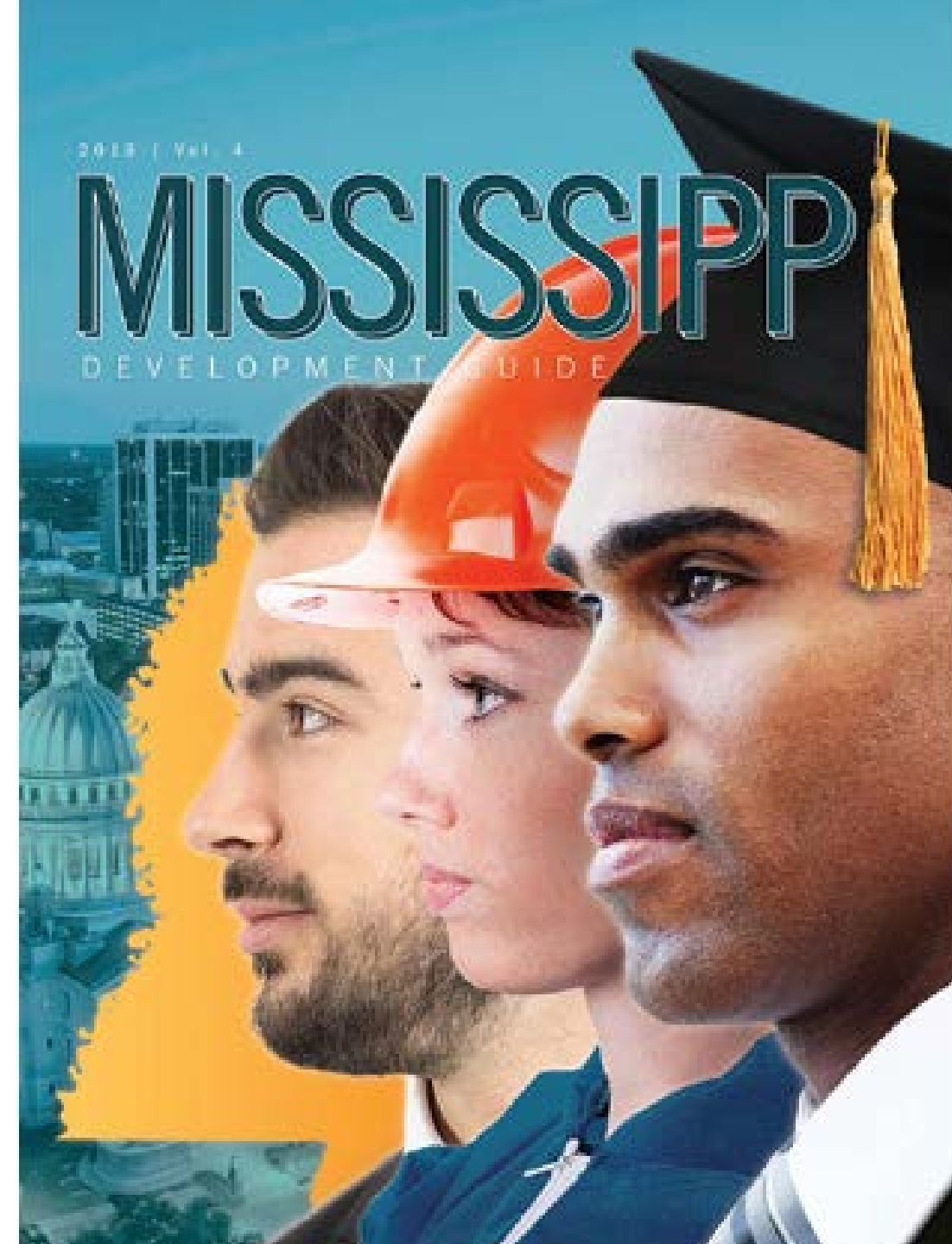
SUSTAIN

- MS Manufacturers Association • MS Hospital Association
North MS Industrial Development Association • MS Concrete Association
MS Retail and Grocers Association • MS Outdoor Industry Association
MS Automotive Association



Mississippi's Definition of Work-Based Learning:

“Work-based learning provides students with authentic work experiences where they apply and develop employability and technical skills that promote success in careers and post-secondary education. Work-Based Learning activities culminate in an assessment and recognition of acquired knowledge and skills.”



Mississippi's Vision for WBL

To scale and enhance high-quality WBL experiences in MS:

- Identify MS's targeted WF needs;
- Create sustainable pathways for MS's high-demand industries; and
- Ensure alignment of PK-16 education, government, community, and business resources toward priority employer needs.



Mississippi's WBL Accomplishments

- Met with multiple stakeholders to define WBL and start developing a plan for expansion of WBL
- Working closely to identify challenges, barriers, and opportunities to expand WBL among our many stakeholders
- Governor Bryant continues to support workforce development throughout MS, including WBL
- Held a Governor's Workforce Summit in January



Governor's Workforce Summit

- Summit Goal – highlight workforce solutions for leaders in the business community
- Speaker Panels focusing on Preparing, Connecting, and Sustaining the workforce in Mississippi including topics such as Education and Workforce Development
- Local Workforce Development Area Booths with WIOA Core Partner Agencies
- Mississippi Works job matching system available for registration and job listings



Next Steps

- Regional Workforce Summits in each Local Workforce Development Area
- Revise the Secondary Career Experience Definition and Program Guide to reflect changes in Perkins V and WIOIA



Preparing the Future Workforce: The Promise of Work-Based Learning

National Institute on Scaling Work-Based Learning

Tuesday April 9th

10:30 – 11:30 AM

Preparing the Future Workforce: The Promise of Work Based Learning

Moderator:

- *Rachael Stephens*, Senior Policy Analyst, Economic Opportunity Division, NGA Center for Best Practices

Speakers:

- *Debbie Hughes*, Senior Strategist, Entangled Solutions
- *Beth Townsend*, Director, Iowa Workforce Development

State Collaborative Consortium to Understand and Support the On-Demand Workforce

OBJECTIVE: Support state efforts to understand and respond to emergent changes in the structure of work and the economy, specifically the on-demand workforce.

- ✓ The project is focused both on research and policy development
- ✓ States are collaborative partners and co-creators with NGA in this endeavor
- ✓ Project duration: September 2018 to May 2020

Future Workforce Now: Reimagining Workforce Policy in the Age of Disruption

OBJECTIVE: Develop and refine actionable ideas on what states can do today to prepare the future workforce, particularly through innovations in workforce and education policy.

- ✓ The project is focused on research and creative policy ideation
- ✓ States are engaging in conversations with other leading thinkers, researchers, academics, practitioners, tech innovators, and employers
- ✓ Project duration: June 2018 through December 2019

Preparing the Future Workforce: The Promise of Work Based Learning

Moderator:

- *Rachael Stephens*, Senior Policy Analyst, Economic Opportunity Division, NGA Center for Best Practices

Speakers:

- *Debbie Hughes*, Senior Strategist, Entangled Solutions
- *Beth Townsend*, Director, Iowa Workforce Development



Bridging the Divide: Linking business workforce needs to work- based learning opportunities

April 2019

entangled



As the U.S. transitions to a knowledge economy, our education, workforce development, and employment systems have not kept pace.

A high school diploma now offers a 50% fewer opportunities for finding family sustaining careers versus 30 years ago.

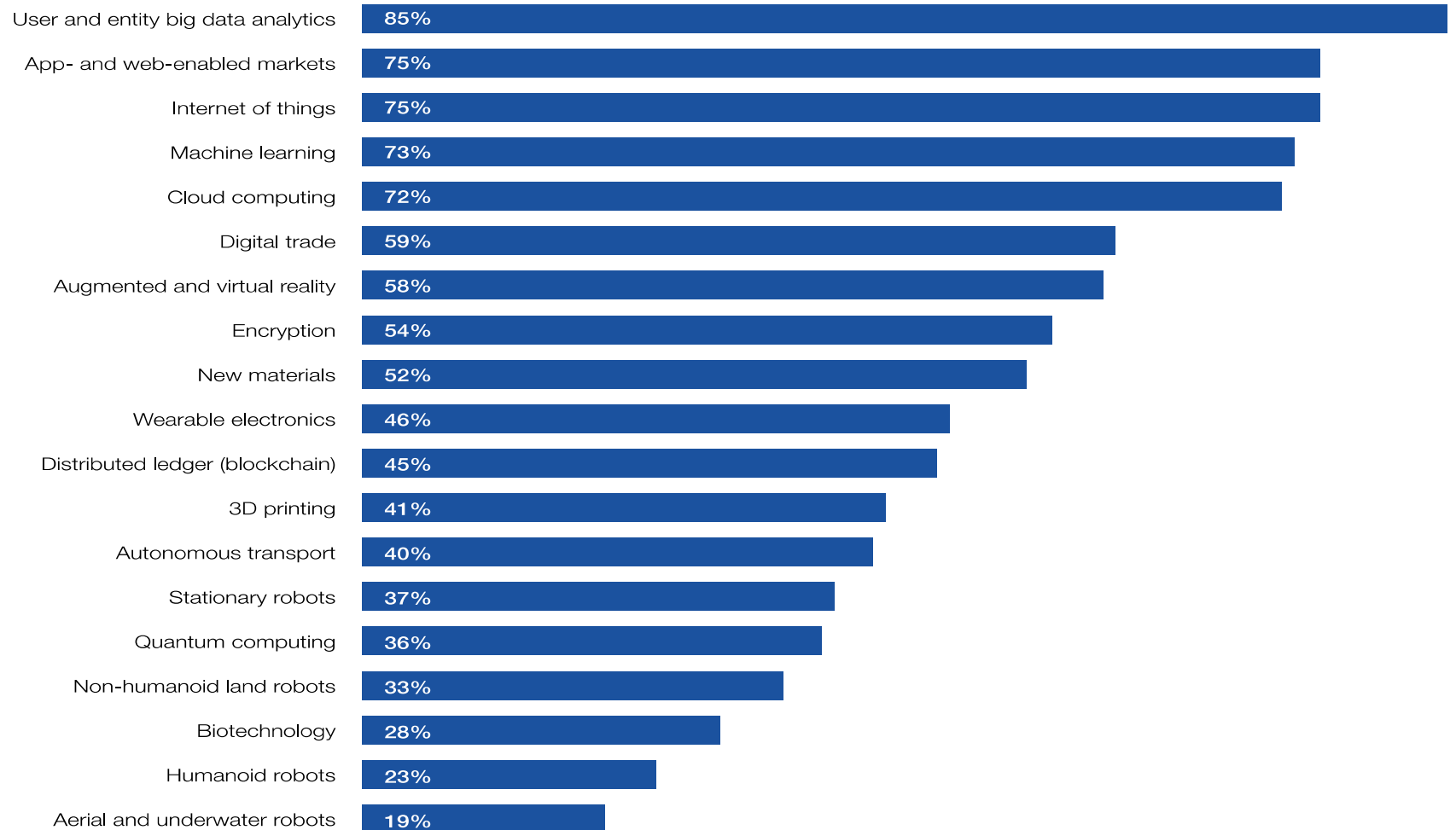
Postsecondary graduation rates have remained stagnant over the same period, with over half of attendees dropping out. For those who manage to complete, **40 percent of graduates will be underemployed**, working in jobs that do not require their level of training.

Eighty-nine percent of employers report having difficulty finding people with the requisite skills for job openings and are desperately seeking new ways to fill those gaps.

Unprecedented disconnect in labor market with record high **6.1M open postings, 6.8M currently unemployed and 6.7M more underemployed**

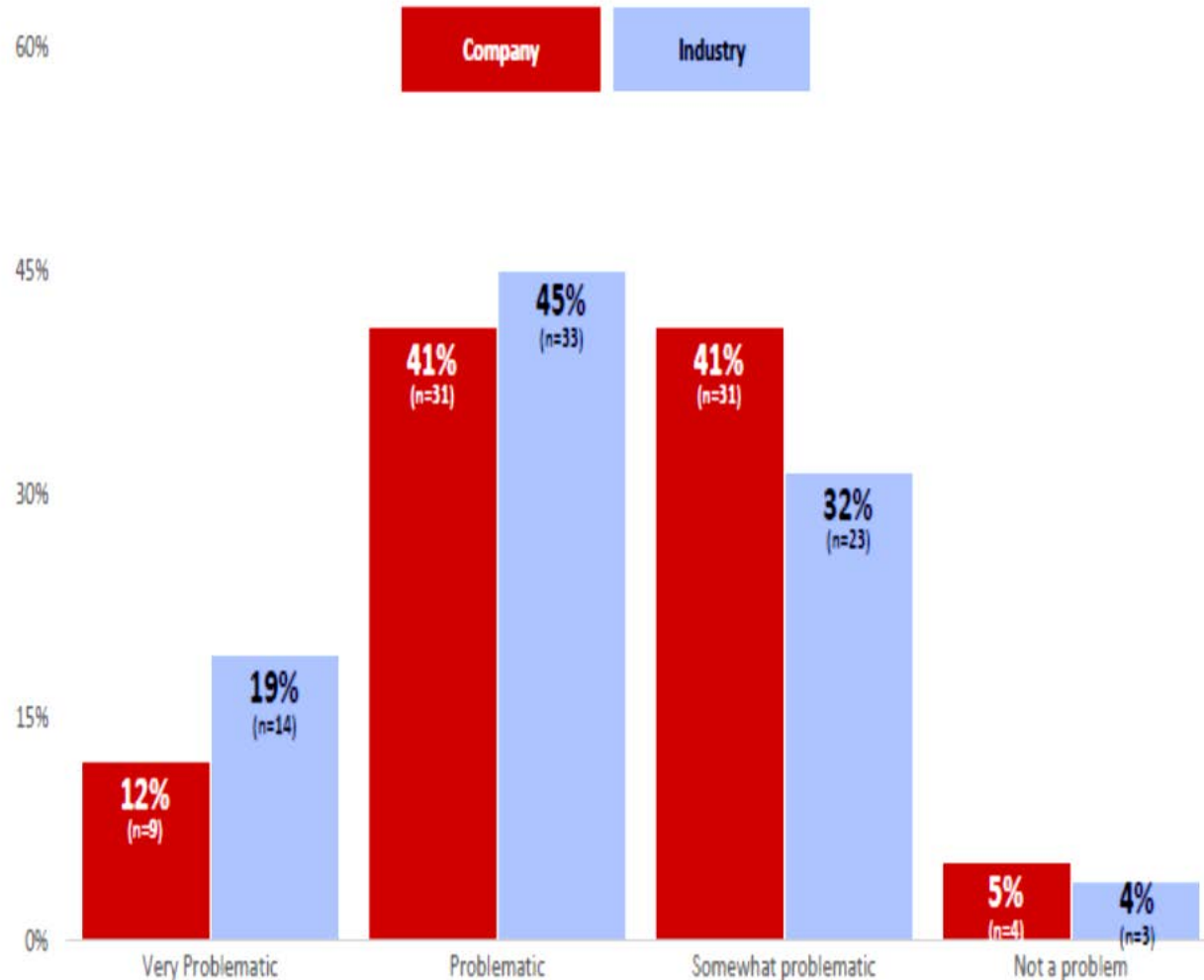
Companies are undergoing rapid transformation

“
There are still
a number of
challenges to
becoming digital”



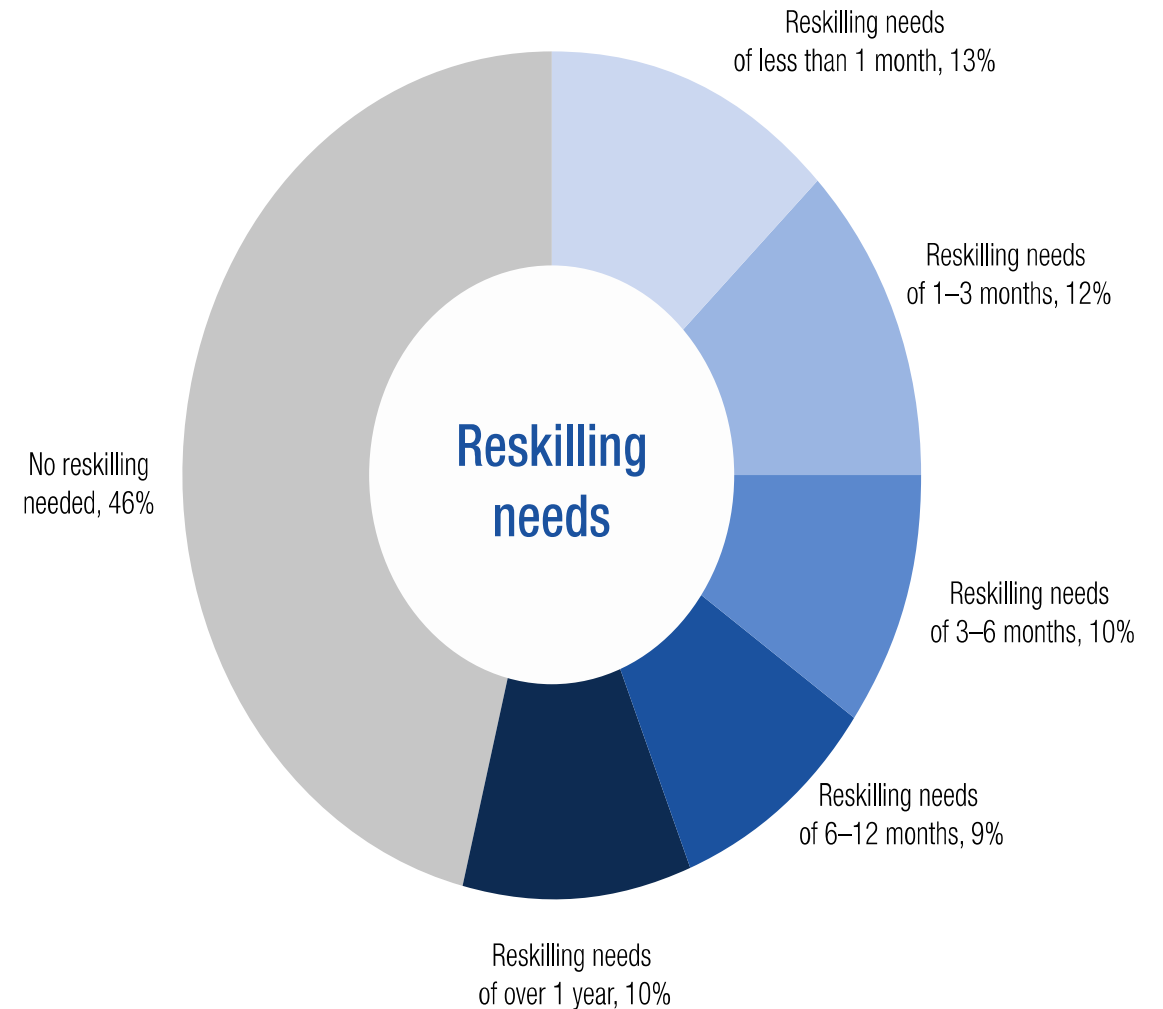
Source: Future of Jobs Survey 2018, World Economic Forum.

Employers need to reskill at scale

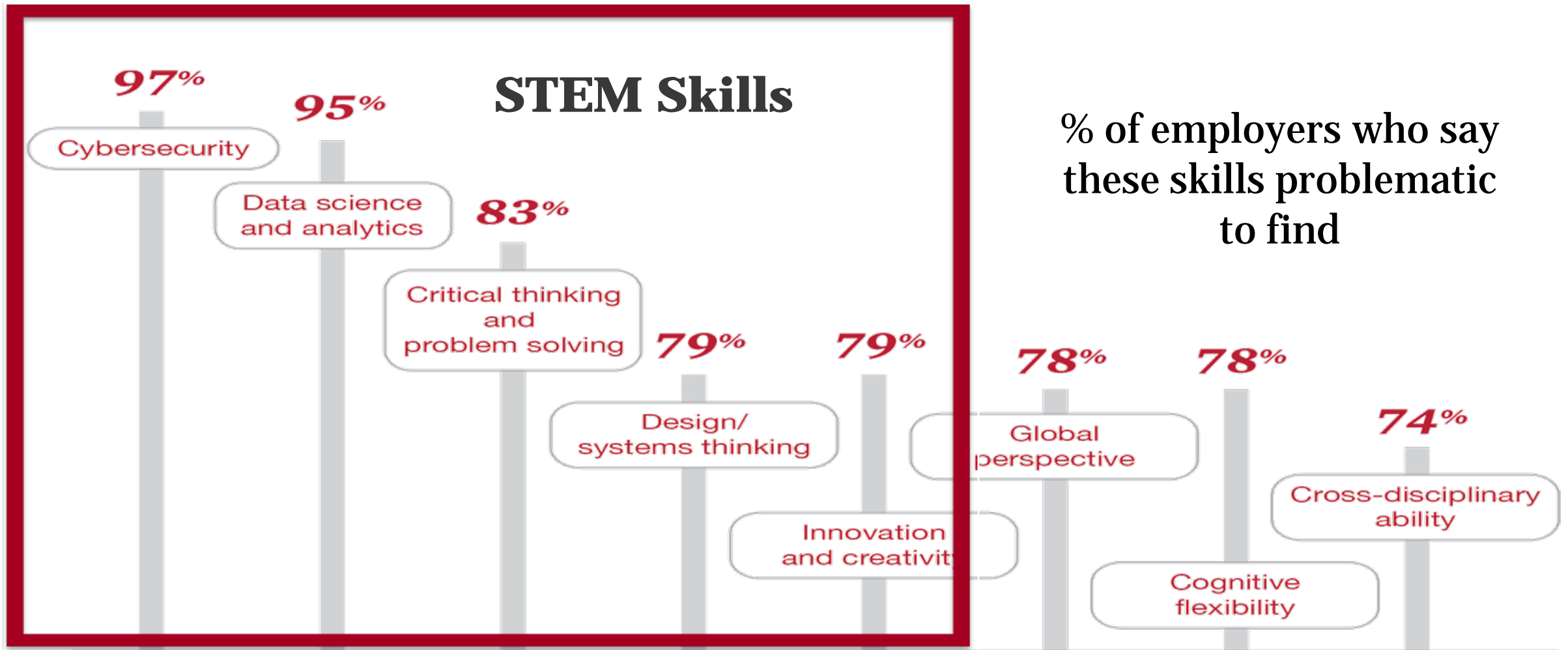


Skills shortages are a problem for companies and industry in the U.S.

Expected reskilling needs across companies (2018 – 2022)



Employers' Hardest to Hire Skills

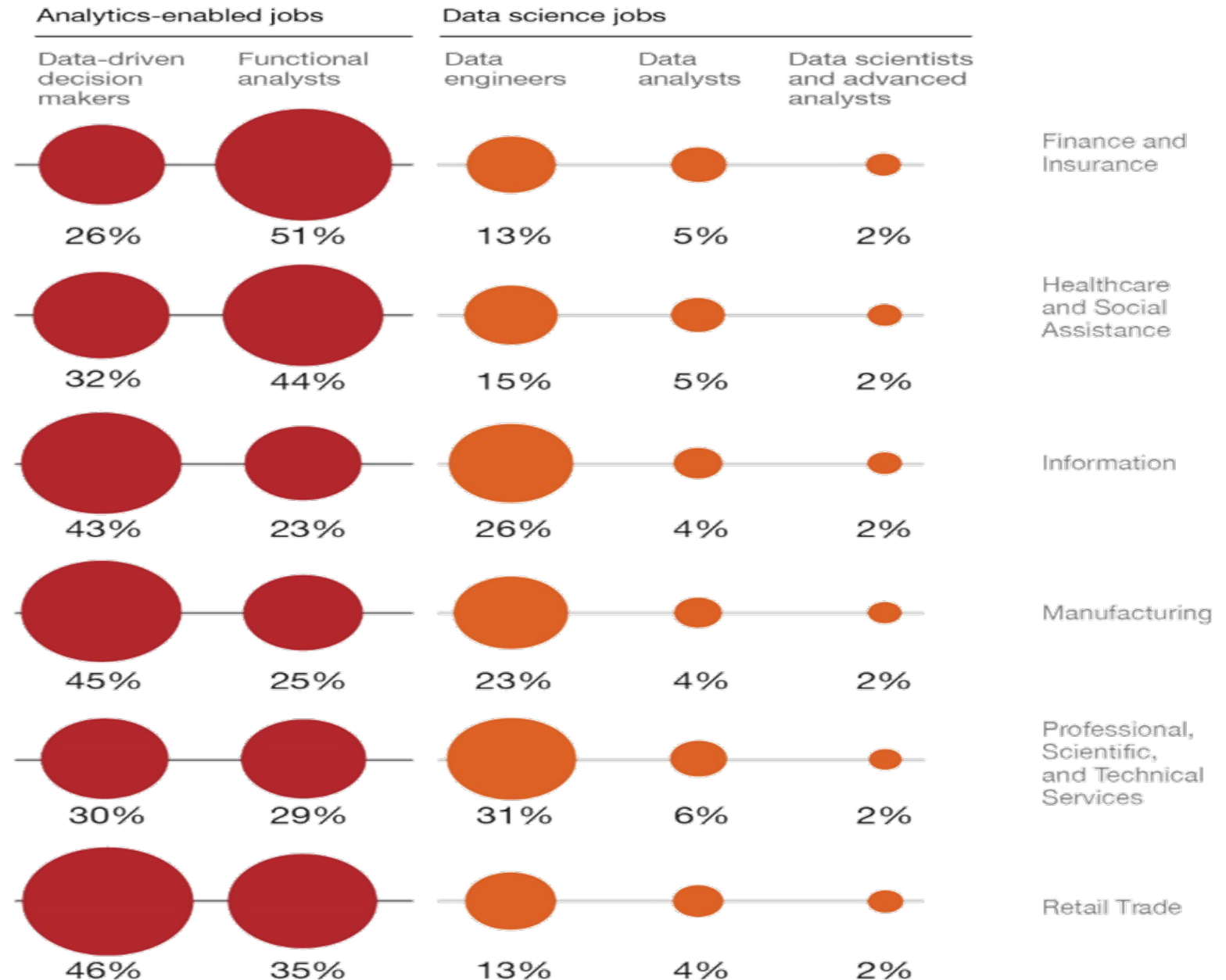


Source: Business Roundtable (2017).

The rise of the Data-Driven Decision Makers

**Explosive
growth in
demand
for
analytics
skills**

entangled.solutions



Today's changing
landscape is demanding
business people with new
skills, **not just digital experts
or data scientists**

23%

Of educators say all graduates will
have data science and analytics skills

69%

Of employers say they will prefer
job candidates with these skills
over ones without

entangled.solutions

Today's changing
landscape is demanding
business people with new
skills, **not just digital experts
or data scientists**











































23%

Of educators say all graduates will
have data science and analytics skills

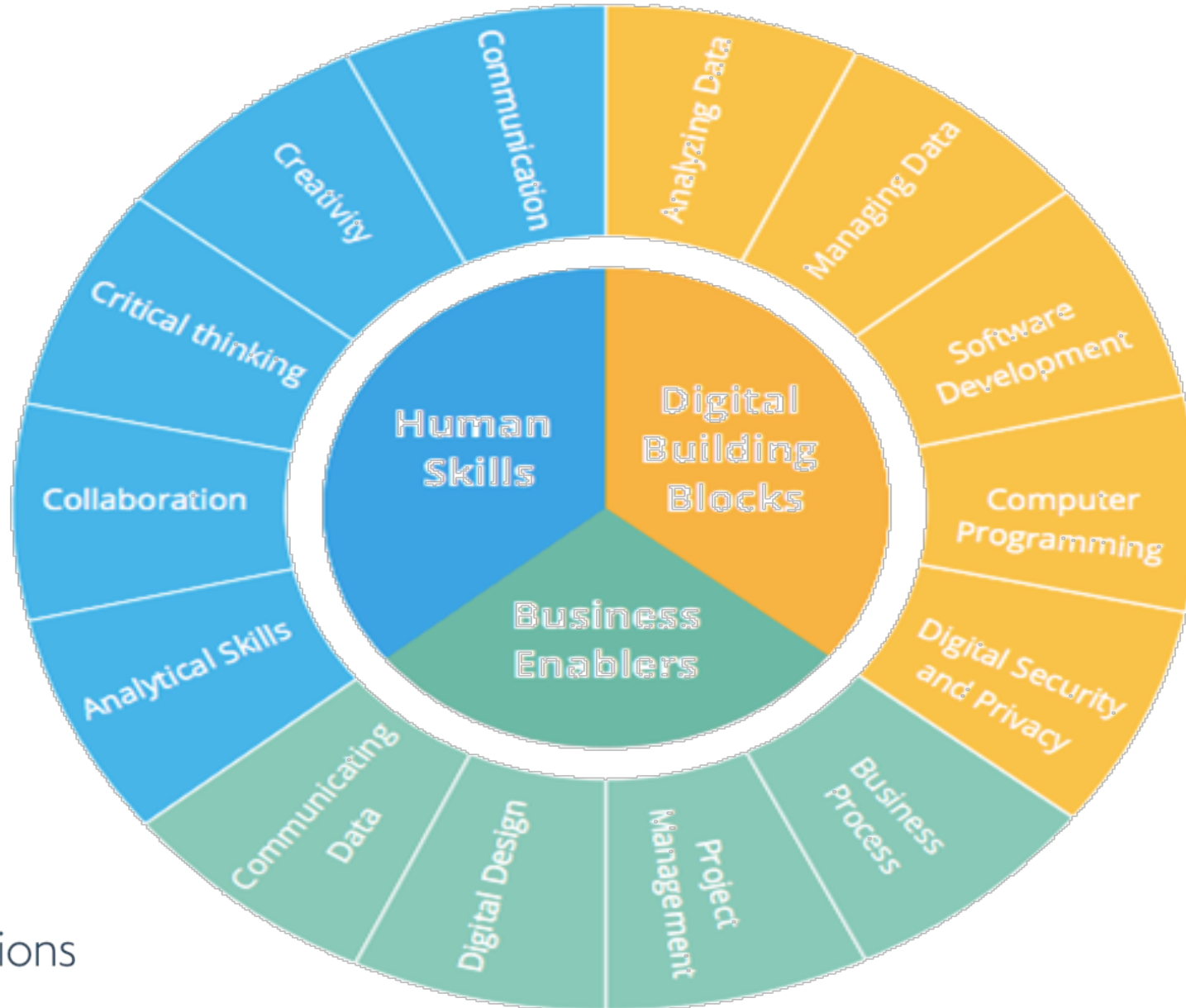
69%

Of employers say they will prefer
job candidates with these skills
over ones without

Foundational skills for the digital economy

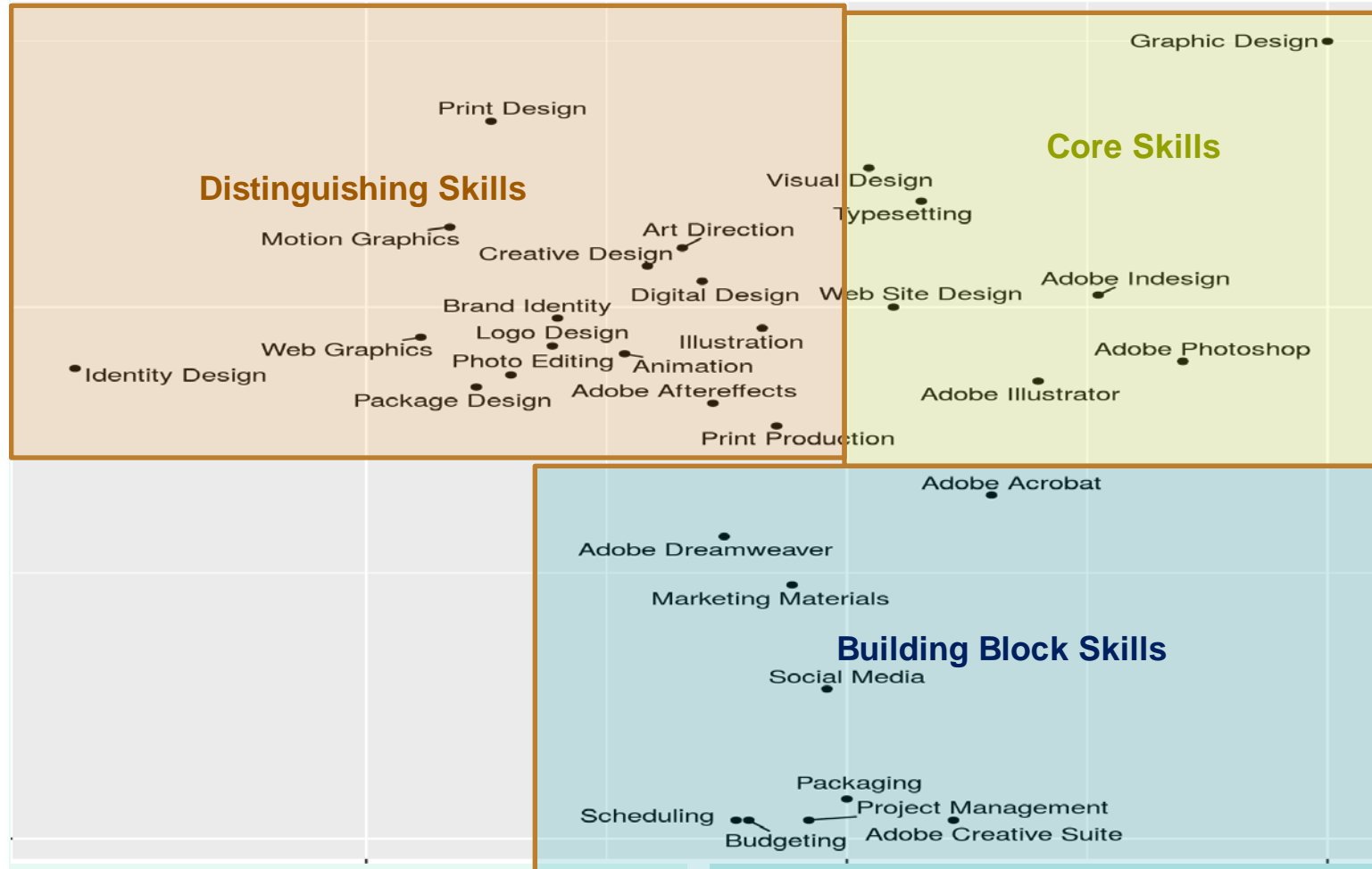
Digital Building Blocks		Business Enablers		Human Skills
Foundation Skill Area	Total Openings: 2017	Growth: 2012-2017	Share of Openings Outside IT and Analysis Job Families	Average Salary Premium
Managing data	 3,527,740	 24%	 29%	14%
Software development	 3,326,192	 44%	 21%	34%
Computer programming	 2,571,728	 35%	 15%	38%
Analyzing data	 1,320,678	 68%	 58%	7%
Digital security & privacy	 895,547	 75%	 28%	17%
Business process	 3,215,648	 18%	 70%	19%
Project management	 2,354,230	 21%	 68%	21%
Digital design	 1,427,981	 2%	 54%	2%
Communicating data	 147,219	 323%	 32%	17%
Communication	 5 million 9,185,978	 27%	 85%	-
Critical thinking	 3,666,249	 31%	 73%	-
Collaboration	 3,480,175	 46%	 82%	-
Analytical skills	 2,395,145	 24%	 78%	-
Creativity	 1,217,062	 23%	 80%	-

A new blended digital professional is emerging



Skills best learned at work

Graphic Designer / Desktop Publisher (BGTOcc)



Core Skills: Definitional skills to each occupation which job seekers need in order to contribute. Best addresses in academic/training settings.

Building Block Skills: Required and relevant across many roles and represent foundational, but not unique skills. Typically best developed on-the-job.

Distinguishing Skills: Allow a job seeker to highlight his or her technical proficiency in the role. Typically best developed through a hybrid of training and on the job.

Both credentials and internships/co-ops

Employers want graduates with work-ready technical skills, critical thinking, problems solving and additional baseline skills developed through traditional academic coursework.

We identified eight skill sets that Liberal Arts graduates can develop through a modest amount of coursework, such as a minor or online training or internships, that **double their job prospects**:

IT NETWORKING & SUPPORT

+ \$1,058 premium
66,429 postings

SALES

567,855 postings

GENERAL BUSINESS

+ \$11,144 premium
577,787 postings



SOCIAL MEDIA

+ \$3,424 premium
399,577 postings

DATA ANALYSIS & MANAGEMENT

+ \$12,703 premium
136,757 postings

MARKETING

+ \$336 premium
359,916 postings

GRAPHIC DESIGN

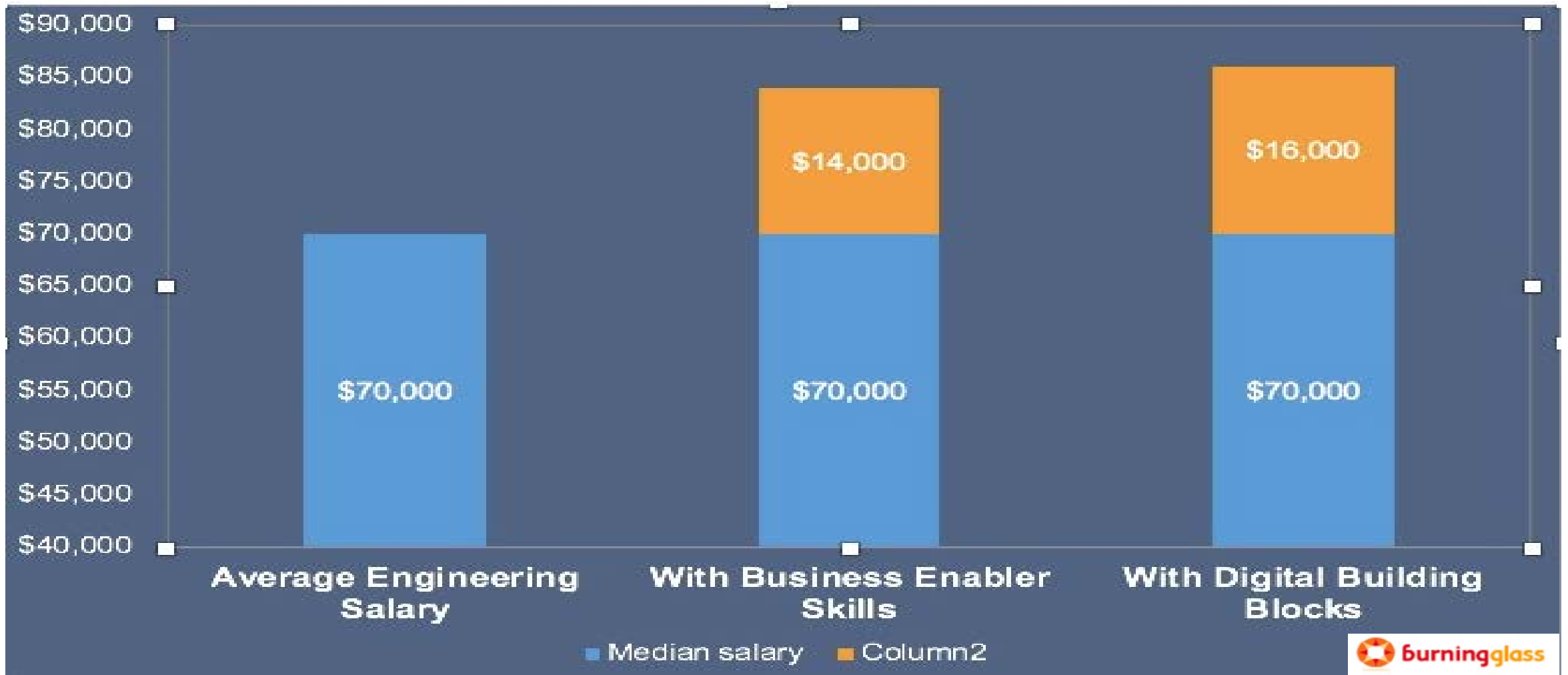
+ \$9,188 premium
134,090 postings

COMPUTER PROGRAMMING

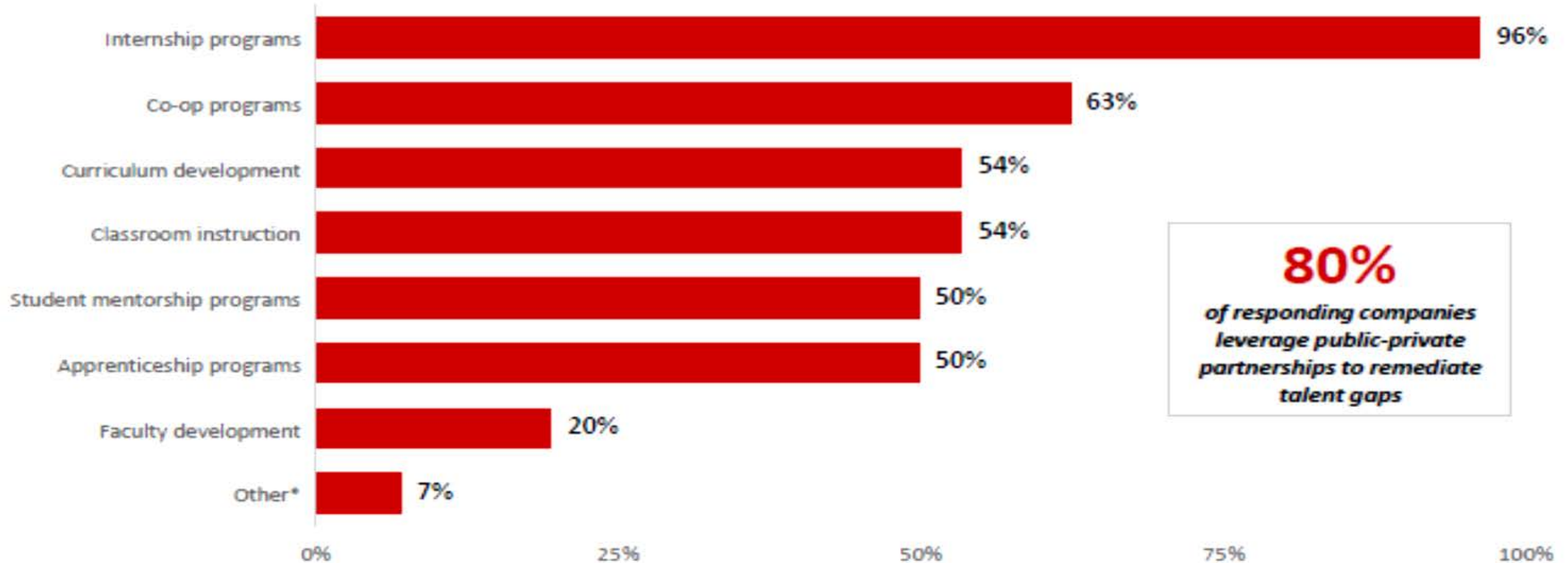
+ \$17,753 premium
52,822 postings



Skilling up has significant returns



Work-Based Learning used to remediate talent gaps

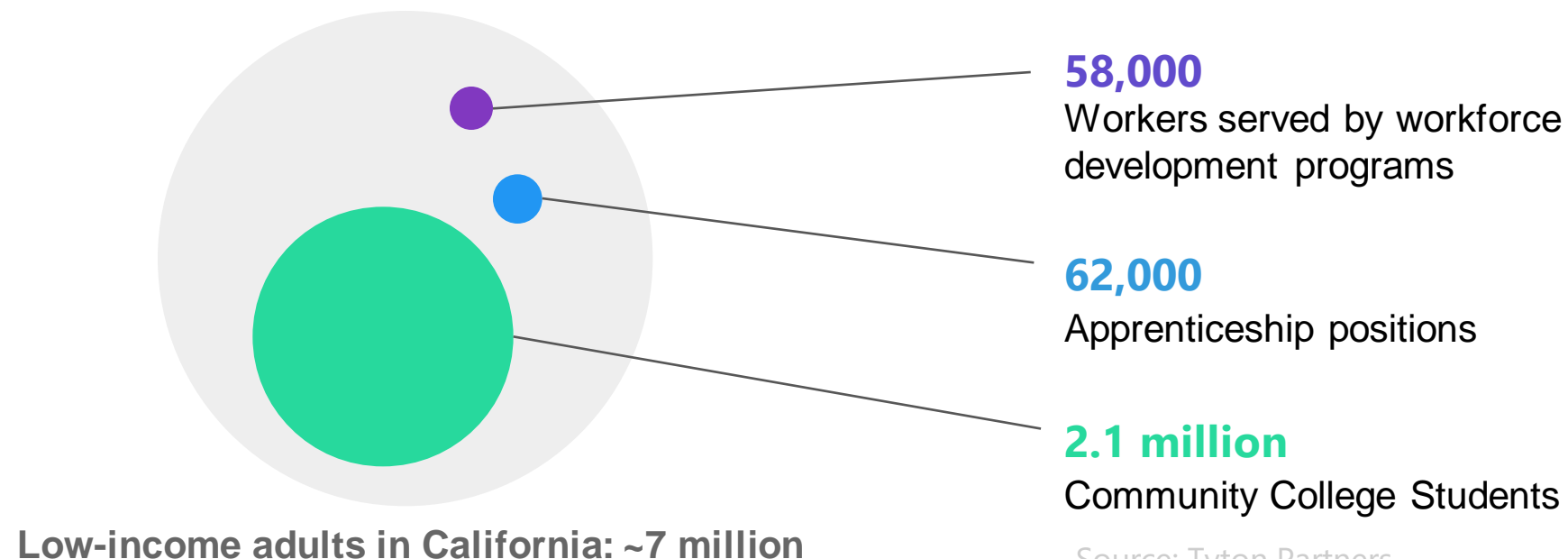


Responses: n = 56;

*Note: For a complete list of "Other" specifications, refer to Appendix III.

Inequity remains a primary challenge

California low-income adults are underserved by traditional education and training programs



Source: Tyton Partners

Further, just 6% of graduates strongly agree they had an internship or job that allowed them to apply what they were learning, worked on a long-term project, and were actively involved in extra-curricular activities.

The odds of being engaged at work are:

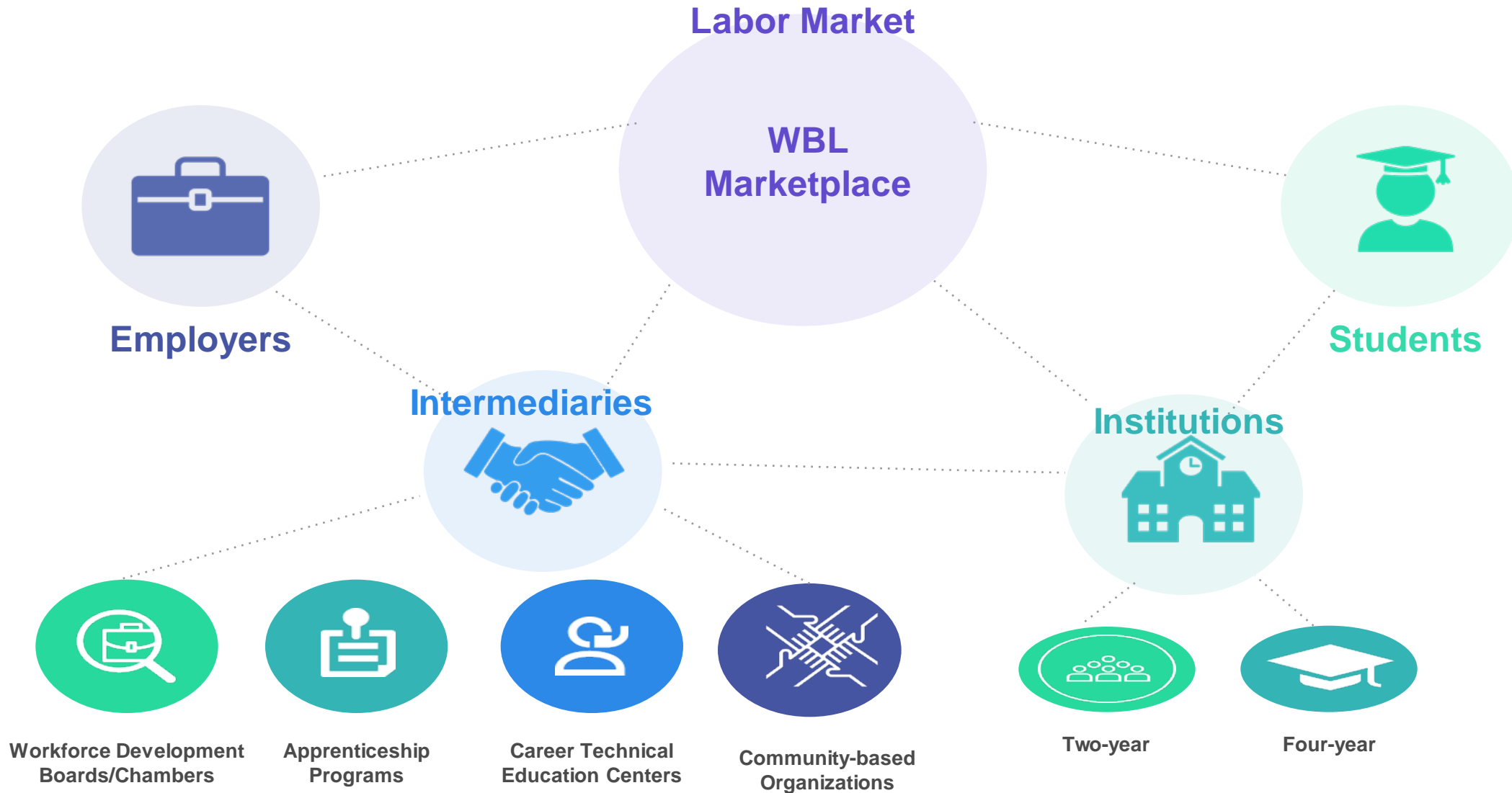


The Undergraduate Experience: Support and Experiential and Deep Learning

	% Strongly agree
Experiential	
I worked on a project that took a semester or more to complete.	32%
I had an internship or job that allowed me to apply what I was learning in the classroom.	29%
I was extremely active in extracurricular activities and organizations while attending [College].	20%
Strongly agree with all three experiential statements	6%

Based on Web surveys of nearly 30,000 college graduates with Internet access from Feb. 4-March 7, 2014.
Gallup-Purdue Index

Work-based learning has four key stakeholders



Work-based learning benefits both learners and employers

Benefits of WBL for learners

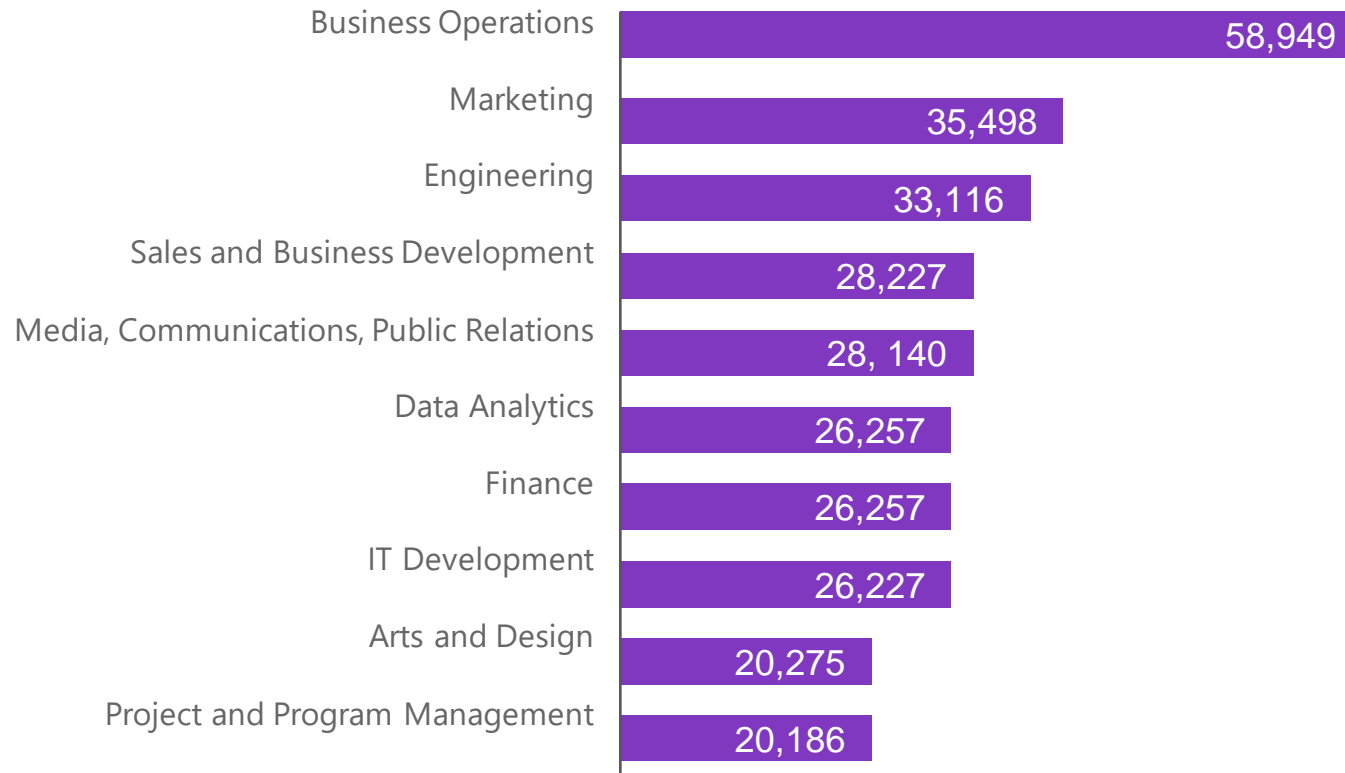
1. Fosters self and career exploration
2. Develops positive work habits and attitudes
3. Assesses abilities and strengths
4. Expands professional networks
5. Promotes informed decisions when considering job offers
6. Increases income potential

Benefits of WBL for employers

1. Extends recruiting pipelines
2. Provides access to skilled and motivated talent in accordance with their needs
3. Improves employee retention
4. Reduces training/recruitment costs

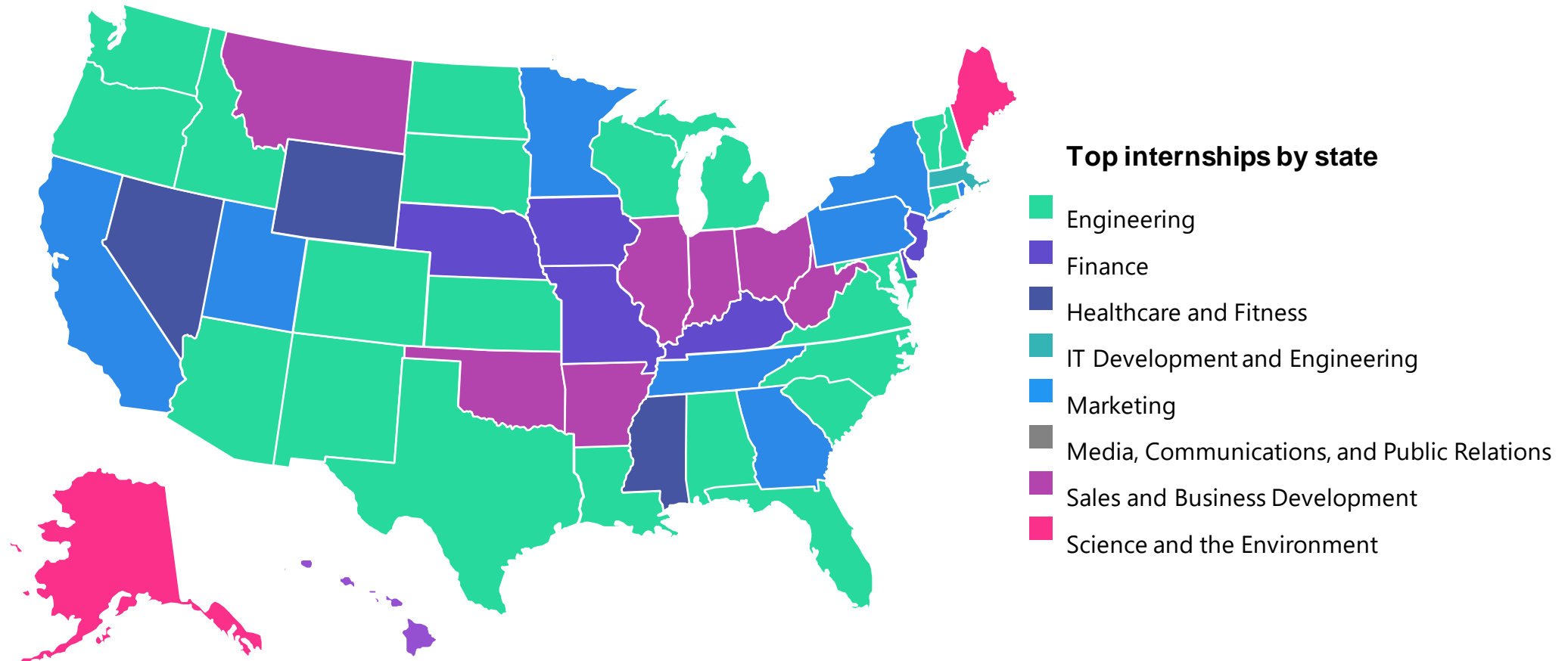
Work-based learning is leveraged across industries

Occupational fields with the largest number of internship postings in the United States from September 2015 to October 2016



Work-based learning is most common in fields that require highly technical professional skills that typically are not taught directly in traditional education.

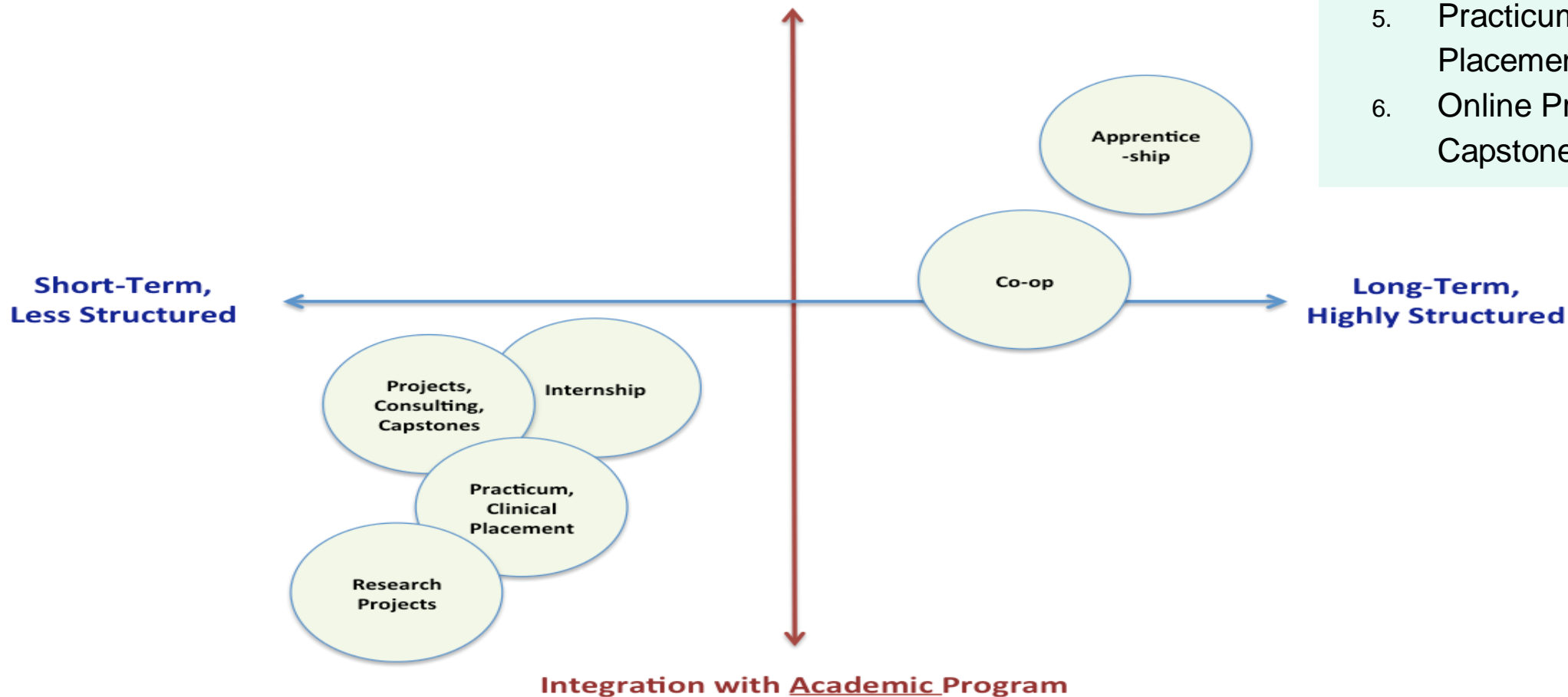
Work-based learning opportunities vary regionally



Source: Burning Glass Technologies

Comparing the models

Integration with Business Objectives
(Correlated with pay, length and depth, etc.)



Models for WBL

1. Apprenticeships
2. Co-ops
3. Internships
4. Applied Research Projects
5. Practicums & Clinical Placements
6. Online Projects, Consulting, Capstones

Practice-based learning

The integration of real-world learning experiences and projects into the classroom.



The University of Chicago's Booth School of Business created a practice-based learning program for pre-MBA students called Startup Summer

Students noted a wish to have done more with their pre-MBA summer—particularly if it meant a chance to explore entrepreneurial opportunities. In response, in 2016 Chicago Booth developed a Startup Summer program, which allows incoming students to work with Booth-led startups for 6-7 weeks before they begin their MBA studies.



Virginia Tech's Innovation Campus is meant to provide experiential learning to business and technology students

Virginia Tech's new Innovation Campus is 2 miles from Amazon's new HQ in Arlington and aims to produce 25,000-35,000 new graduates in computer science and related fields over the next 20 years. The campus will bring together graduate students, faculty, and numerous industry partners in an experiential learning environment.



Lehigh University's Enterprise Systems Center (part of its college of engineering) integrates academic with experiential learning

Students participate in mentored projects with ESC partners from industry and government, allowing students to "interact with all levels of workforce personnel from shop floor to corner office." Mentors focus on a systems approach, innovative problem solving, integrative thinking, and competitiveness differentiators such as sustainability and analytics. Lehigh alumni are recruited to serve as guest leaders and mentors.

Job skill development

Unbundled learning programs lead to valued workplace credentials



EASTERN
WASHINGTON UNIVERSITY



Northeastern
University



woz **U**

accenture



Unique engagement models:

Eastern Washington partners with EdX for a custom Microsoft request

Microsoft needed to hire new employees specialized in data analytics. Microsoft partnered with EdX to offer a “micro-degree” that could be agile in churning out prospective employees. Eastern Washington approved the new major in a year, the fastest approval ever on its campus.

IBM and Northeastern University blur the line between school and work

IBM and Northeastern University announced a partnership in three graduate programs, where IBM badges for employees can count for credit toward a graduate degree.

Apple co-founder’s founding of Woz U to train technology professionals

Apple co-founder Steve Wozniak is helping the for-profit university Southern Careers Institute create Woz U, an online education program to produce tech workers

Internet of Learning Consortium, founded by Accenture, Boeing, and Microsoft

Companies including Accenture, Boeing, and Microsoft have created the Internet of Learning Consortium to speed up the development of job-ready workers by using the internet to teach them what they need to know.

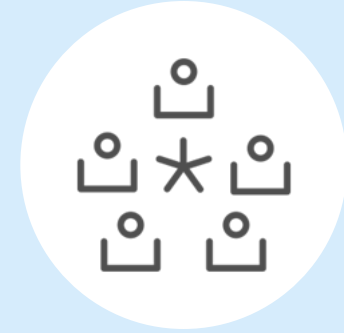
Three strategies to improve education and work interoperability



**EMPOWER
OPPORTUNITY
SEEKERS AND HIRING
MANAGERS WITH
OUTCOMES-BASED
DATA**



**ENCOURAGE
DISRUPTIVE
INNOVATION WITHIN
TRADITIONAL
EDUCATION SYSTEMS**



**CREATE INDUSTRY-
ALIGNED TALENT
ECOSYSTEMS**

Our collective mission

- Recognize the ecosystem of WBL opportunities zooming in on **alignment to employer talent and skill needs** tied to talent strategies
- Take the **onus off the learner** to draw **connections of relevancy**, particularly working learners
- Leverage **intermediaries and institutional partners** to facilitate multi-corporation programs with explicit learning outcomes and recognition
- Deepen **rigor, recognition, expectations** around non-apprenticeship WBL programs, particularly ones already deployed
- Mobilize strategic employer engagement across **states and regions**

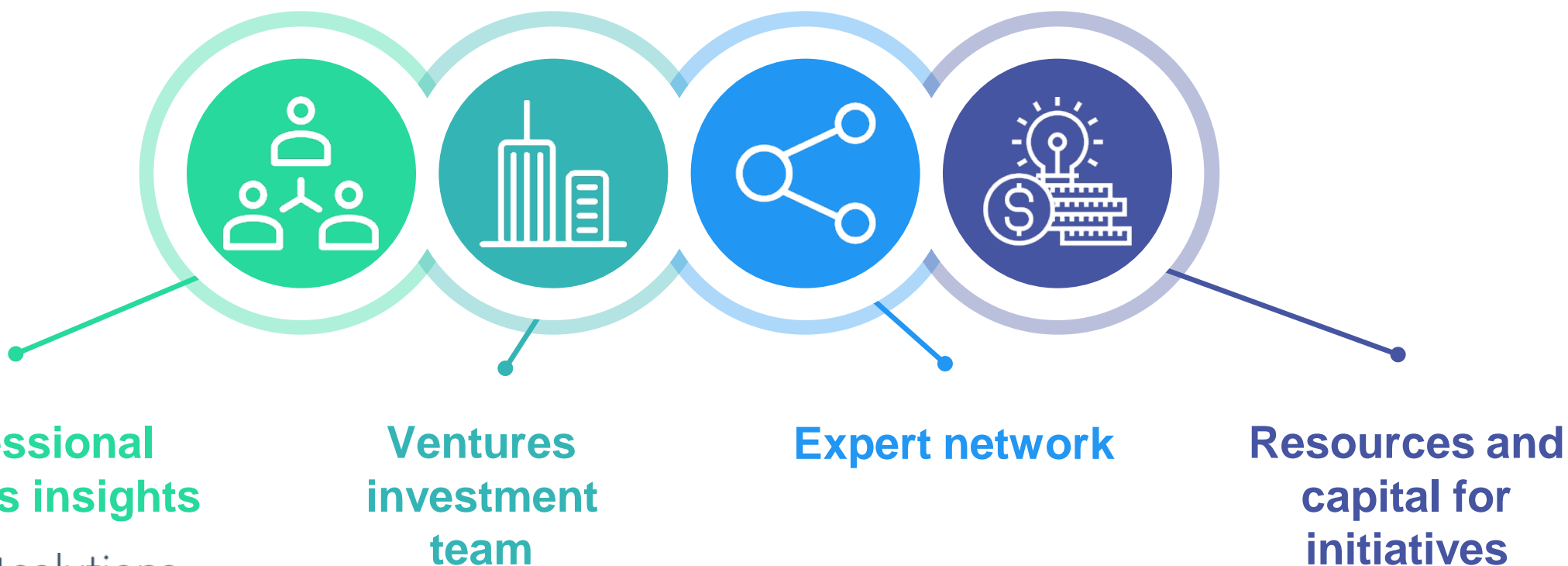
Thank You
...now let's get to work!



Debbie Hughes
Senior Strategist
Head of Talent and Workforce Solutions
Debbie@entangled.solutions

About the Entangled Group

Our mission is to equitably support the transition from an industrial economy to a knowledge economy. Unlike traditional venture capital, professional services firms, or accelerators, Entangled operates as a company builder, where great ideas become reality with the right support and network.





April 9, 2019

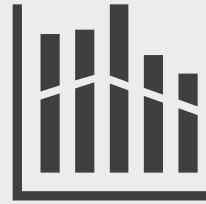
BUILDING A TALENT PIPELINE THROUGH FUTURE READY IOWA

Beth Townsend, IWD Director



IOWA

Unemployment Rate



2018 AVERAGE
UNEMPLOYMENT RATE

2.5%



UNEMPLOYED PERSONS
IN 2017

40,500

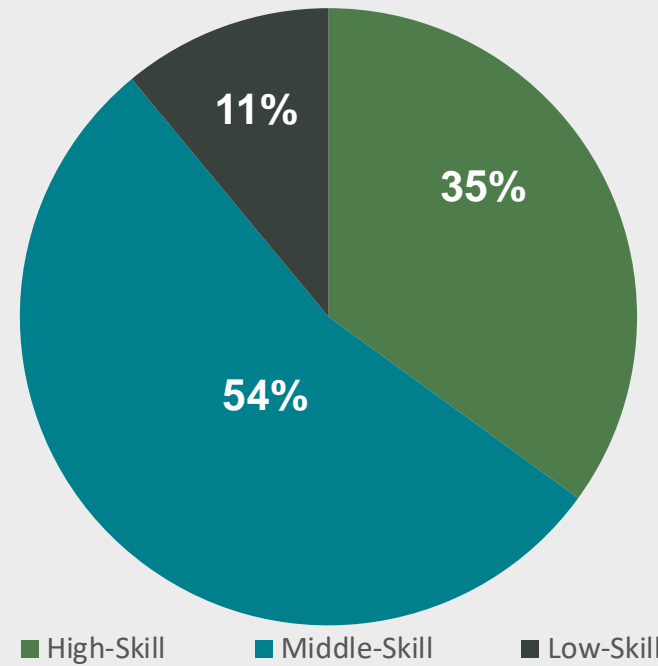
CURRENT
UNEMPLOYMENT RATE

2.4%

February '19 –
3rd month
Lowest in the
country

PROJECTED SKILLS GAP

Iowa's Jobs by Skill Level, 2017

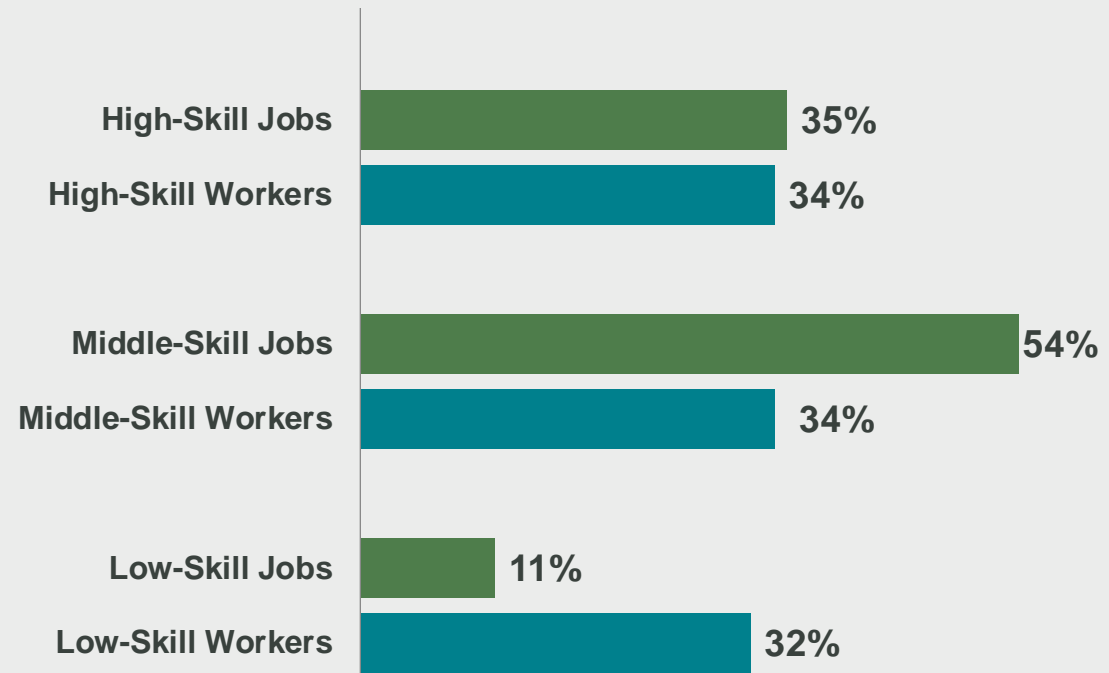


54%
ARE MIDDLE-SKILL JOBS


Sources: 2017 Occupational Employment Statistics, Labor Market Information Division, Iowa Workforce Development.

IOWA IS EXPERIENCING A MIDDLE-SKILL JOB GAP

Iowa's Jobs and Workers by Skill Level, 2016/2017



Sources: 2017 Occupational Employment Statistics, Labor Market Information Division, Iowa Workforce Development. 2016 Current Population Survey, U.S. Census Bureau.



Percent of Employers who Perceive they have difficulty filling positions due to:

Applicants lack the **QUALIFICATIONS** needed **56%**

GENERAL lack of Applicants **48%**

Lack of applicants due to wages offered **28%**

Lack of applicants due to benefit package provided **21.7%**

Lack of applicants due to type of work required **30.7%**

EMPLOYER PERCEPTION OF APPLICANTS



REGISTERED **APPRENTICESHIP**

Iowa recently awarded an additional \$1 million ApprenticeshipUSA State Expansion Grant from the U.S. Department of Labor

The grant is focused on:

- expanding opportunities in healthcare and advanced manufacturing, the fastest growing and largest employment sectors in the state,
- increasing the participation of women, youth, minorities, veterans and people with disabilities.

Organizations may apply for funding in five areas:

- Quality Pre-Apprenticeship;
- High School Registered Apprenticeship;
- Healthcare Sector Registered Apprenticeship;
- Advanced Manufacturing Sector Registered Apprenticeship; and
- Pilot Quality Pre-Apprenticeship Program.

Registered Apprenticeships FY18

756	Active Registered Apprenticeship Programs
126	Number of New Registered Apprenticeship Programs
1,839	Total Number of Apprentices who Completed Registered Apprenticeship Programs
7,971	Total Number of Active Apprentices
3,545	Number of New Registered Apprentices added since October 1, 2017

Iowa Statistics for Federal Fiscal Year 2018

YTD FY19


766	Active Registered Apprenticeship Programs
36	Number of New Registered Apprenticeship Programs
1,146	Total Number of Apprentices who Completed Registered Apprenticeship Programs
8,028	Total Number of Active Apprentices
460	Total Number of New Apprentices



Iowa Statistics for Oct 1, 2018 - Feb 26, 2019

NEW REGISTERED APPRENTICESHIP WEBSITE



[Home](#) [Contact](#)





FIND A CAREER THAT'S A PERFECT FIT. EARN \$\$\$ WHILE YOU LEARN.

FOR FUTURE APPRENTICES

GET THE SUPPORT YOU NEED TO TRAIN QUALITY WORKERS.

FOR EMPLOYERS

WHAT IS A REGISTERED APPRENTICESHIP?

For job seekers, becoming a Registered Apprentice means you're on the path to a rewarding career where you'll earn a paycheck from day one - your chance to earn and learn. For businesses, starting a Registered Apprenticeship Program means you'll build a talented workforce equipped with the skills that specifically fit your company.

FROM AN APPRENTICE


"As a Registered Apprentice, you're getting paid to go to school. You're getting paid to get a career and learn something you can go anywhere in the country with. And once I realized the benefit package - what they offered you, how they backed you up, the 401K - it was crazy not to sign up. I cannot express enough how important and good this is for somebody to do. It's life changing."

- Christopher Iafate, Camblin Mechanical - Atlantic, Iowa

FROM AN EMPLOYER

"Implementing Iowa's Registered Apprenticeship Program is the best thing we've ever done as a business. It's allowed us a platform to train, recruit and think about our business growth. And now that the word's spread, we're seen as a quality organization with a professional training program. We wouldn't have that without the apprenticeship. As a business owner looking to the future, I feel really good."

- Steve Gilbert, Gilbert Home Comfort - Leon, Iowa



FUTURE APPRENTICE

[CONTACT IOWAWORKS TO GET STARTED](#)

[ARE YOU AN EMPLOYER? EMPLOYER INFORMATION](#)

YOUR PATH TO A SUCCESSFUL CAREER STARTS HERE.

No matter your interests, Registered Apprenticeship Programs can help you find a career that's your perfect fit! Plus, when you become a Registered Apprentice, you'll start working - and earning - from day one with little to no college/educational debt. And you'll get the support you need to be successful.


Becoming a Registered Apprentice is your first step to a rewarding future.

WHY BECOME A REGISTERED APPRENTICE?

There are so many reasons to become a Registered Apprentice! Let's start with a few of the top ones.

Earn while you learn


- Find the right path
- Get on-the-job training
- Get classroom instruction
- Get a certification



When you become a Registered Apprentice, you'll start earning and learning from day one. And as your skills improve, so will your pay. Pretty sweet, huh?

HOW LONG WILL IT TAKE TO BECOME A REGISTERED APPRENTICE?

It all depends on what career path you choose. Registered Apprenticeship Programs range from one to five years, depending upon the occupation. As a Registered Apprentice, you'll get 2,000 hours of on-the-job training and at least 144 hours of related classroom instruction per year. A Registered Apprenticeship is designed to make sure you get all the training you need to succeed.



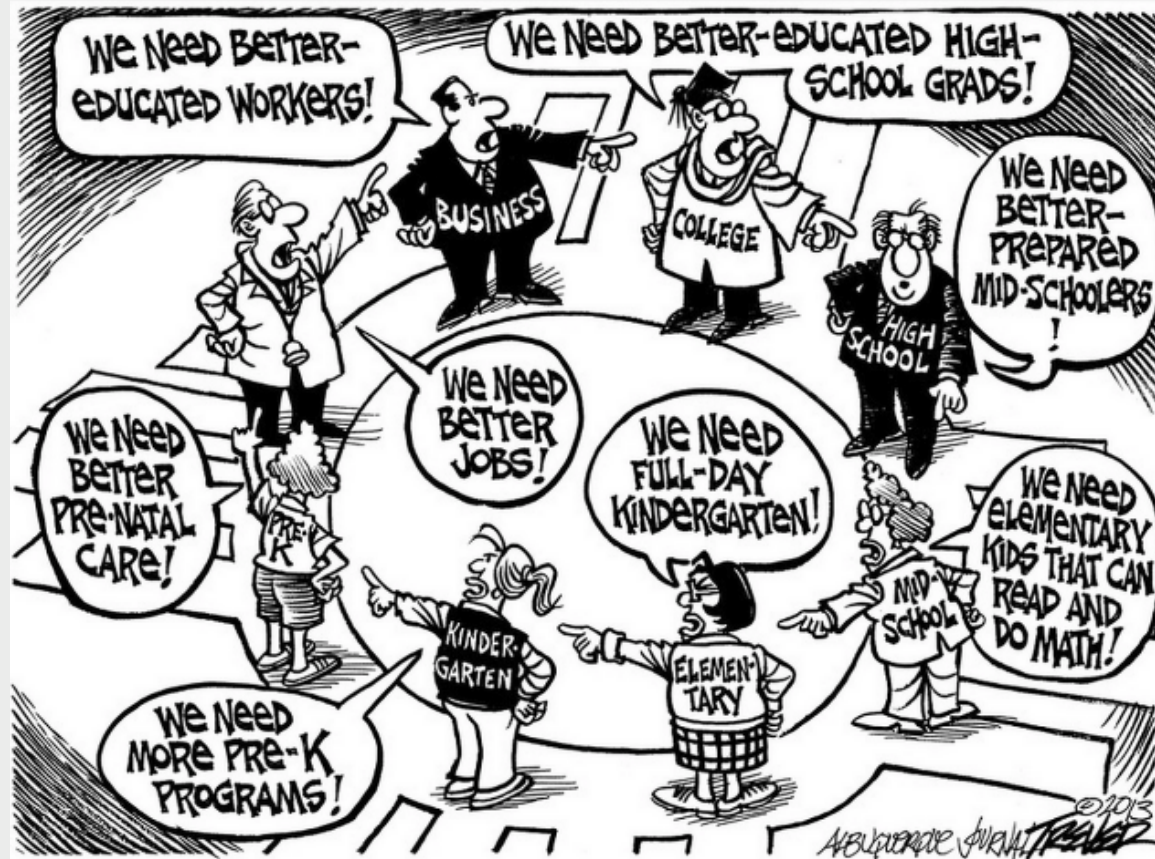


GET YOUR
FUTURE
READY

**FUTURE
READY
IOWA**

**Transforming THE
WORKFORCE THRU
EDUCATION**

**Closing
Iowa's
SKILLS GAP**



WHERE WE
STARTED

GOVERNOR REYNOLDS SIGNS THE **FUTURE READY IOWA ACT**



WHERE WE
ENDED



GOVERNOR KIM REYNOLDS

“At its core, Future Ready Iowa recognizes that there is dignity in meaningful work, that Iowans yearn for the opportunity to better themselves, and that those opportunities exist right here in Iowa.”



“Future Ready Iowa is a powerful tool to grow family incomes, meet employer needs and strengthen communities.

The time is now to invest in Iowans and their future. Today, I’m calling on the Legislature to take the next step, to appropriate \$20 million to fund the plan we put in place last session.

This investment will take Iowa to the next level. And more important, it will give more Iowans an opportunity to find a rewarding career.”



70%

of Iowa's workforce will have post-secondary education,
training or a credential of value by

2025

To meet the goal, Iowa needs a net increase of

127,700

Residents need to earn postsecondary
degrees and other credentials

FUTURE READY IOWA
GOAL

Population age 25 years or older:

3.2%

Trade Certificates

1.6%

Vocational Training

17.0%

Associate Degree

24.5%

Undergraduate Degree

11.3%

Post-Graduate Degree

EDUCATION LEVEL

57.6%

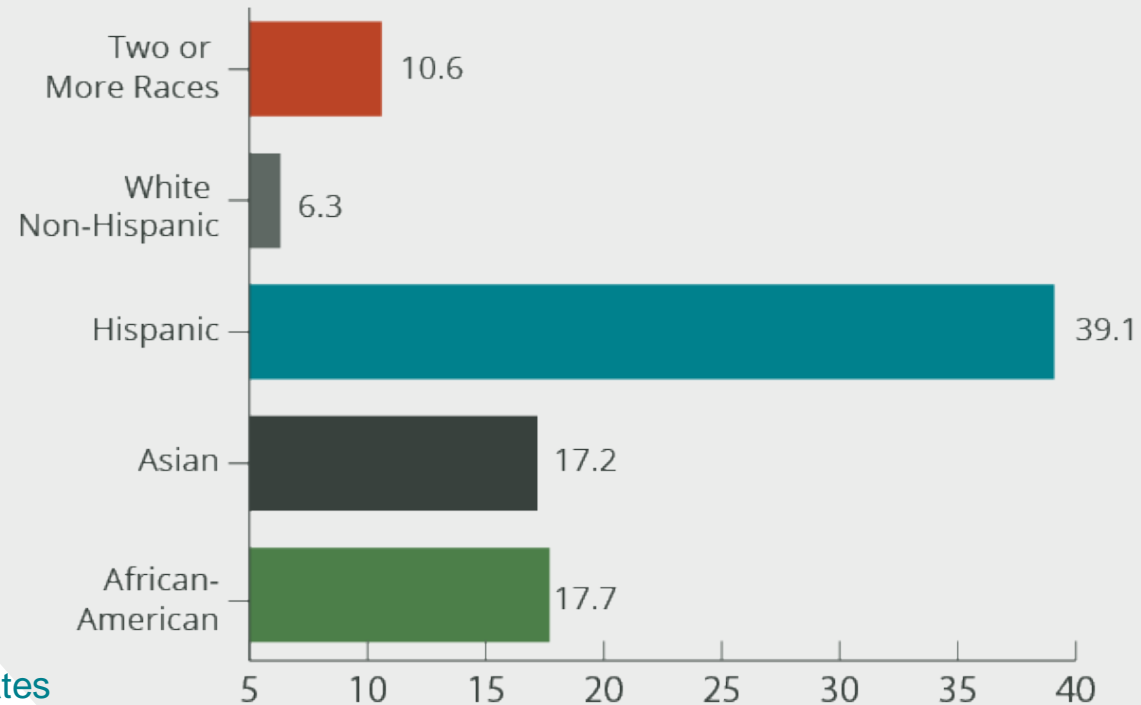


Total Iowans with completed education
or training beyond High School

Compared to 58.4%
in 2017

EDUCATIONAL ATTAINMENT RATES BY RACE

The chart shows the percentage of select groups in Iowa that lack a high school diploma, for populations 25 years and older.



Addressing inequality in educational attainment is important because people with more education are:

- more likely to be employed
- more likely to have lower poverty rates
- less likely to rely on government assistance programs like Medicaid.

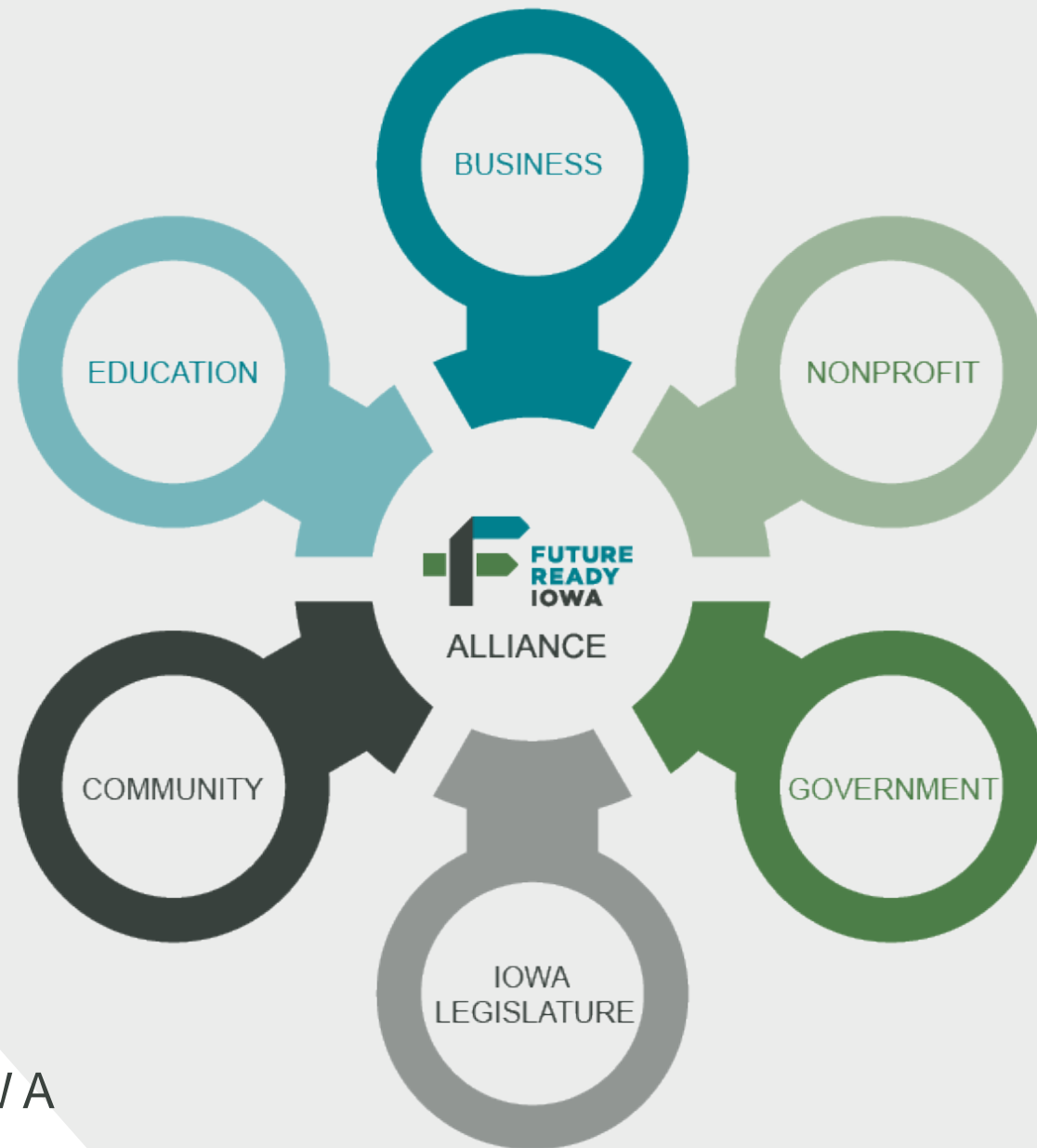
Source: 2016 Current Population Survey

Source: American Community Survey 2016 Estimates

Task: Create a strategic plan to reach ambitious goal of 70% of Iowa's workforce having education or training beyond high school by 2025



FUTURE READY IOWA
ALLIANCE



FUTURE READY IOWA
ALLIANCE

STRATEGY 1



Last Dollar Scholarship

For lowans seeking up to an associates degree in a high-demand job at Iowa colleges or universities.



Future Ready Iowa Grant Program

For lowans seeking a bachelor's degree who already earned more than half the credits for a major in a high-demand job.



Employer Innovation Fund

For public/private partnerships to grow the regional talent pipeline.

STRATEGY 2



Strengthen Iowa's Skilled Workforce, Expand Opportunities

For Iowans beginning/returning to complete college/career training.

Intensive career counseling and mentoring and improved remedial education for high school students needing preparation for college or for career training for adult learners, with a focus on low-income and underrepresented minorities.

STRATEGY 3

Expand Work-based Learning Experiences in High-demand Careers

- Quality pre-apprenticeships
- Registered apprenticeships
- Internship programs
- Leverage existing programs, such as the STEM BEST (Businesses Engaging Students and Teachers) program and Iowa (Work-Based Learning) Intermediary Networks
- Launch WBL Clearinghouse in July 19

STRATEGY 4



Prepare Students and Adult Learners for a Changing World

Update Iowa's 21st century skills in our 2019 state academic standards and identify other early learning academic approaches.

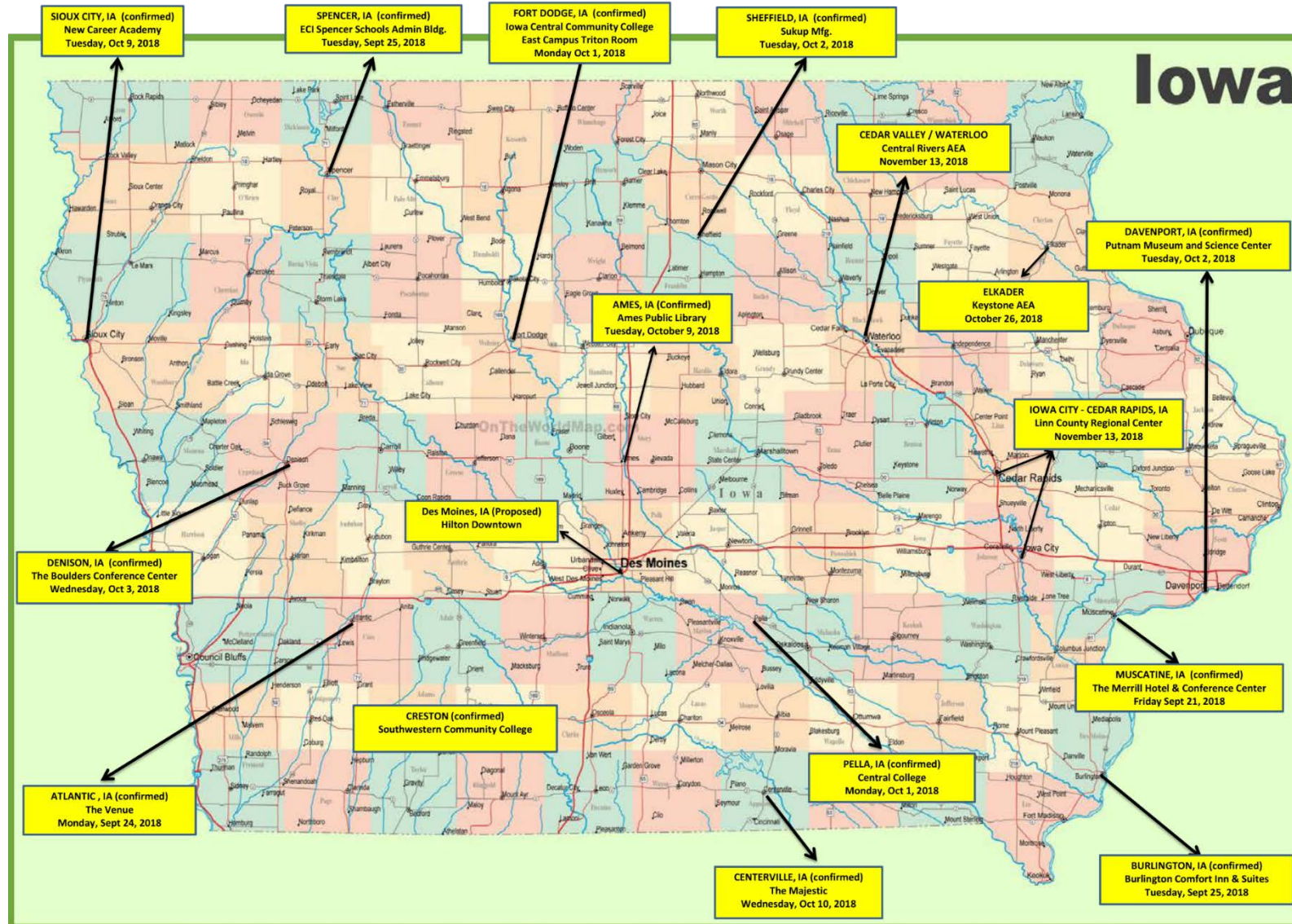
STRATEGY 5

Engage the Business Community and Other Regional Collaborations

Develop a grassroots strategy that maps out existing regional and local workforce partnerships and fills identified gaps.

FRI REGIONAL SUMMITS

Register at www.FutureReadyIowa.gov/Summits



FUTURE READY IOWA **WEBSITE**

- Connects job seekers to tools for finding education, training and jobs
- Current local Labor Market Information
- Offers assessment tool for career recommendations
- Provides education and training opportunities and financial resources for paying for school
- Connects job seekers to open jobs in Iowa



ION HALL

Board of
Advisors
BENEFITS
ATION



UNLEASHING OPPORTUNITIES TO GET
IOWA FUTURE READY.



Host State Highlight: Alabama

National Institute on Scaling Work-Based Learning

Tuesday April 9th

11:30 AM – 12:30 PM

Host State Highlight: Alabama

Keynote Address:

- *Adam Thompson*, Deputy Chief of Staff for Policy, Governor Kay Ivey

Moderator:

- *Nick Moore*, Coordinator, Governor's Office of Education and Workforce Transformation

Speakers:

- *Lori Bearden*, Deputy Secretary, Alabama Department of Commerce
- *Josh Laney*, Senior Director for Workforce Development, Alabama State Department of Education
- *Jeff Lynn*, Vice Chancellor, Alabama Community College System

Concurrent Sessions:

Setting the Vision for Work-Based Learning

Building the Business Case for Work-Based Learning

- *Azalea A*

Governance Structures to Support and Scale Work-Based Learning

- *Azalea B*

Creating Partnerships for Long-Term Success

- *Azalea C*

Concurrent Sessions:

Using Data to Support and Scale Work-Based Learning

Introduction to Collecting Data on Work-Based Learning

- *Magnolia Ballroom*

Data and Equity Goals

- *Azalea A*

Data as a Tool for Sustainability

- *Azalea B*



Introduction to Collecting Data on Work-Based Learning

National Institute on Scaling Work-Based Learning

Tuesday April 9th

3:00 – 4:00 PM

Introduction to Collecting Data on Work-Based Learning

Moderator:

- *Amanda Winters*, Program Director, Economic Opportunity Division, NGA Center for Best Practices

Speakers:

- *Natalie Clark*, Education Program Consultant, Kansas State Department of Education



State Team Time: Reflections on the Concurrent Sessions

National Institute on Scaling Work-Based Learning

Tuesday April 9th

4:15 – 5:15 PM



Day One Wrap-Up

National Institute on Scaling Work-Based Learning

Tuesday April 9th

5:15 – 5:30 PM



National Institute on Scaling Work-Based Learning

Tuesday, April 9th – Wednesday, April 10th, 2019

Point Clear, Alabama



Welcome and Overview of Day Two

National Institute on Scaling Work-Based Learning

Wednesday April 10th

8:15 – 8:30 AM

Concurrent Sessions:

Innovative Work-Based Learning Program Models

Mid-Career Apprenticeship Programs

- *Azalea A*

Work-Based Learning and the CTE System

- *Azalea B*

Youth Apprenticeship Programs

- *Azalea C*

Integrating Work-Based Learning into Postsecondary Programs

- *Magnolia Ballroom*



Integrating Work-Based Learning into Postsecondary Programs

National Institute on Scaling Work-Based Learning

Wednesday April 10th

8:30 – 9:30 AM



Aligning Federal and State Policy to Scale Work-Based Learning

National Institute on Scaling Work-Based Learning

Wednesday April 10th

10:00 – 11:00 AM

Aligning Federal and State Policy to Scale Work-Based Learning

Moderator:

- ***Geoff King***, Senior Policy Analyst, Economic Opportunity Division, NGA Center for Best Practices

Speakers:

- ***Nova Gattman***, Deputy Director for External Affairs, Washington Workforce Training and Education Coordinating Board
- ***Nick Moore***, Coordinator, Governor's Office of Education and Workforce Transformation



State Report-Out

National Institute on Scaling Work-Based Learning

Wednesday April 10th

11:00 – 11:45 AM



Wrap-Up and Next Steps

National Institute on Scaling Work-Based Learning

Wednesday April 10th

11:45 AM – 12:00 PM