

Workforce, Skills, and a Strong Economy:

Making the most of your talent assets

December 2022



[Lightcast.io](https://lightcast.io)



People Inspired. Data Driven

Lightcast Community provides trusted labor market data, analytics, and expert guidance that empowers economic and workforce development organizations to make informed decisions and navigate the increasingly complex world of work.

Our data helps drive strategies that attract jobs, identify up- and reskilling opportunities, and develop effective policy. As a result, local residents enjoy greater prosperity and increased economic mobility. Lightcast Community serves more than 650 clients in the US and Canada



Data sources – current, granular, comprehensive



Labor market data

Data from government sources like US Census Bureau and the Department of Labor



Job postings

Data from job advertisements made by employers (aka real-time labor market data)



Résumés and profiles

Data from online profiles and résumés created by students and jobseekers



Compensation Data

Data from government sources and wage data advertised in job postings to provide an estimate compensation



Skills Library

Skills possessed by real people that describe jobs much more accurately than a raw job title



Global Data

Data from various countries categorizing industry, occupation, and profiles



THE **DEMOGRAPHIC DROUGHT**

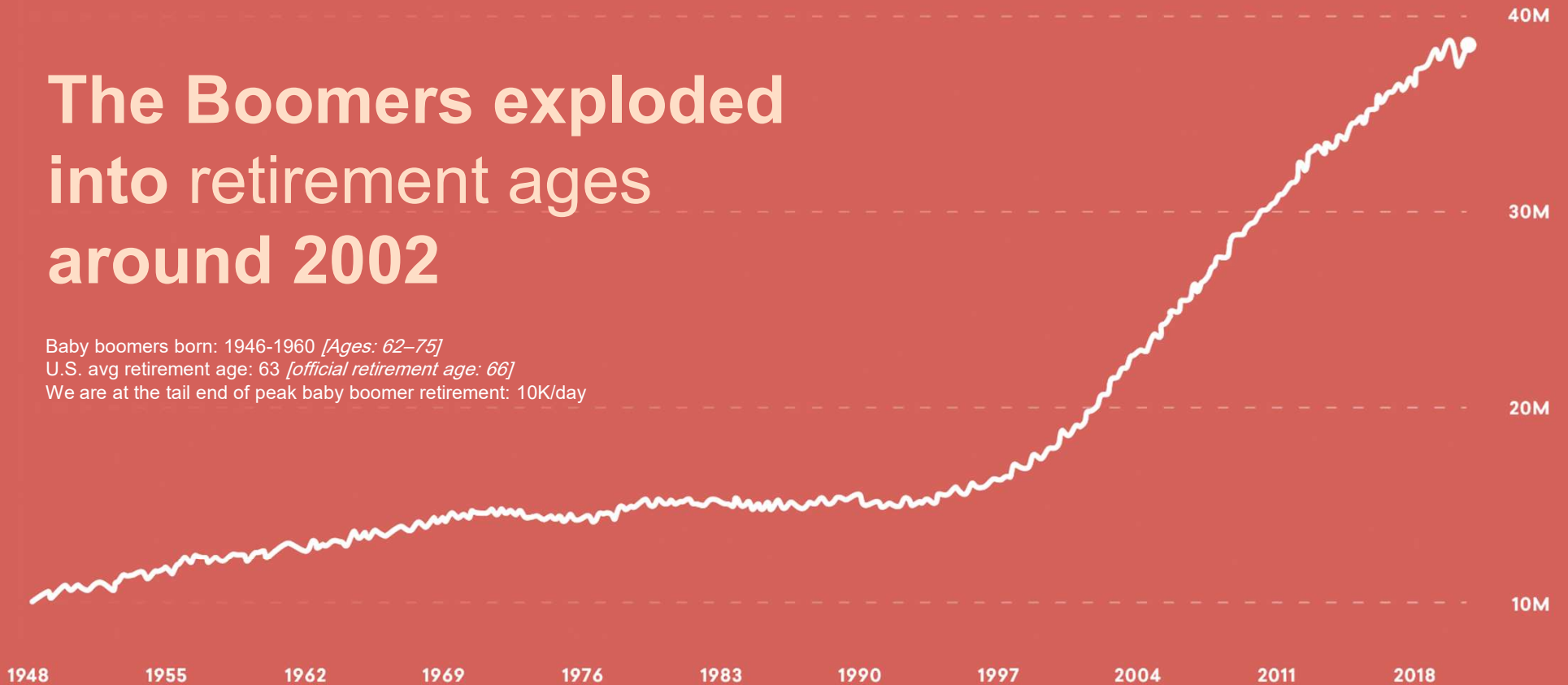


Bridging the Gap in our Labor Force



The Boomers exploded into retirement ages around 2002

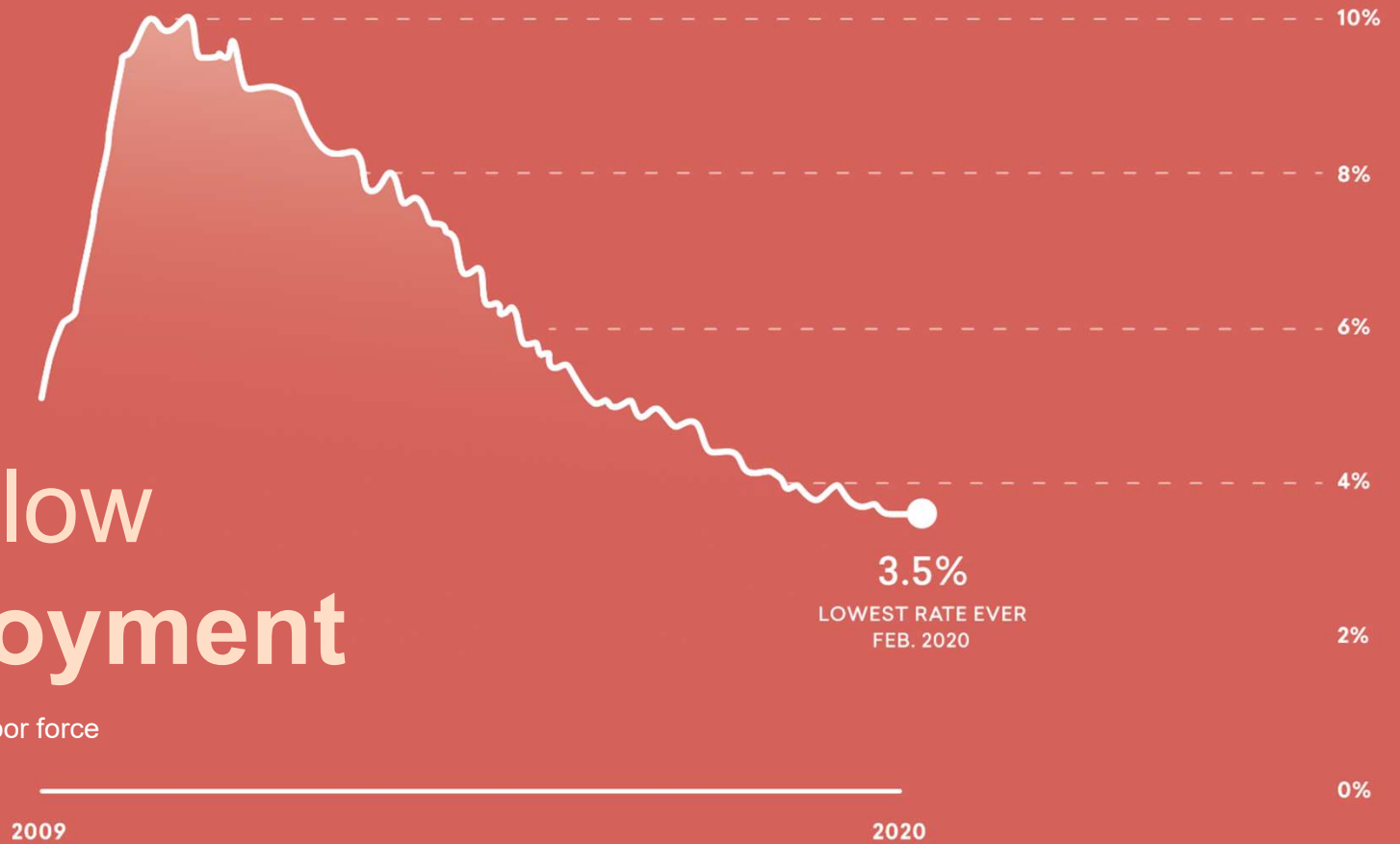
Baby boomers born: 1946-1960 *[Ages: 62-75]*
U.S. avg retirement age: 63 *[official retirement age: 66]*
We are at the tail end of peak baby boomer retirement: 10K/day



The U.S. Pre-Covid

Record low unemployment

LFPR: 63% | 95M not in labor force



Source: BLS

The U.S. Pre-Covid

Fewer people on the sidelines looking for work

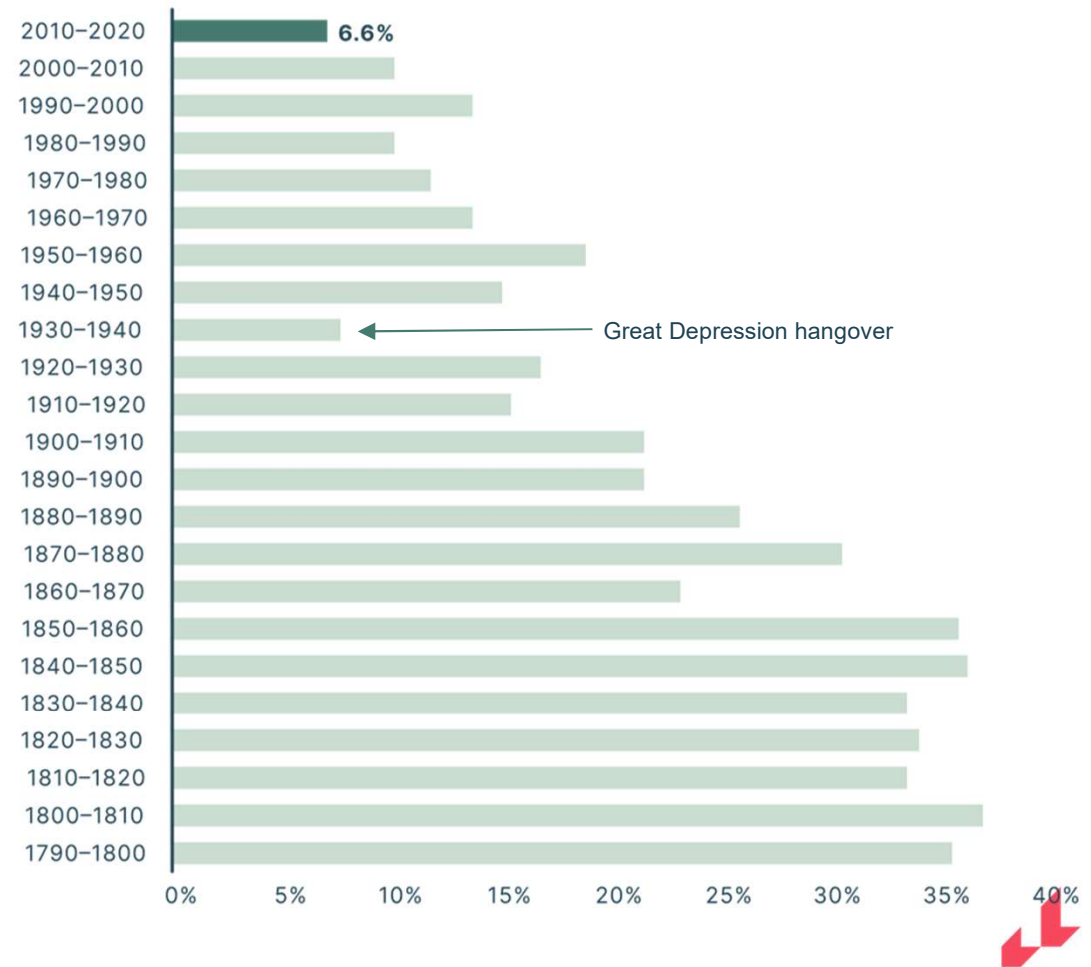
Boomers (55+) were also increasingly not looking to work

Source: BLS



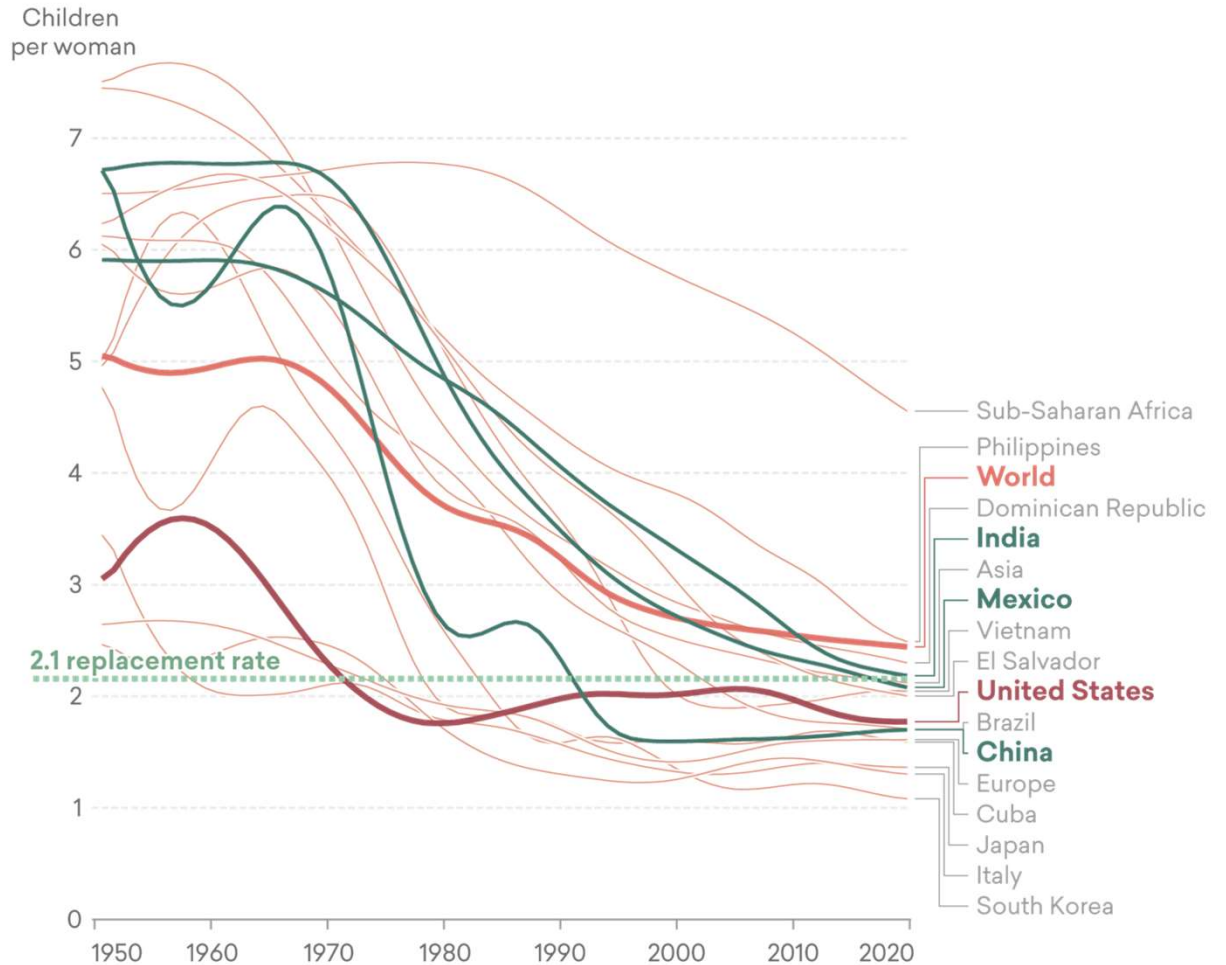
US population growth by decade

1790 to 2020 (estimated) censuses



Immigration will become less reliable

Most developed nations are below replacement level, including the top 3 countries of origin for immigration to the US.



Current Labor Crisis

RESULT: 43% Job Openings Increase



Current Labor Crisis

This is not about the unemployed, it is about the disengaged

Are they going to college?
“Total undergraduate enrollment dropped 3.1 percent from the fall of 2020 to the fall of 2021, bringing the total decline since the fall of 2019 to 6.6 percent- or 1,205,600 students.”

— New York Times

16–19-year-old Unemployment rate

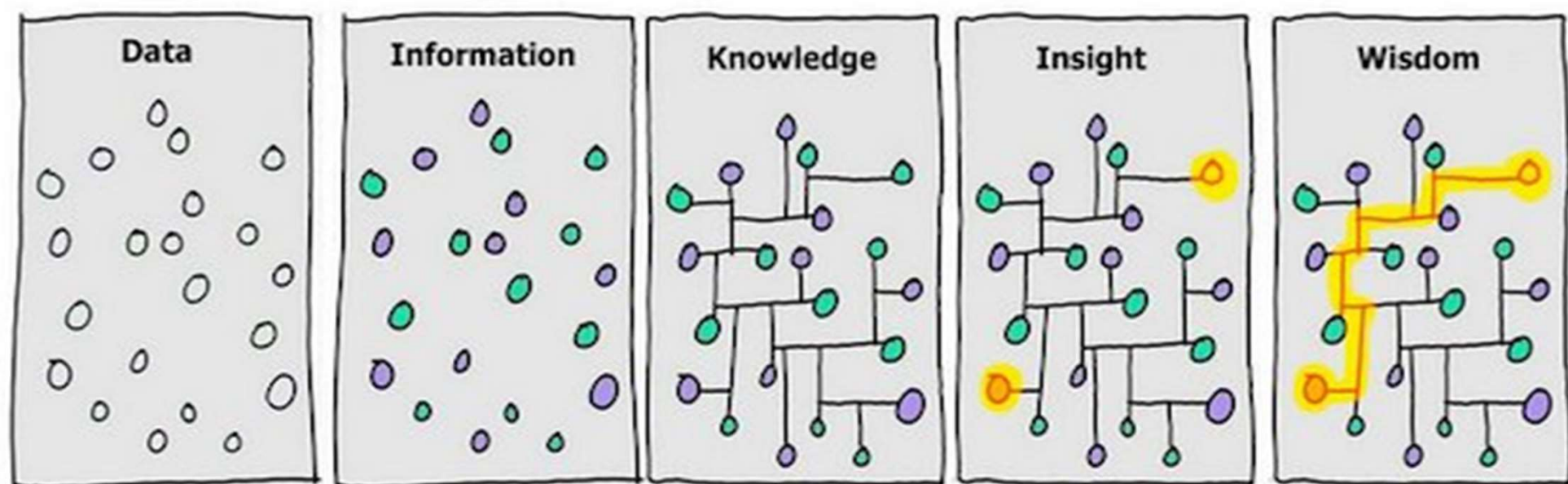
Lowest unemployment rate since the Korean War. 16-17 years old primary driver.



16–19-year-old Not in the labor force

11M 16–19-year-olds who are out of the labor force.





[Cartoon by David Somerville, based on a two pane version by Hugh McLeod.]



Values

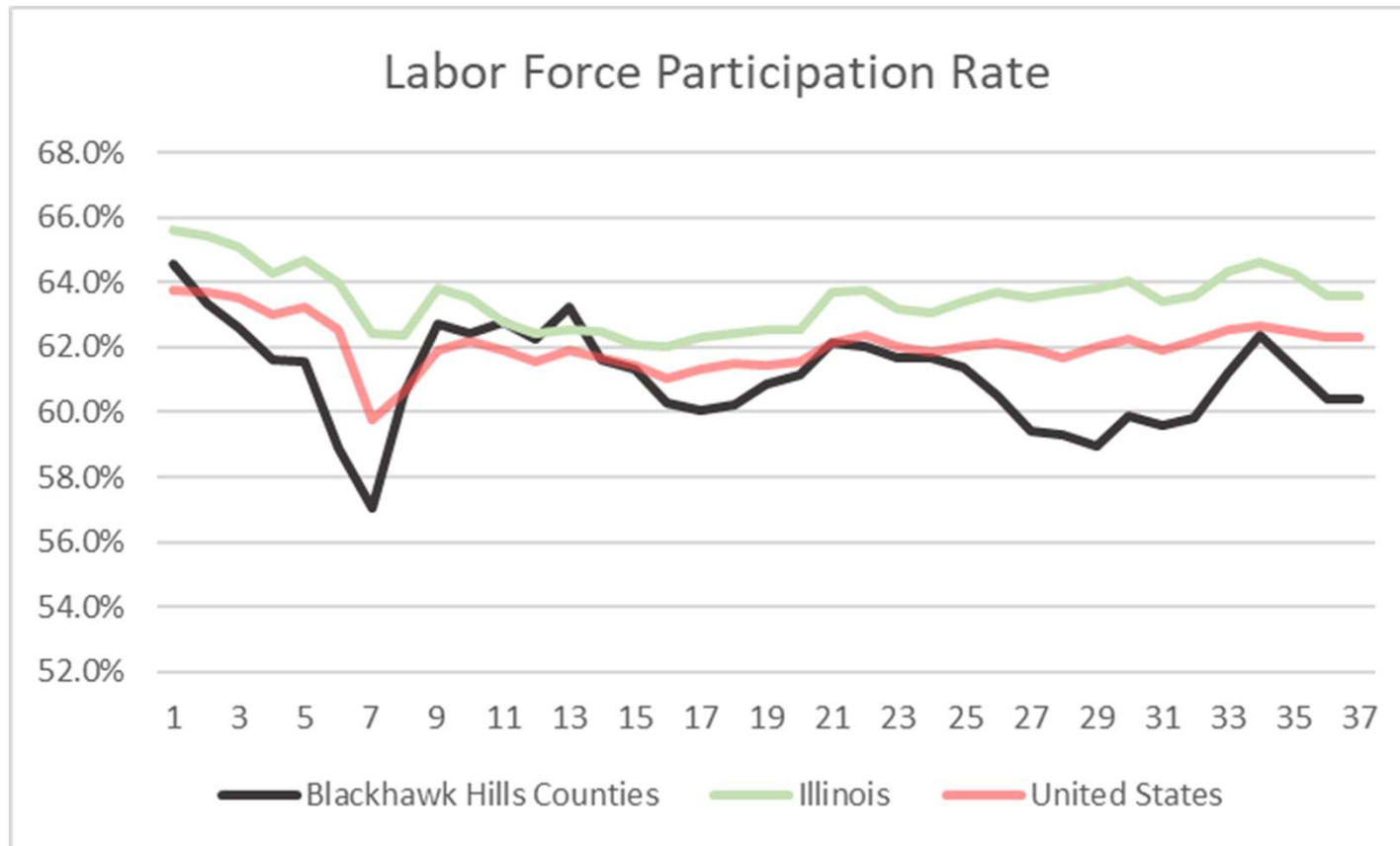
Building on Community Residents' strengths

Identifying high-value opportunities

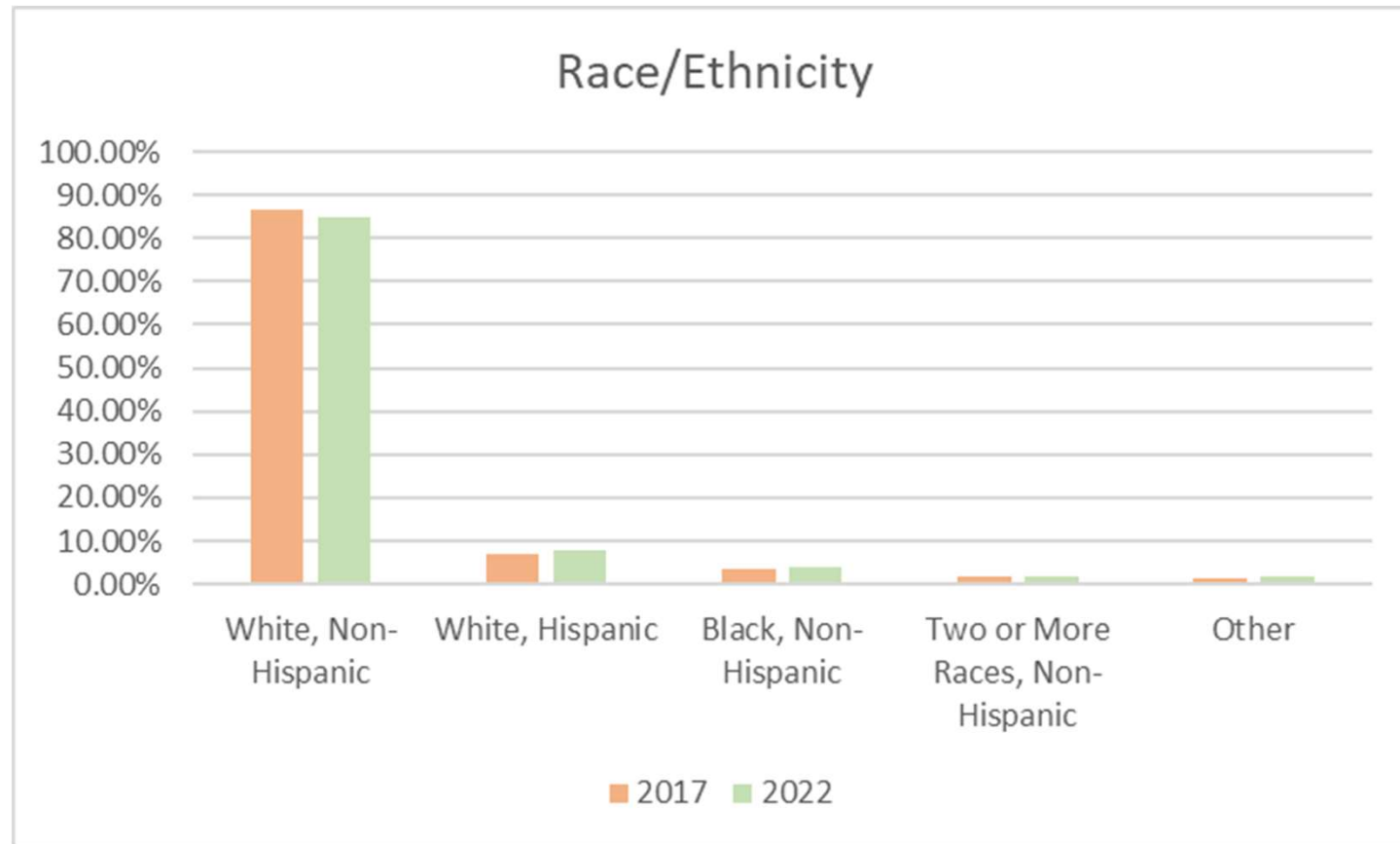
Bridging both the skills gap and the equity gap



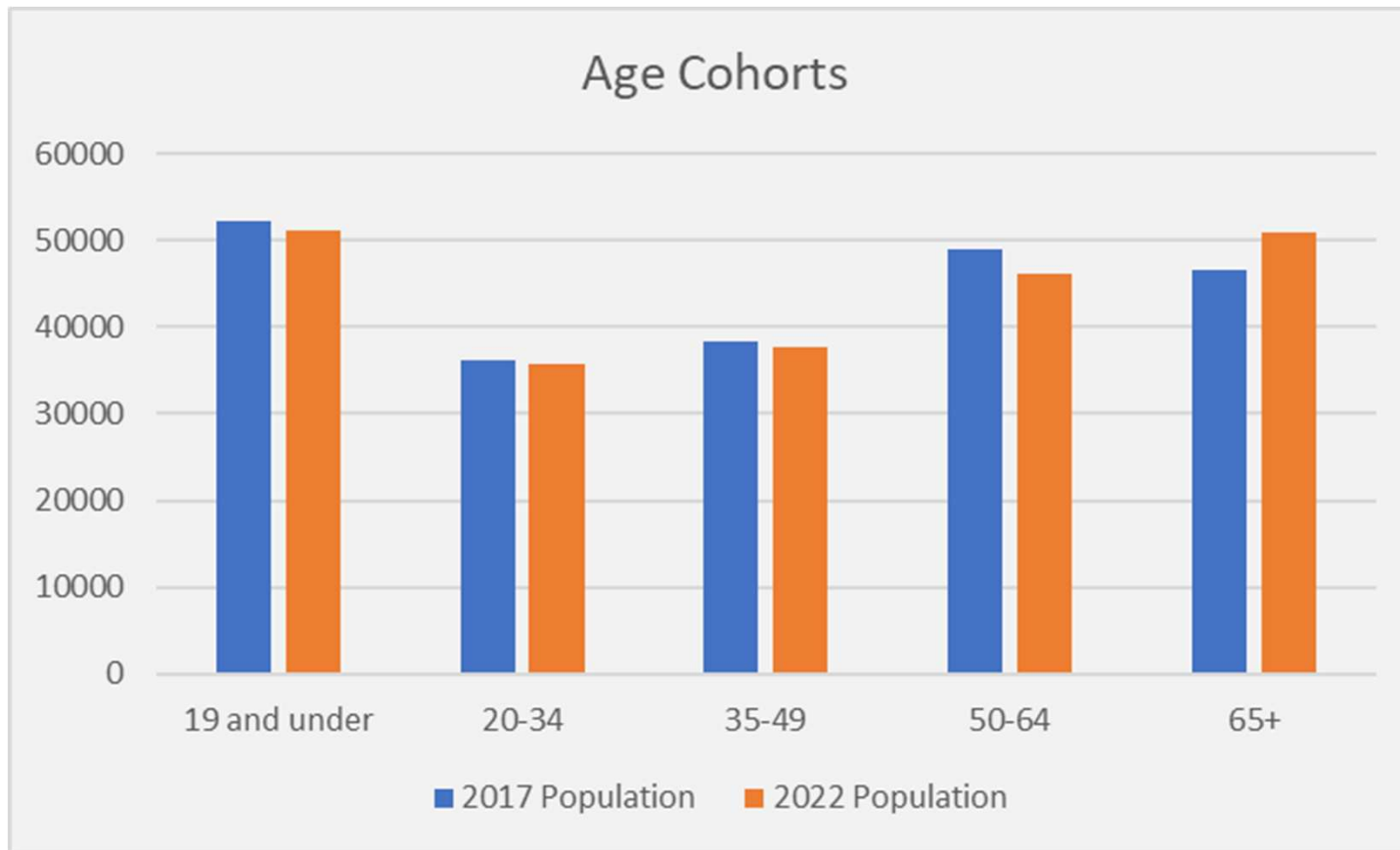
Labor Force Participation



Race/Ethnicity



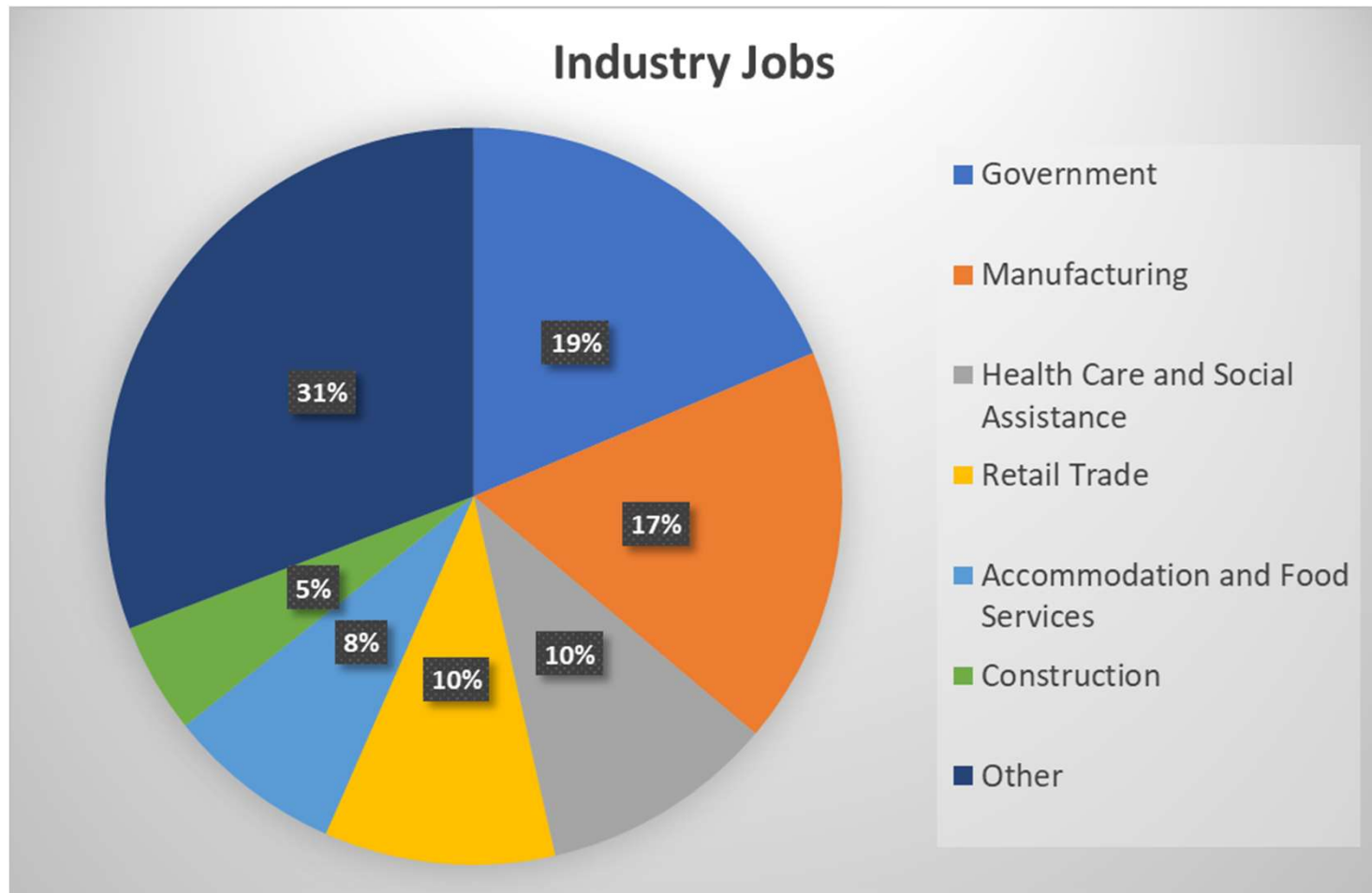
Age Cohorts





Building on Skills

Top Regional Industries



Largest Occupations

Rank	Occupations	2022 Jobs
1	Office and Administrative Support Occupations	9,914
2	Production Occupations	9,391
3	Transportation and Material Moving Occupations	8,179
4	Sales and Related Occupations	6,477
5	Food Preparation and Serving Related Occupations	6,344



Rapidly Declining Occupations

Rank	Occupations	2017-2022 % Change
1	Personal Care and Service Occupations	(13%)
2	Educational Instruction and Library Occupations	(11%)
3	Food Preparation and Serving Related Occupations	(11%)
4	Architecture and Engineering Occupations	(9%)
5	Protective Service Occupations	(8%)



At-Risk Occupation Group Office and Administrative Support Occupations

At-risk Occupations:

1. Office Clerks, General
2. Receptionists and Information Clerks
3. Secretaries and Administrative Assistants

Office & Administrative Support Occupations

\$37,157

Customer Service Representatives

Median Salary = \$38,580
Automation Risk = 0.55

Skills to Acquire:

Customer Service, Sales,
Customer Contact, Retail
Industry Knowledge

Computer User Support Specialists

Median Salary = \$60,080
Automation Risk = 0.65

Skills to Acquire:

Troubleshooting, Technical
Support, Help Desk Support,
Repair, Microsoft Active
Directory

Human Resources Specialists

Median Salary = \$61,430
Automation Risk = 0.31

Skills to Acquire:

Recruiting, Onboarding,
Talent Acquisition, Applicant
Tracking System



Accessing underutilized talent

Projected Demand:
8,282 roles to fill

Ready Workforce:
5,222 dislocated
Utility Line Locator / Technician

Potentially Available Workforce:
10,690 skills-similar dislocated workers

100% Similar Education
Percent of Feeder roles meeting education requirements of Critical occupation

100% Higher AR
Percent of Feeder roles with higher automation risk than Critical occupation

Skills:

Unemployed and underemployed workers in feeder occupations bring in some skills important to work as an Utility Line Locator / Technician

Necessary Skills

Occupational Health and Safety
New Construction
Switchgear
Hand Tools
Detection and Measurement Equipment

Necessary Skills are specialized skills required for this job and relevant across other similar jobs. These skills are building blocks for more complex Defining Skills.

Defining Skills

Telecommunications
Repair
Claims Knowledge
Transformers

Defining skills represent the day-to-day tasks and responsibilities of the job. An employee needs these skills to qualify for and perform successfully in this occupation.

Television / Satellite Television Installer

+5,304 available workers
+\$33,010 salary
0% youth, 16% non-white

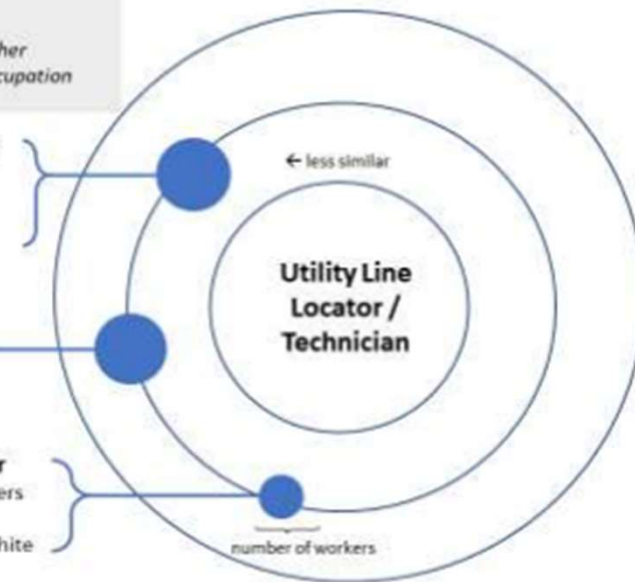
Electrician's Assistant

+4,032 available workers
+\$39,960 salary
35% youth, 61% non-white

Insulation Worker

+1,354 available workers
+\$29,864 salary
16% youth, 68% non-white

Feeder Occupations



Upskilling/Reskilling

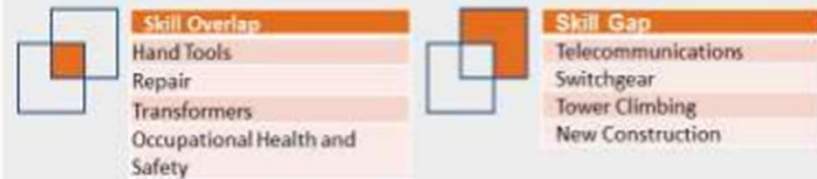
Skill Gaps and Overlaps

Feeder Occupations:

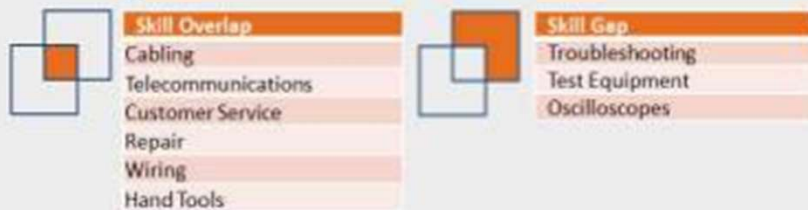
Broadcast Technician



Electrician's Assistant



Television / Satellite Television Installer

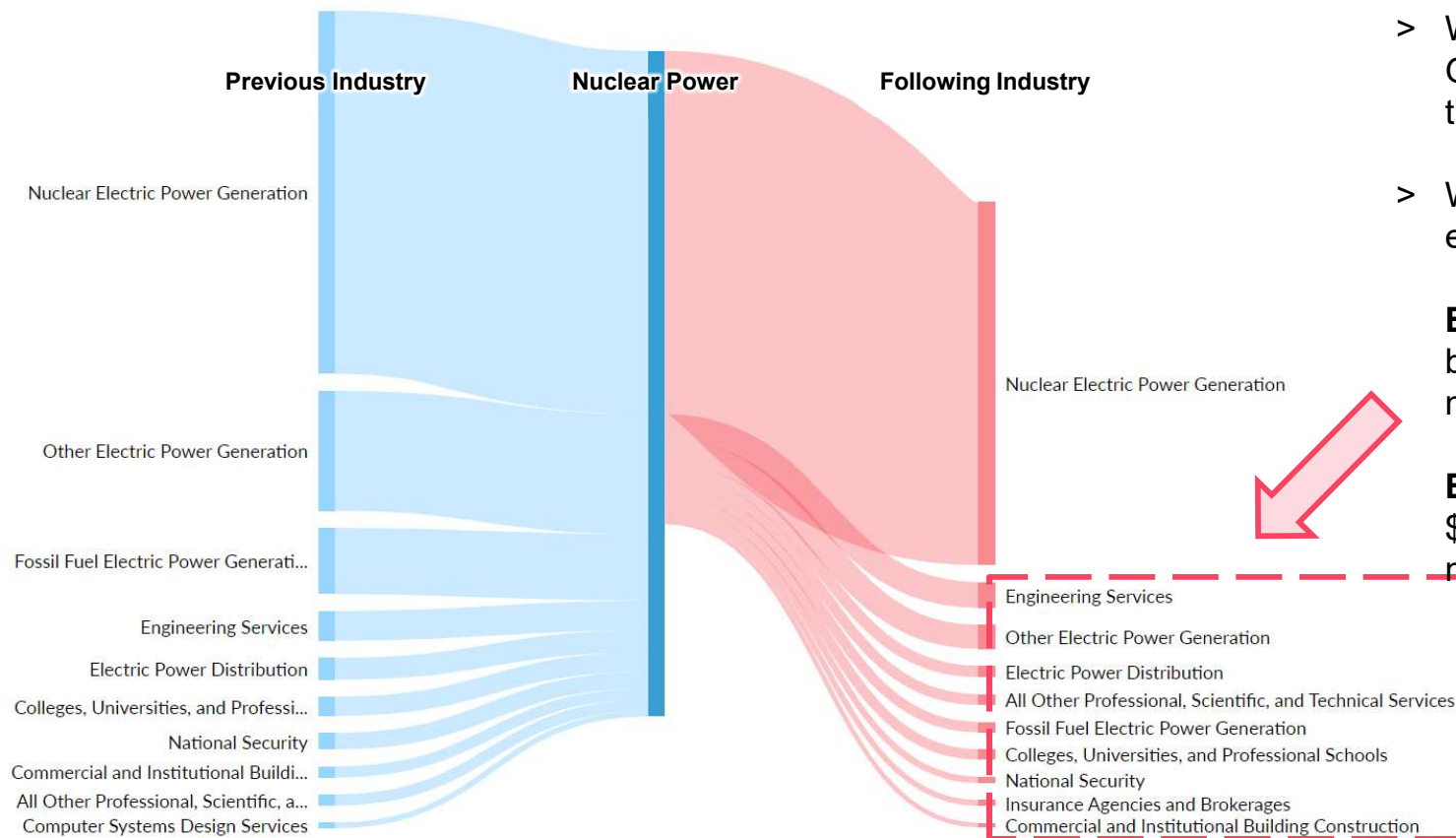


Workers from feeder occupations contribute several broader skills that will be useful for retraining as Utility Line Locators / Technicians, such as repair, telecommunications and customer service. Efforts to transition workers will need to focus on oscilloscopes, test equipment, switchgear, and detection and measurement equipment, as those are unique to Utility Line Locators / Technicians.



Highly skilled talent emanating from nuclear power facilities can be a regional opportunity

Career Histories of Nuclear Power Workers



> Workers from Nuclear Electric Power Generation continue their careers in the industries highlighted below.

> Workforce reemployment and economic development:

Engineering Services is a \$157 billion industry, 4.6x the size of nuclear power

Electric Power Distribution is a \$153 billion industry, 4.5x the size of nuclear power



Regional entities should review skill-based pathways to build upon skills of workers from nuclear power plants

> Planning, workforce, and economic development organizations should put transitions under a microscope:

...where are there skill similarities between current roles and future roles?

...where do the transitions yield salary premiums?

...which destination jobs are in high demand local?

...which destination jobs complement existing economic development strategies?

Origin Occupation Name	Destination Occupation Name	Destination Occupation Salary (Advertised)	Skill Similarity Score
Power Plant Operators	Gas Compressor and Gas Pumping Station Operators	\$60,729	0.66
	Control and Valve Installers and Repairers, Except Mechanical Door	\$61,085	0.62
	Wind Turbine Service Technicians	\$59,309	0.59
	Power Distributors and Dispatchers	\$61,498	0.57
	First-Line Supervisors of Mechanics, Installers, and Repairers	\$64,168	0.57
	Medical Equipment Repairers	\$56,575	0.57
	Stationary Engineers and Boiler Operators	\$63,225	0.54
	Boilermakers	\$61,118	0.51
	Facilities Managers	\$80,772	0.50



Regional entities should review skill-based pathways for transitioning workers from nuclear power to other roles and sectors

> There are many transitions to consider...

Occupation Group	SOC	Description	Employed in Industry (2021)	Number of Potential Destination Occupations [min. 30]
Engineering Occupations	17-2112	Industrial Engineers	492	31
Production Occupations	51-1011	First-Line Supervisors of Production and Operating Workers	2,034	38
Security and Protective Service Occupations	33-1091	First-Line Supervisors of Security Workers	471	58
Technicians and Specialists	19-2041	Environmental Scientists and Specialists, Including Health	160	30
	13-1041	Compliance Officers	151	78
	13-1161	Market Research Analysts and Marketing Specialists	172	72
	13-1028	Buyers and Purchasing Agents	256	60
	13-2051	Financial and Investment Analysts	100	59
Business and Finance Occupations	13-1199	Business Operations Specialists, All Other	405	56
	13-1151	Training and Development Specialists	1,082	46
	13-1071	Human Resources Specialists	126	44
	13-1082	Project Management Specialists	419	42
	13-1111	Management Analysts	220	34
	13-2011	Accountants and Auditors	108	32
	11-1021	General and Operations Managers	401	55
Management Occupations	11-3012	Administrative Services Managers	192	49
	11-3013	Facilities Managers	134	47
	11-9199	Managers, All Other	353	44
	11-3131	Training and Development Managers	144	35
	43-6011	Executive Secretaries and Executive Administrative Assistants	196	89
Office and Administrative Support Occupations	43-1011	First-Line Supervisors of Office and Administrative Support Workers	129	85
	43-5061	Production, Planning, and Expediting Clerks	332	46
	43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, & Exec	268	37

Some workers will have a hard time finding new employment – recognize the types of challenges that workers will face

- > Some occupations have a low number of potential destination occupations for skills-based transitions...

Occupation Group	SOC	Description	Employed in Industry (2021)	Number of Potential Destination Occupations [max. 10]
Engineering Occupations	17-2161	Nuclear Engineers	4035	4
	17-2071	Electrical Engineers	1148	7
	17-2199	Engineers, All Other	104	7
Production Occupations	51-8011	Nuclear Power Reactor Operators	3349	0
	51-8013	Power Plant Operators	238	9
	51-8012	Power Distributors and Dispatchers	143	4
	51-4041	Machinists	122	1
	51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	106	7
Security and Protective Service Occupations	33-9032	Security Guards	4020	1
Technicians and Specialists	19-4051	Nuclear Technicians	2861	0
Mechanics and Repairers	49-2095	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	944	2
	49-9051	Electrical Power-Line Installers and Repairers	344	0
	49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	139	3
Office and Administrative Support Occupations	43-5041	Meter Readers, Utilities	171	0



COMMAND
Shift


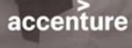
 Lightcast  npower

THE
Equation
FOR *Equality*

WOMEN OF COLOR IN TECH

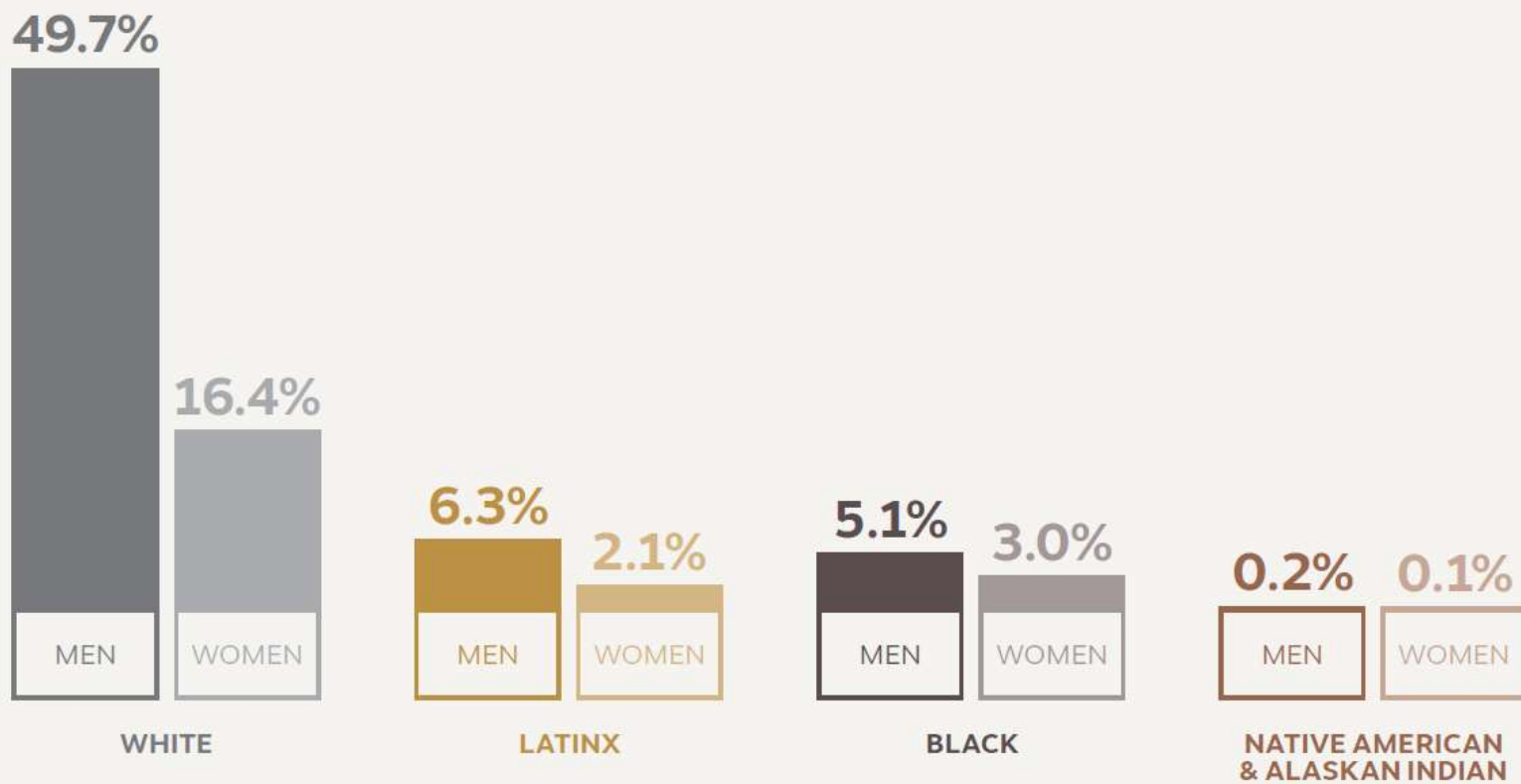


WITH SUPPORT AND STEWARDSHIP FROM
Citi Foundation



DIVERSITY IN TECH



OVERLAP OF KNOWLEDGE, SKILLS, AND ABILITIES BETWEEN TECH AND NON-TECH JOBS

NON-TECH JOB

SKILLS OVERLAP

BRIDGE SKILLS

TECH JOB

**ELECTRONIC
MEDICAL
RECORDS
SPECIALIST**

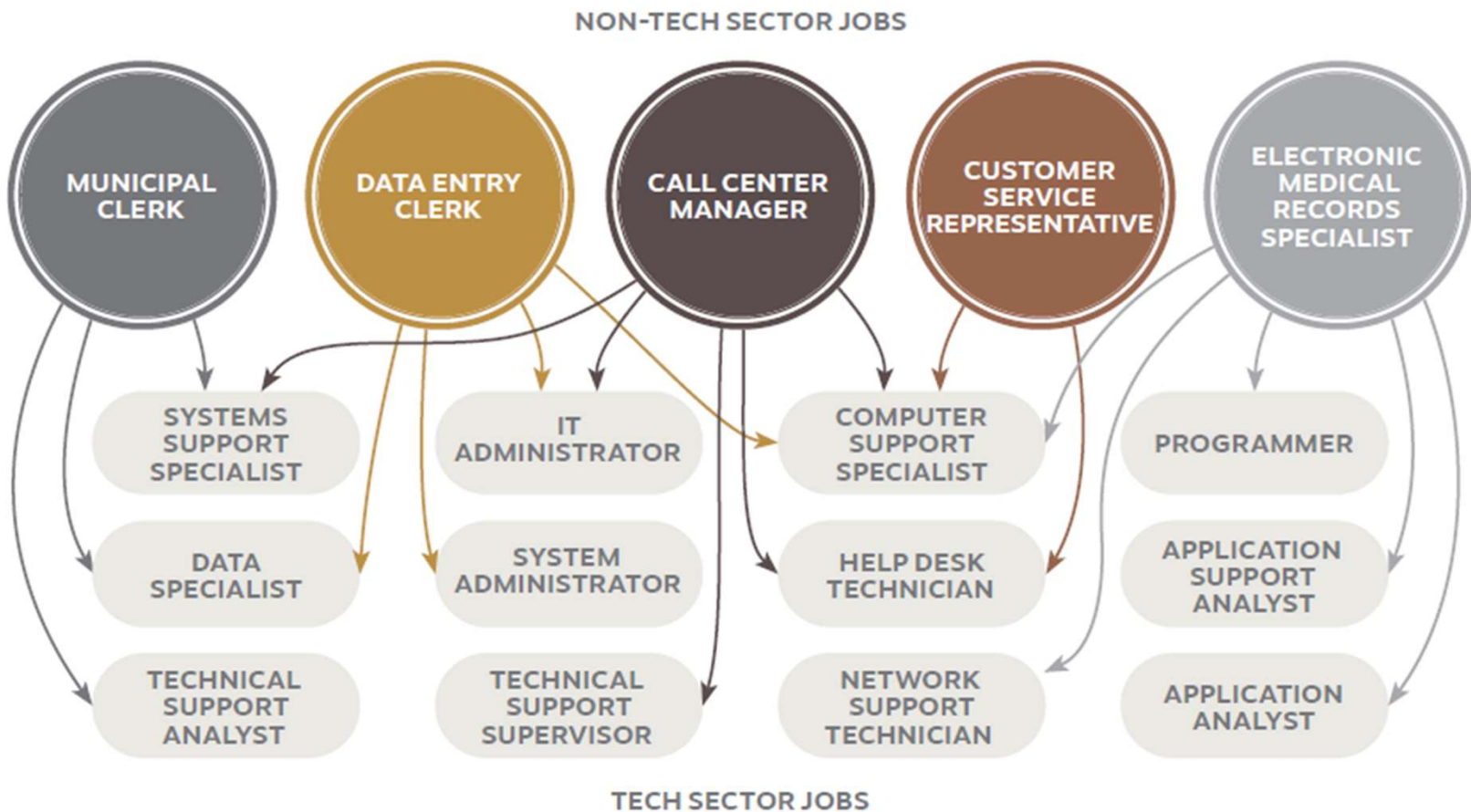
- › Technical Support
- › Customer Service
- › Help Desk Support
- › Information Systems
- › Scheduling
- › Project Management
- › Customer Billing
- › Quality Assurance and Control
- › Process Improvement
- › Data Entry

- › Troubleshooting Technical Issues
- › Computer Hardware/Software Knowledge
- › Network Troubleshooting
- › Operating System-Specific Knowledge

**COMPUTER
SUPPORT
SPECIALIST**
Salary Increase
of \$7,100



EQUITY-BUILDING JOB TRANSITIONS INTO THE TECH SECTOR



SIMILAR JOB PAIRS THAT TRANSITION INTO THE TECH SECTOR

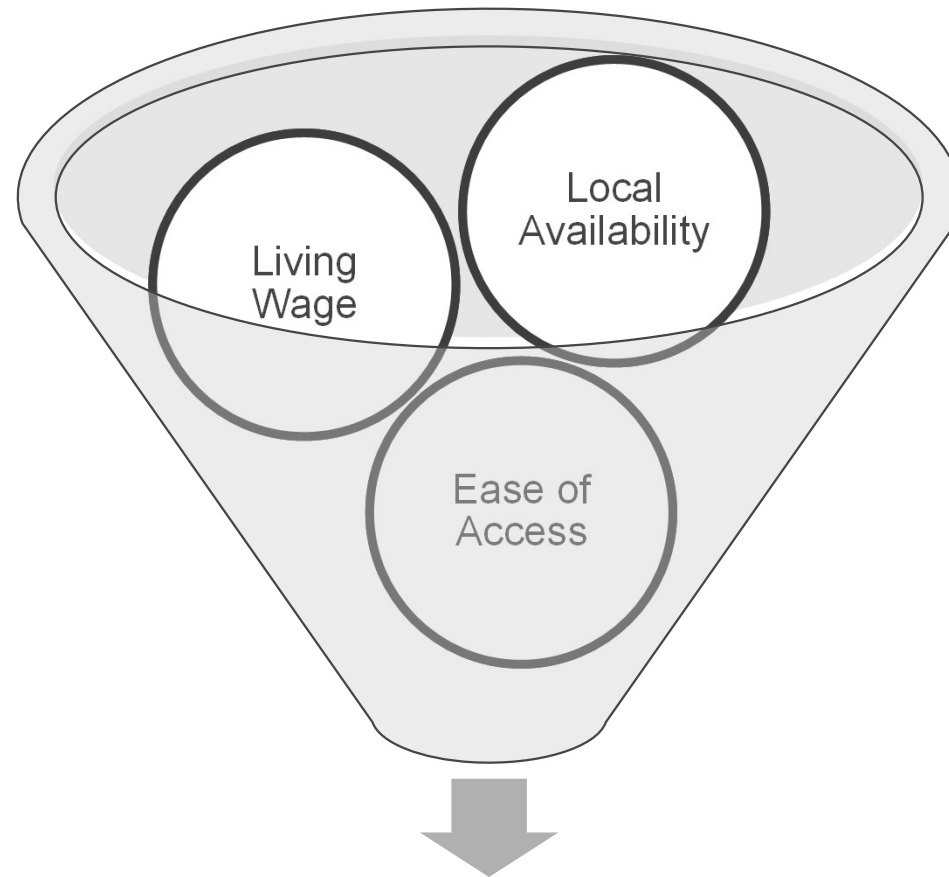
SOURCE (NON-TECH SECTOR)				DESTINATION (TECH SECTOR)		
OCCUPATION	WOC	SALARY		OCCUPATION	WOC	SALARY
Data Entry Clerk	26%	\$28,127	›	Computer Support Specialist	9%	\$49,664
Data Entry Clerk	26%	\$28,127	›	IT Administrator	2%	\$69,673
Compensation / Benefits Specialist	25%	\$49,879	›	Business / Systems Analyst	10%	\$83,871
Compensation / Benefits Specialist	25%	\$49,879	›	Technical Consultant / Analyst	8%	\$89,902
Risk Analyst	21%	\$79,328	›	Cyber Security Analyst	6%	\$85,483
Healthcare Analyst	20%	\$76,447	›	Programmer / Analyst	4%	\$82,915
Healthcare Analyst	20%	\$76,447	›	Business / Systems Analyst	10%	\$83,871
Healthcare Analyst	20%	\$76,447	›	SAS Programmer	4%	\$98,961
Healthcare Analyst	20%	\$76,447	›	Business Intelligence Developer / Architect	4%	\$99,068
Quality Assurance Specialist	19%	\$54,993	›	Software QA Analyst	12%	\$69,806
Operations Analyst (General)	19%	\$60,705	›	Cyber Security Analyst	6%	\$85,483
Clinical Documentation			›			



Fastest Growing Occupations

Rank	Occupations	2017-2022 % Change
1	Business and Financial Operations Occupations	23%
2	Computer and Mathematical Occupations	21%
3	Management Occupations	17%
4	Community and Social Service Occupations	11%
5	Building and Grounds Cleaning and Maintenance Occupations	5%





“Good” Job, “Good” Career

Good for the worker/student, Good for the economy



Attributes of "Good Jobs"

Macro Level

Visible in the Data

- Workforce Size, Demand
- Wage
- Stability/Growth
- Barrier to Entry
- Skills, Credentials
- Diversity
- Mobility

Not Visible in the Data

- Benefit Type and Quality
- Investment, M&A Implications
- Values and Principles
- Commuting
- Workplace Culture
- Schedules
- Everyone's needs and preferences are unique to them



Drive Pathways that are....



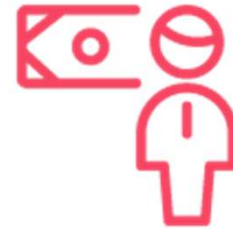
Possible

Overlaps in Knowledge, Skill,
and Ability



Feasible

Similar education, experience
requirements



Desirable

Next-step occupation offers
higher wage



Implications for Action



Strategic, Not Transactional

Participants



Implications for Action... How we populate programs

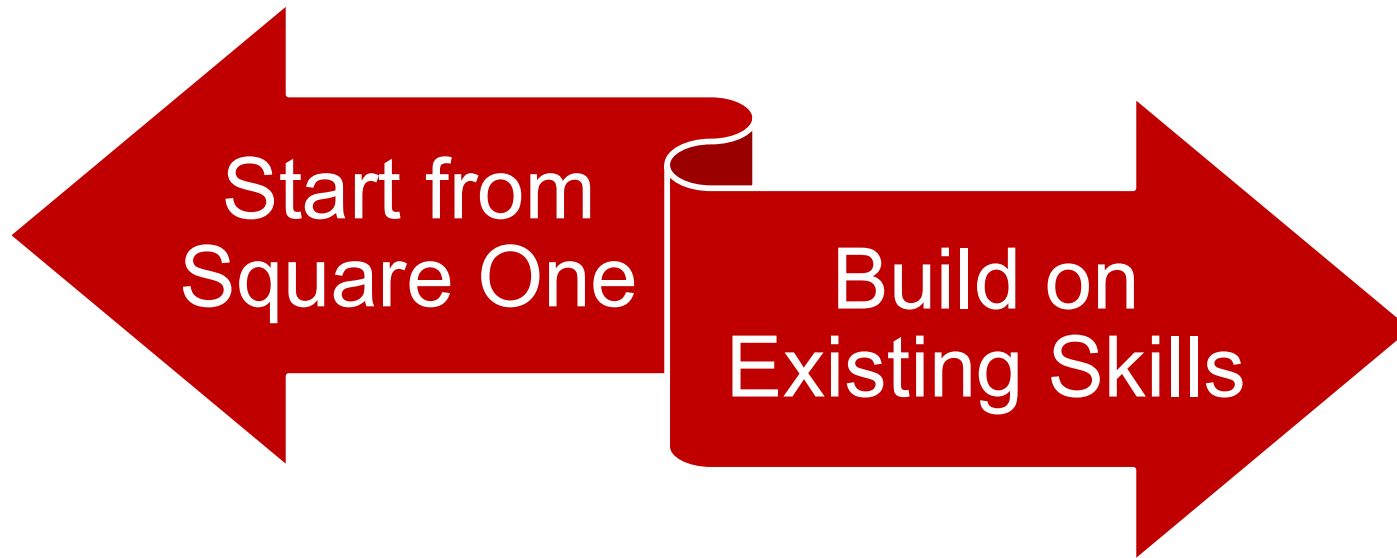
Who is poised for advancement, but is unaware of opportunities or what it takes to achieve them?

Which skills can be developed in early-career roles that are valuable longer-term?

Do we support employed and unemployed people differently?



Learner-Centric Programming



Implications for Action... How we adjust programming

How does our participant focus change our Program Content?

Do we need to rethink our approach to Credentials?

Can we better hone program content (skills) to be driven by employer/industry requirements?



Employer and Industry Partnerships



Implications for Action... How we adjust industry and employer engagement

Can we aim not just for job placement, but longer term pathways?

What can we offer that includes – but is not limited to – instruction?

Can we not only react to what they say, but influence who they consider and how industry and education can be partners in development of skills and people?



Implications for Action

Implications for Action...

What we spend time/money on

What are our smartest, most meaningful investments?

Outreach.... Advising.... Supportive Services... Tracking

*Equipment... Learning Technologies... Program Redesign...
Curriculum*

Policy Change... Tuition Assistance... Strategic Partnerships



What other questions do we need to be asking? What different/deeper data do we need?

What other data do we need to be leveraging?

How do we want to reorient to the jobs and industries that we focus on?



Thank you

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