

# Exploring a Skills-Based Approach to Occupational Mobility

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# Challenges Persist for Workers and Employers



Think back on the jobs  
you've held throughout your life.

What is a skill or talent that you have brought  
with you from position to position that has  
enabled you to be successful?

# Occupations Can Be Classified into Three Categories

Lower-Wage  
Occupations

Opportunity  
Occupations

Occupations Requiring  
Extensive Experience  
or a Bachelor's Degree

# Occupations Can Be Classified into Three Categories

Not requiring a bachelor's degree



# Guiding Principles, Data, and Methods

## Occupations Defined by Tasks and Skills

- Occupations can be defined as bundles of tasks that require skills to complete.
- Occupations differ in the skills they request and the frequency with which they request them.

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## Skills Described in Online Job Ads

- We analyzed nearly 60 million online job ads posted between 2014 and 2018.
- Our analysis covers the 33 metro areas with at least 1 million jobs.

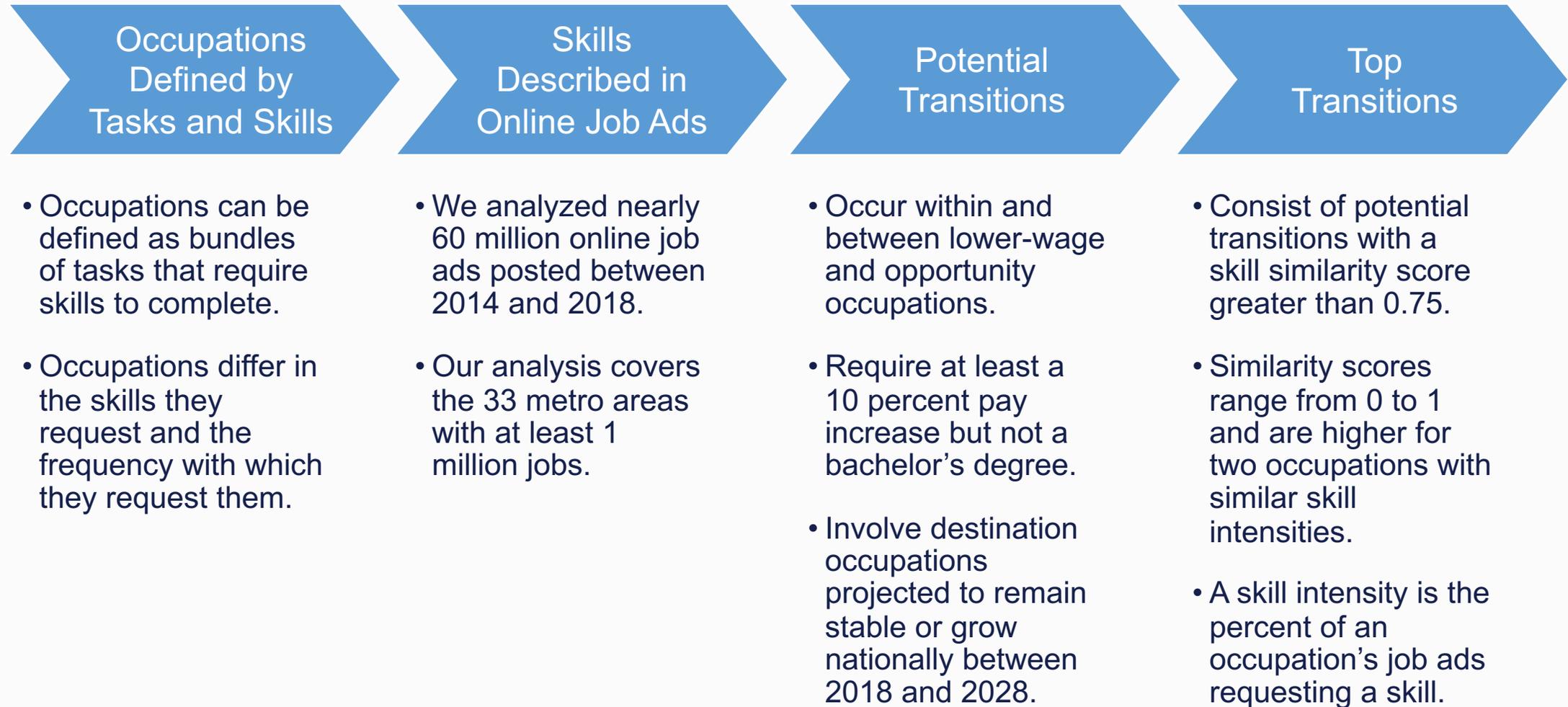
Potential Transitions

Top Transitions

# Guiding Principles, Data, and Methods



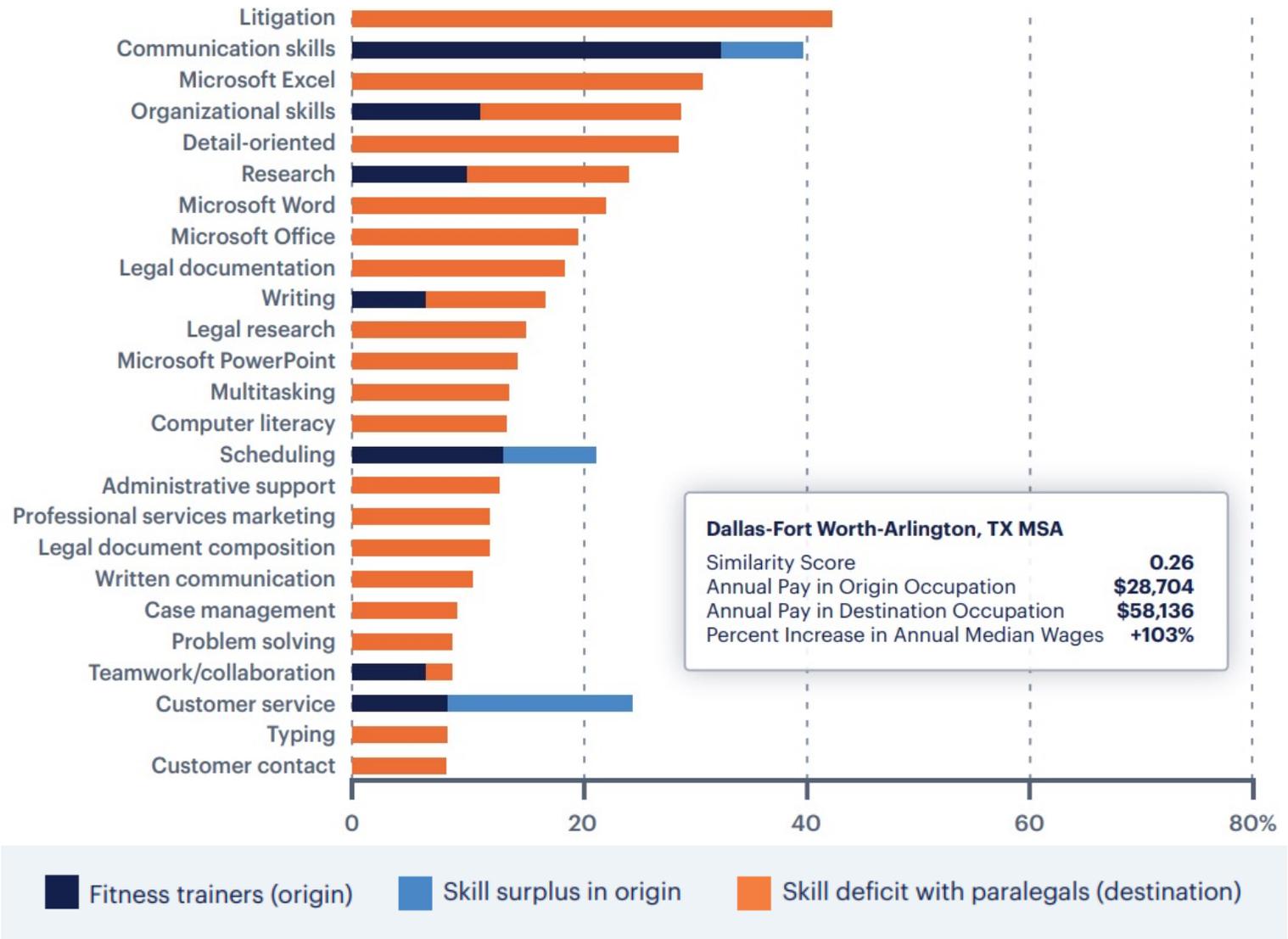
# Guiding Principles, Data, and Methods



# Occupational Transition with a Low Similarity Score

The vast majority of potential transitions involve very different skill sets...

The average similarity score for the roughly 685,000 potential transitions analyzed is 0.25.

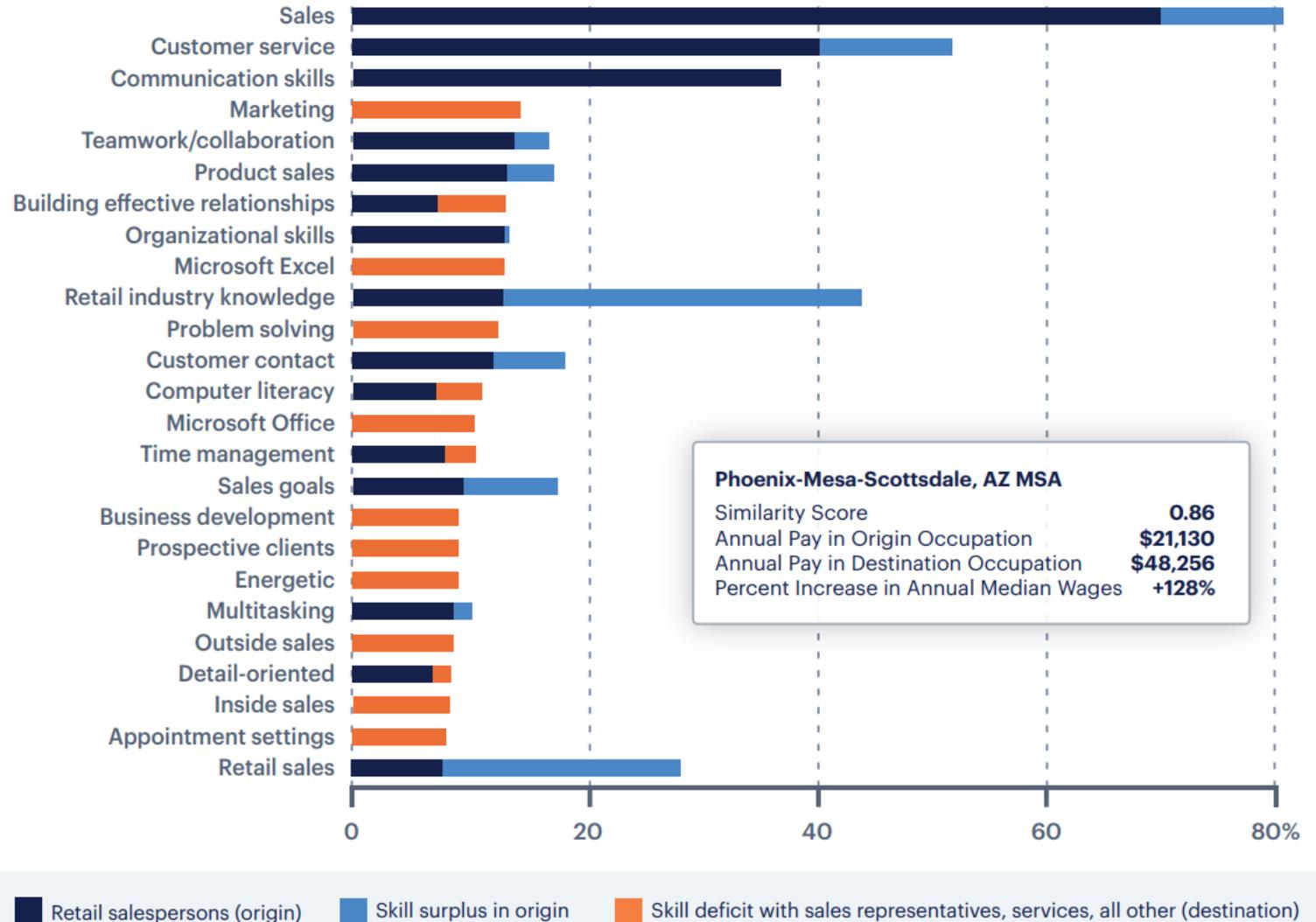


Source: DeMaria, Kyle, Kyle Fee, and Keith Wardrip. 2020. *Exploring a Skills-Based Approach to Occupational Mobility*. Federal Reserve Banks of Philadelphia and Cleveland.

# Occupational Transition with a High Similarity Score

...but top transitions exist in every metro area.

In the 33 metro areas analyzed, we find 4,097 top transitions (similarity score >0.75).



Source: DeMaria, Kyle, Kyle Fee, and Keith Wardrip. 2020. *Exploring a Skills-Based Approach to Occupational Mobility*. Federal Reserve Banks of Philadelphia and Cleveland.

# 21st-Century Skills Form the Bridge Between Occupations

## Skills can be viewed as a bridge rather than as a gap.

There is overlap in the top skills requested for lower-wage and opportunity occupations (rank order correlation of 0.70).

21st-century skills form the bridge between lower-wage and opportunity occupations.

**Top 20 skills overall and ranked within occupational categories** (ranks  $\leq 10$  shaded dark orange; ranks  $> 30$  shaded light orange)

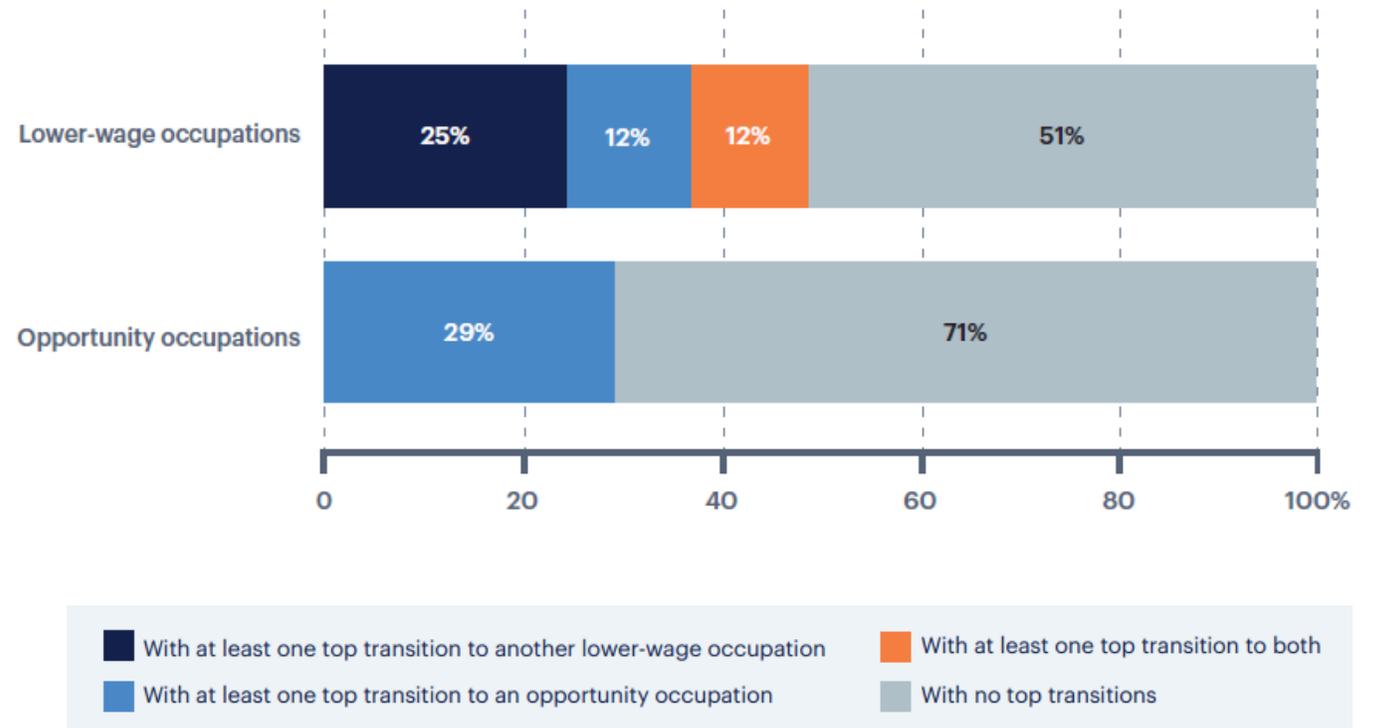
Skill	Overall intensity	Overall	RANK	
			Lower-wage occupations	Opportunity occupations
Communication skills	26.9%	1	1	1
Customer service	17.7%	2	2	3
Physical abilities	14.3%	3	3	8
Organizational skills	13.1%	4	4	4
Teamwork/collaboration	11.8%	5	9	10
Scheduling	10.9%	6	7	6
Detail-oriented	10.2%	7	8	13
Sales	9.9%	8	6	9
Microsoft Excel	9.4%	9	16	5
Computer literacy	9.3%	10	11	7
Problem solving	8.8%	11	18	11
Writing	8.7%	12	14	15
Repair	8.4%	13	13	2
English	8.0%	14	10	21
Microsoft Office	7.7%	15	23	12
Planning	7.7%	16	36	14
Cleaning	7.0%	17	5	54
Building effective relationships	6.7%	18	19	17
Teaching	6.4%	19	30	64
Research	6.1%	20	47	19

# Top Transitions Can Lead to Economic Mobility

**Nearly half of lower-wage employment can be paired with a top transition.**

The same is true for 29 percent of the jobs classified as opportunity occupations.

Share of Employment by Type of Top Transition



Source: DeMaria, Kyle, Kyle Fee, and Keith Wardrip. 2020. *Exploring a Skills-Based Approach to Occupational Mobility*. Federal Reserve Banks of Philadelphia and Cleveland.

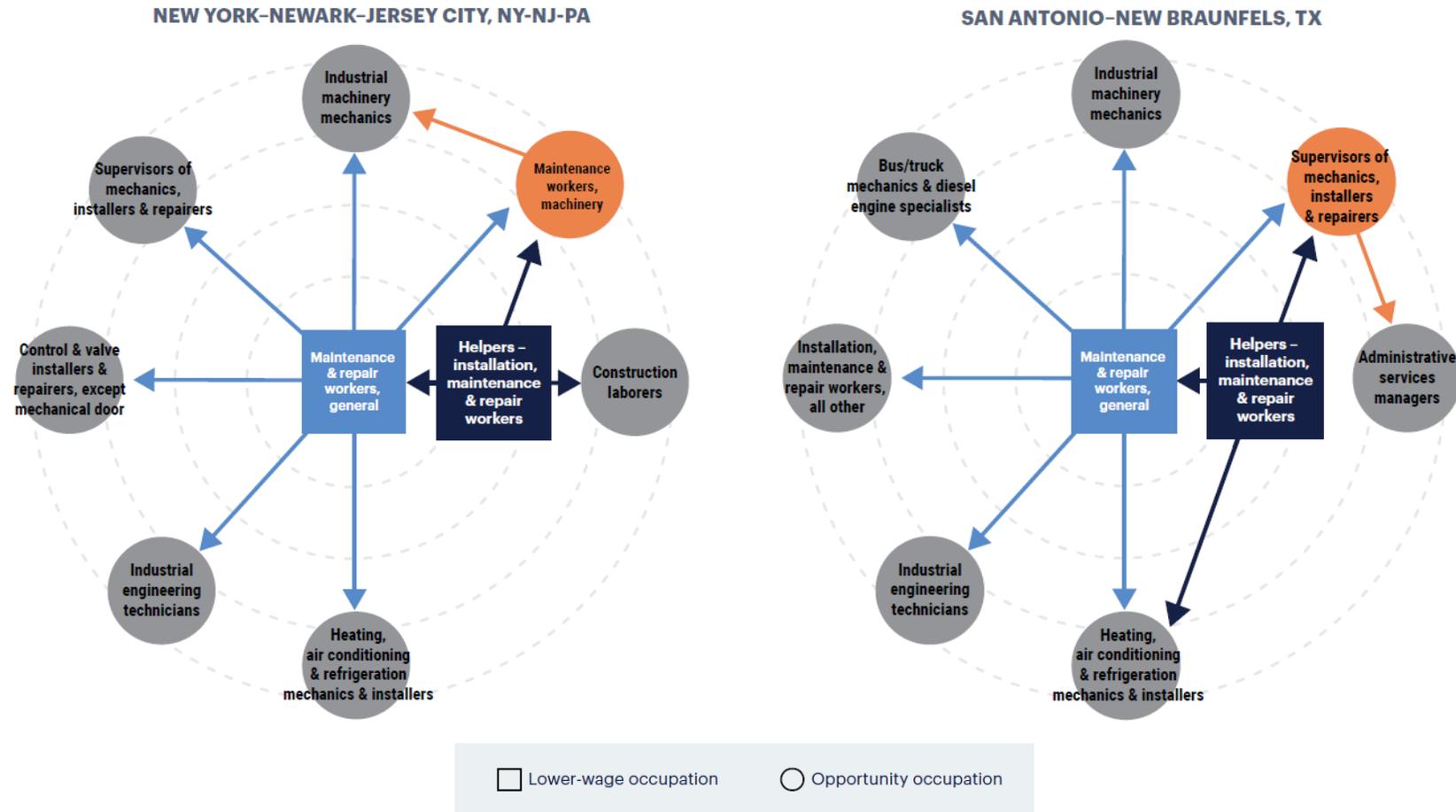
# Top Transitions Can Lead to Economic Mobility

**On average, top transitions can result in a 49% pay increase—from around \$30,000 to \$45,000.**

Type of transition	AVERAGE ANNUAL MEDIAN WAGES			
	Origin occupations	Destination occupations	Increase	Percent increase
Lower-wage occupation to lower-wage occupation	\$21,508	\$28,367	\$6,859	32%
Lower-wage occupation to opportunity occupation	\$28,547	\$50,672	\$22,125	78%
Opportunity occupation to opportunity occupation	\$53,426	\$76,128	\$22,703	42%
<b>Overall</b>	<b>\$30,100</b>	<b>\$44,974</b>	<b>\$14,873</b>	<b>49%</b>

Source: DeMaria, Kyle, Kyle Fee, and Keith Wardrip. 2020. *Exploring a Skills-Based Approach to Occupational Mobility*. Federal Reserve Banks of Philadelphia and Cleveland.

# A First-Degree Transition Can Lead to a Second-Degree Transition



Source: DeMaria, Kyle, Kyle Fee, and Keith Wardrip. 2020. *Exploring a Skills-Based Approach to Occupational Mobility*. Federal Reserve Banks of Philadelphia and Cleveland.

# Occupational Mobility Explorer

## Occupational Mobility Explorer

In *Exploring a Skills-Based Approach to Occupational Mobility*, researchers from the Philadelphia and Cleveland Feds analyze the skills that employers request in the 33 largest metro areas and look for opportunities for workers to transfer their skills from one occupation to a similar — but higher-paying — occupation in the same labor market. This application is designed to make the findings interactive and wholly accessible to those interested in economic mobility.

OCCUPATIONAL MOBILITY EXPLORER

BUILD YOUR PATH

COMPARE SKILLS

VIEW TOP TRANSITIONS

### Build Your Path

See which occupations require similar skills and represent at least a 10% increase in wages

### Compare Skills

Compare the 25 most in-demand skills for any pair of occupations in a metro

### View Top Transitions

View, sort, and download data for pairs of occupations considered most similar



Available at [philadelphiafed.org/ome](https://philadelphiafed.org/ome)

# Several Strategies Could Facilitate Top Transitions

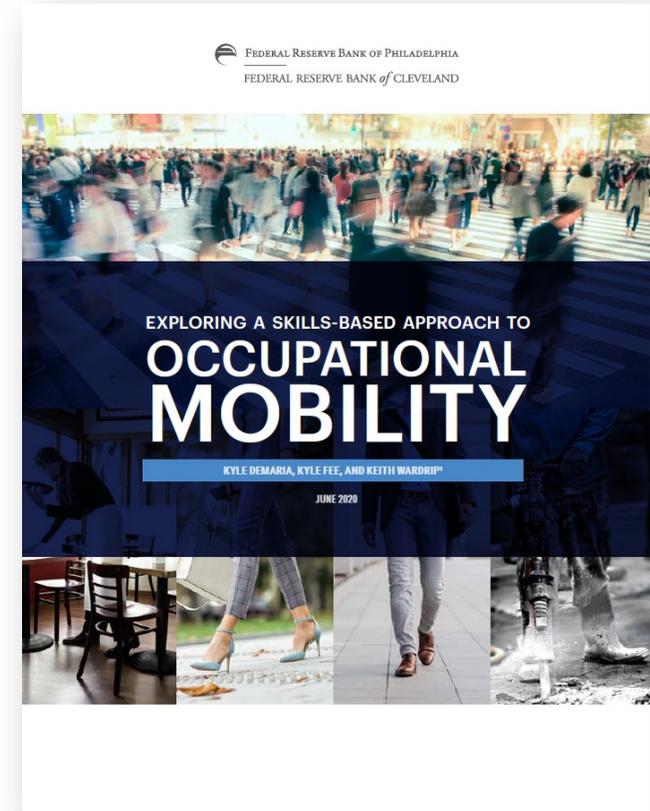
- Consider skills-based hiring practices to expand applicant pools to include skilled workers who may not have a bachelor's degree.
- Targeted training could provide otherwise qualified workers with the skills necessary to make a successful transition.
- Publicly available information on occupations and skills can inform the work of education providers and employers and aide job seekers in their search and career planning.
- Collaboration between employers, education providers, and workforce development organizations can ensure training meets local demand.

# Thank You

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Available at [www.philadelphiafed.org/  
community-development](http://www.philadelphiafed.org/community-development)