
A New Path Forward
Office of the Future of Work
COLORADO
Department of
Labor and Employment
CDLE

Hello! I am Katherine Keegan.

Director of the Office of the Future of Work
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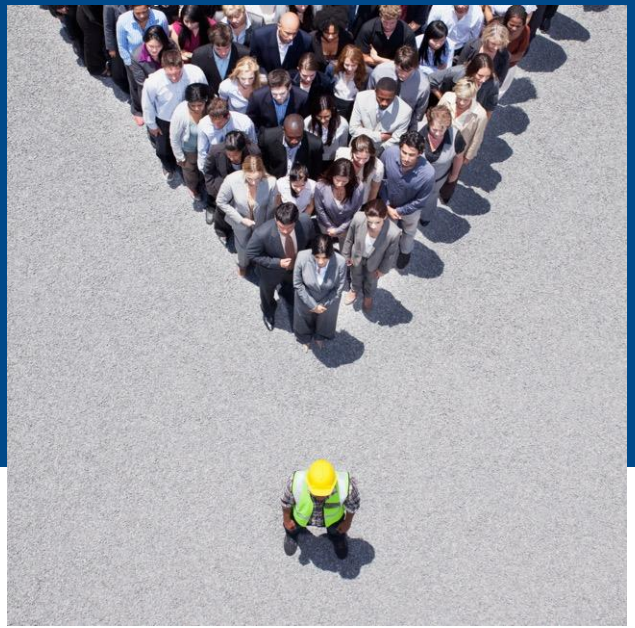

COLORADO
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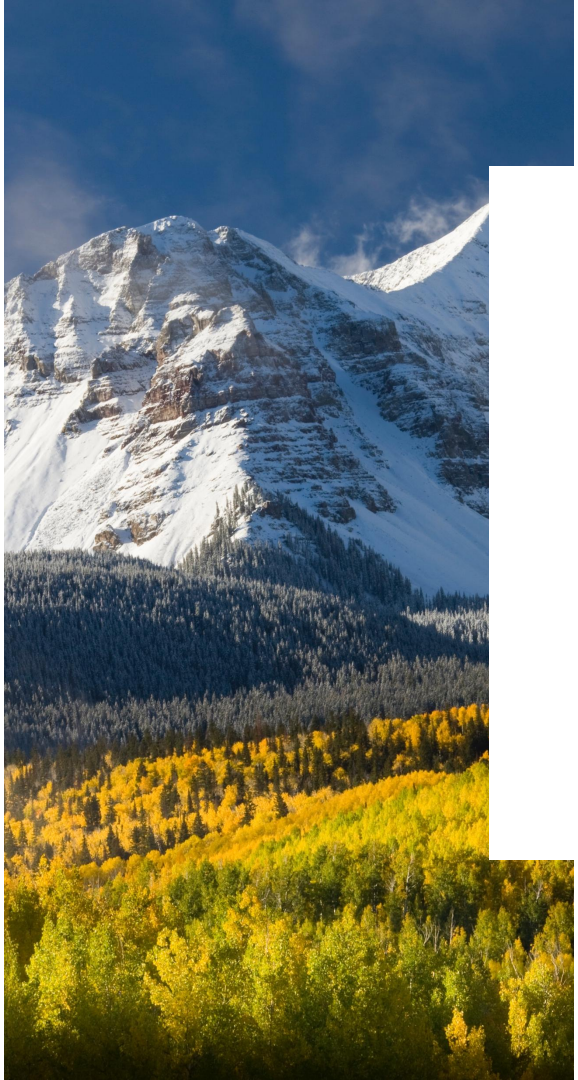
The Office

Vision: A future where all Coloradan workers have access to education and skill training that is connected to meaningful and sustainable employment.

What is the “future of work”

The future of work refers to the impact of globalization, technological advances, changing demographics, and market forces on the work we do and how we do it.



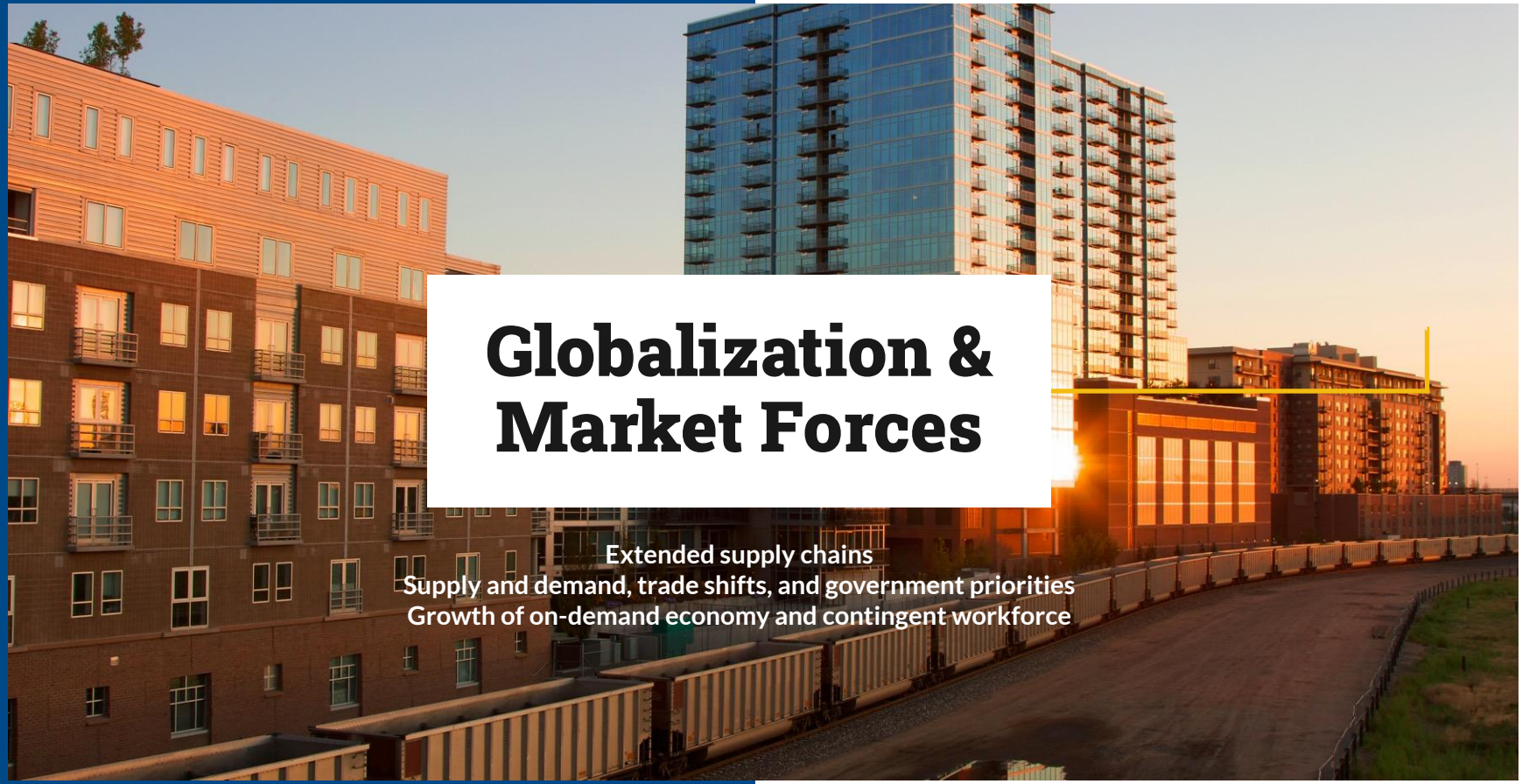
Four Forces at Work

Globalization

Demographic Shifts

Technological Advances

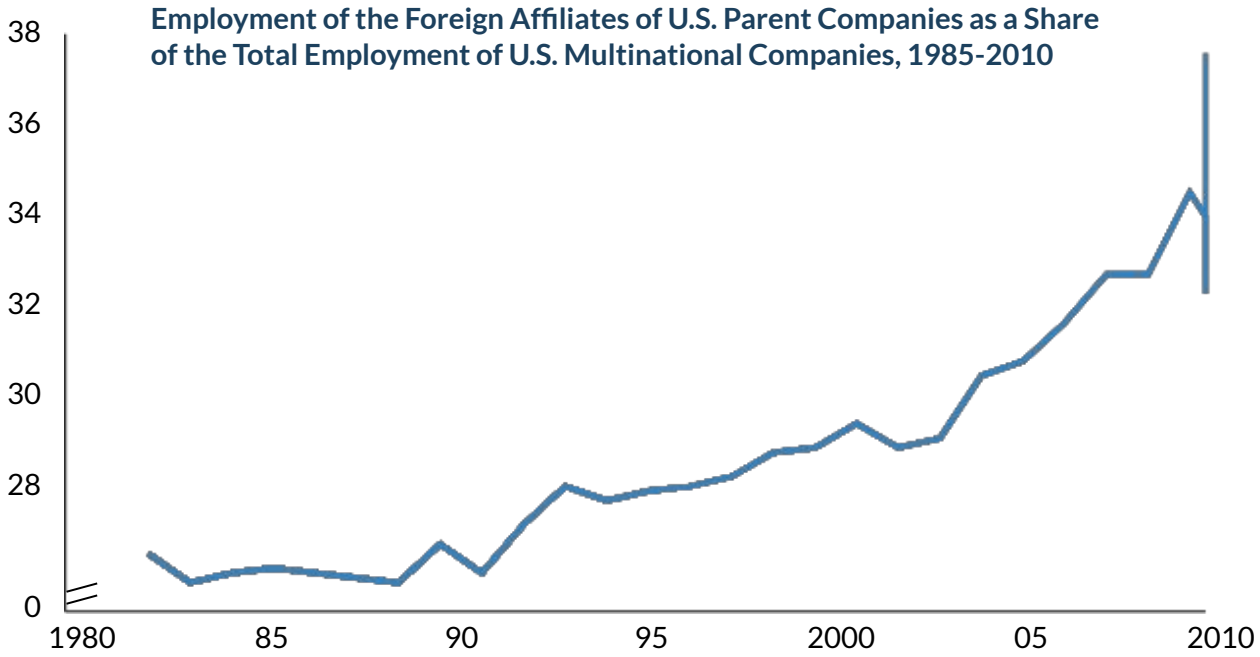
Market Forces



Globalization & Market Forces

Extended supply chains
Supply and demand, trade shifts, and government priorities
Growth of on-demand economy and contingent workforce

Globalization



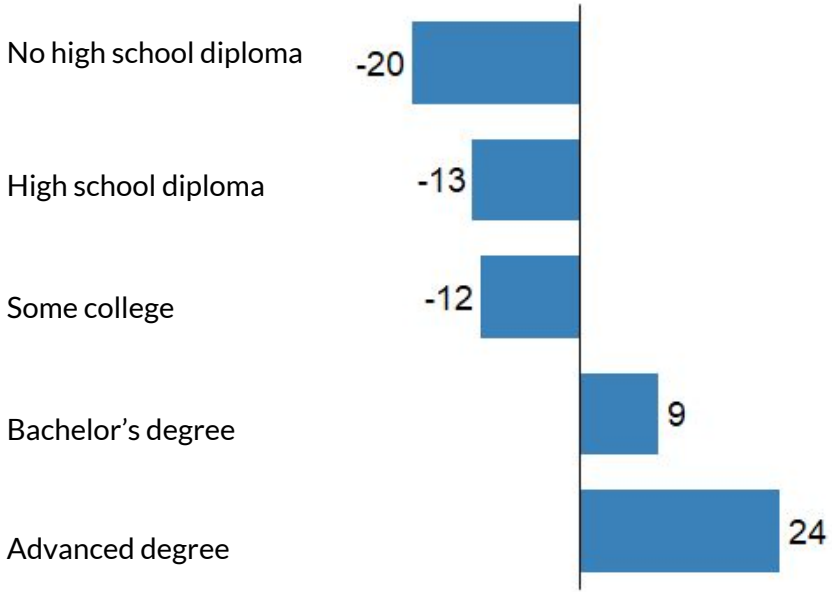
Source: *Outsourcing and Insourcing Jobs in the U.S. Economy: Evidence Based on Foreign Investment Data* , Congressional Research Service, June 21, 2013

With occasional pull-backs, **the outsourcing of jobs by US companies has grown** over the past 30 years.

A significant percentage of **these jobs have been focused in the manufacturing, customer support, and related functions**

Globalization

% change in hourly wages by educational background (1979-2018)



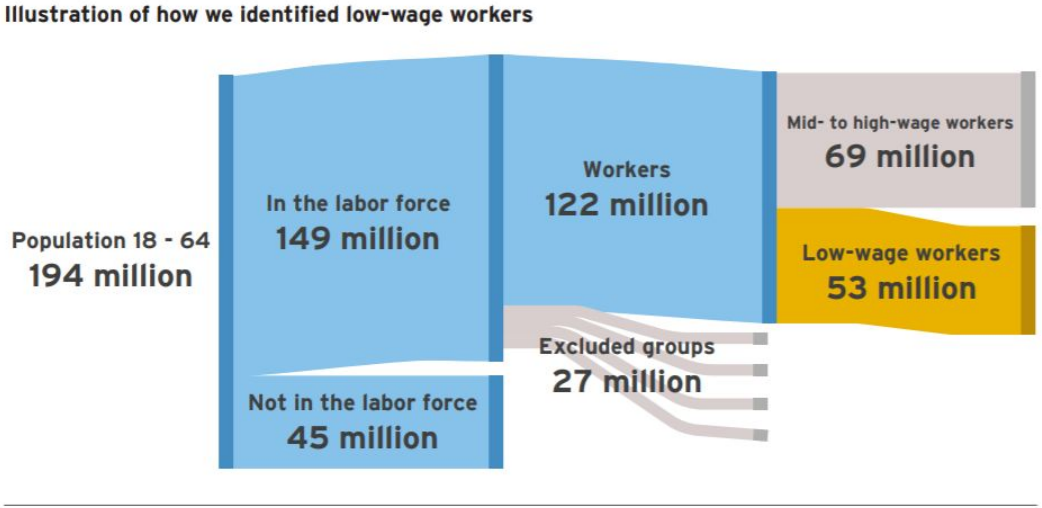
Workers without college degrees have seen significant drops in wages over the past 30-40 years

Globalization has played a significant role in this decline as U.S. workers compete with alternative labor sources from around the world

Real Wage Trends, 1979 to 2018, Congressional Research Service, July 23, 2019; *How to Save Globalization: Rebuilding America's Ladder of Opportunity*, Foreign Affairs, November / December 2019

https://www.brookings.edu/research/meet-the-low-wage-workforce/

Low-wage work across the U.S.



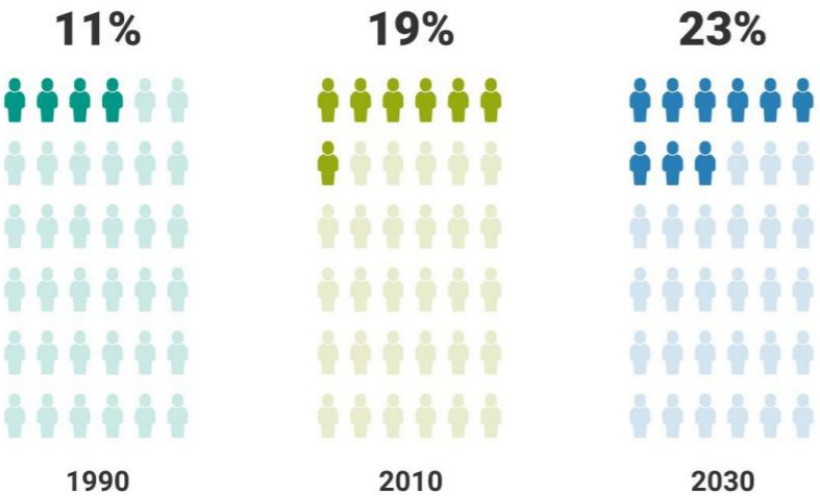
Denver MSA	
Percentage of low-wage workers	40%
Percentage change in jobs	19.90%
Percentage change in earnings	-3.8%
Number of jobs 2008	1,236,797
Number of jobs 2018	1,482,309
Median annual earnings 2008	$39,114
Median annual earnings 2017	$37,633

Demographic Shifts

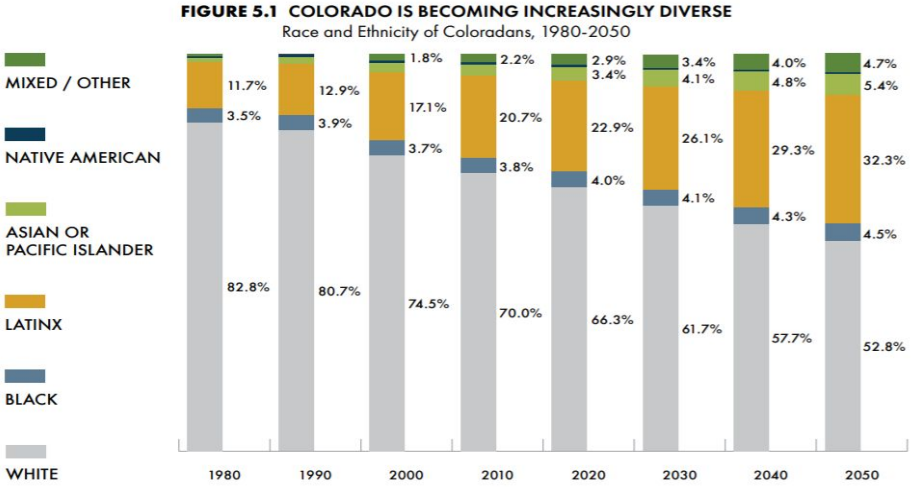
Age & Diversifying

Colorado (and the U.S.) is Aging & Diversifying

Percentage of labor force 55+



Colorado is diversifying



Source: PolicyLink analysis of U.S. Census Bureau data. Available at http://nationalequityatlas.org/indicators/Race~ethnicity/Trend:32756/Colorado/false/

Technological Transformation

Automation, artificial intelligence, digitalization changing work and requiring new skills and mindsets

Artificial Intelligence

Computer systems able to perform tasks that normally require human intelligence, such as visual perception, speech recognition or decision-making.

Allows for non-human decision-making, some forms of analysis and process management

Automation

Use of technology to reduce the level of human activity needed to complete a particular task by replacing or augmenting labor

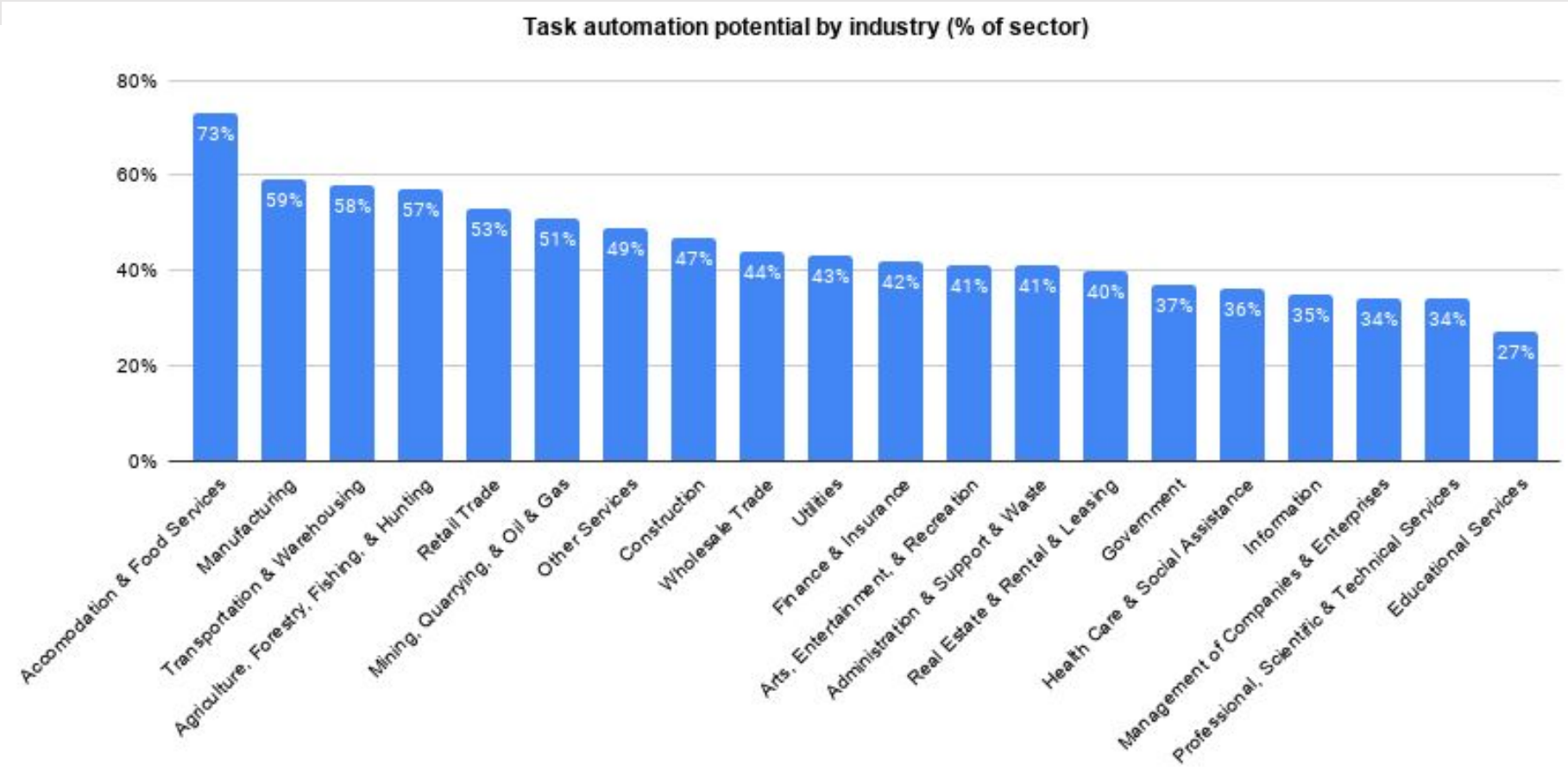
Because automation occurs at the task level, it often changes jobs partially rather than eliminating them

Digitalization

The use of various digital technologies to change/update business or operational processes

Often used to optimize a variety of communication, management, design and logistics tasks (i.e. the use of a GPS tracking system to optimize fleet operations

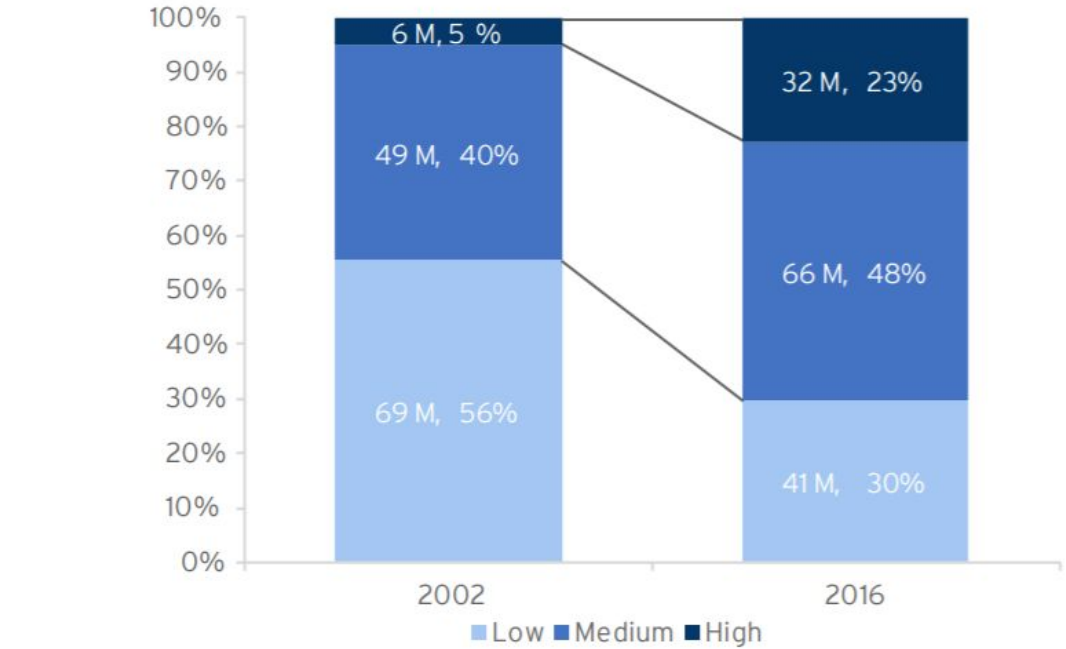
Impact of Technological Advances by Industry



Digital skills needed for work

Employment by levels of job digitalization

2002 and 2016

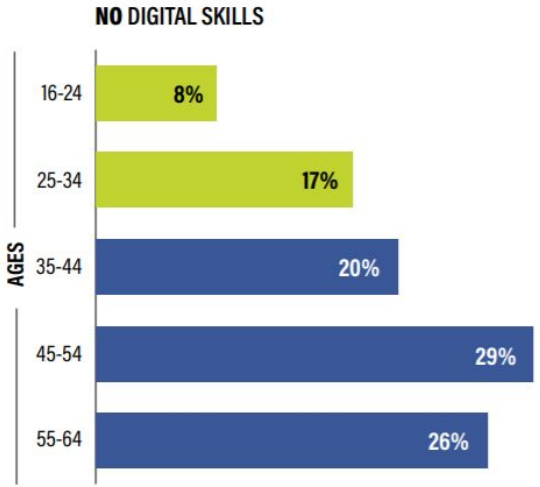


- **Low digital skill jobs represent a declining percentage of the U.S. labor market**, with ongoing drops anticipated
- Medium digital skills jobs have grown dramatically, suggesting the **presence of a required digital baseline that many workers lack**

Markle Foundation's Digital Blindspot

Workers with digital skills

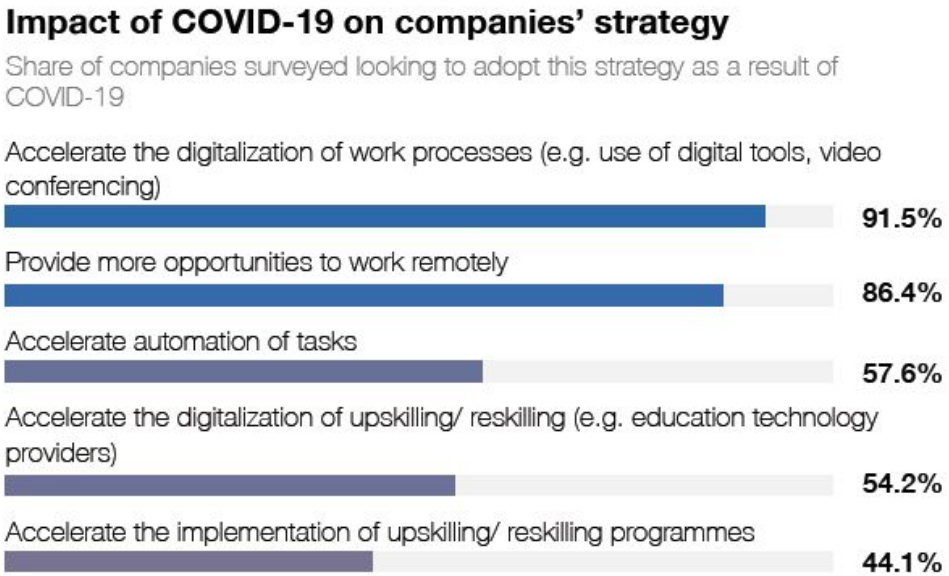
Selected industries[24]	Percentage of workers with no digital skills	Percentage of workers with limited digital skills	Combined percentage of workers with limited or no skills*
Construction, transportation and storage	22%	28%	50%
Retail, wholesale, and auto repair	14%	23%	37%
Hospitality and other services	18%	18%	36%
Manufacturing	16%	19%	35%
Administrative and support services; arts, entertainment and recreation	13%	22%	35%
Health and social work	12%	21%	33%
Finance, insurance, and real estate (FIRE)	6%	14%	19%*
Education	5%	11%	15%*

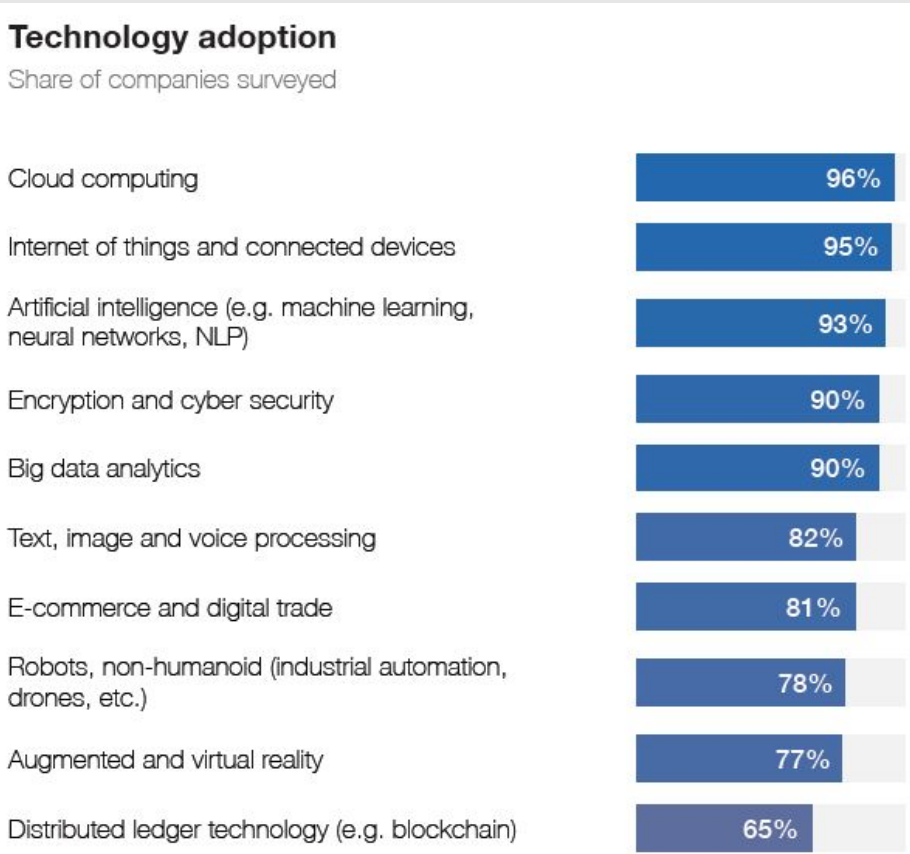


https://www.nationalskillscoalition.org/resources/publications/file/NSC-Skills-for-an-Inclusive-Economic-Recovery-web-Sept-2020.pdf

COVID-19 Impact on Future of Work Trends

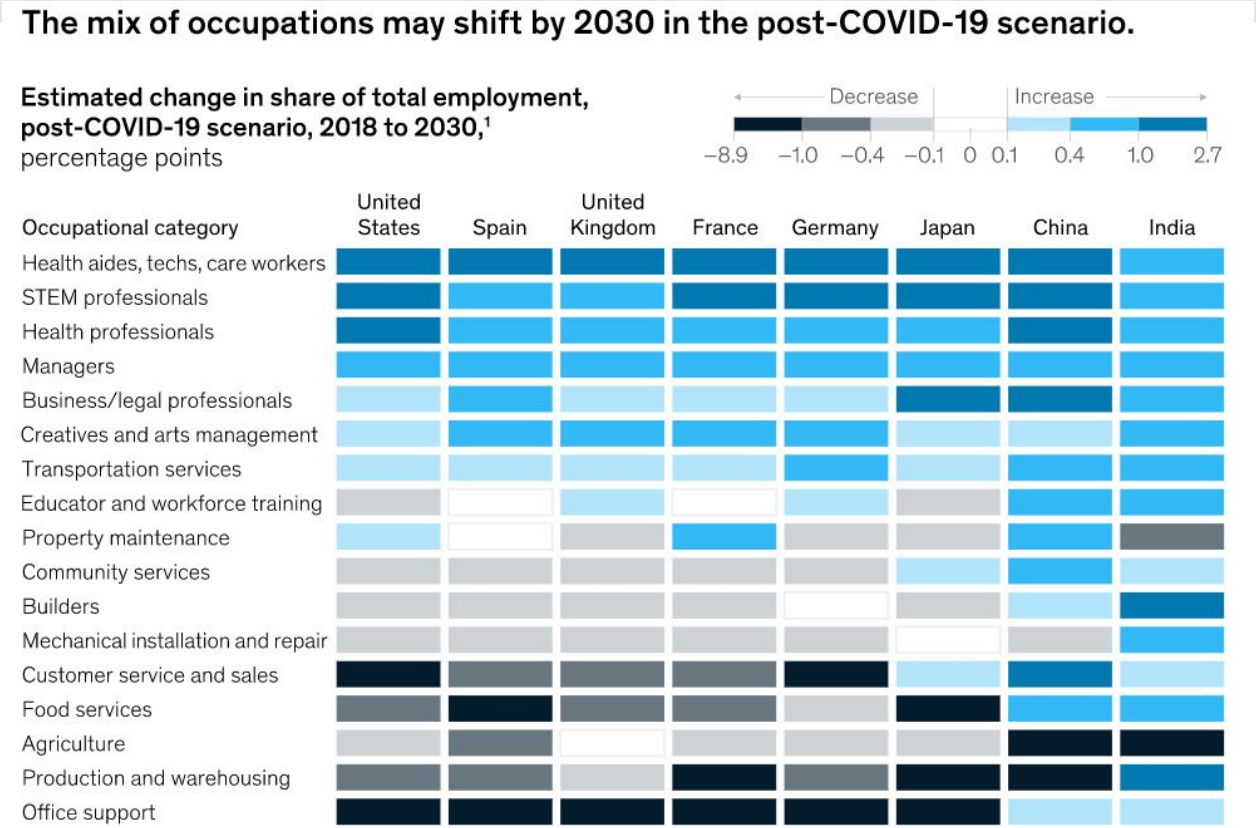
COVID-19 and Workplace Shifts





https://www.weforum.org/reports/the-future-of-jobs-report-2020

COVID-19 Job Shifts

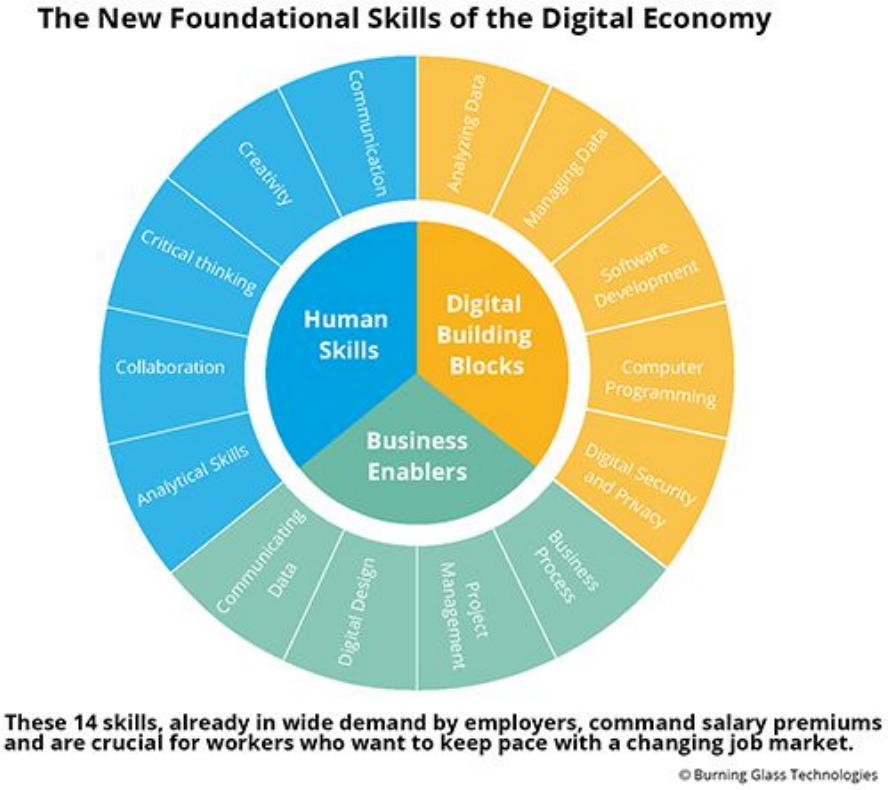


https://www.mckinsey.com/featured-insights/future-of-work/the-future-of-work-after-covid-19

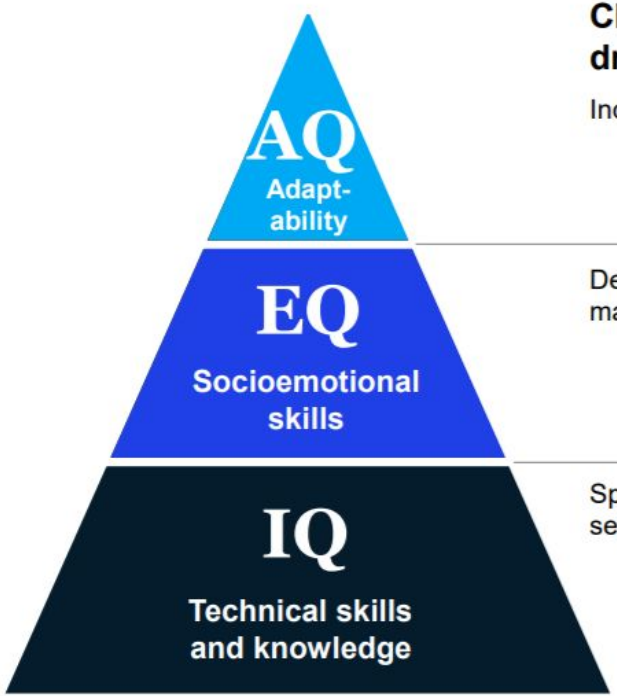
Skills, mindsets, and supports to succeed in the future of work

https://www.burning-glass.com/research-project/new-foundational-skills/

Skills of the Digital Economy



Jobs in the future of work will increasingly require adaptability, socioemotional skills, and technical knowledge

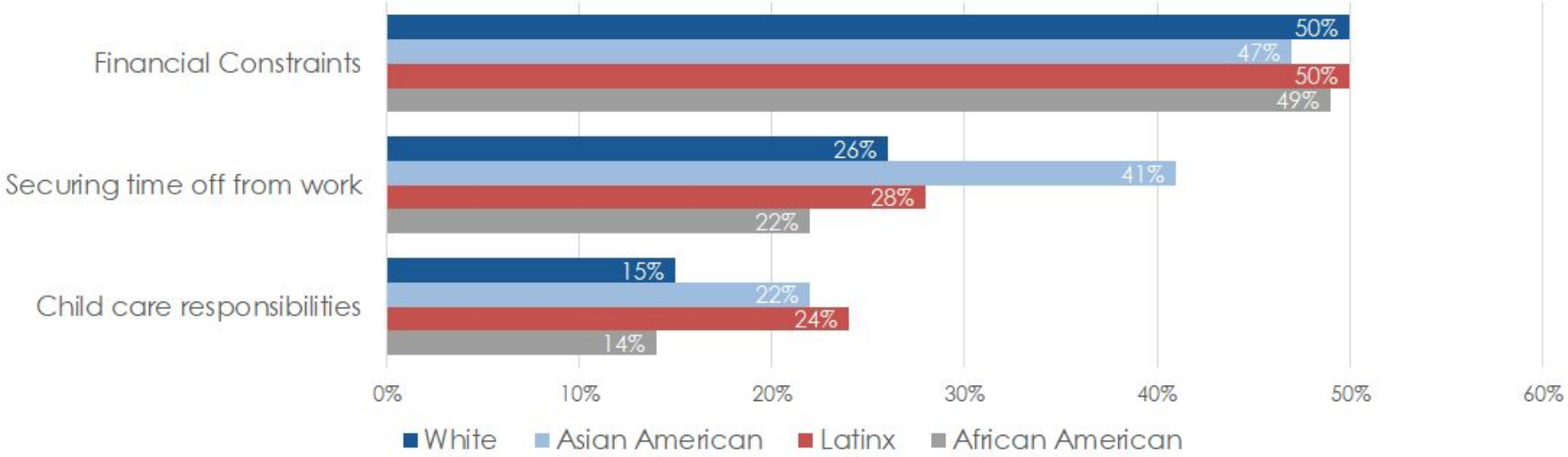


	Changes in demand driven by AI[1][2]	Examples of next generations skills
AQ Adapt-ability	Increasingly critical	Lifelong learning aspiration/growth mindset Self-direction Comfort with change, uncertainty
EQ Socioemotional skills	Demand will increase as machines do knowledge-work	Creativity Critical thinking and problem solving Social intelligence Communication and influence
IQ Technical skills and knowledge	Specific skills will change several times within a career	Software development Design Product management Big data analytics Agile methodologies Lean management practices

1. Artificial intelligence

Source: McKinsey Global Institute analysis

Barriers to upskilling



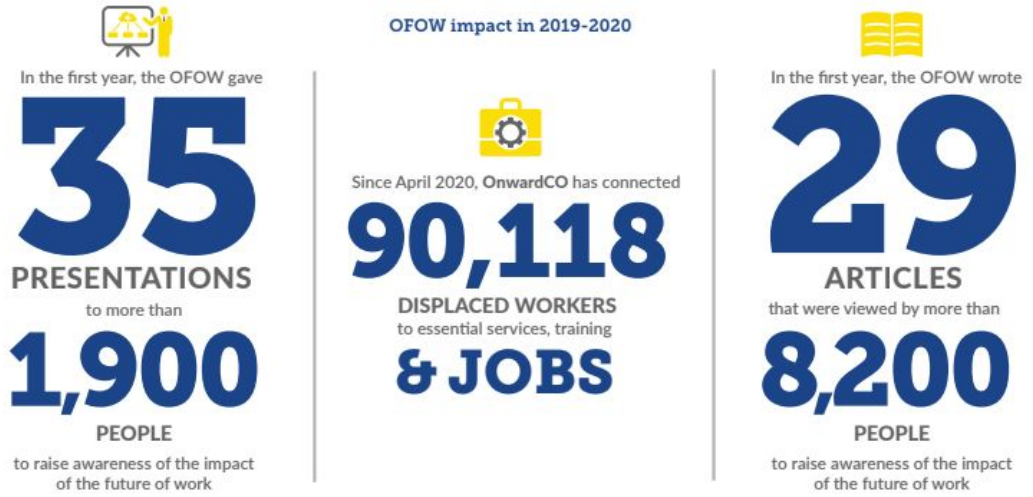
NATIONAL SKILLS COALITION
Every worker. Every industry. A strong economy.

Source: Joint Center for Political and Economic Studies

OFOW Work to Date

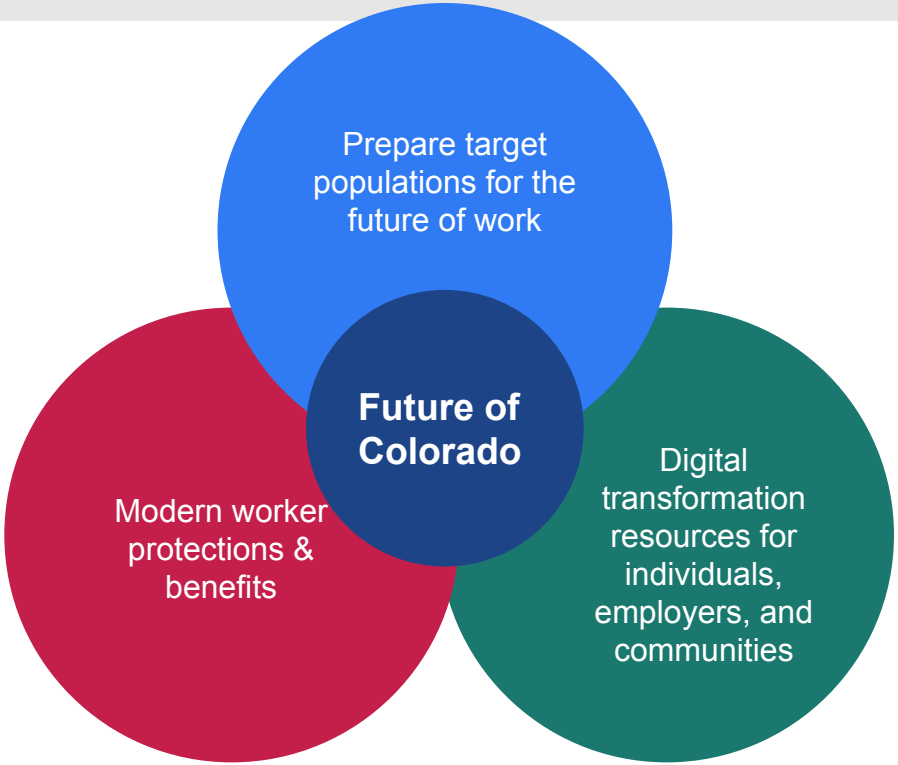
Activities Since Launch

- Focused on raising awareness through community presentations
- Research to understand the future of work in Colorado
- COVID-19 Response



- Publication of first annual report of future of work trends
- Research and publication of SB207 - Independent Contractor Study
- Developing partnerships to align work

Focus Areas and Opportunities



- State Apprenticeship Agency
- Digital Literacy and Inclusion
- Remote Work Initiative
- Economic Complexity Research (with JTO)
- Independent Contractor Research (with FAMLI)
- Raising Awareness and Developing Resources

User-Centered | Left Behind Coloradans | Regional Diversity

Future of Work Reports

Office of the Future of Work: Annual Report

Colorado Workforce Development Council: Talent Pipeline Report

Aspen Institute
- Automation and a Changing Economy
- Designing Portable Benefits: A Resource Guide for Policymakers

Brookings Institution
- Automation and Artificial Intelligence: How machines are affecting people and places
- Meet the low-wage workforce
- Growing cities that work for all: capability-based approach to regional economic competitiveness
- Realism about reskilling
- Moving Up: Promoting workers' upward mobility using network analysis

DigitalUS: Building a Digitally Resilient Workforce: Creating On-Ramps to Opportunity

McKinsey Global Institute
- Future of Work Post-COVID
- The future of work in America: People and places, today and tomorrow

MIT Work of the Future: Final Work of the Future Report

Rework America Business Network, A Markle Initiative: Digital Blindspot: How digital literacy can create a more resilient American workforce

Thank you!

Any questions?
Contact Katherine Keegan at
katherine.keegan@state.co.us