



**NATIONAL
SKILLS
COALITION**

Every worker. Every industry.
A strong economy.

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

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**Digital Access for All Idahoans
Community Call**
May 18, 2023



About National Skills Coalition:

Our vision

- ▶ Jobs that require skills training are the backbone of our economy.
- ▶ National Skills Coalition fights for a national commitment to inclusive, high-quality skills training so that more people have access to a better life, and more local businesses see sustained growth.



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





Higher digital skills are correlated with higher broadband adoption rates.

People often enroll in digital skills classes to get a job or get a better job.





**So we decided
to research
employers'
demand for
digital skills.**





New research report: *Closing the Digital Skill Divide*

- Our project looked at **millions of online job ads** posted during calendar year 2021
- Data was initially collected and standardized by Lightcast (*formerly Emsi Burning Glass*)
- Further analysis was carried out by NSC in collaboration with the Federal Reserve Bank of Atlanta (FRBA)

The opinions expressed in the report reflect those of the authors and do not necessarily reflect those of the Federal Reserve System or the Federal Reserve Bank of Atlanta.



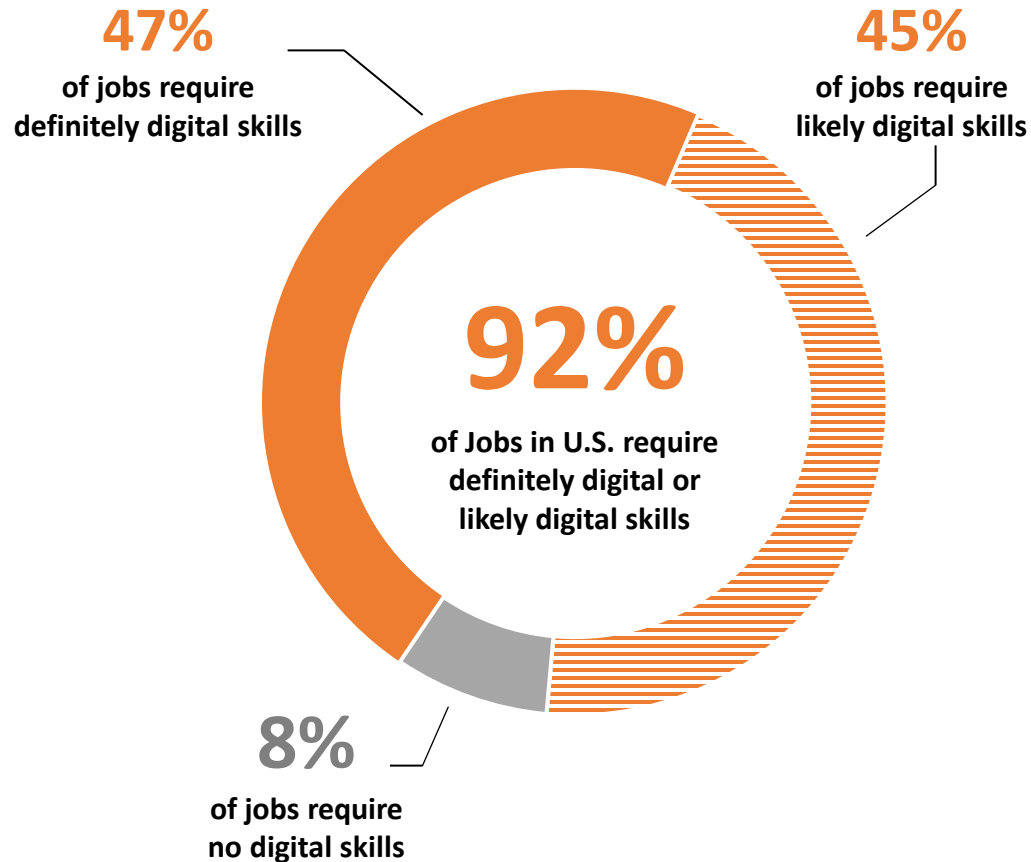
We analyzed 43 million job ads

- Ads were posted online in 2021
- The average ad sought **8 skills**
- We hand-coded skills to understand which ones were definitely digital, likely digital, or not digital





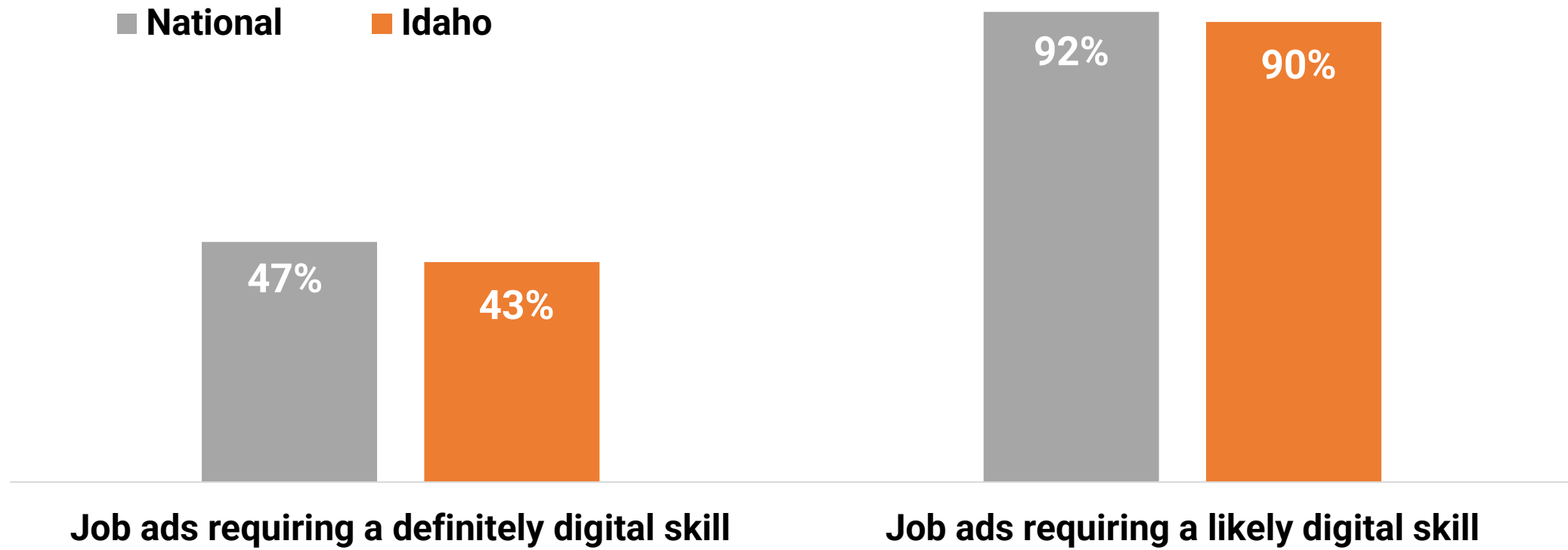
Virtually all of today's jobs require digital skills



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



Idaho employers are slightly below the national average in requiring digital skills





Every industry needs digital skills

- The percent of job ads requiring digital skills ranges from **77%** to **99%** depending on industry sector
- This includes industries that are priorities for Idaho, such as ***manufacturing*** (93%); ***agriculture*** (86%); ***mining, quarrying, and oil and gas extraction*** (92%), and ***transportation and warehousing*** (77%).

Let's take a look at some real-life digital skills...



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



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

Photo credit: Smooth Robotics



Medical office staff supporting telehealth patients.



Agriculture workers using in-cab tractor technology.



Aerospace workers using augmented reality.

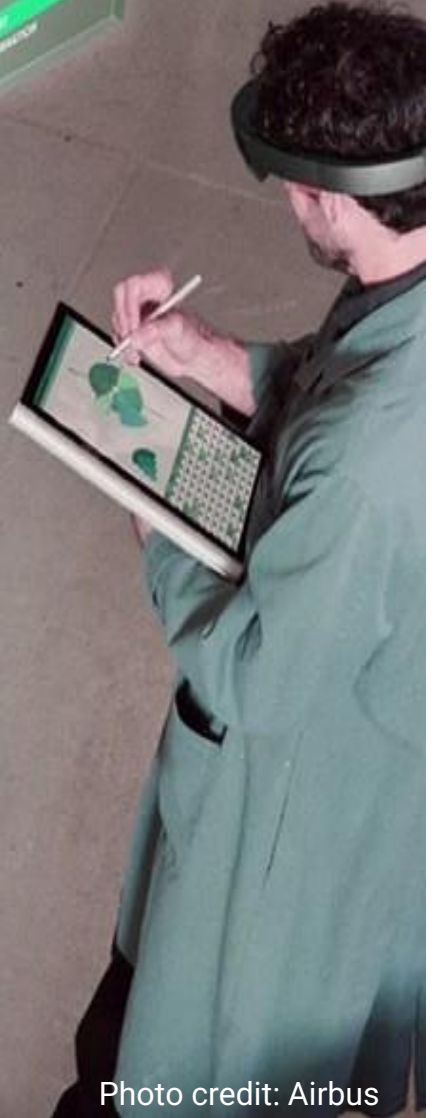


Photo credit: Airbus



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%

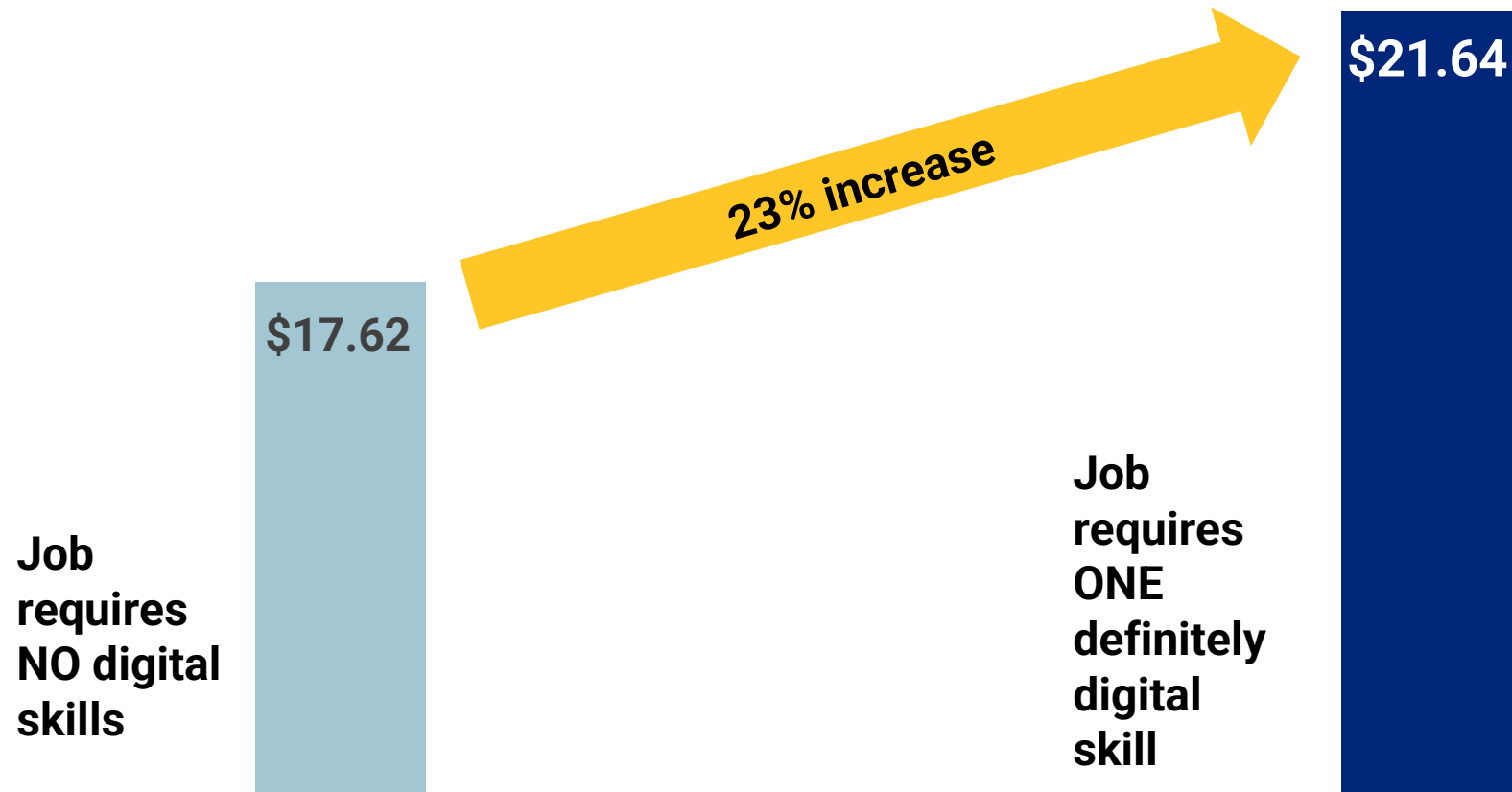
Counter-intuitive but true:

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.)*



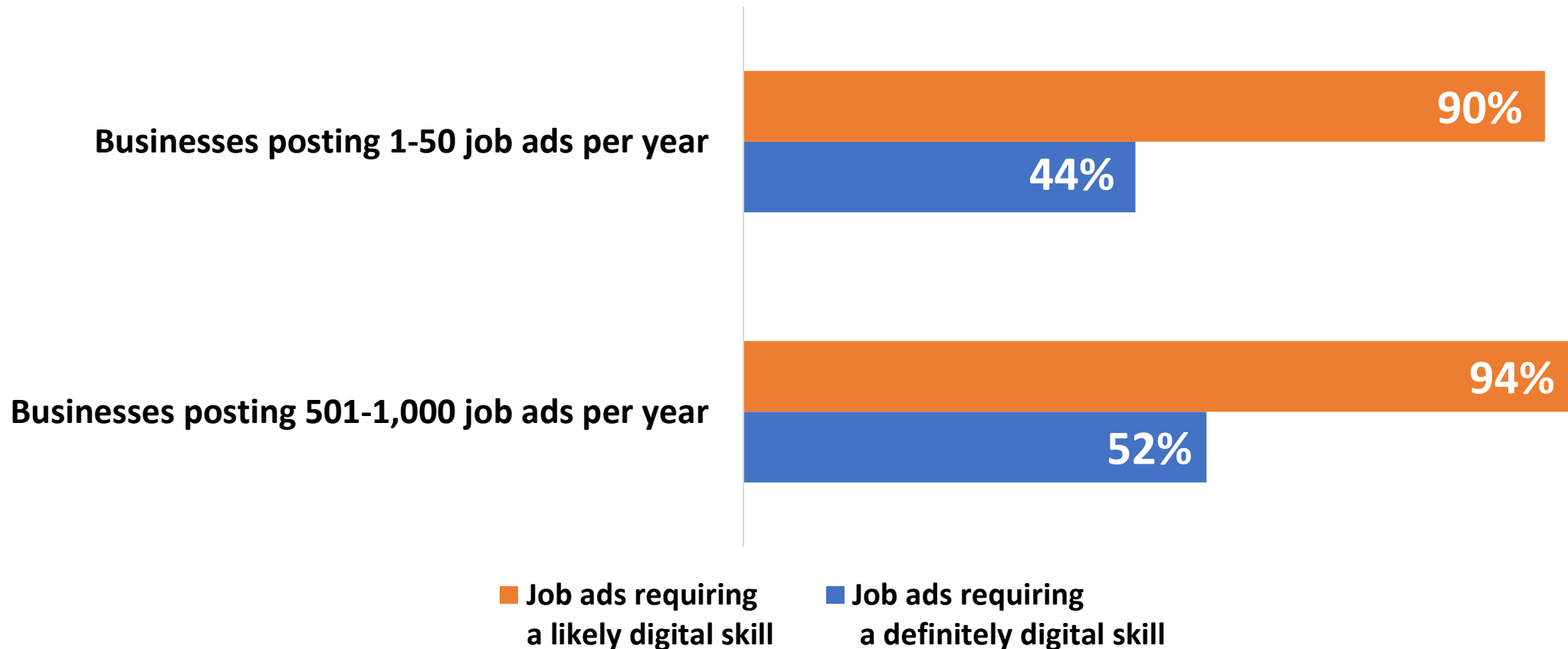
Higher pay leads to greater economic vitality for Idaho

- Workers who earn higher wages by moving to a job that requires one digital skill will typically **contribute more** in state and federal tax revenue.
- Depending on the household size and composition, this amount could range from **\$2,103** to **\$4,206** per year

Note: Example calculated via [taxsim.app: an interactive US Individual Income Tax simulator](https://taxsim.app), using Idaho as the reference state.



Small businesses also need workers with digital skills

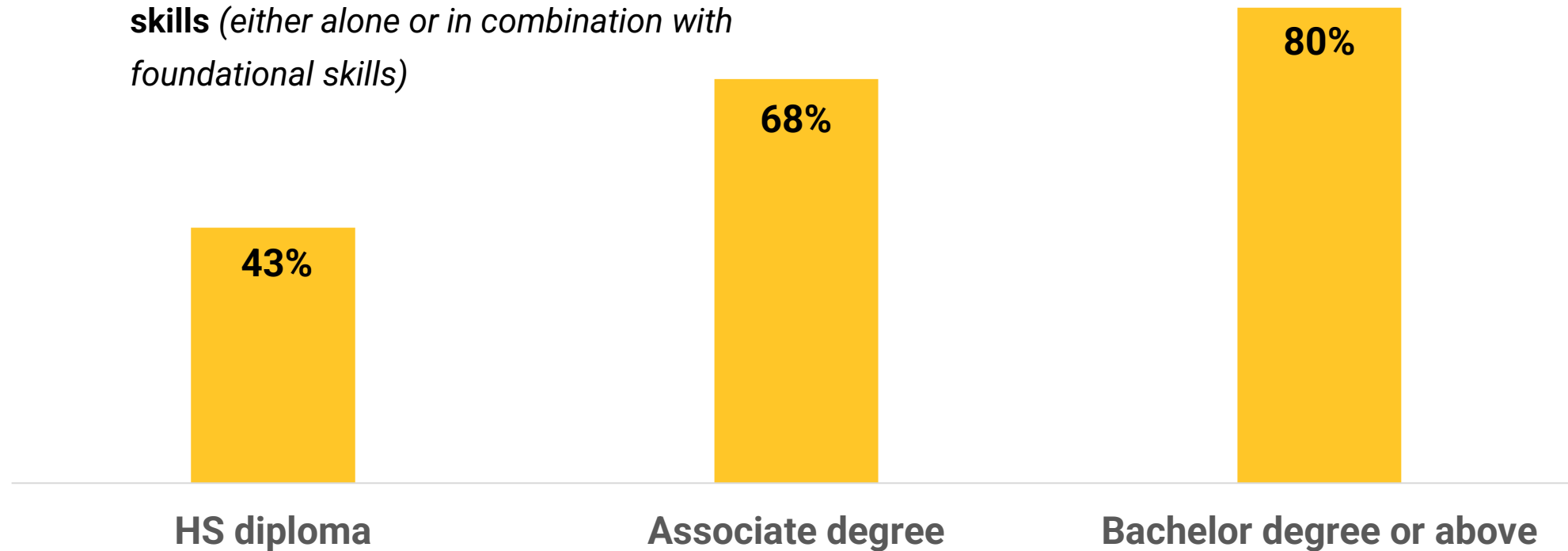


*Note: National data. For details, see full report: **Closing the Digital Skill Divide** (National Skills Coalition, 2023.) The dataset used for this analysis does not directly measure the size of a company, so we inferred firm size based on the volume of job ads posted by the company in a year.*



Workers need both foundational and industry-specific digital skills

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



Note: National data. 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.

Let's zero in on Idaho's demand for digital skills





Idaho businesses want workers with a strong base of foundational digital skills....







Idaho's most in-demand *foundational* digital skills

- Typing
- Data entry
- “Computer literacy”
- Word processing
- Microsoft Excel
- Microsoft PowerPoint
- Customer relationship management software

*Not in rank order. Idaho-specific data from unpublished NSC analysis conducted as part of **Closing the Digital Skill Divide** report.*



Select *industry-specific* skills with strong demand in Idaho:

-  **Finance and insurance:** Nationwide Mortgage Licensing System; SQL
-  **Healthcare:** Electronic medical records; radiologic technology; “medical software”
-  **Manufacturing:** Enterprise Resource Planning (ERP) software; Computer Numerical Control (CNC)
-  **Retail:** SAS retail analytics and consumer goods software



**What can Idaho leaders do
with this data?**

Idaho leaders can use these findings to ensure that new federal investments pay off for workers and small businesses:



1. Use Digital Equity and BEAD planning to lay out a roadmap for digital upskilling.





2. Invest in the digital skill-building strategies that research tells us work well:



More details in the full report:
www.tinyurl.com/BoostingDL

- ▶ **Industry sector partnerships** between educational institutions and employers
- ▶ **Contextualized** and integrated learning
- ▶ **Rapid prototyping** of new programs



3. Tap into your state labor agency and workforce stakeholders to help design industry partnerships.



4. Make sure that digital skill-building opportunities are embedded *across* industries.





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



**Time for your
questions!**



Contact information

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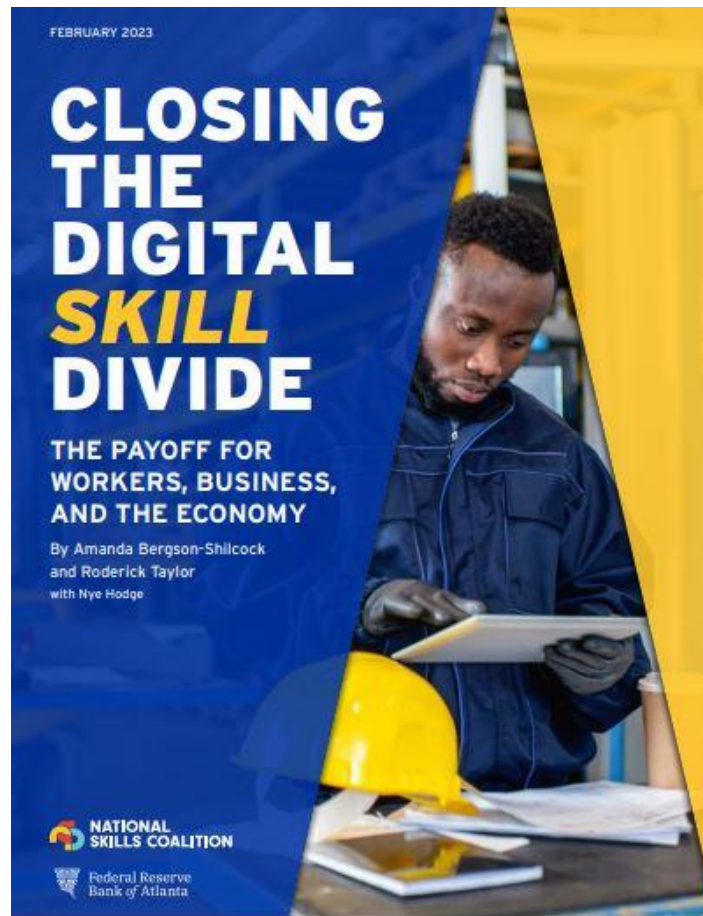
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Full report: *Closing the Digital Skill Divide*

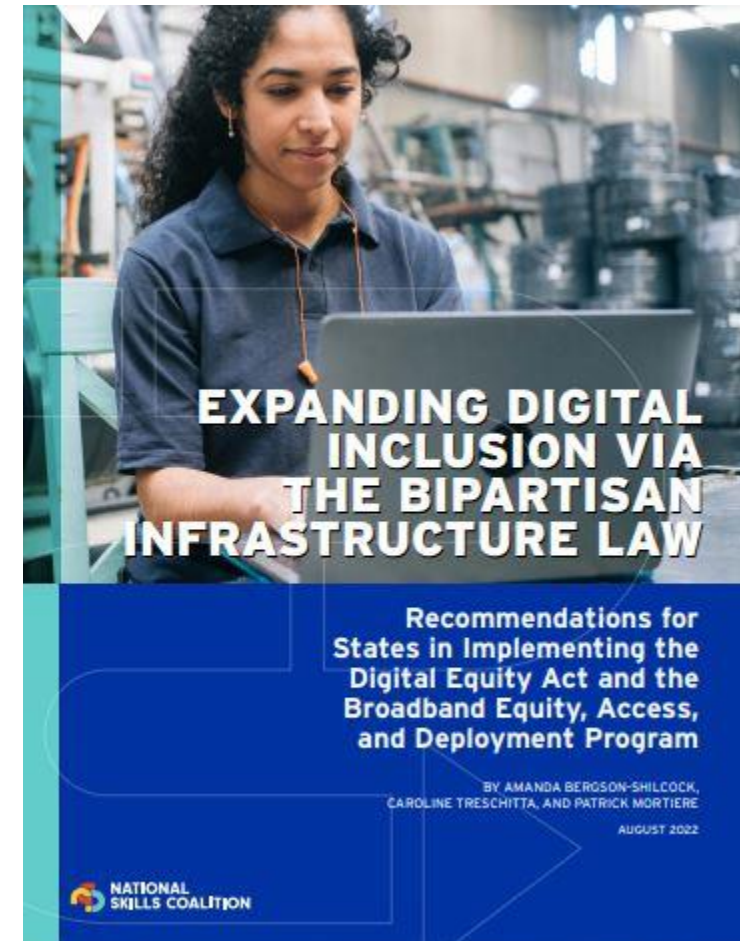


<https://tinyurl.com/DigitalSkillDivide>



Knowledge to action: Additional resources

- Check out NSC's [Digital Equity Act 101 fact sheet](#)
- NSC's experienced policy staff can help Idaho leaders identify other specific administrative or legislative policy possibilities
- NSC's Digital Equity Act and BEAD [recommendations](#) (see *right*) may also be helpful





Sign on to our 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



Other NSC digital skills data resources



Full report:

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