



**NATIONAL  
SKILLS  
COALITION**

Every worker. Every industry.  
A strong economy.

# Closing the Digital **Skill** Divide: The Payoff for Workers, Business, and the Economy

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*Moderated by Rachel Unruh*

February 22, 2023

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**Atlanta Fed**

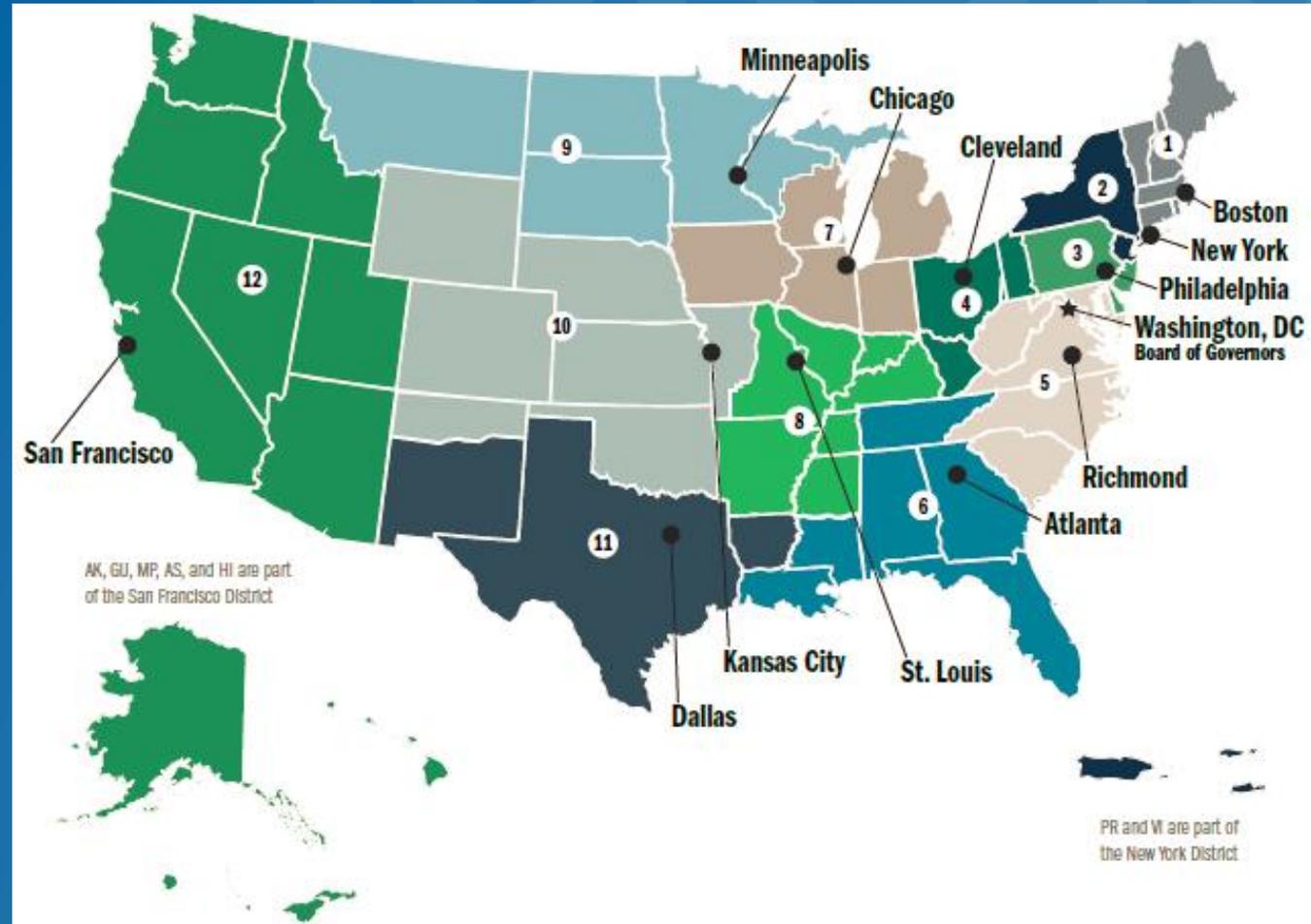
Center for Workforce &  
Economic Opportunity

# The Federal Reserve

Responsible for **monetary policy**, supervision and regulation of banks, and payment systems.

## The Dual Mandate

1. Stable Prices
2. Maximum Employment
  - a. Community Development





The **digital divide** isn't just about broadband or hardware – it's also about **skills**.





# We analyzed 43 million job ads from 2021

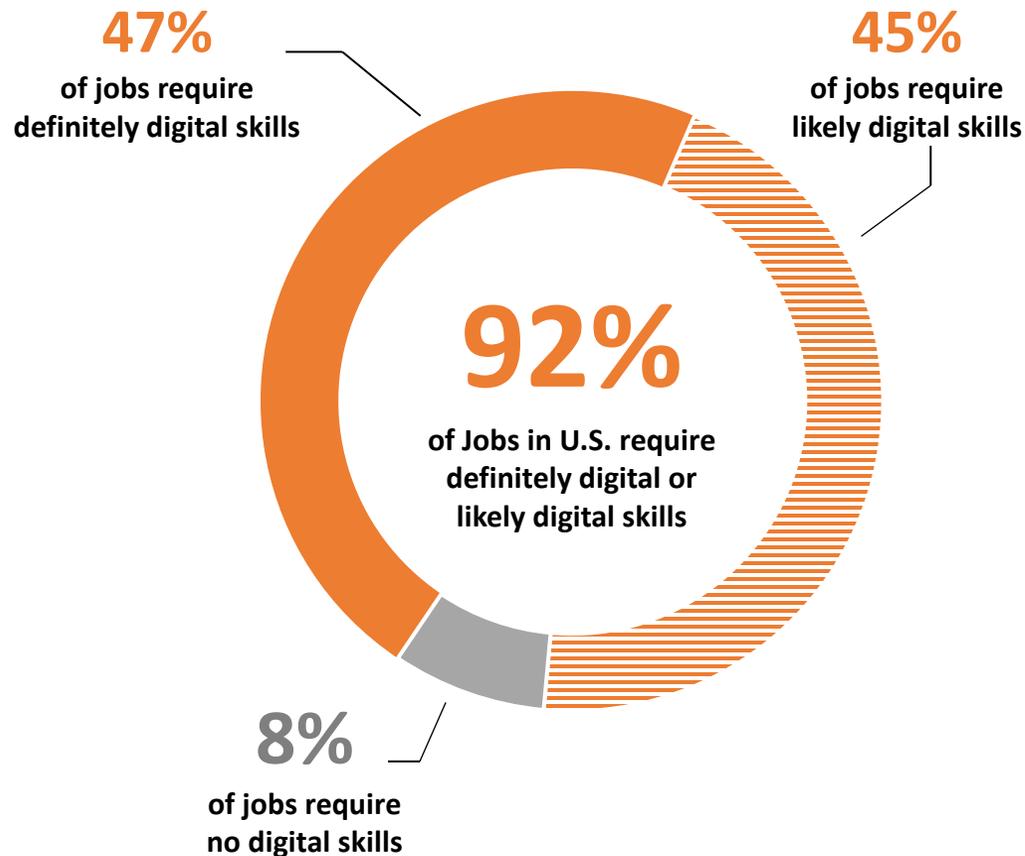
- The average ad sought **8 skills**
- Data was initially collected and standardized by Lightcast
- Further analysis was carried out by NSC in collaboration with the Federal Reserve Bank of Atlanta



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# Virtually all of today's jobs require digital skills



- **Definitely** digital: Microsoft Excel; Python language
- **Likely** digital: Bookkeeping; survey design
- **Not** digital: Ironing; changing diapers



**Construction workers using mobile apps to submit work-order changes.**



Aerospace workers using augmented reality.

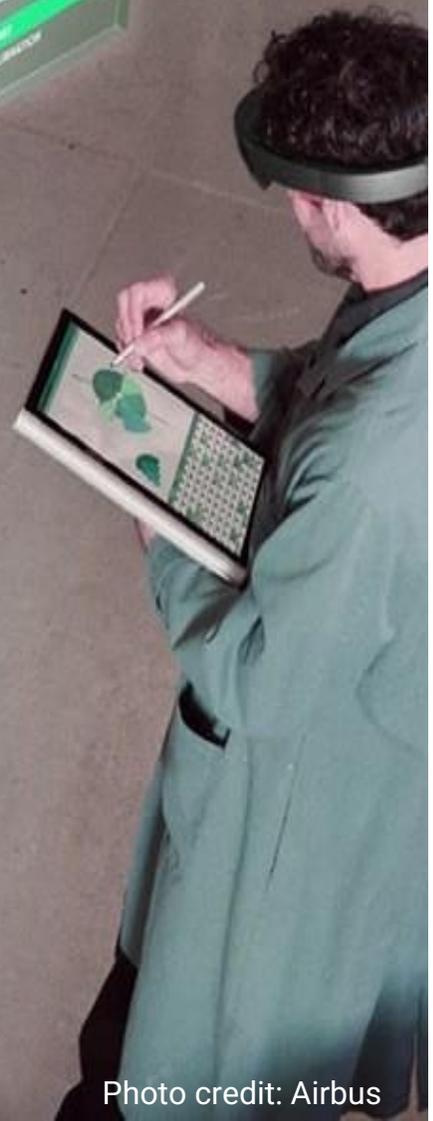


Photo credit: Airbus



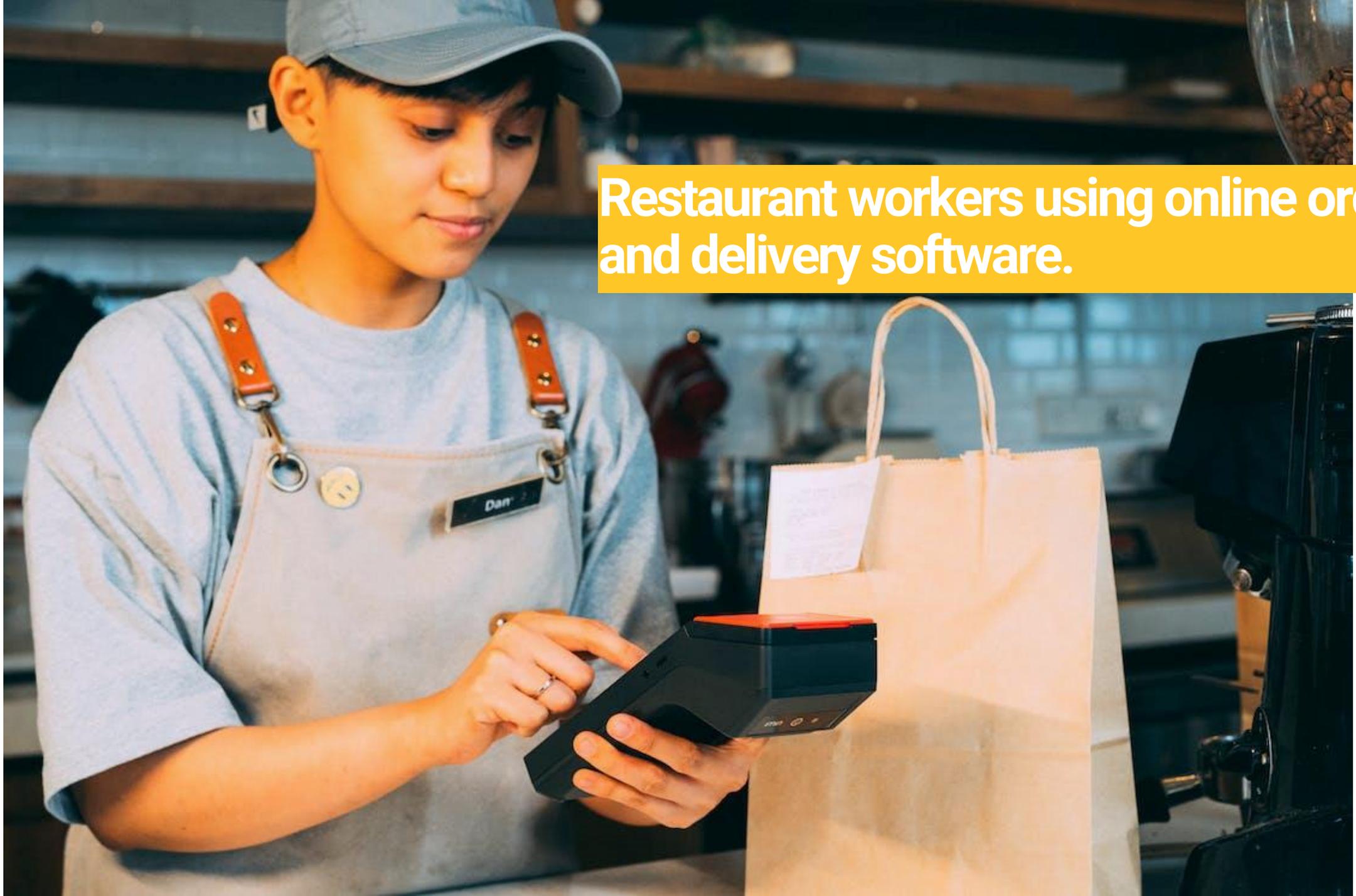
**Medical office staff supporting telehealth patients.**



**Wind turbine service technicians  
using industrial control software.**



**Restaurant workers using online ordering and delivery software.**





**Agriculture workers using in-cab tractor technology (e.g., AutoTrac) for efficient tractor operation**



**Welders using collaborative robots  
("cobots") in advanced manufacturing**

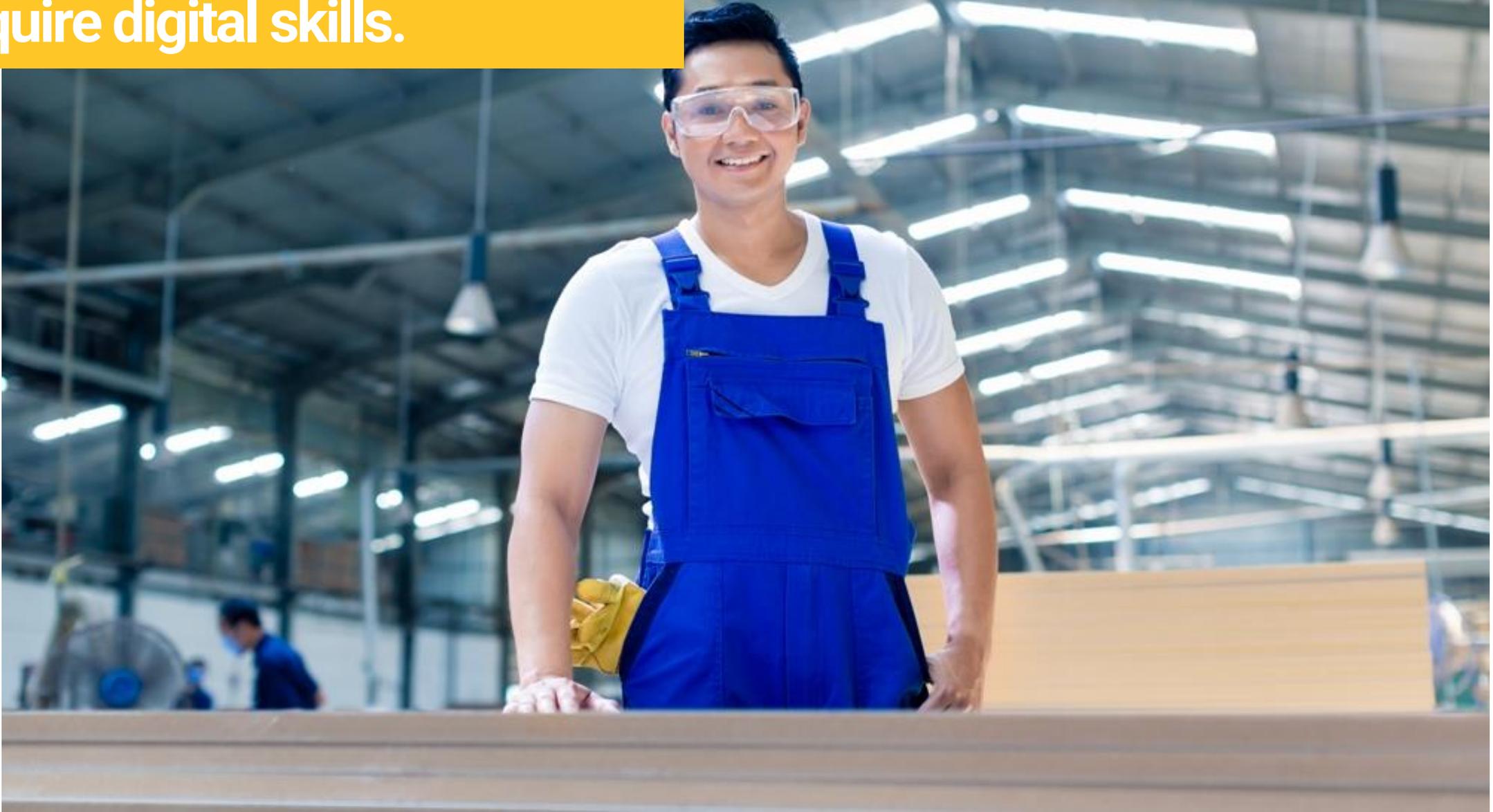
*Photo credit: Smooth Robotics*



**Conservation technicians using forest management software.**



**The bottom line:**  
Even entry-level positions now  
require digital skills.





# Jobs that require very little work experience still need digital skills

Amount of work experience required	Percentage of job ads requiring <u>likely</u> digital skill	Percentage of job ads requiring <u>definitely</u> digital skill
0-2 years	95%	49%
3-5 years	98%	71%
6-8 years	99%	81%
9+ years	98%	75%



# Jobs that require limited education nevertheless need digital skills

Educational credential required	Percentage of job ads requiring <u>likely</u> digital skill	Percentage of job ads requiring <u>definitely</u> digital skill
High school diploma	94%	46%
Associate's degree	97%	47%
Bachelor's degree	99%	74%
Master's degree	97%	46%
Ph.D.	97%	39%

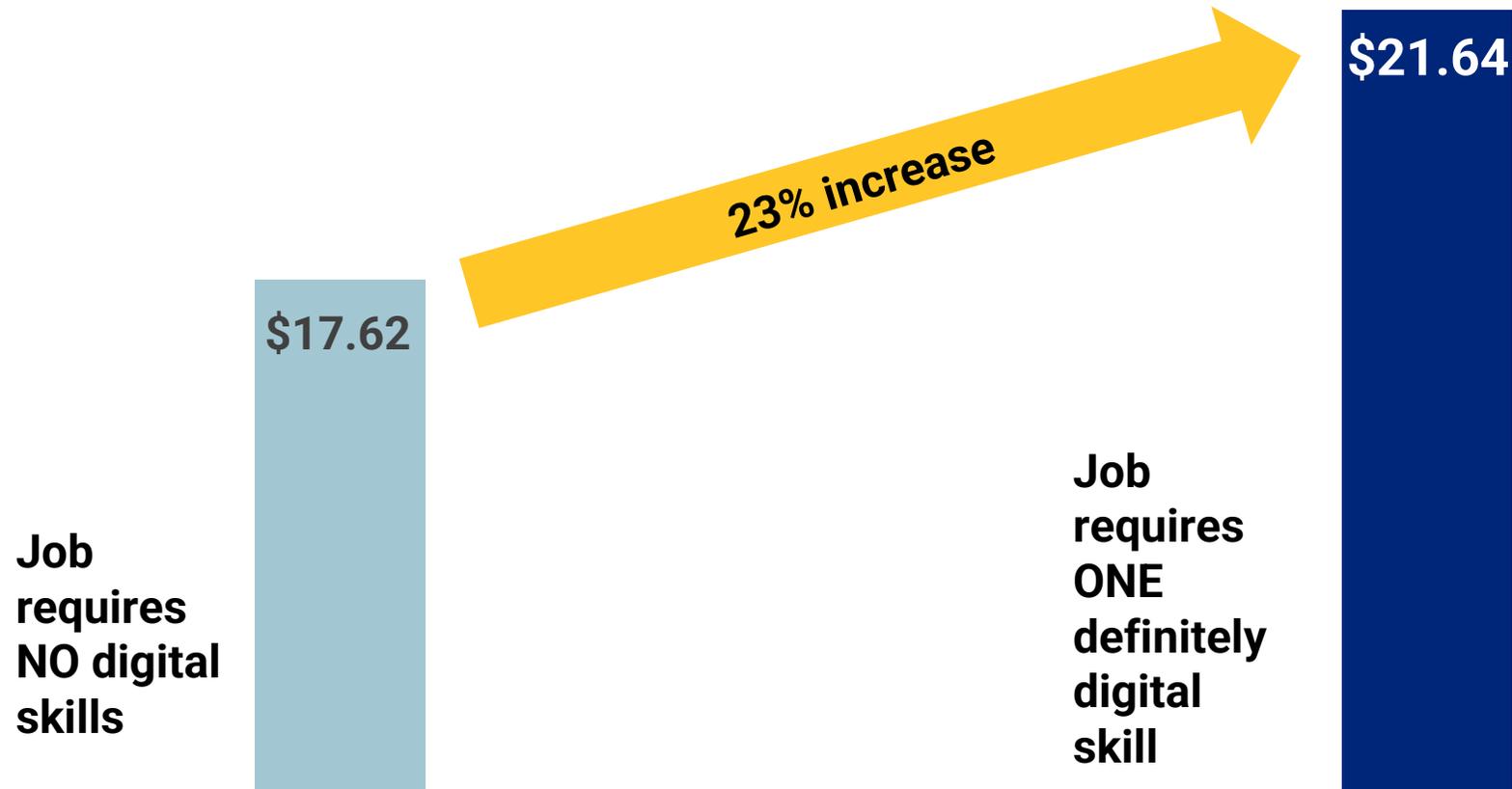
**Counter-intuitive but true:**

**Younger workers need to develop digital skills too!**





# Jobs that require digital skills pay more



*Note: Numbers shown are median hourly wages. People who qualify for jobs that require even one digital skill can earn an average of 23 percent more than those working in jobs requiring no digital skills – an increase of \$8,000 per year for an individual full-time worker. Data shown are national data. For details, see full report: **Closing the Digital Skill Divide** (National Skills Coalition, 2023.)*



# Higher pay leads to greater vitality in the broader economy

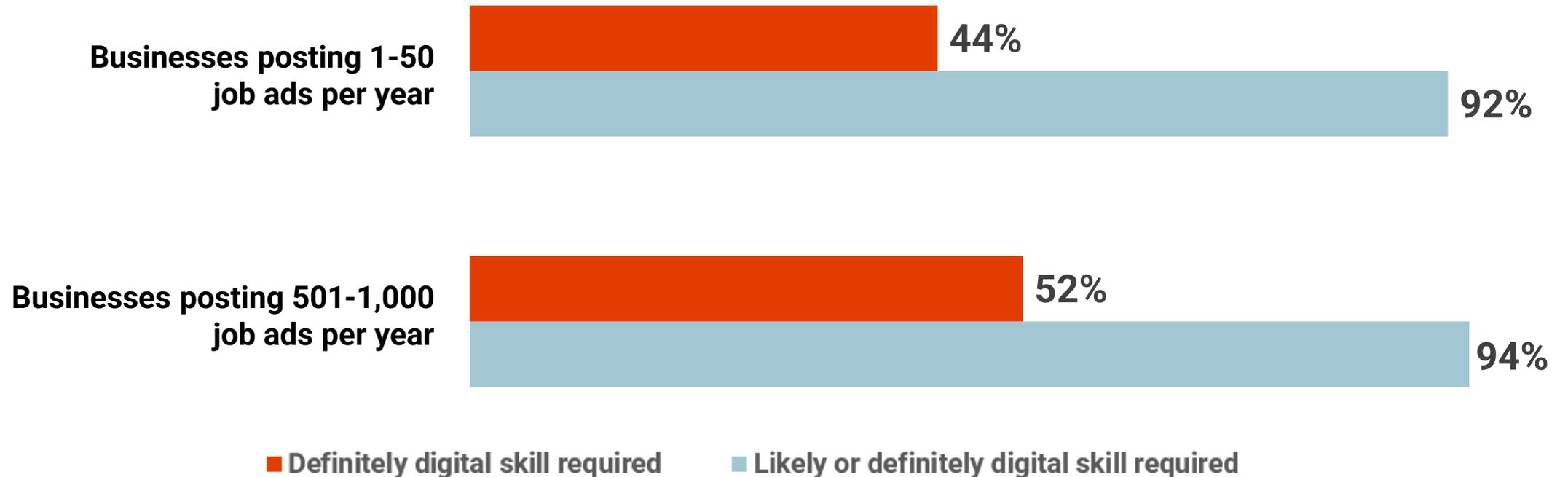
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- Workers who earn higher wages by moving to a job that requires one digital skill will typically **contribute more** in federal and state tax revenue
- Depending on the household size and composition, this amount could range from **\$1,363** to **\$2,879** per year.

*Note: Example calculated via [taxsim.app: an interactive US Individual Income Tax simulator](https://taxsim.app), using Illinois and North Carolina as reference states. For full details, see **Closing the Digital Skill Divide** report (National Skills Coalition, 2023.)*



# Small businesses also need workers with digital skills



*Note: National data. For details, see full report: **Closing the Digital Skill Divide** (National Skills Coalition, 2023.) The dataset used for this analysis does not directly measure the size of a company, so we inferred firm size based on the volume of job ads posted by the company in a year.*



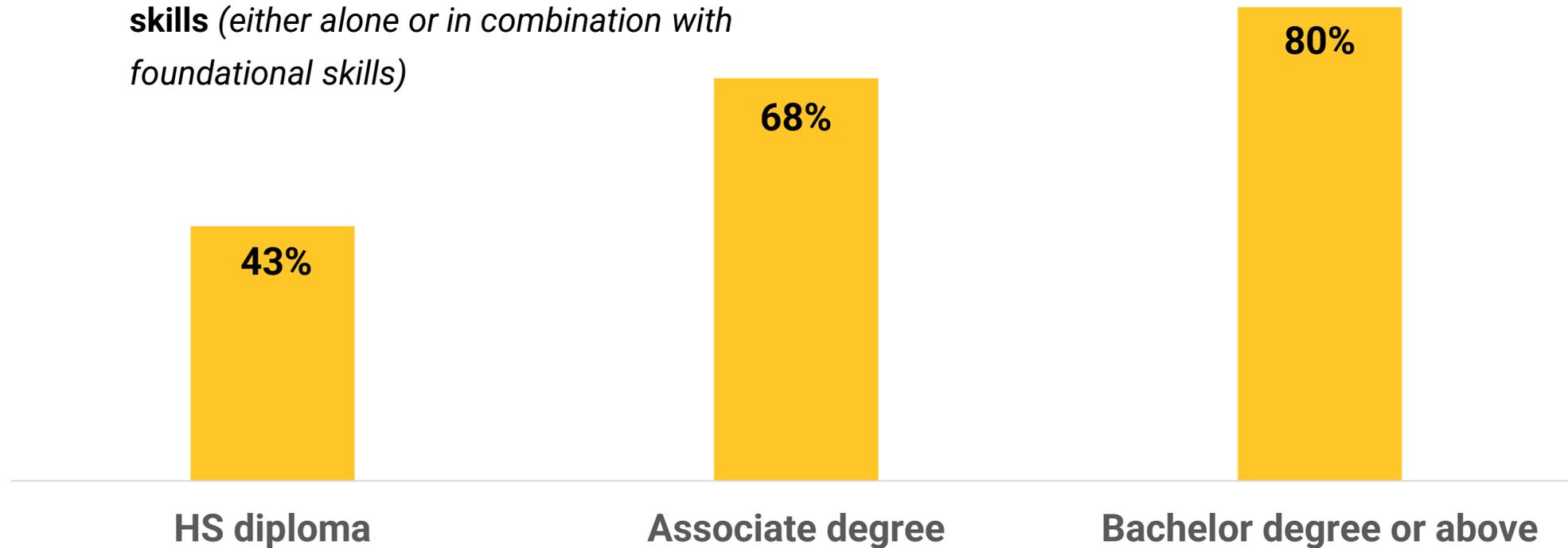
# Every industry needs digital skills

- Nationally, the percent of job ads requiring digital skills ranges from **77%** to **99%** depending on industry sector
- This includes industries not always spotlighted in tech discussions, such as **manufacturing** (93%), **construction** (91%), **utilities** (91%) and **accommodation and food services** (85%).



# There is robust demand for industry-specific digital skills

■ Job ads requiring industry-specific digital skills (either alone or in combination with foundational skills)



Note: Numbers reflect percentage of jobs requiring an industry-specific digital skill within the subset of jobs that require at least one definitely digital skill. Percentages would be even higher if including jobs with only likely digital skills.

**Advocates can use these findings to ensure that new federal investments pay off for workers and small businesses.**





# Underlying our recommendations: Digital equity principles

## ***A digital skill foundation for all.***

All workers need the opportunity to develop broad-based, flexible digital problem-solving skills for current technologies and ongoing technological shifts.

## ***Ongoing upskilling for every worker in every workplace.***

Workers in every industry need the opportunity to develop industry- and occupation-specific digital skills to adapt and advance in their careers.

## ***Rapid re-skilling for rapid re-employment.***

We need to be ready for sudden disruptions to the labor market or specific industries. Policies should support rapid reskilling so workers can move from one industry to another.

**Sign on to our principles: [tinyurl.com/DigitalEquityAtWork](https://tinyurl.com/DigitalEquityAtWork)**

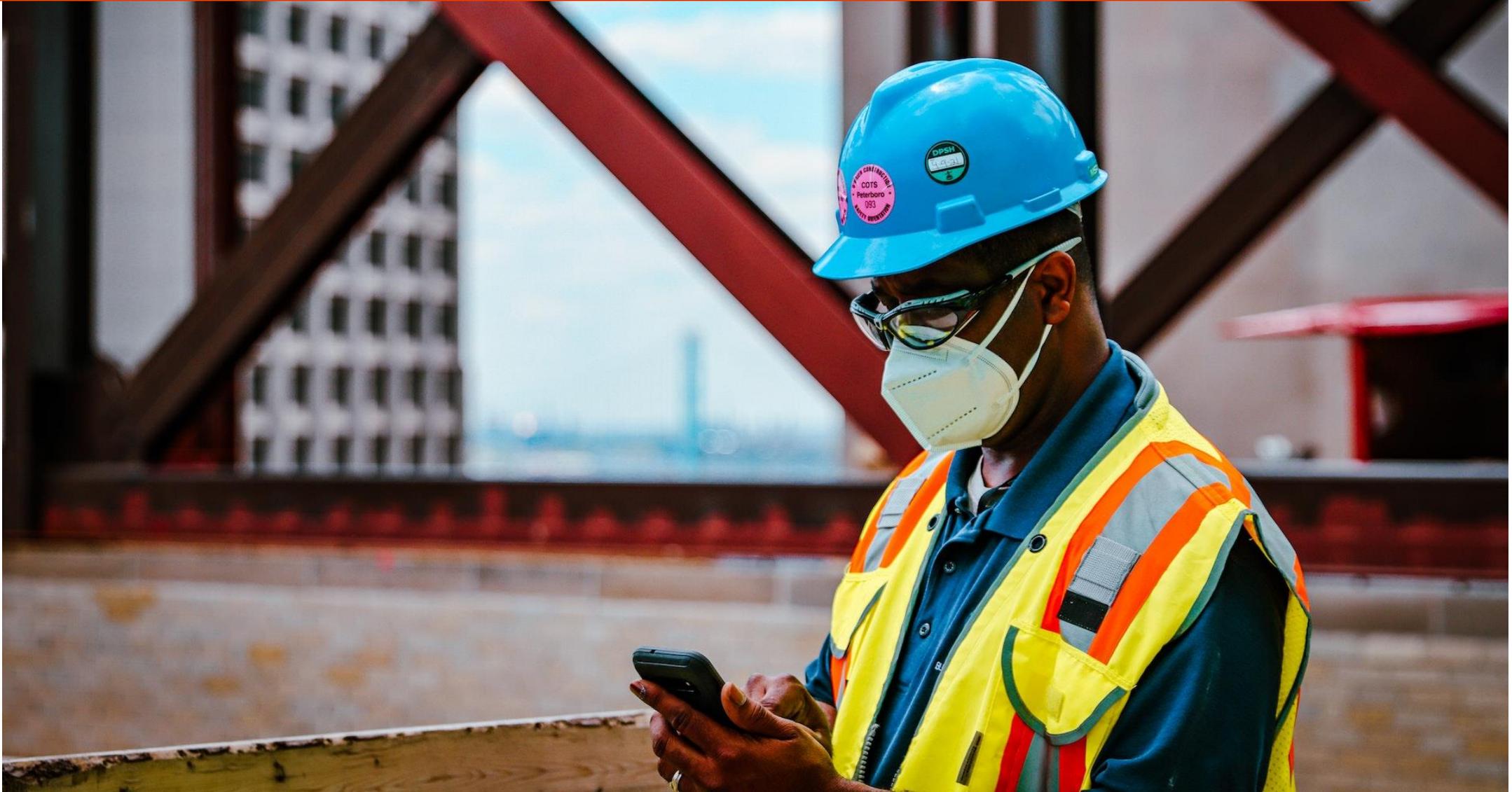


**1. Use Digital Equity Act and BEAD funding to expand digital skills training.**



**2. Combine these findings with Census data to target services and close equity gaps for covered populations.**

### 3. Invest BEAD funds in broadband workforce programs that create inclusive career pathways...





**...such as industry sector partnerships that bring employers together with education and training organizations trusted in the community.**



**4. Explicitly embed digital skills throughout other state workforce development investments.**



**5. Invest in the supportive services that equip workers to succeed in upskilling programs.**



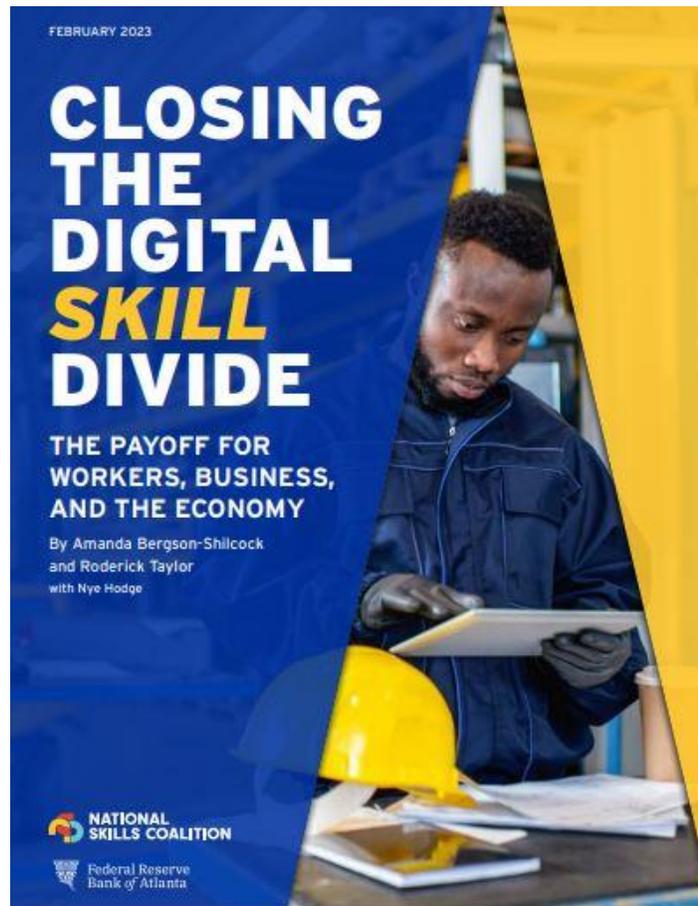
**6. Expand financial aid for high-quality short-term programs.**



**Time for your  
questions!**



# Full report: *Closing the Digital Skill Divide*

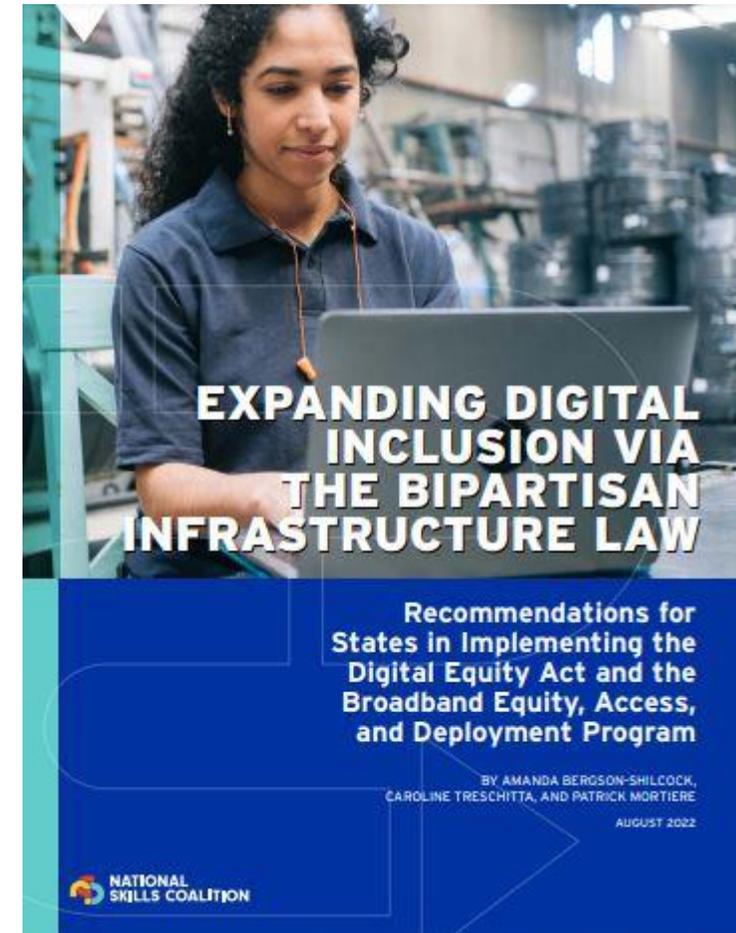


<https://tinyurl.com/DigitalSkillDivide>



# Knowledge to action: Additional resources

- NSC's experienced policy staff can help policymakers and advocates identify other specific administrative or legislative **policy possibilities**
- NSC's previously-published Digital Equity Act and BEAD **recommendations** (see right) may also be helpful





# Other NSC digital skills data resources



Full report:

[www.tinyurl.com/BoostingDL](http://www.tinyurl.com/BoostingDL)

- [Applying a Racial Equity Lens to Digital Literacy](#) (fact sheet)
- Digital skills fact sheets by industry:
  - [Manufacturing](#)
  - [Retail & hospitality](#)
  - [Health & social work](#)
  - [Construction, transportation & storage](#)

# The New Landscape of Digital Literacy

**How workers' uneven digital skills affect economic mobility and business competitiveness, and what policymakers can do about it.**



Full charts and graphs in this data report:  
[tinyurl.com/NewLandsDL](https://tinyurl.com/NewLandsDL)



# Register for the 2023 Skills Summit!

The **Skills Summit** is our largest event of the year. Join skills advocates from across the country as we:

- **Learn** about critical federal skills policy.
- **Meet** with legislators on Capitol Hill and members of the Biden Administration.
- Leave equipped to **fight** for investments in inclusive, high-quality skills training.

*Early bird registration ends Friday, February 24!*



**Register:**

<https://www.nationalskillssummit.com/>