

SREB

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Understanding the Workforce of the Future

Presented by:

Ivy Coburn, Division Director—Education and
Workforce

June 11, 2023

75th
Anniversary

In-Demand Job Projections (Mentimeter)

What are the priority in-demand job sectors for your state?



A job sector is an economic term used to classify a broad group of occupations and industries that are related by what they do.

Successful Practices (Mentimeter)

Name a strategy, program or initiative that is successfully building the talent needed to supply workers for in-demand job sectors in your state.

SREB

The Future of Work

What will the future of work look like in 2030?

Highlights according to ChatGPT:

1. Automation and Artificial Intelligence (AI)
2. Remote Work and Flexible Arrangements
3. Lifelong Learning and Upskilling
4. Collaborative Work Environments
5. Focus on Well-being and Work-Life Integration
6. Augmentation of Human Abilities

Top 10 Jobs in 2030

1. Data Scientist/Analyst
2. Artificial Intelligence/Machine Learning Engineer
3. Cybersecurity Expert
4. Robotics Engineer
5. Sustainability Specialist
6. Healthcare Professional (especially in specialized fields)
7. Renewable Energy Engineer
8. Virtual Reality/Augmented Reality Developer
9. UX/UI Designer
10. Mental Health Professional

Most of the 50 million workers in the region will be affected by automation in the coming decades

If state and business leaders do not act



workers and their children could be unemployable or stuck in low-wage jobs: **an endless cycle of poverty**

This multigenerational cycle, combined with rising workforce skill demands, means more workers of all educational attainment levels will be:



unemployed or underemployed



earning incomes below the poverty level



reliant on state services

Just 5% of jobs are completely automatable, but **44%** of all work activities have automation potential.

In the **top 5 industries** the potential is often greater:



Note: The top five industries employ the most people.



Business & industry will need increasing numbers of workers with middle & high skills

Are students prepared?

Parents today: 25 to 44 year-olds

37% had a high school credential or less in 2017

Of 8th graders whose parents had no education after high school

36% were **below Basic** on NAEP reading and

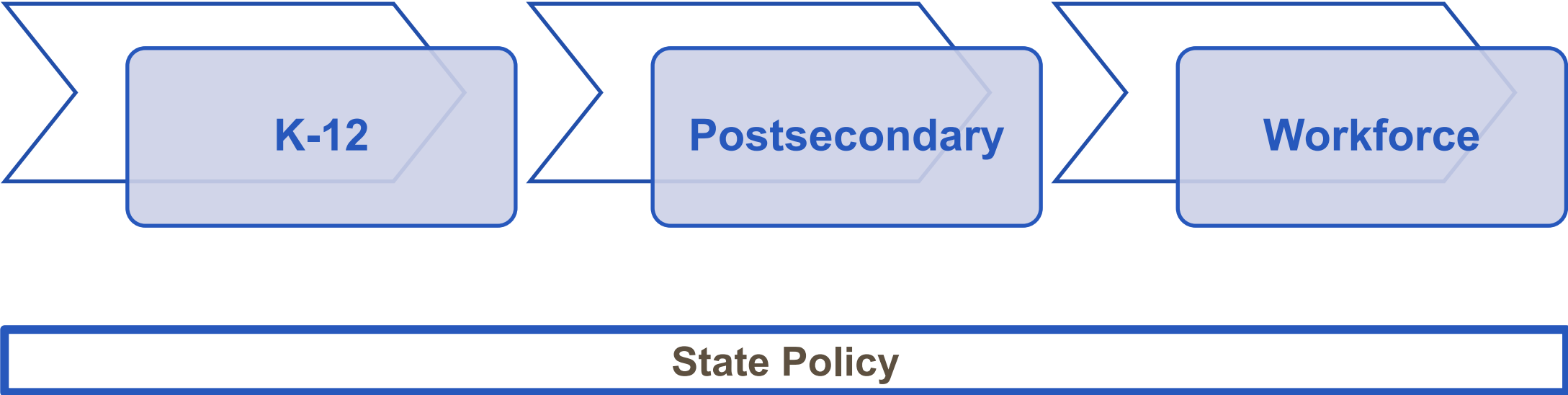
48% were **below Basic** on NAEP math

These percentages were just

22% **32%**

for students whose parents had some education beyond high school

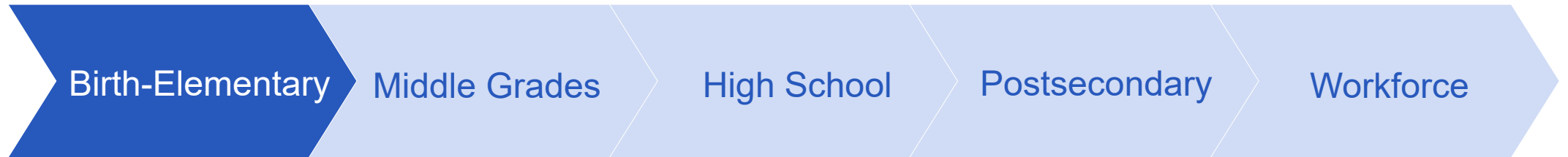
Education and Workforce System



Education and Workforce System

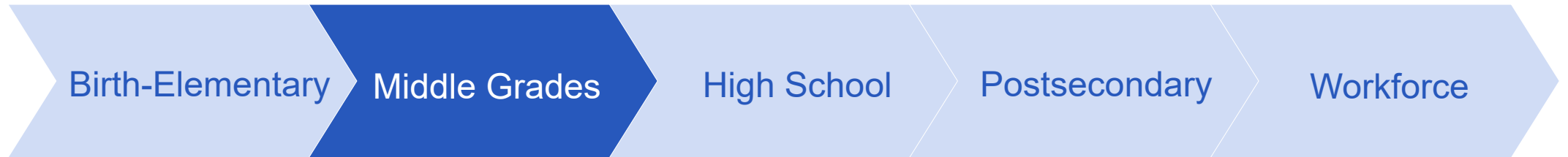


Education and Workforce System



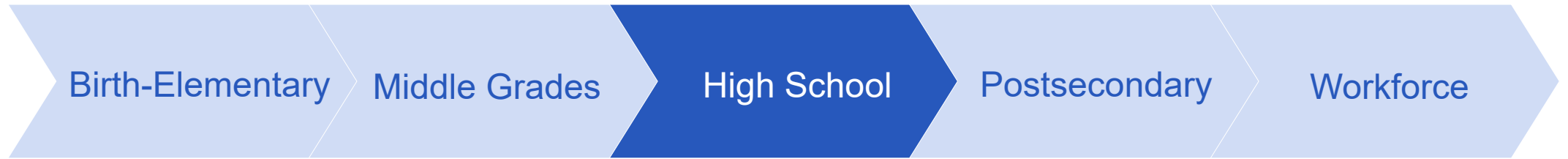
- Early Exposure and Career Awareness
- Foundational Core Academic and Employability Skills

Education and Workforce System



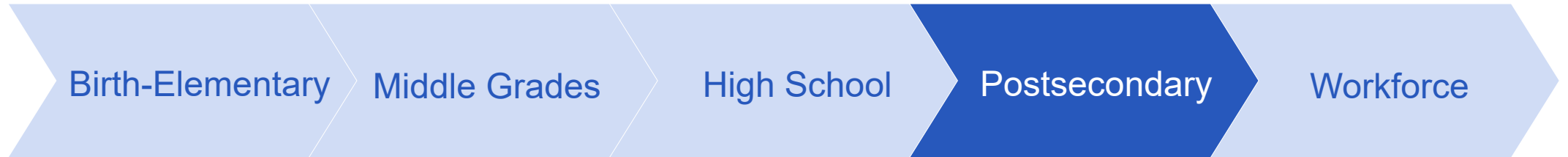
- Career Exploration
- Career Focused Activities and Projects
- Pop-Up Events and Camps

Education and Workforce System



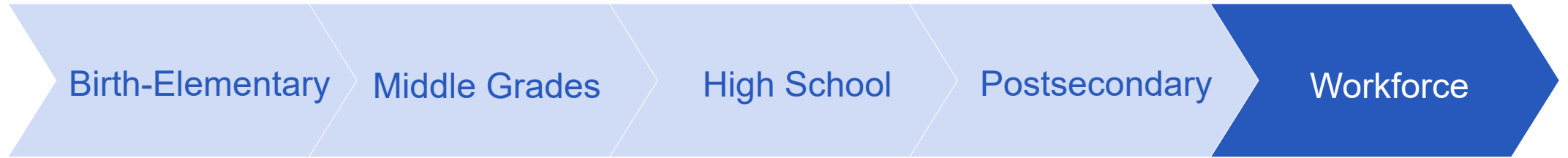
- Career Pathways
 - High-Quality Curriculum
 - Labor Market Alignment
- Dual Enrollment
- Work-Based Learning

Education and Workforce System



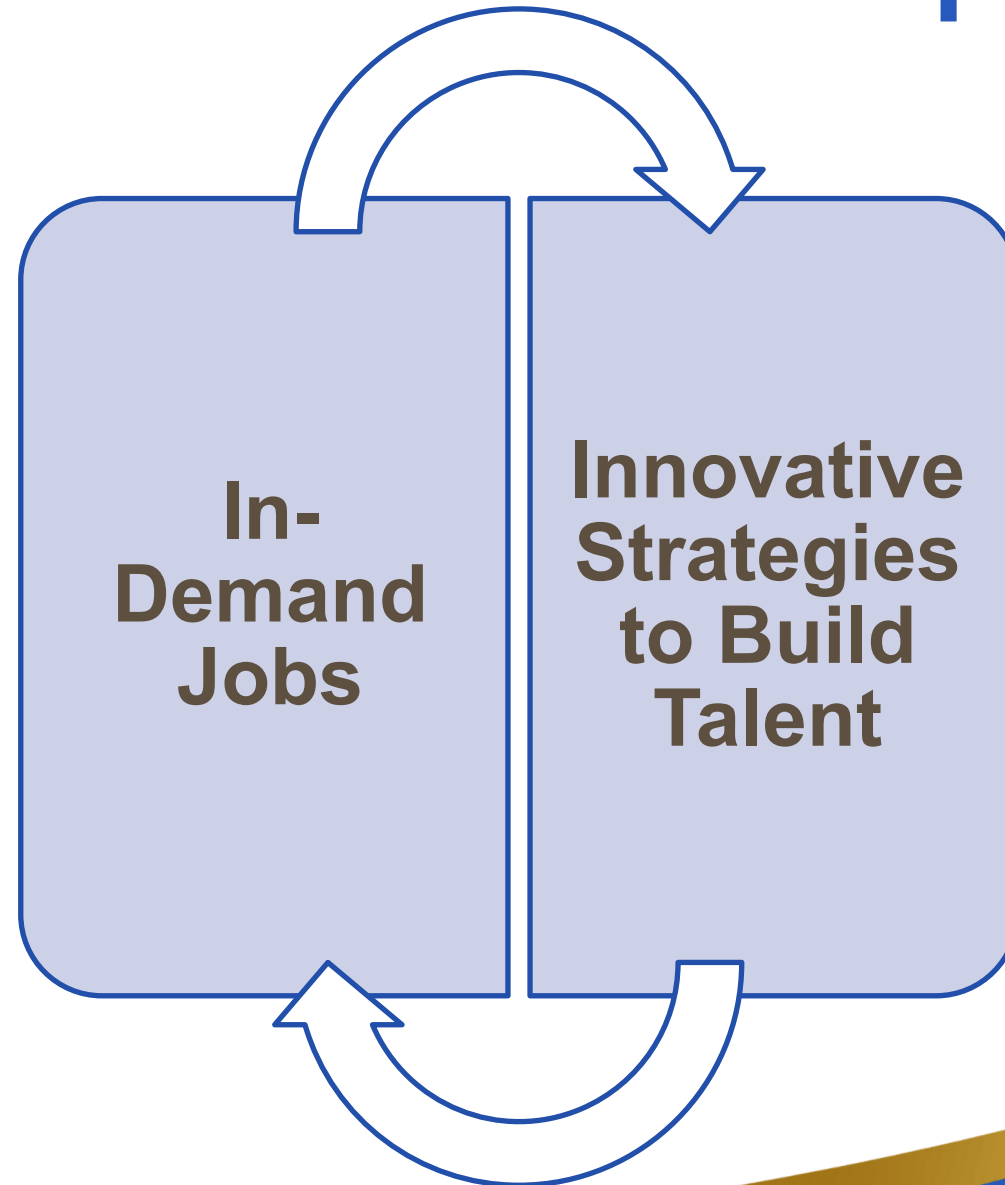
- “Stacking” Options to Support Credential/Degree Attainment
 - Certificate Programs
 - Associate Degrees
 - Bachelor Degree
 - Advanced Degrees

Education and Workforce System



- Upskilling
- Strategic Planning to Support In-Demand Occupations

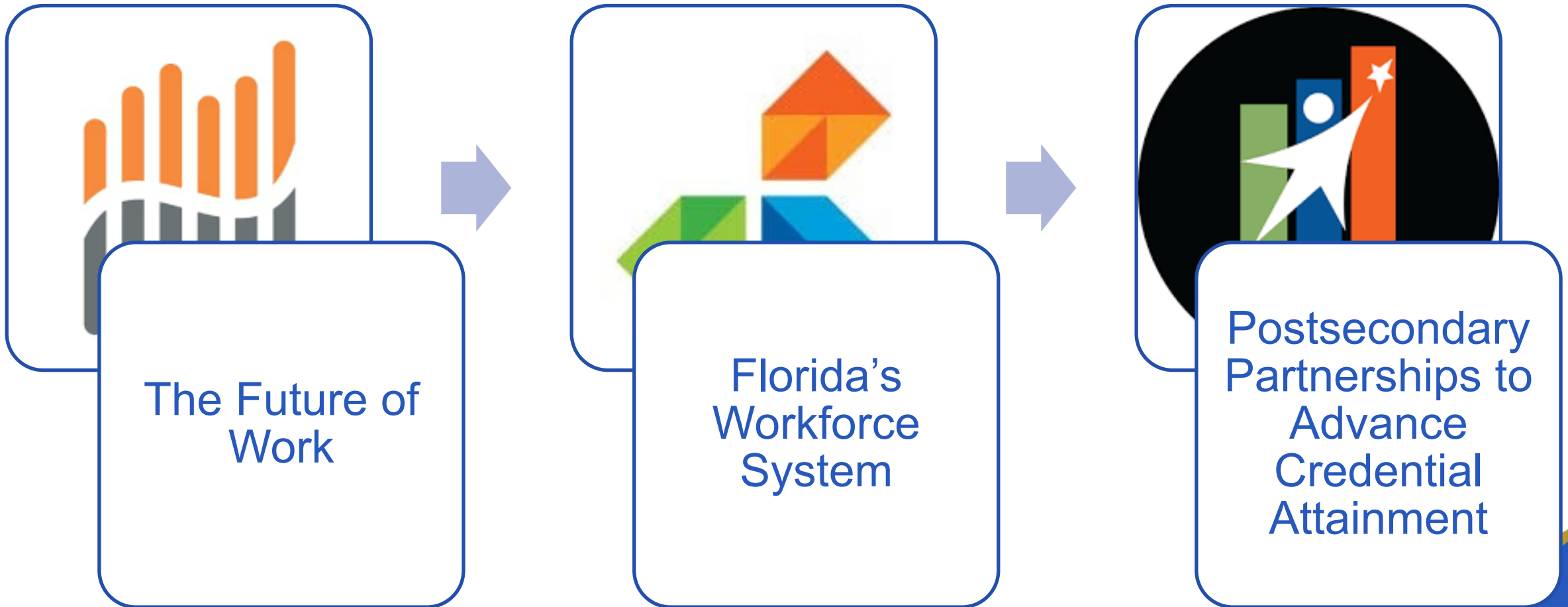
Two Critical Concepts



Sharing the Workforce Viewpoint

Panel Presentations

Expanding Our View of Workforce



The Future of Work

Christine (Chris) Chmura, Ph.D.

CEO and Chief Economist

Chmura Economics & Analytics





CHMURA



The Future of Work

June 11, 2023



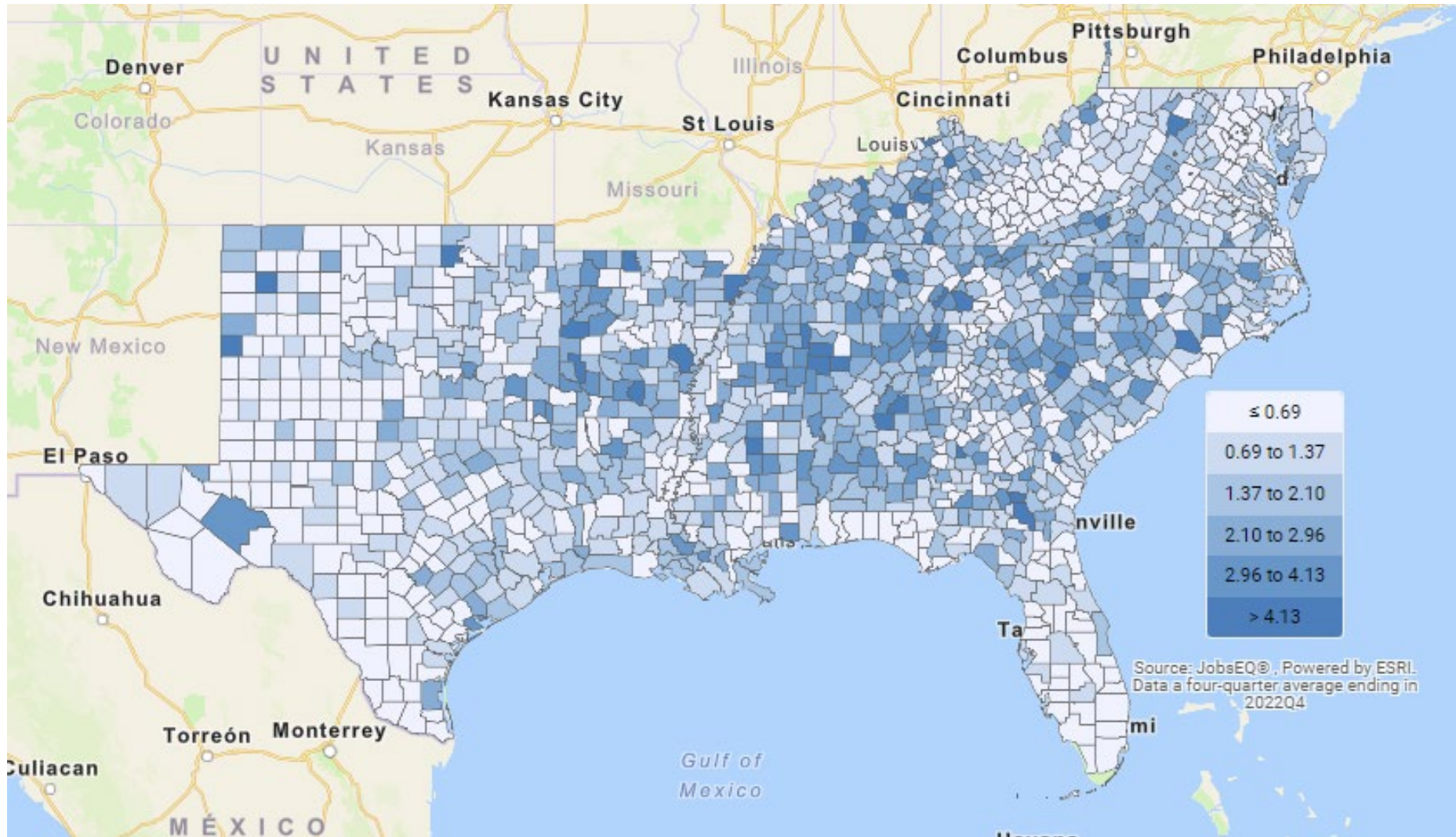
How to Think About The Future of Work

- Terminology
- Future needs vary by state and region in state
- Drivers that shape jobs of the future
- Focus on skills not occupations

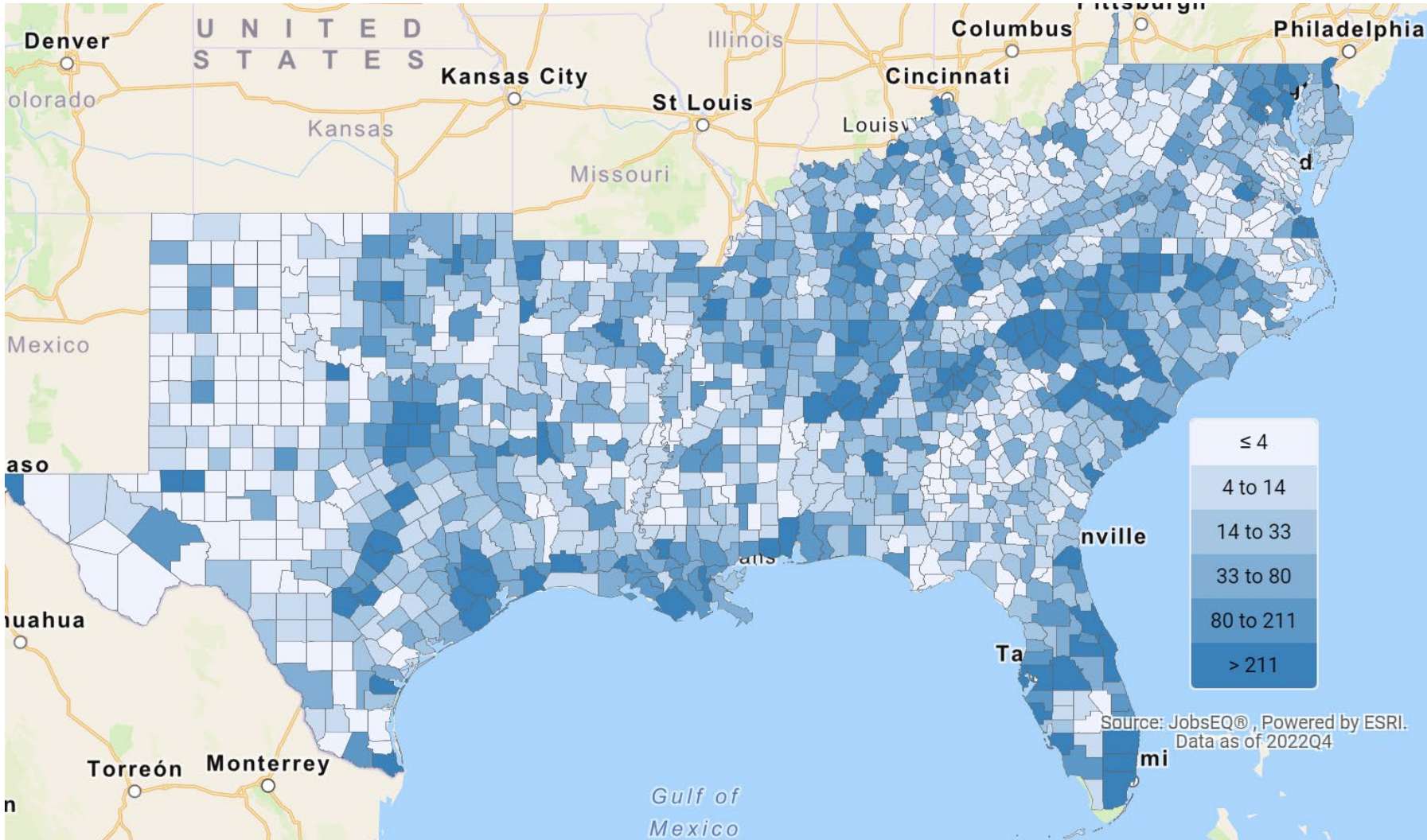
Key Definitions

- Industry sector details linked to
 - Occupation (job) details linked to
 - Skills needed
 - Curriculum
 - Attributes, knowledge, skills
-

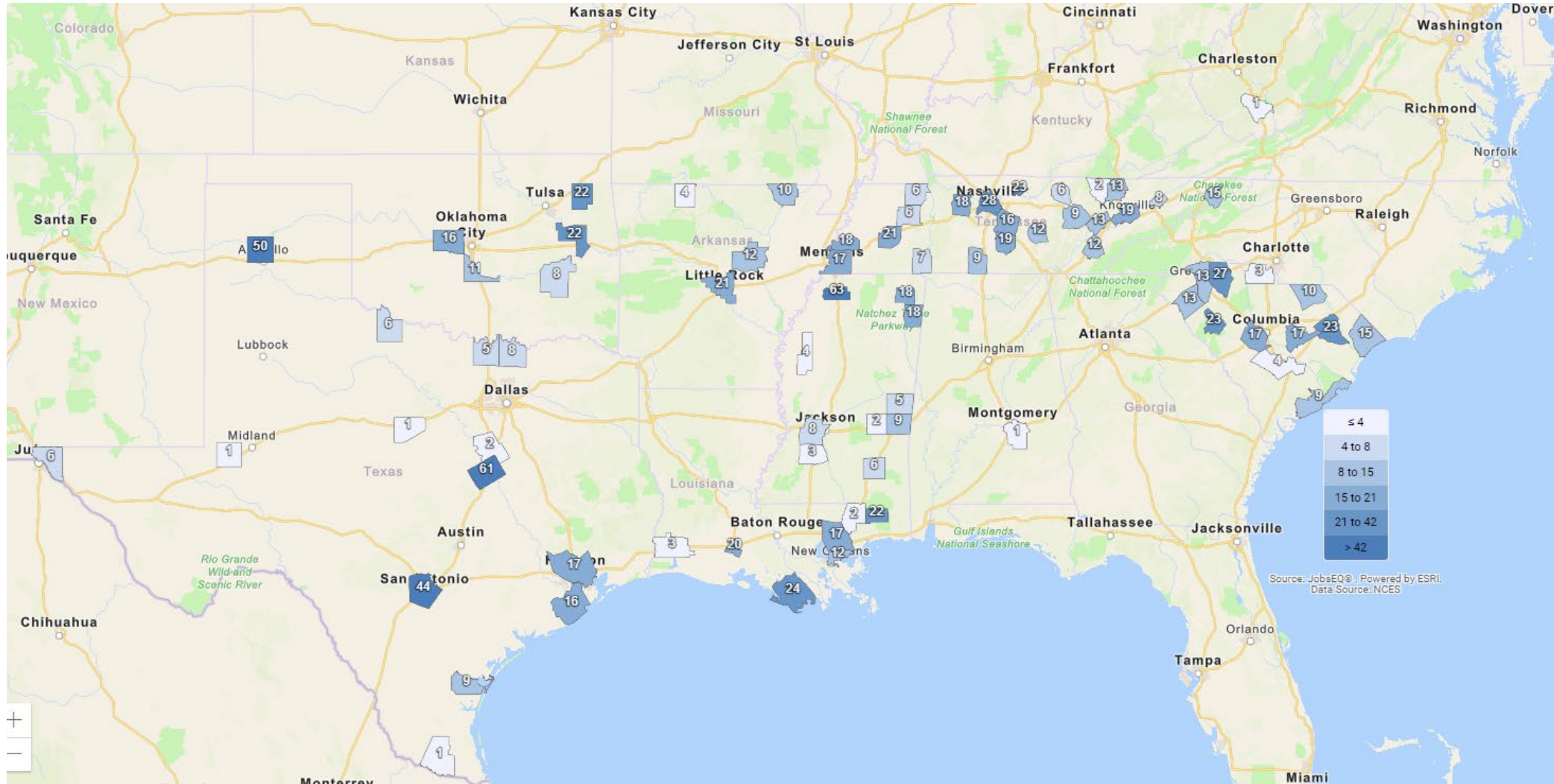
Manufacturing Industry Concentration (LQ) By County



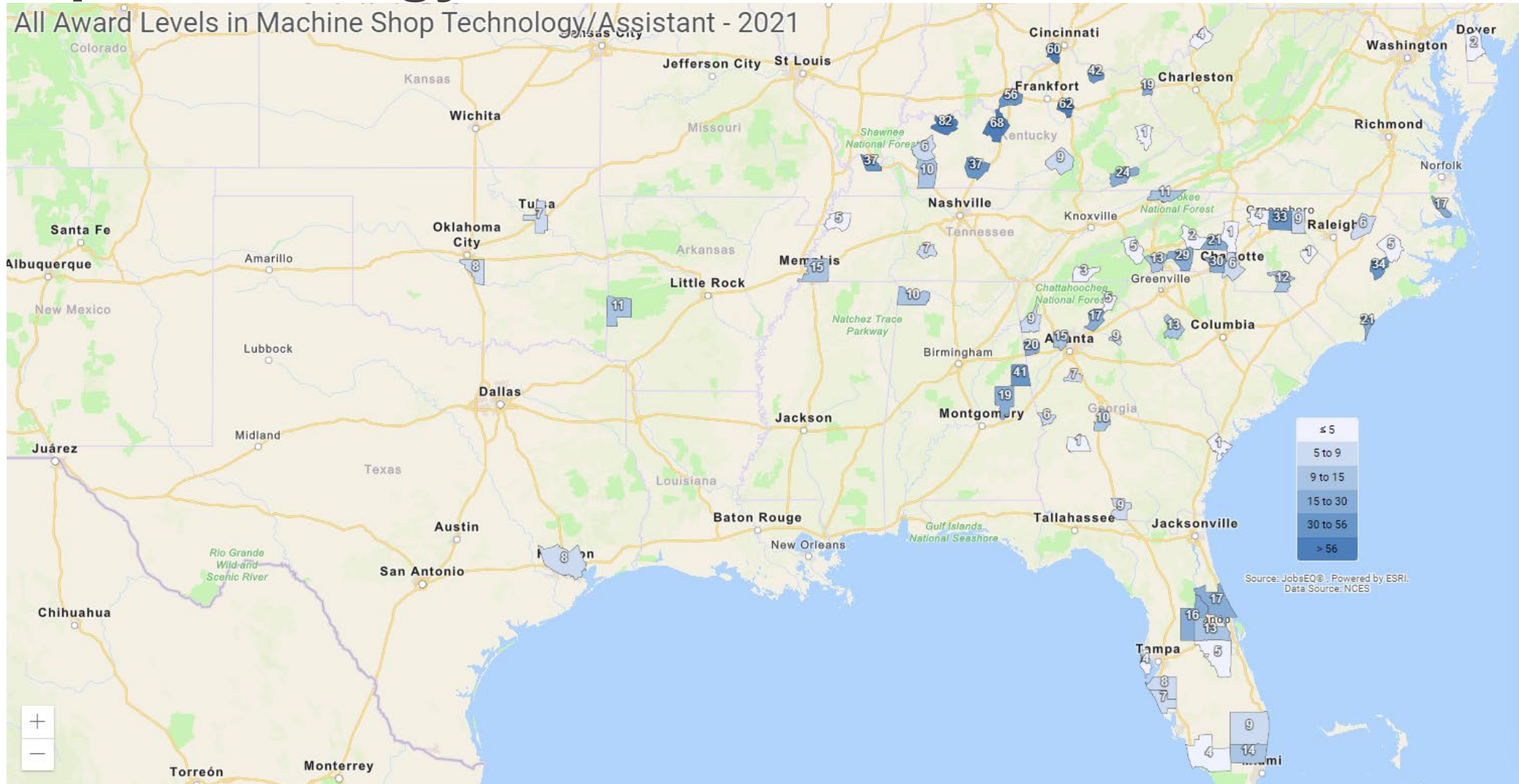
Machinist Occupation Supports Manufacturing and Other Industries



Curriculum Needed to Provide Skills: Machine Tool Technology/Machinist Awards in 2021



Curriculum Needed to Provide Skills: Machine Shop Technology/Assistant Awards in 2021



Top 10 Soft Skills Needed By Machinists in SREB States

Soft Skills

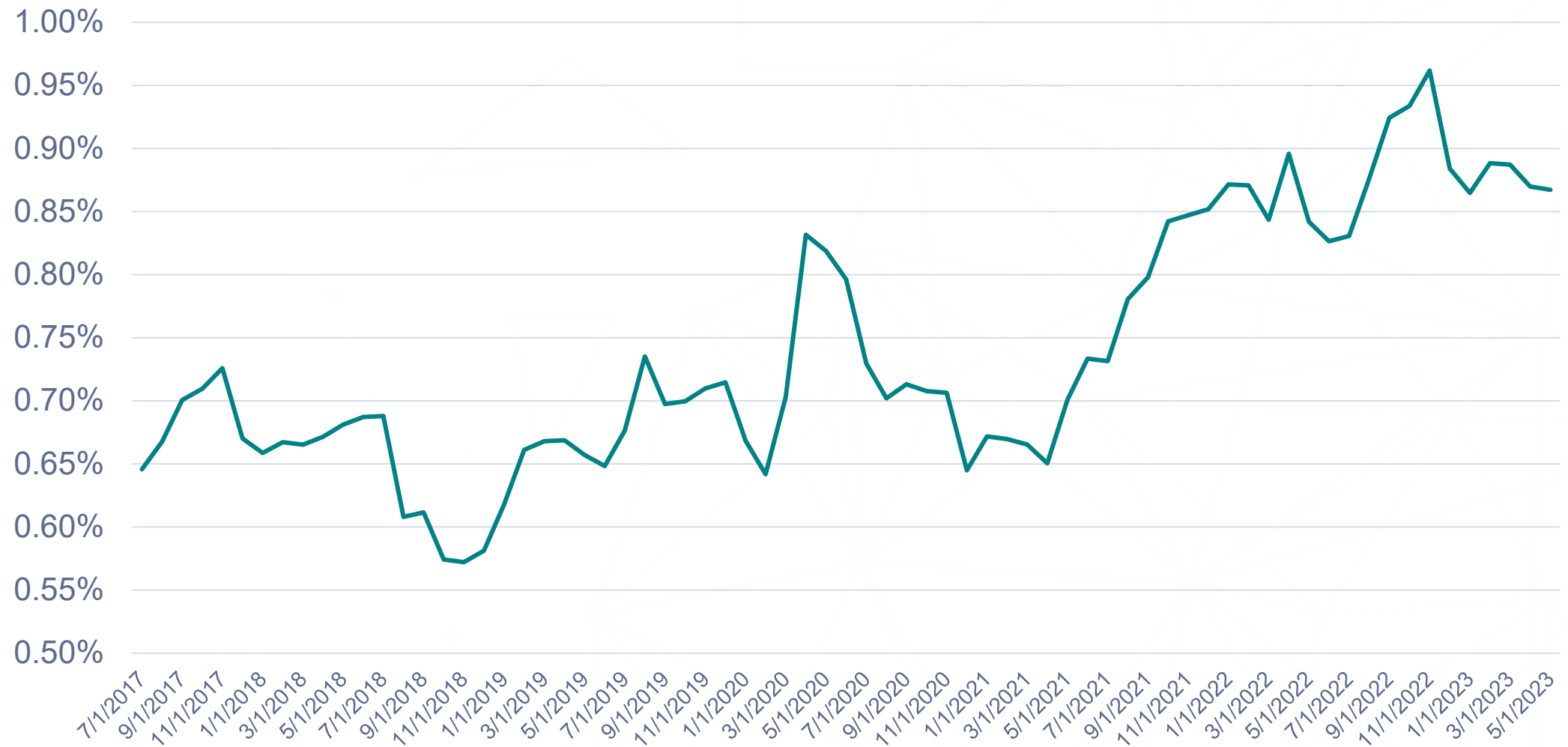
<input type="checkbox"/>	Skill Name	Active Job Ads
<input type="checkbox"/>	Communication (Verbal and written skills)	7,208
<input type="checkbox"/>	Cooperative/Team Player	3,588
<input type="checkbox"/>	Detail Oriented/Meticulous	2,655
<input type="checkbox"/>	Self-Motivated/Ability to Work Independently/Self Leadership	2,282
<input type="checkbox"/>	Problem Solving	2,244
<input type="checkbox"/>	Organization	2,110
<input type="checkbox"/>	Ability to Work in a Fast Paced Environment	1,685
<input type="checkbox"/>	Adaptability/Flexibility/Tolerance of Change and Uncertainty	1,529
<input type="checkbox"/>	Punctual	1,192
<input type="checkbox"/>	Troubleshooting	1,093

Source: JobsEQ®
 Data reflect online job postings that were active from 6/05/2022 to 6/05/2023
 See JobsEQ online Help for important Technical Notes

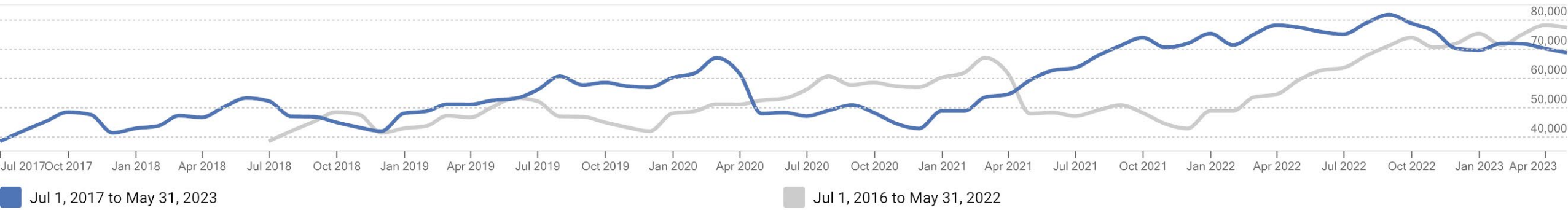
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Innovative Curriculum Follows Employer Needs

Ads Requiring Cyber Relative to All Ads in U.S. Have Grown



Active Job Ads by Date



Source: JobsEQ®, See JobsEQ online Help for important Technical Notes

Cyber Job Ads in the United States

38,368 Jun 2017

68,603 May 2023

Peak: 81,653 Sept 2022

Education Data, Both Genders, Total

			Total - All Programs (00.0000)	Cybersecurity Defense Strategy/Policy (43.0404)	Cyber/Computer Forensics and Counterterrorism (43.0403)	Cyber/Electronic Operations and Warfare (29.0207)
Regions and Schools	Award Level	Year	Awards	Awards	Awards	Awards
SREB States - All Schools	All Award Levels	2010	1,503,858	n/a	24	n/a
		2011	1,623,956	n/a	34	n/a
		2012	1,662,606	n/a	82	n/a
		2013	1,661,394	n/a	96	n/a
		2014	1,692,787	n/a	135	n/a
		2015	1,724,254	n/a	176	n/a
		2016	1,753,919	n/a	270	54
		2017	1,778,913	n/a	342	116
		2018	1,800,244	n/a	434	124
		2019	1,836,646	n/a	472	150
		2020	1,845,423	50	579	163
		2021	1,906,741	117	717	229

Source: JobsEQ®

Note: Awards data for occupations represent awards related to the occupation. Since an award is often related to multiple occupations, awards by occupation data should not be expected to sum.

Note: Awards and enrollment are for the academic year listed. The academic year ends in the spring semester of the displayed year.

Education Data, Both Genders, Total

			Total - All Programs (00.0000)	Cybersecurity Defense Strategy/Policy (43.0404)	Cyber/Computer Forensics and Counterterrorism (43.0403)	Cyber/Electronic Operations and Warfare (29.0207)
Regions and Schools	Award Level	Year	Awards	Awards	Awards	Awards
USA (0) - All Schools	All Award Levels	2010	4,461,303	n/a	37	38
		2011	4,771,610	n/a	73	66
		2012	4,909,272	n/a	119	96
		2013	4,916,440	n/a	233	17
		2014	4,954,196	n/a	483	81
		2015	4,991,769	n/a	583	110
		2016	5,023,135	n/a	709	241
		2017	5,080,555	n/a	1,001	416
		2018	5,174,107	n/a	1,238	560
		2019	5,267,037	n/a	1,343	745
		2020	5,263,562	124	1,430	820
		2021	5,369,496	191	1,569	917

Source: JobsEQ®

Note: Awards data for occupations represent awards related to the occupation. Since an award is often related to multiple occupations, awards by occupation data should not be expected to sum.

Note: Awards and enrollment are for the academic year listed. The academic year ends in the spring semester of the displayed year.

You Don't Need a Cyber Diploma To Perform Cyber Work But You Need Transferable Skills

Hard Skills

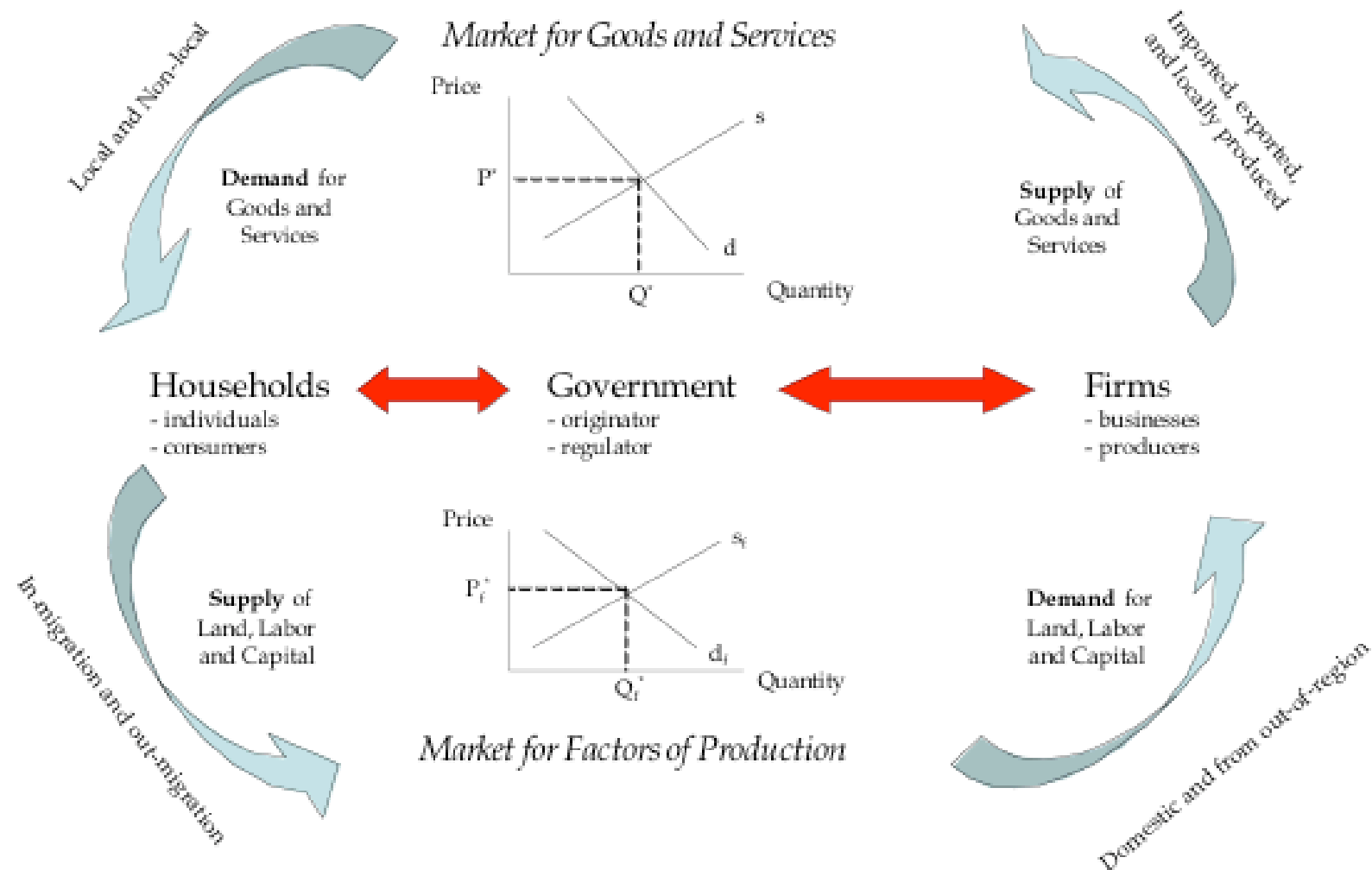
<input type="checkbox"/>	Skill Name	Active Job Ads	
<input type="checkbox"/>	Information Security	80,283	
<input type="checkbox"/>	Linux	43,546	
<input type="checkbox"/>	Agile	42,909	
<input type="checkbox"/>	Python	42,301	
<input type="checkbox"/>	Amazon Web Services (AWS)	34,607	
<input type="checkbox"/>	Computer Networking	32,822	
<input type="checkbox"/>	Microsoft Azure	32,752	
<input type="checkbox"/>	Cyber Security	31,185	
<input type="checkbox"/>	Computer Programming/Coding	29,634	
<input type="checkbox"/>	Microsoft Office	29,320	

Source: JobsEQ®
Data reflect online job postings that were active from 6/06/2022 to 6/06/2023
See JobsEQ online Help for important Technical Notes

Max Rows: 10

Drivers that Shape Jobs of the Future

The Big Picture: Always Moving to a New Equilibrium



Drivers: Technology

What Skills Do Employers Want For AI Jobs in SREB States?

Hard Skills

<input type="checkbox"/>	Skill Name	Active Job Ads	
<input type="checkbox"/>	Machine Learning	18,842	
<input type="checkbox"/>	Python	15,612	
<input type="checkbox"/>	Agile	12,249	
<input type="checkbox"/>	Computer Programming/Coding	10,206	
<input type="checkbox"/>	Structured Query Language (SQL)	9,237	
<input type="checkbox"/>	Amazon Web Services (AWS)	7,920	
<input type="checkbox"/>	Java	7,577	
<input type="checkbox"/>	JavaScript	7,155	
<input type="checkbox"/>	Microsoft Azure	6,660	
<input type="checkbox"/>	Microsoft Excel	6,418	

Source: JobsEQ®

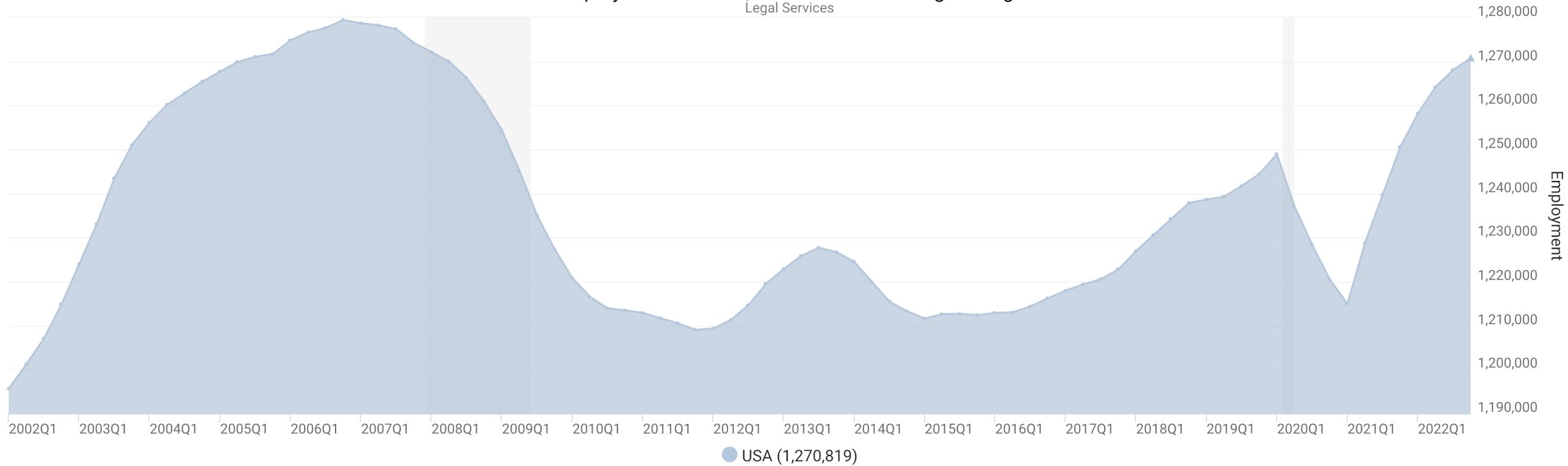
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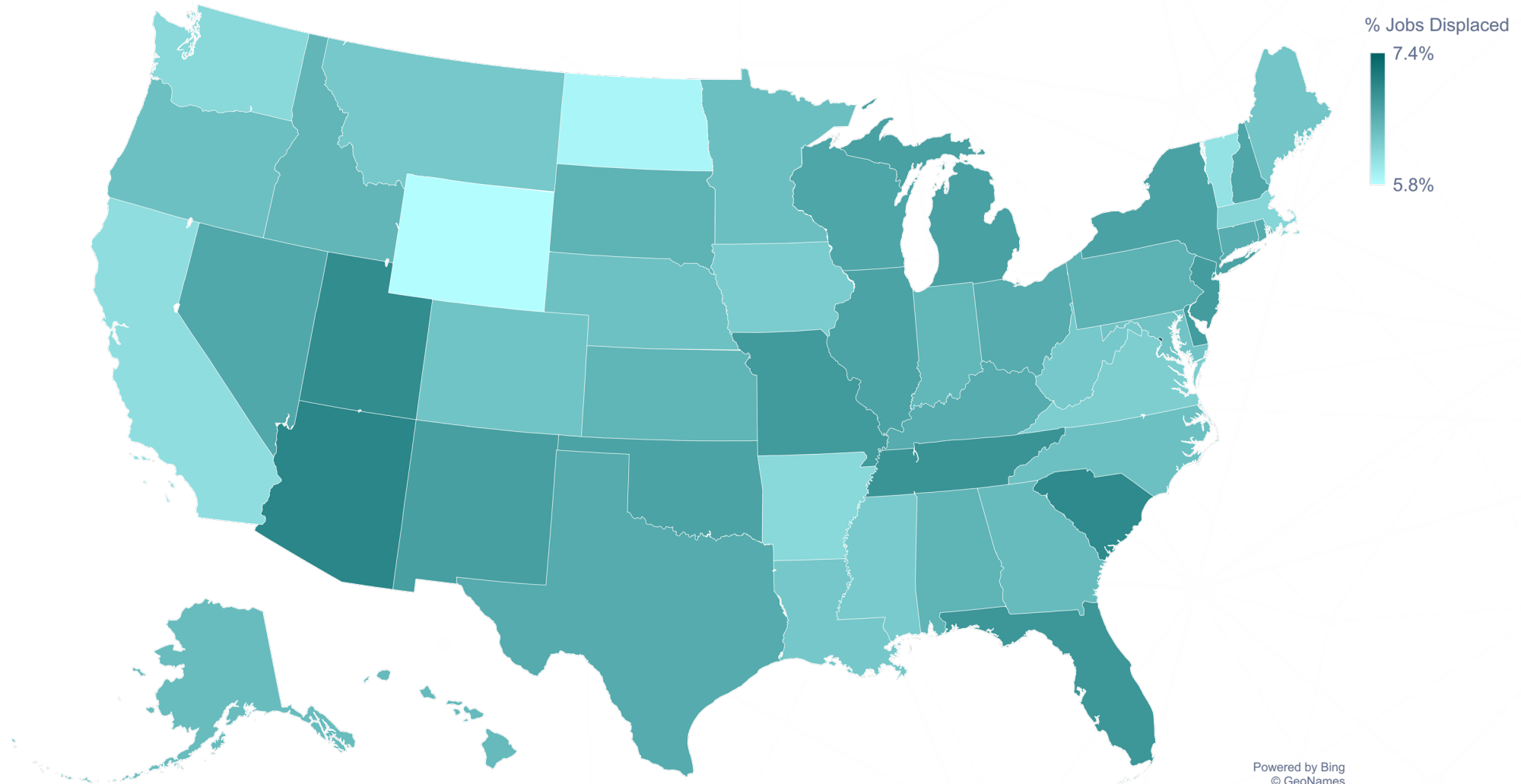
AI Frees Up Time for Higher-Level Work Increased Productivity Can Lead to Job Losses

Employment for USA, Four-Quarter Moving Average
Legal Services



Source: JobsEQ®. Data as of 2022Q4. The shaded areas of the graph represent national recessions.

Estimated Percentage of Jobs Displaced By AI Over Next 10 Years



Source: Chmura and Goldman Sachs See blog at <https://www.chmura.com/blog>

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Drivers: What Skills Do Employees Need Because of Changes in Regulations?

Green Industries in Energy Cluster in SREB States, 2022Q4¹

CLIP

NAICS	Industry	CURRENT			5-YEAR HISTORY			10-YEAR FORECAST				
		Empl	Avg Ann Wages	LQ	Empl Change	Trend	Ann %	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
221113	Nuclear Electric Power Generation	17,897	\$156,073	1.20	-2,573		-2.7%	8,520	5,024	9,088	-5,592	-3.7%
335910	Battery Manufacturing	9,409	\$74,925	0.56	726		1.6%	12,647	4,048	6,758	1,841	1.8%
333611	Turbine and Turbine Generator Set Units Manufacturing	7,572	\$110,442	1.16	-736		-1.8%	6,536	2,652	4,568	-683	-0.9%
221111	Hydroelectric Power Generation	7,169	\$157,931	1.05	159		0.5%	5,397	2,261	4,109	-973	-1.4%
221115	Wind Electric Power Generation	4,205	\$105,937	1.39	1,548		9.6%	6,800	1,692	3,112	1,996	4.0%
221114	Solar Electric Power Generation	3,682	\$119,768	1.12	2,892		36.1%	6,078	1,372	2,851	1,854	4.2%
221118	Other Electric Power Generation	1,617	\$138,685	1.27	1,415		51.6%	1,733	535	999	199	1.2%
221117	Biomass Electric Power Generation	512	\$93,574	0.67	19		0.8%	467	172	317	-22	-0.4%
221116	Geothermal Electric Power Generation	44	\$116,723	0.10	9		4.9%	59	17	32	11	2.3%
7908	Green Industries in Energy Cluster	52,107	\$127,247	0.97	3,460		1.4%	48,239	17,774	31,834	-1,369	-0.3%
-	Total - All Industries	59,755,768	\$62,481	1.00	3,734,479		1.3%	77,366,692	29,987,913	41,835,870	5,542,909	0.9%

Source: JobsEQ®
Data as of 2022Q4

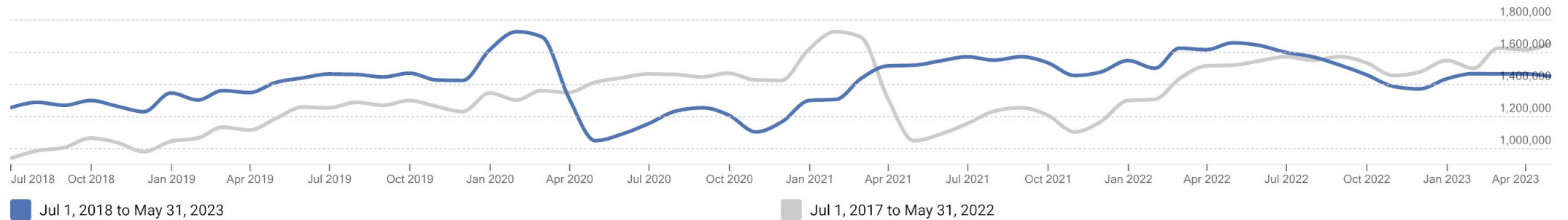
SOC	Occupation	CURRENT		10-YEAR FORECAST				
		Empl	Mean Ann Wages ²	Total Demand	Exits	Transfers	Empl Growth	Ann % Growth
15-0000	Computer and Mathematical Occupations	1,970,784	\$100,300	1,885,702	466,758	1,028,115	390,829	1.8%
39-0000	Personal Care and Service Occupations	1,420,557	\$33,600	2,969,036	1,098,418	1,587,263	283,354	1.8%
31-0000	Healthcare Support Occupations	2,248,058	\$32,600	3,809,545	1,507,135	1,888,087	414,323	1.7%
35-0000	Food Preparation and Serving Related Occupations	4,946,841	\$29,300	10,692,228	4,505,089	5,329,291	857,848	1.6%
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations	900,089	\$60,900	1,126,825	405,051	590,460	131,314	1.4%
21-0000	Community and Social Service Occupations	947,332	\$53,500	1,102,847	400,145	573,452	129,250	1.3%
23-0000	Legal Occupations	486,503	\$109,100	422,810	161,926	192,110	68,774	1.3%
11-0000	Management Occupations	4,027,014	\$114,200	4,074,039	1,237,498	2,345,658	490,883	1.2%
13-0000	Business and Financial Operations Occupations	3,732,317	\$82,400	3,913,564	1,179,851	2,282,899	450,813	1.1%
29-0000	Healthcare Practitioners and Technical Occupations	3,458,241	\$91,100	2,524,792	1,094,124	1,046,562	384,106	1.1%
53-0000	Transportation and Material Moving Occupations	5,424,181	\$43,000	8,309,107	2,957,804	4,787,127	564,176	1.0%
25-0000	Educational Instruction and Library Occupations	3,076,654	\$58,000	3,190,315	1,445,136	1,450,373	294,806	0.9%
37-0000	Building and Grounds Cleaning and Maintenance Occupations	2,039,729	\$33,600	3,032,986	1,304,464	1,543,381	185,140	0.9%
19-0000	Life, Physical, and Social Science Occupations	460,181	\$81,400	488,006	107,036	338,709	42,261	0.9%
47-0000	Construction and Extraction Occupations	2,894,226	\$49,900	3,203,327	1,029,765	1,925,463	248,099	0.8%
49-0000	Installation, Maintenance, and Repair Occupations	2,502,455	\$53,600	2,729,926	948,538	1,561,399	219,988	0.8%
17-0000	Architecture and Engineering Occupations	933,827	\$94,400	797,114	271,580	447,009	78,524	0.8%
33-0000	Protective Service Occupations	1,307,493	\$50,100	1,643,003	714,655	852,072	76,275	0.6%
41-0000	Sales and Related Occupations	5,899,999	\$46,300	8,270,548	3,514,305	4,551,448	204,794	0.3%
45-0000	Farming, Fishing, and Forestry Occupations	245,984	\$34,300	402,754	127,681	267,418	7,655	0.3%
43-0000	Office and Administrative Support Occupations	7,530,530	\$43,600	9,206,657	4,100,766	5,088,334	17,557	0.0%
51-0000	Production Occupations	3,302,765	\$44,300	3,827,596	1,440,043	2,385,415	2,138	0.0%
00-0000	Total - All Occupations	59,755,760	\$56,800	77,622,726	30,017,771	42,062,046	5,542,909	0.9%

Drivers: Ecosystem (Culture, Demographics, COVID, Business Cycle)

Source: Chmura's JobsEQ

Drivers: Some Skills Persist as Long as We Interact with Humans! Communication is the Top Requirement in All Ads in the United States

Active Job Ads by Date



Source: JobsEQ®, See JobsEQ online Help for important Technical Notes

Top 10 Soft Skills Required By Employers in Job Ads

Soft Skills

<input type="checkbox"/>	Skill Name	Active Job Ads	
<input type="checkbox"/>	Communication (Verbal and written skills)	18,155,331	
<input type="checkbox"/>	Cooperative/Team Player	10,710,690	
<input type="checkbox"/>	Customer Service	7,416,544	
<input type="checkbox"/>	Organization	5,241,086	
<input type="checkbox"/>	Problem Solving	4,589,355	
<input type="checkbox"/>	Detail Oriented/Meticulous	4,384,807	
<input type="checkbox"/>	Adaptability/Flexibility/Tolerance of Change and Uncertainty	4,203,438	
<input type="checkbox"/>	Self-Motivated/Ability to Work Independently/Self Leadership	4,186,675	
<input type="checkbox"/>	Interpersonal Relationships/Maintain Relationships	4,135,626	
<input type="checkbox"/>	Supervision/Management	3,742,619	

Source: JobsEQ®

Data reflect online job postings that were active from 6/05/2022 to 6/05/2023

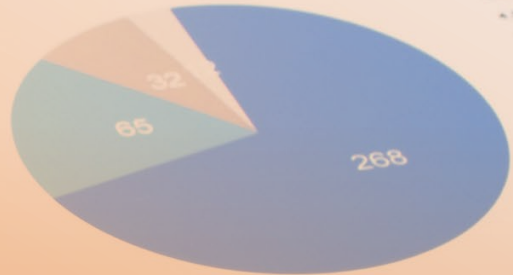
See JobsEQ online Help for important Technical Notes

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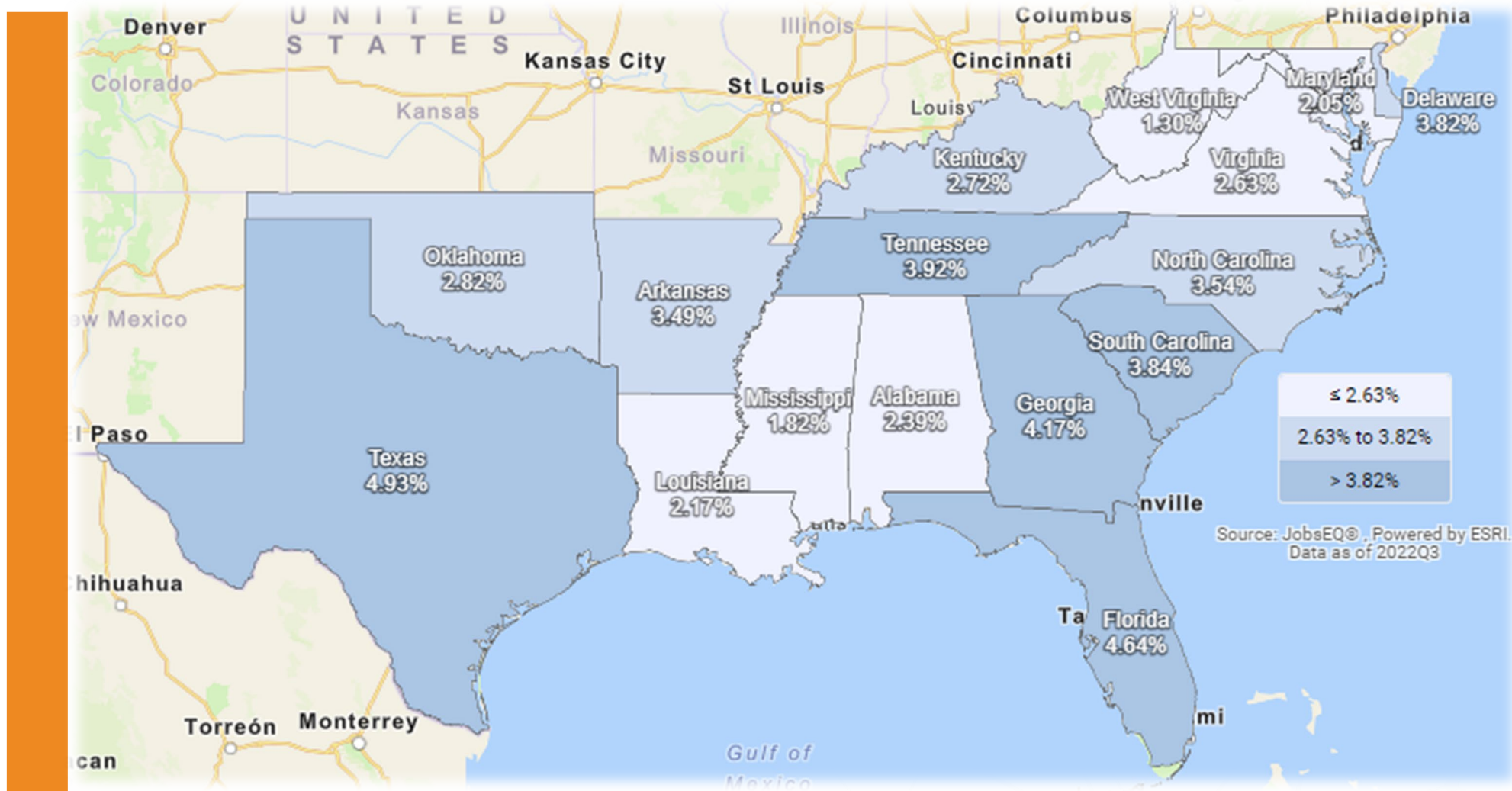
Summary On The Future of Work

- Future skill needs vary by state and region in state
- Drivers that shape jobs of the future
 - Technology
 - Regulations
 - Ecosystem
 - Culture
 - Demographics
 - COVID
 - Business Cycle
- Focus on skills not occupations

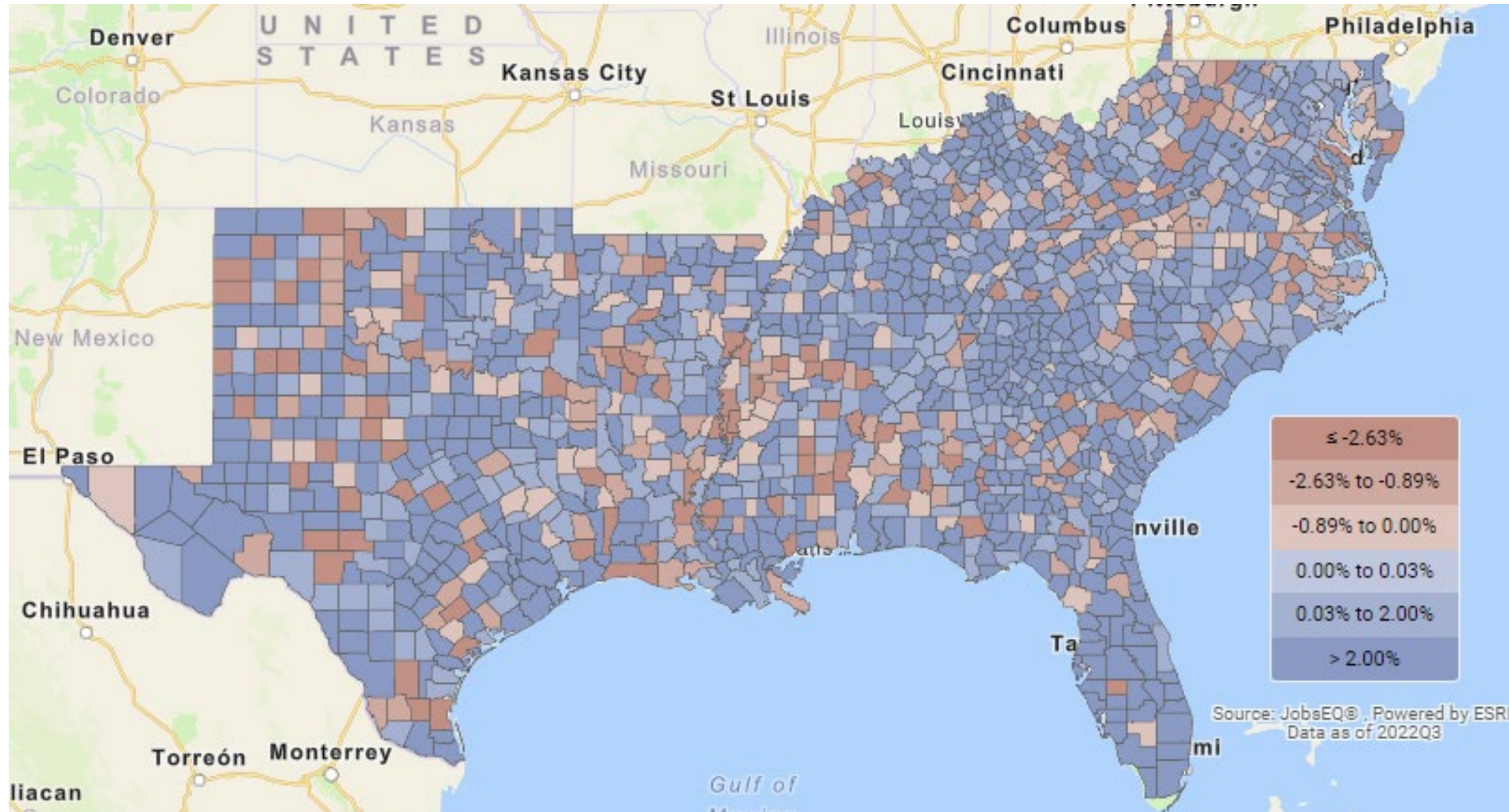
Economic Overview



Employment, Percentage Change From Last Year 2022Q3



Employment, Percentage Change From Last Year 2022Q3



Summary

U.S. stocks tumbled on Friday and ended the week lower as investors worried the Federal Reserve will increase the economy to slow too much by raising interest rates faster than previously expected. For the week, the Dow Jones Industrial Average declined 1.9%, the S&P 500 decreased 2.8%, and the NASDAQ fell 3.5%. It was a light week for economic reports. Initial unemployment claims for the week ending April 10 decreased 2,000 to 184,000. Housing starts inched

forward 0.3% and building permits—a forward looking metric—were up 0.4% last month as strong activity in the volatile multifamily segment offset declines in single-family activity. On a year-over-year basis, starts climbed 3.9% and building permits were 6.7% higher. Sales of existing homes—which are counted when contracts are closed—decreased 2.7% last month and were down 4.5% on a year-over-year basis. The median sales price rose 15.0% from March 2021. In more

housing news, the National Association of Home Builders October Housing Market Index, a gauge of builder confidence, declined 2 points to 77, but still signaled strong confidence among builders. The Conference Board's Leading Economic Index, a gauge of the outlook for the U.S. economy over the next three to six months, rose 0.3% in March after advancing an upwardly revised 0.6% in February.

ECONOMIC RELEASES

Last Week: Indicator	Number Reported	Consensus Expectation	Comment
NAHB Housing Market Index (Apr - Mo 10:00)	77	77	Down 2 points from April
Housing Starts (Mar - Tu 8:30)	1,793 TUAR	1,750 TUAR	Single-family starts decreased 1.7%
Building Permits (Mar - Tu 8:30)	1,873 TUAR	1,840 TUAR	Single-family permits declined 4.8%
Existing Home Sales (Mar - We 10:00)	5.77 MUAR	5.80 MUAR	-4.5% from March 2021
Initial Unemployment Claims (4/16 - Th 8:30)	184 K	195 K	4-week moving average rose 4,500 to 177,250
Continuing Claims (4/16 - Th 8:30)	1,417 K	NA	
Leading Economic Index (Mar - Th 10:00)	+0.3%	+0.3%	February revised up to +0.6%
Upcoming Week: Indicator	Consensus Expectation	Last Period	Comment
Durable Orders (Mar - Tu 8:30)	+1.1%	-2.2%	
Durable Orders ex-transportation (Mar - Tu 8:30)	+0.5%	-0.6%	
New Home Sales (Mar - Tu 10:00)	770 TUAR	772 TUAR	
Pending Home Sales (Mar - We 10:00)	-1.5%	-4.1%	
Real Gross Domestic Product (4/17 - Th 8:30)	+1.1%	+6.9%	Advance estimate
Chain Deflator (4/17 - Th 8:30)	+7.3%	+7.1%	Advance estimate
Initial Unemployment Claims (4/23 - Th 8:30)	182 K	184 K	
Continuing Claims (4/16 - Th 8:30)	NA	1,417 K	Not available
Personal Income (Mar - Fr 8:30)	+0.4%	+0.5%	
Personal Spending (Mar - Fr 8:30)	+0.6%	+0.2%	
PCE Prices - Core (Mar - Fr 8:30)	+0.3%	+0.4%	
Michigan Sentiment (Apr - Fr 10:00)	65.7	65.7	Final reading

*Sources: www.briefing.com and www.federalreserve.gov

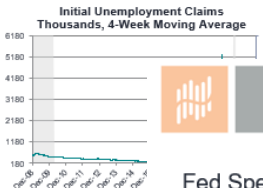
Economic Review

Housing starts and building permits—a forward-looking metric—rose modestly last month driven by activity in the volatile multi-family segment. HOUSING STARTS inched forward 0.3% in March to 1,793 thousand units at an annualized rate (TUAR). The March rate is 3.9% above the March 2021 rate of 1,725 TUAR. Starts to build single-family homes declined 1.7% while starts to build units in buildings with at least five units jumped 7.5%. By region, total starts advanced 110.8% in the Northeast and 7.7% in the West while falling 2.0% in the Midwest and 17.2% in the South. New BUILDING PERMITS edged up 0.4% to 1,865 TUAR and are 6.7% above the March 2021 rate of 1,755 TUAR. Permits for units in buildings with five units or more jumped 10.0% in March while permits to build single-family homes fell 4.8%.

Sales of existing homes declined more than expected in March while the median existing home sales price increased at a healthy pace. EXISTING HOME SALES, which are counted when contracts are closed, fell 2.7% to 5.77 million units at an annualized rate (MUAR) from 5.83 MUAR in February. From March 2021, sales decreased 4.5%. First-time buyers purchased 30% of all existing homes sold last month up 1 percentage point from February. All-cash sales

represented 28% of sales in March, up 3 percentage points from February. Distressed sales accounted for less than 1% of March sales, unchanged from February. The median sales price advanced 15.0% from March 2021 to \$375,300. At the current sales pace, it would take 2.0 months to sell the 950,000 existing homes for sale. Sales decreased 2.0% in the Northeast, 4.5% in the Midwest, and 3.0% in the South while remaining unchanged in the West.

INITIAL UNEMPLOYMENT CLAIMS declined to 184,000 for the week ending April 16, slightly below economists' expectations. The four-week moving average rose 4,500 to 177,250. CONTINUED BENEFITS decreased 58,000 to 1,417,000 for the week ending April 9. The four-week moving average, a better measure of underlying trends, fell 31,250 to 1,481,750.



Fed Speeches

Federal Reserve Bank of St. Louis President and CEO James Bullard spoke at Princeton University last week. President Bullard talked about how the United States experienced a core personal consumption expenditure (PCE) inflation rate similar to the current rate of 5.4% in both 1974 and 1983. The Federal Open Market Committee (FOMC) kept the target range for the federal funds rate

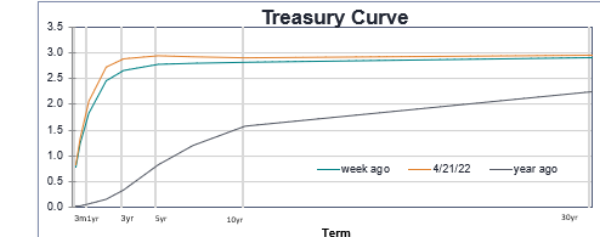
- The FOMC kept the policy rate relatively high in the face of declining inflation. The expected annual real interest rate was relatively high.
- The subsequent experience was that core PCE inflation was below 4% for the next 10 years.
- The real economy also stabilized with no recession until 1980-81.
- The contrast between the 1974 and 1983 experiences convinced many that it was important to avoid getting "behind the curve" on inflation.

President Bullard also presented two interpretations of "the Fed is not as far behind the curve," although it would still have to raise the policy rate to ratify the forward guidance.

Federal Reserve Bank of St. Louis President and CEO James Bullard fairly low in response to rising inflation in 1974. Subsequently, when the United States experienced relatively high inflation over the next decade and multiple recessions. The FOMC's actions in 1984 were quite different.

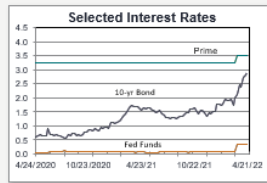
- The 1983 move, which was also looking at a core PCE inflation rate similar to today's, had a different approach to monetary policy and spoke more about monetary factors affecting inflation.

whether the central bank, which is expected to raise the target range for the federal funds rate by at least 50 basis point at its next meeting, is "behind the curve" on increasing rates. Based on the second interpretation, which takes into account the credibility of the modern Fed, "the Fed is not as far behind the curve," although it would still have to raise the policy rate to ratify the forward guidance."



Financial Markets

U.S. stocks ended last week lower with the Dow Jones Industrial Average decreasing 1.9%, the S&P 500 declining 2.8%, and the NASDAQ falling 3.8%. Treasury yields rose across the curve with the 10-year yield increasing 7 basis points (bps) to 2.90% and the 30-year yield up 3 bps to 2.95%. Oil prices eased 0.8%, ending the week at \$105.67 per barrel. The U.S. dollar climbed 2.1% against the Japanese yen and the euro decreased 0.3% against the greenback last week.



Interest Rate Forecast*

The Federal Open Market Committee (FOMC) raised the federal funds rate target to 0.25% to 0.50% at the Fed's March policy meeting. In the statement released following the March meeting, the FOMC said, "Indicators of economic activity and employment have continued to strengthen. Job gains have been strong in recent months,

and the unemployment rate has declined substantially. Inflation remains elevated, reflecting supply and demand imbalances related to the pandemic, higher energy prices, and broader price pressures." The statement went on to say, "...the Committee anticipates ongoing increases in the target range will be appropriate."

Avg. for:	Prime	Fed Funds	3-Mo. T-Bill	6-Mo. T-Bill	1-Yr. Note	10-Yr. Treasury	30-Yr. Bond	30-Yr. Mortgage
2 nd Qtr '22	3.92	0.79	0.93	1.27	2.15	2.63	2.90	4.21
3 rd Qtr '21	4.58	1.46	1.52	1.89	2.65	2.98	3.30	4.44
4 th Qtr '20	5.00	1.88	1.88	2.23	2.87	3.12	3.57	4.60
1 st Qtr '23	5.42	2.29	2.29	2.53	3.07	3.35	3.87	4.87
2 nd Qtr '22	5.84	2.71	2.68	2.83	3.28	3.57	4.05	5.15

*Forecast as of March 20, 2022

FINANCIAL MARKET SUMMARY

	As of 4/22/2022	As of 4/15/2022	Weekly Change	4-Week Change	12-Week Change
MONEY MARKET \$ (Changes in BPs)					
Prime	3.50	3.50	0	0	25
LIBOR Index Base Rate (1Month)	0.62	0.55	7	17	51
Fed Funds (Wed a/c)	0.33	0.33	0	0	25
TREASURY \$ (BE) (Changes in BPs)					
1 Month	0.83	0.79	4	28	66
3 Months	1.34	1.25	9	33	99
6 Months	2.08	1.85	22	39	148
1 Year	2.72	2.47	25	42	171
2 Years	2.94	2.79	15	39	140
5 Years	2.90	2.83	7	42	115
30 Years	2.95	2.92	3	35	88
MUNICIPAL \$-AAA G.O. & Mortgage (Changes in BPs)					
2-Year Muni	2.21	2.02	19	48	162
5-Year Muni	2.48	2.26	22	49	154
10-Year Muni	2.69	2.46	23	70	138
30-Year Muni	3.04	2.85	19	44	129
30-Year Conventional Mortgage	5.11	5.00	11	68	155
MARKET INDICATOR \$ (Changes in %)					
DJIA	33,811.40	34,451.23	(1.9)	(3.0)	(1.3)
S&P 500	4,271.78	4,392.59	(2.8)	(6.0)	(2.9)
NA BDAQ	12,839.29	13,351.08	(3.8)	(6.4)	(6.8)
CMB Futures	323.79	331.92	(2.4)	(1.0)	22.6
Oil (WTI Crude)	105.67	106.50	(0.8)	(6.2)	24.1
Gold	1,934.50	1,977.10	(2.3)	(1.0)	5.5
Yen / Dollar	128.50	125.88	2.1	5.2	13.0
Dollar / Euro	1.08	1.08	(0.3)	(1.7)	(4.8)

The information in this newsletter is obtained from sources we believe to be reliable. We cannot, however, guarantee its accuracy and completeness. Furthermore, the opinions in this report constitute our present judgment, which is subject to change without notice.

Sign up here for complementary updates:
<https://www.chmura.com/weekly-economic-update>

Florida's Workforce System

Adam Briggs, MBA, Ph.D., PMP

Sr. Director, Business & Workforce Strategies

CareerSource Florida



Data-driven Approaches to Building Florida's Talent Pipeline



Adam Briggs, Ph.D.

Senior Director, Workforce Program
Development

CareerSource Florida

Planning for Florida 2030: Key Themes and Initiatives

- Data-driven analysis supplemented by qualitative feedback.
- Differentiating between various types of demand across the state.
- Highlighting credentials of value within a competitive marketplace.
- Identifying career pathways based on relationships among credentials.
- Legislative strategies: REACH Act (2021) and Senate Bill 240 (2023).
- Funding strategies: Pathways to Career Growth Grant, Florida Job Growth Grant Fund, and WIOA Governor's Reserve.
- Systems strategies: FLWINS Workforce System Integration and Education Meets Opportunity Platform.

Information Sources for In-demand Occupations

- Florida Department of Economic Opportunity (DEO): state and regional lists.
- DEO's [2022-2030 Employment Projection Dashboard](#): state, regional, county data.
- Labor Market Estimating Conference Critical Undersupply List.
- Lightcast Labor Market Information and Analytics.
- Florida Chamber Foundation's Workforce Needs Survey 2.0.
- Joint Florida Chamber/CareerSource Florida Industry Focus Groups (2023).

Florida Department of Economic Opportunity

- State-level jobs with demand greater than the state mean for in-demand jobs. (1.49%)
- State-level in-demand jobs also flagged as high-skill, high-wage.
- Source: [DEO Demand Occupation Lists](#).

Computer Network Architects	1.53
Registered Nurses	1.53
Marketing Managers	1.54
Training and Development Specialists	1.58
Construction Managers	1.64
Civil Engineers	1.67
Electronics Engineers, Except Computer	1.69
Mechanical Engineers	1.75
Architectural and Engineering Managers	1.76
Producers and Directors	1.81
Computer and Information Systems Managers	1.82
Management Analysts	1.85
Dental Hygienists	1.87
Electrical Engineers	1.97
Industrial Machinery Mechanics	2.15
Business Teachers, Postsecondary	2.23
Financial Managers	2.28
Industrial Engineers	2.36
Diagnostic Medical Sonographers	2.45
Market Research Analysts and Marketing Specialists	2.73
Respiratory Therapists	3.03
Occupational Therapy Assistants	3.36
Physical Therapist Assistants	3.39
Physician Assistants	3.99
Information Security Analysts	4.14

Florida Department of Economic Opportunity

- State-level jobs with demand greater than the state mean for in-demand jobs. (1.49%)
- State-level in-demand jobs NOT flagged as high-skill, high-wage.
- File also contains Demand Lists for each of Florida's 24 local workforce development areas.
- Source: [DEO Demand Occupation Lists](#).

Medical Secretaries and Administrative Assistants	1.50
Electricians	1.51
Cardiovascular Technologists and Technicians	1.55
Community and Social Service Specialists, All Other	1.56
Licensed Practical and Licensed Vocational Nurses	1.57
Surgical Technologists	1.63
Surveying and Mapping Technicians	1.65
Computer User Support Specialists	1.73
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	1.74
Meeting, Convention, and Event Planners	1.80
Paralegals and Legal Assistants	1.80
Industrial Truck and Tractor Operators	1.83
First-Line Supervisors of Housekeeping and Janitorial Workers	1.83
Dental Assistants	1.87
Biological Technicians	1.89
Security and Fire Alarm Systems Installers	2.00
Tile and Stone Setters	2.06
Glaziers	2.24
Phlebotomists	2.29
Medical Assistants	2.34
Roofers	2.35
Substance Abuse, Behavioral Disorder, and Mental Health Counselors	2.37
Audio and Video Technicians	2.49
Interpreters and Translators	3.15

Labor Market Estimating Conference (LMEC)

- State-level critical undersupply jobs with less than 95% of demand projected for 2032 met.
- Top 7/10 and 4/5 require nondegree postsecondary credentials.
- File also contains wage information and critical undersupply estimates for each of Florida's 24 local workforce areas.
- Source: [LMEC Statewide and Workforce Region Data File](#).

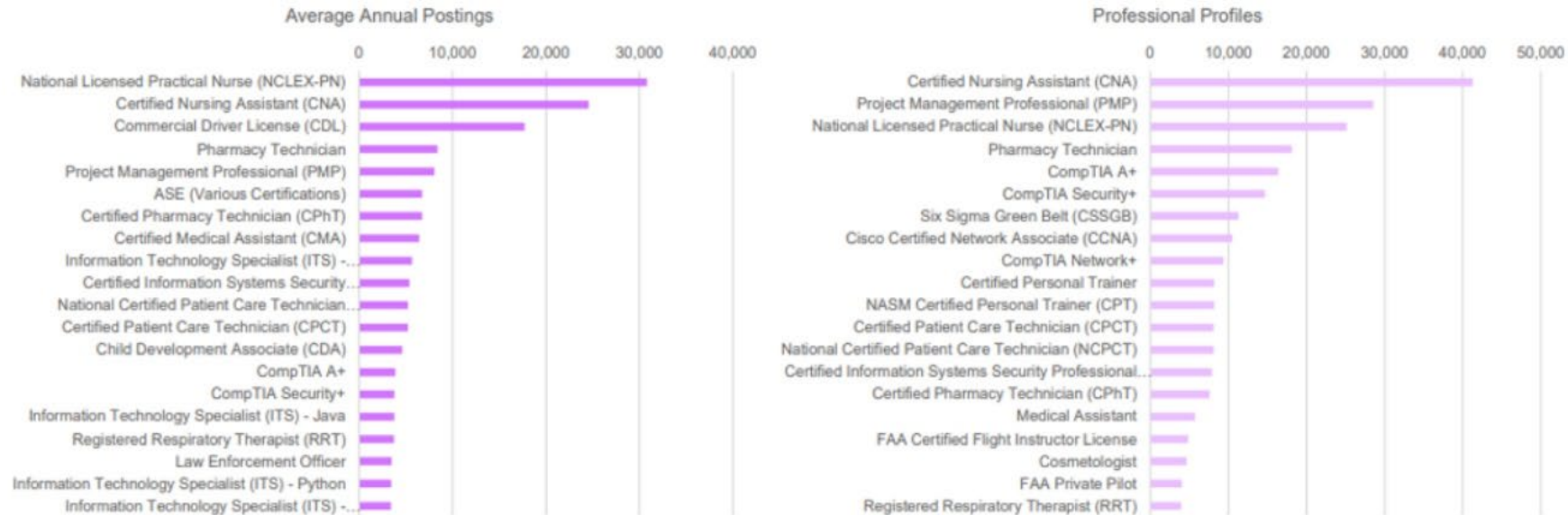
Educational Requirement	Occupational Title	Undersupply FY 2031-2032	% of 2032 Demand Met
Postsecondary nondegree award	Nursing Assistants	-36,207	74.80%
Postsecondary nondegree award	Licensed Practical, Licensed Vocational Nurses	-18,253	75.63%
Postsecondary nondegree award	Real Estate Sales Agents	-12,101	81.41%
Associate's degree	Cardiovascular Technologists/Technicians	-1,364	82.05%
Postsecondary nondegree award	Cooks, Private Household	-685	83.53%
Associate's degree	Nuclear Medicine Technologists	-316	86.86%
Postsecondary nondegree award	Hearing Aid Specialists	-137	89.19%
Postsecondary nondegree award	Heavy and Tractor-Trailer Truck Drivers	-12,573	90.27%
Associate's degree	Magnetic Resonance Imaging Technologists	-387	91.70%
Postsecondary nondegree award	Motorboat Mechanics and Service Technicians	-244	94.46%

Lightcast Industry Credential Pathways



Top industry certifications by supply and demand

447 industry certifications have signaling value (at least 25 postings or profiles).



Industry Engagement

Workforce Needs Study 2.0 Focus Groups: Research on the Road

Research objectives

- Verify current/emerging skills needs.
 - Master Credentials List
- Catalogue industry-education partnership best practices.
- Assess training resource utilization.

8 Regions

4 Occupational Groups

- Manufacturing
- Information Technology
- Healthcare
- Finance/Professional Services

70 employers engaged to date



Legislative Strategies to Support Talent Development

- [REACH Act](#) has led to:
 - Creation of [Credentials Review Committee](#) and interagency Steering Committee.
 - Development of a [Framework of Quality](#) and [Master Credentials List](#).
 - Research to inform [Workforce System Transformation](#), a focus in 2023-24.
- [Senate Bill 240](#) from the 2023 Florida Legislative Session calls for:
 - Creation of an Education and Industry Consortium for each workforce area.
 - Development of workforce education partnerships at state universities.
 - Greater efficiencies and expansion of registered apprenticeship processes.

Funding Strategies to Support Talent Development

- State-level grants:
 - [Pathways to Career Opportunities Grant](#) – funds for expanding apprenticeship and pre-apprenticeship programs in high schools, career centers, charter technical career centers, Florida College System institutions, and other authorized apprenticeship sponsors.
 - [Florida Job Growth Grant Fund](#) – an economic development program designed to promote public infrastructure and workforce training across the state.
- Governor's WIOA Reserve Budget
 - Current initiatives – Get There Faster awards focused on returning adult learners, veterans and at-risk Floridians.
 - Investments for 2023-24 include: \$2.5M to support the Hope Florida initiative led by the Florida Department of Children and Families, \$2.75M for the Florida Healthcare Training initiative, and \$4M to support CareerSource Florida network navigators.

Systems Strategies to Support Talent Development

- [FLWINS Workforce System Integration Initiative](#)
 - Reduces redundancy and promotes efficiency for staff and customers alike.
 - Supports the REACH Act's "no-wrong-door" approach to client engagement.
 - Leverages existing partner systems within a hybrid/hub environment.
 - Enables a closed-loop referral process for case management integration.
- [Education Meets Opportunity Platform](#)
 - Enables analysis across programs, career clusters, institutions, and demographics.
 - Contains valuable insights on enrollments, retention, and completions.
 - Promotes transparency and access to information for decision making at all levels.



Questions and Discussion

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Innovative Postsecondary Programs

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President

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Education



Kentucky's Workforce Challenges and Postsecondary Education's Solutions

Aaron Thompson
President
Kentucky Council on Postsecondary Education



Kentucky's Workforce Challenge

Kentucky's workforce participation rate is one of the lowest:

- Ranked 43rd in the nation, or the seventh-worst.

The rate has been steadily declining over the past 20 years:

- 63.4% in 2001 to 57.5% in 2022.

The state's population growth has stagnated over the past 20 years:

- Growth was half the national rate.

Source: Kentucky Chamber Center for Policy and Research.

Economic Implications

More reliance on public assistance:

- Kentucky is ranked 5th in the nation for the percentage of the population reliant upon federal aid.

Strains on state and local resources. Out of the state's general fund appropriations:

- Over 15% goes toward Medicaid.
- Nearly 12% goes toward criminal justice – Kentucky is ranked 9th in the nation for incarceration rates.

Sources: WalletHub and Budget of the Commonwealth.

Workforce Implications

Employer difficulties with hiring and meeting the demands of customers:

- During 2022, KY had nearly 100,000 more open jobs than unemployed Kentuckians looking for work.

Challenges with business attraction, retention and expansion:

- Kentucky's low educational attainment (54.3%) makes it difficult to compete with other states with higher rates.

Framework for Improvement



HIGHER EDUCATION *Matters*

A Statewide Strategic Agenda for
Kentucky Postsecondary Education

2022-2030

Strategies for Increasing Attainment

Elevating the value of higher education:

- Spreading the “Higher Education Matters” message and educating the public on “What Is College.”

To strengthen the link between education and career:

- Creating more employer-education partnerships and improving career advising.

To make the transition to college easier:

- Providing more dual credit courses and scholarships.

#1 Priority: Healthcare Workforce

By 2030, **over 15,000 more healthcare jobs will be added to the sector**, an 11.6% increase.

Retention is a problem.

- More than 14% of registered nurses at Kentucky hospitals are "nearing retirement age."

Mental health professionals are a growing need.

- By 2030, it's projected that the need for mental health counselors and substance abuse/behavioral disorder counselors will have increased by 26%.

Sources: Kentucky Occupational Outlook (KYSTATS) and Kentucky Hospital Association.

Strategies for Healthcare

Bringing together education and employers to address current staff shortages and grow capacity.

- **Healthcare Workforce Collaborative:** A multi-sector group focused on addressing issues facing healthcare graduate success along the P20 pipeline.
- **Healthcare Workforce Investment Fund:** A private-public partnership to provide scholarships and other incentives to grow student recruitment.
- **CLIMB Health:** An initiative creating postsecondary pathways for Kentuckians in recovery to become counselors.

State Collaborative Action Planning

- Promoting In-Demand Jobs
- Implementing Strategies to Strengthen the Education and Workforce System

State Collaborative Action Planning

Consider the Workforce Presentations to:

1. Validate workforce projections for your state;
2. Identify needed data to paint the full picture of workforce needs for your state;
3. Determine 2-3 critical actions needed to strengthen the alignment of the education and workforce system within your state.

JobsEQ Economic Overview & RTI Report

Use your state's Report to support your discussions.

Reports include:

- Demographic Profile
- Industry Snapshot
- Occupation Snapshot
- Education Levels
- RTI Openings by Occupations
- RTI Openings by Employer
- RTI Openings by Certifications



Your Priority Action (Mentimeter)

Enter one priority action for your state.

Please remember to include your state's abbreviation in your response.

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