

A hand holding a glass of whiskey with a large orange graphic overlay. The background is dark and textured, possibly a close-up of a hand or a similar surface. The orange graphic is a large, stylized shape that resembles a drop or a splash, partially overlapping the glass and the hand. The overall mood is dramatic and high-contrast.

Who is Going to do the **Work?**

While developed nations battled for decades for high end labor, a demographic crisis has pushed us into shortages of all jobs.

What can the country, and industries do to head off this crisis, if still possible?



Agenda

1. Background

2. Current Labor Crisis

3. Labor Pools

4. Who is going to do the work?

5. Factors affecting young people choosing careers

6. Employer/Society Solutions



Background

In the Demographic Drought: Bridging the Gap, we showed that while there are not enough workers for **all** levels of jobs, the larger issue was the looming lack of people to do the very jobs that keep our country running.

To this end, in the Summer of 2022, Tallo and Lightcast surveyed **1,500 high school and college-age students** and found that while they are more aware of and do not overwhelmingly harbor negative feelings for the trades or community colleges, they still generally **plan to go the 4-year route** and pursue careers more commonly associated with a bachelor's degree.



Key Takeaways

Roughly **85%** of our respondents* indicated that they intended to pursue a 4-year degree at some point with another study from 2021 showing about **55-60%** intended to pursue a 4-year degree

Most recent data shows around **63%** of high school graduates immediately enroll in post secondary programs.



Key Takeaways

2 out of every 3 native born young people are planning to get a 4 year degree so...

Who is going to do the work that keeps the country fed, protected, and cared for?





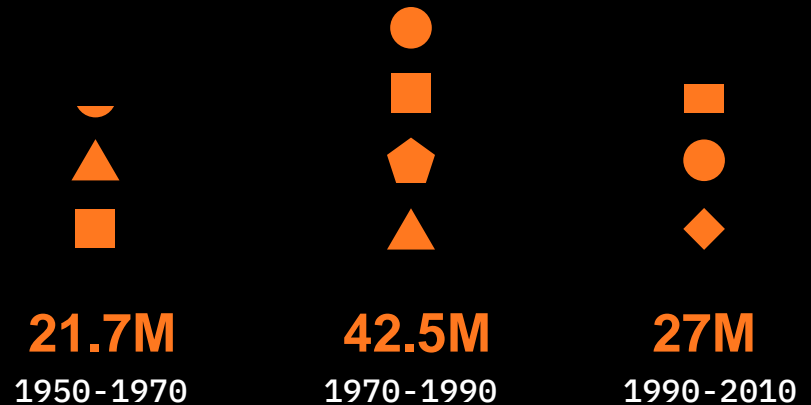
The Demographic Effect

How we got to our destination will
forever affect our future



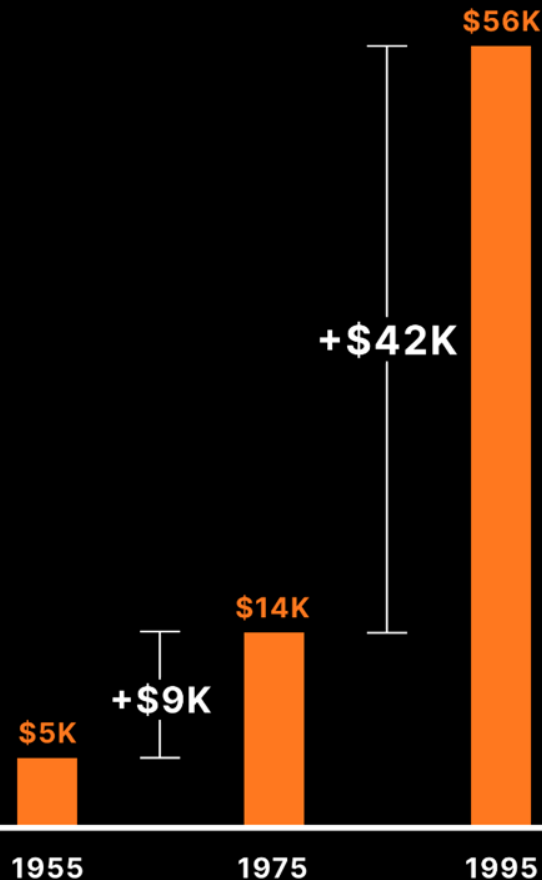
Higher birth rates and women entering doubled our workforce growth

College Enrollment jumped 100% from 1965 to 1975 and continued to soar for women



Boomers generated massive household wealth gains

REAL Median Household Income



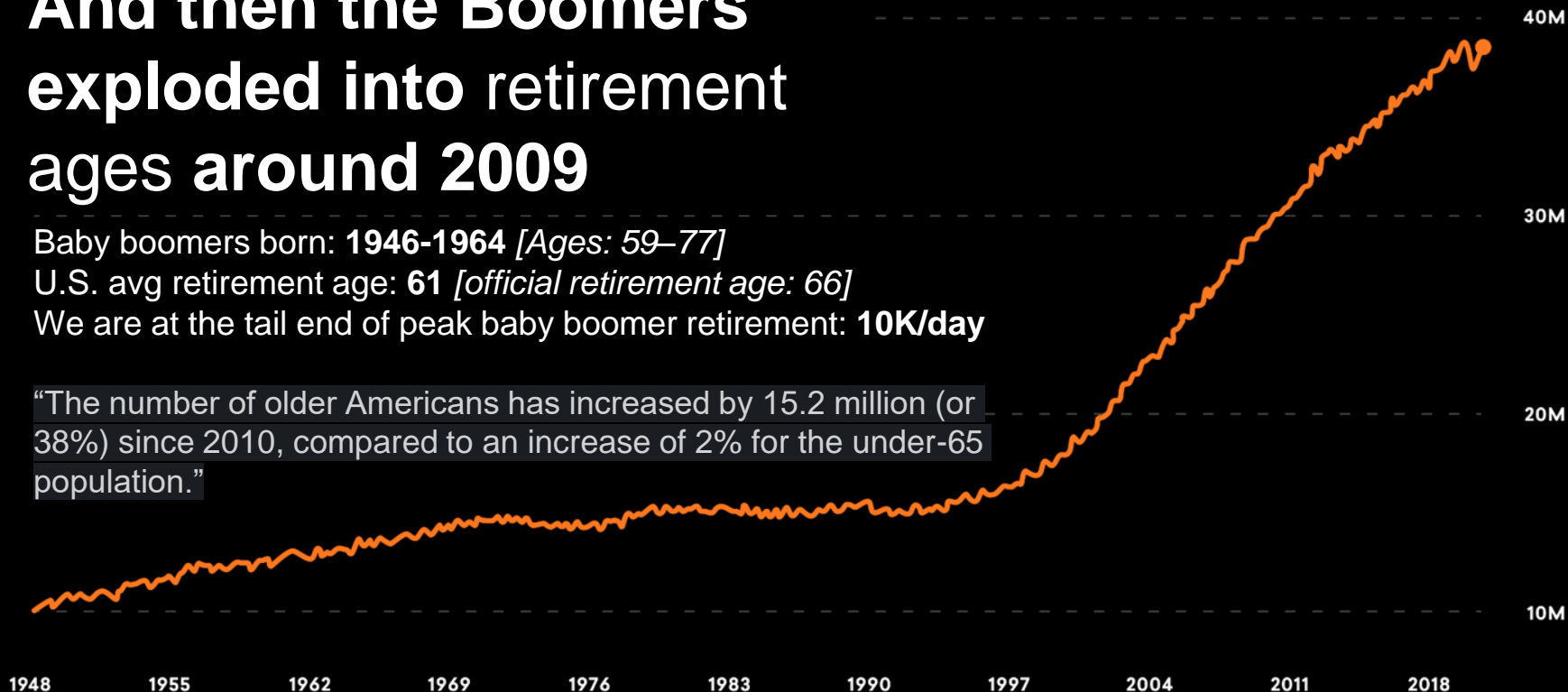
And then the Boomers exploded into retirement ages around 2009

Baby boomers born: **1946-1964** [Ages: 59–77]

U.S. avg retirement age: **61** [official retirement age: 66]

We are at the tail end of peak baby boomer retirement: **10K/day**

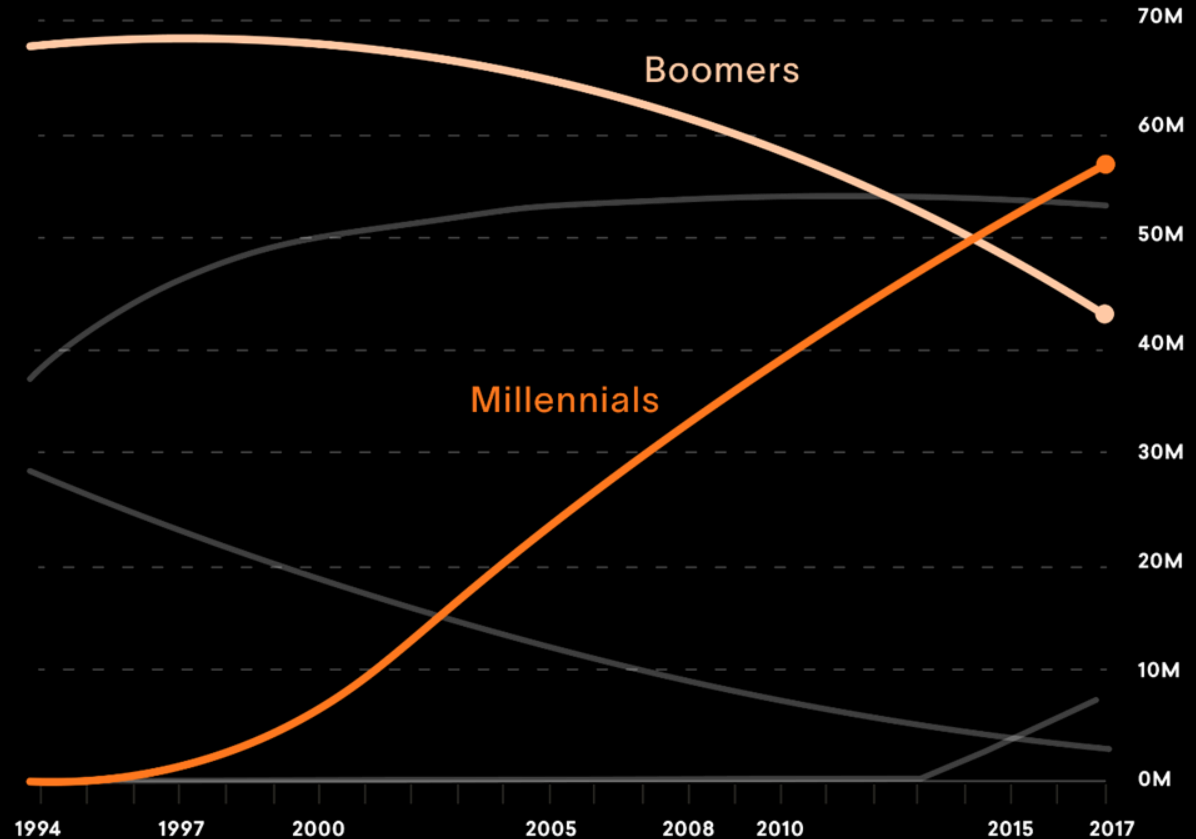
“The number of older Americans has increased by 15.2 million (or 38%) since 2010, compared to an increase of 2% for the under-65 population.”



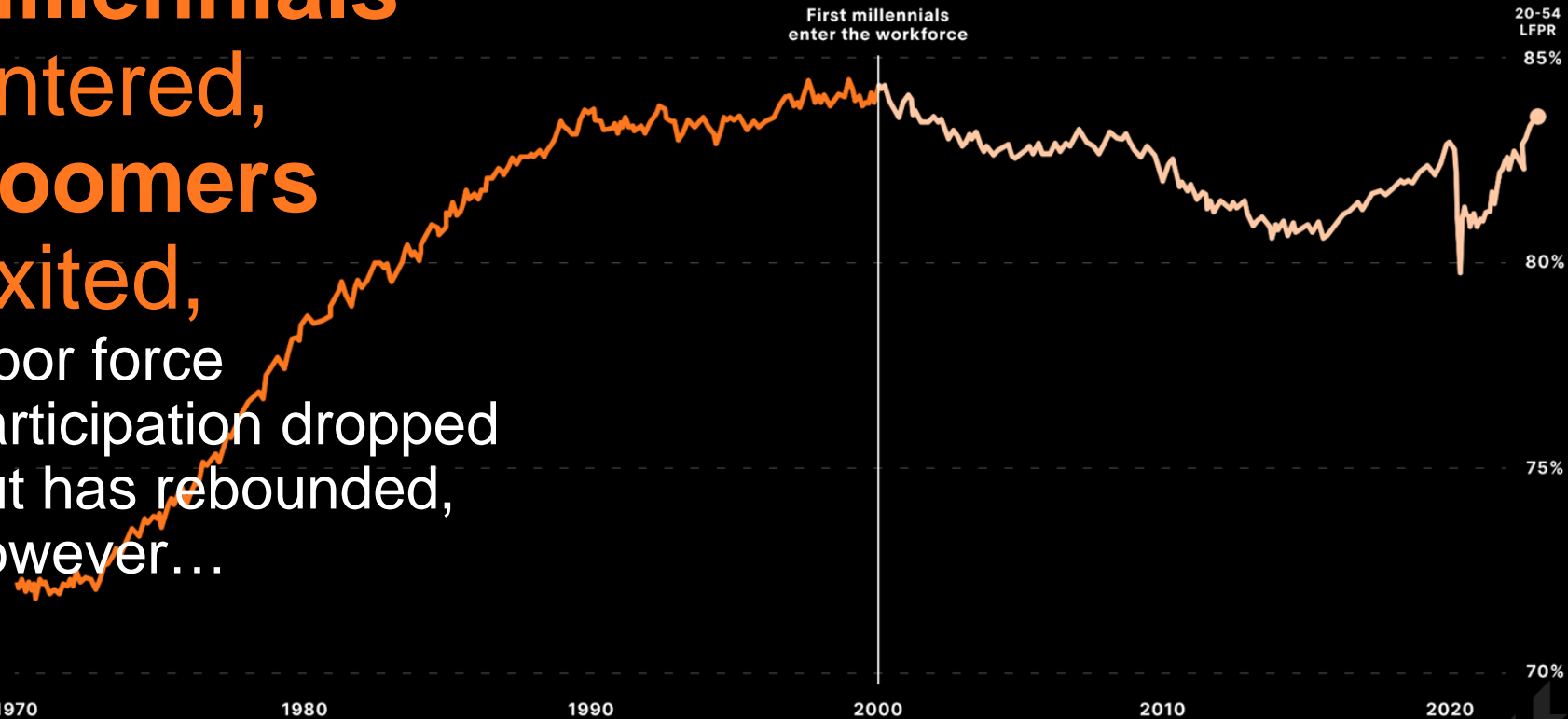
In 2016,

Millennials became the largest generation in the labor force

Note: Labor force includes those ages 16 and older who are working or looking for work. Annual averages shown.

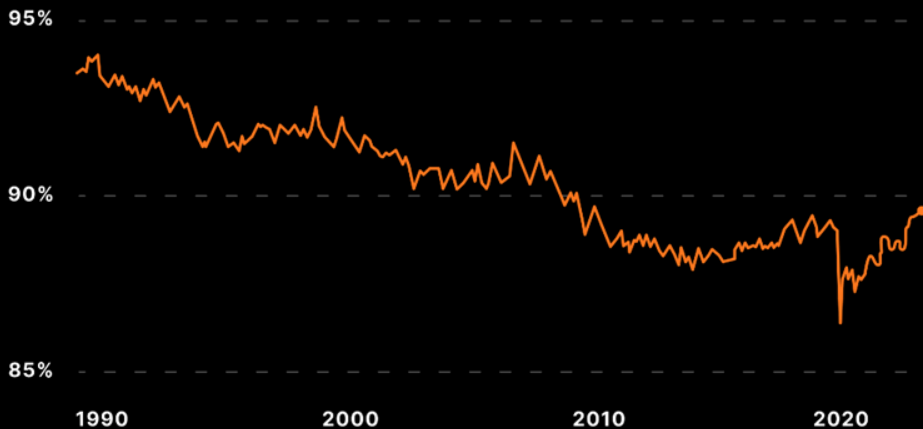


Millennials
entered,
boomers
exited,
labor force
participation dropped
but has rebounded,
however...



The rebound is driven by women

Prime age male LFPR down over 5% from 1990 – Jan 2020



Prime age female LFPR up nearly 3% from 1990 – Jan 2020



An aerial, high-angle photograph of a crowd of people walking on a city street. The image is rendered in a dark, monochromatic style with a color gradient that transitions from a dark, grainy grey on the left to a vibrant orange on the right. The silhouettes of the people are scattered across the frame, some walking in groups and others alone. The overall mood is one of movement and density.

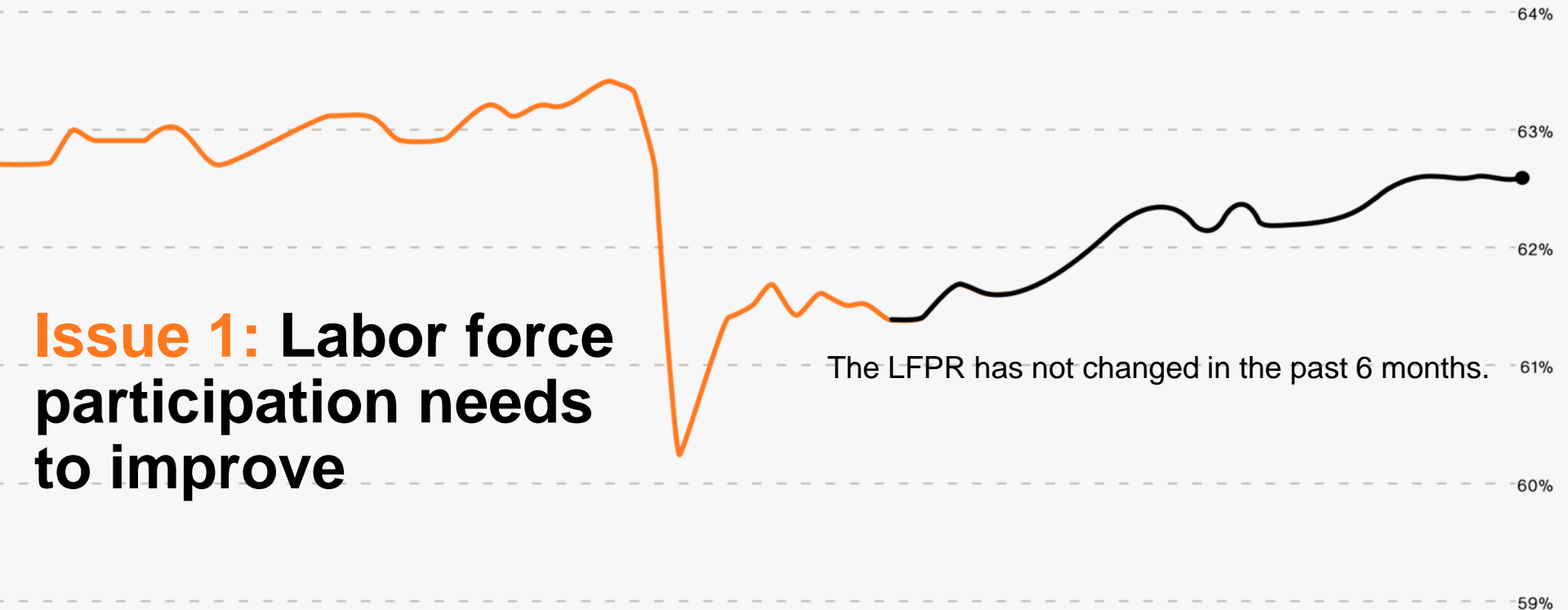
Current labor crisis



Issue 1: Labor force participation needs to improve

The LFPR has not changed in the past 6 months.

Jan 2018 Jan 2019 Jan 2020 Jan 2021 Jan 2022 Jan 2023



The 55+ cohort left the labor force at a much higher rate than the others, and millions may stay out

About three million workforce dropouts say they don't plan to return to pre-Covid activities

- [wfhresearch.com](https://www.wfhresearch.com), [WSJ](https://www.wsj.com), Apr 16, 2022

Age	Labor Force Change	Excess Not in the Labor Force
16-24	370	1,243*
25-54	2,175	324
55+	-230	4,046
Total	2,199	5,613

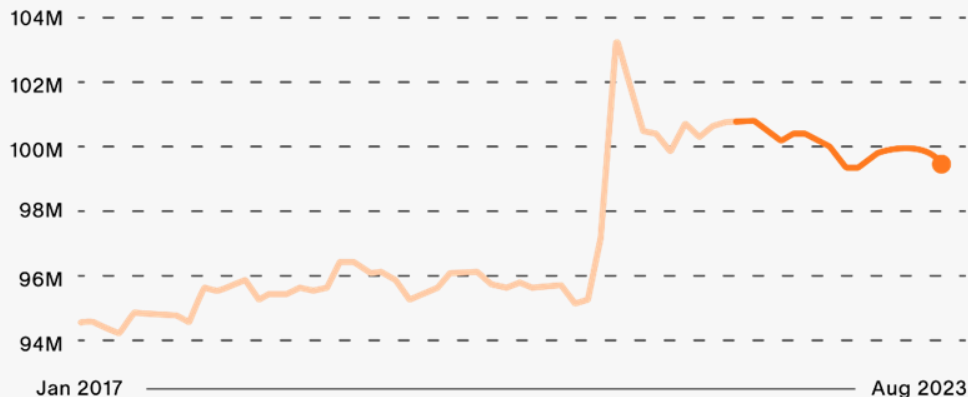
Compared to Feb 2020

All data in k's

Source: Lightcast analysis of US Census Current Population Survey and Bureau of Labor Statistics data

*16-24 not in labor force compared to same month 2019 due to extreme seasonality

Not in the Labor Force



Aug 2023



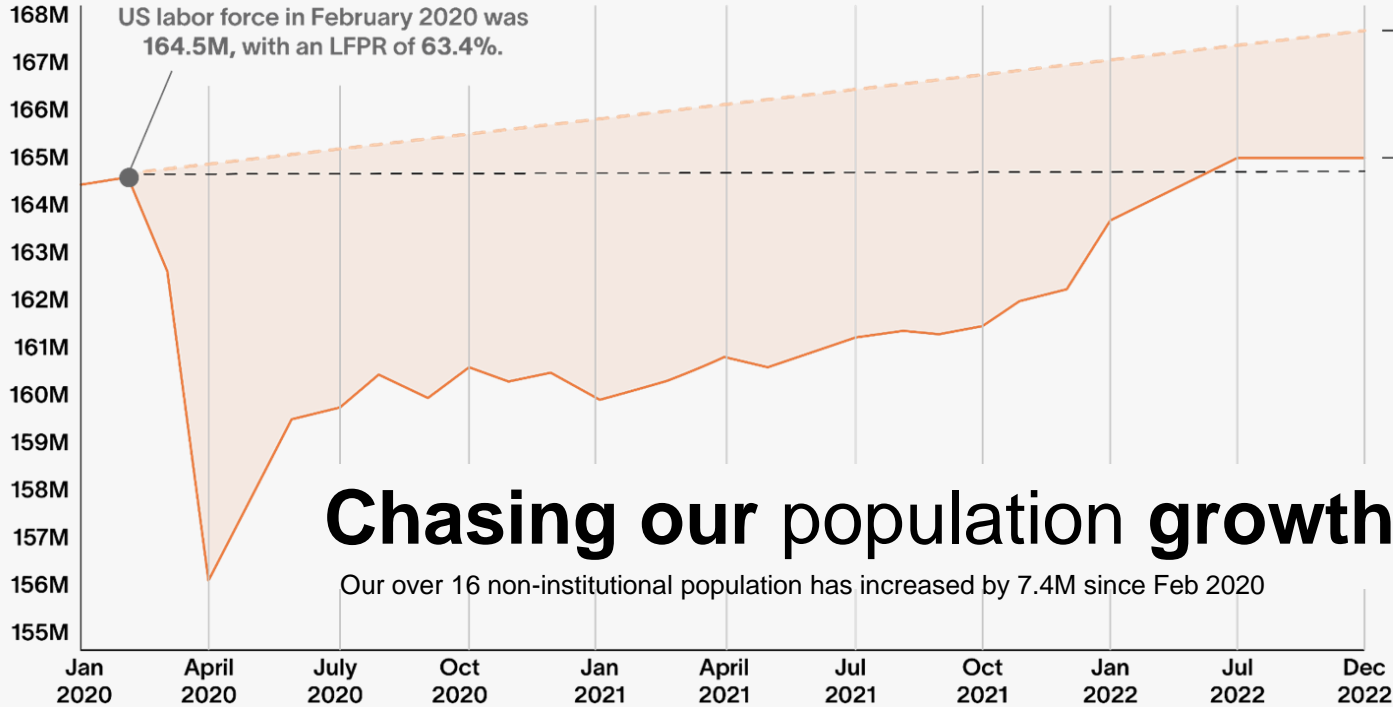
Of all people who are out of the labor force, 60% say they are retired

Reason out of labor force

% of those who gave a reason

I am retired	59.3%
I am/was sick or disabled	13.9%
I did not want to be employed at this time	6.6%
I am/was caring for children not in school or daycare	6.6%
I am/was laid off or furloughed	3.7%
I am/was caring for an elderly person	2.5%
I do/did not have transportation to work	2.2%





We need **700K more people** in the labor force to recover

In **Aug '22** the labor force finally made it back to its level in Feb 2020

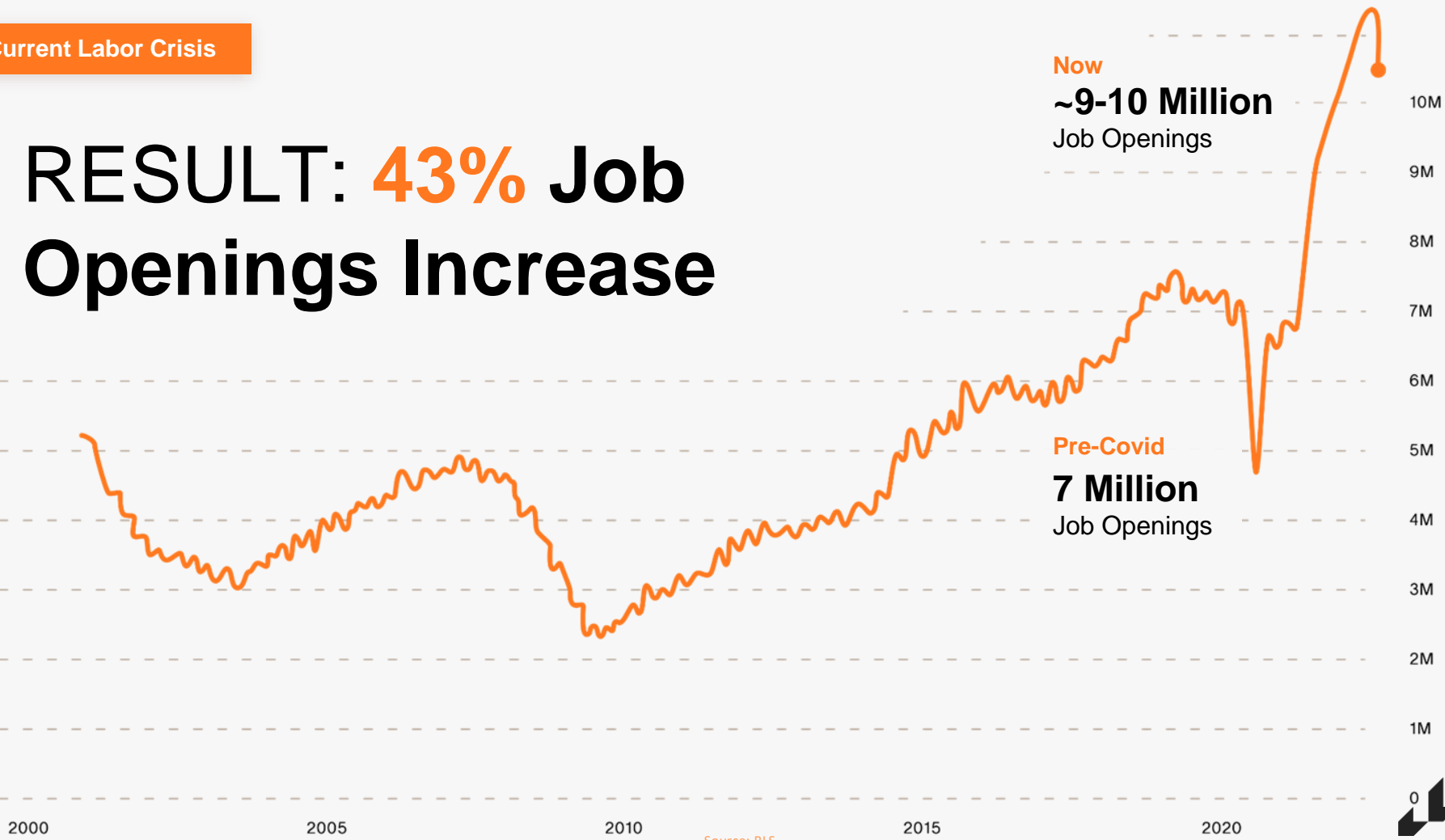
Chasing our population growth

Our over 16 non-institutional population has increased by 7.4M since Feb 2020

Source: BLS, Current Population Survey, Seasonally Adjusted: February 2022



RESULT: 43% Job Openings Increase



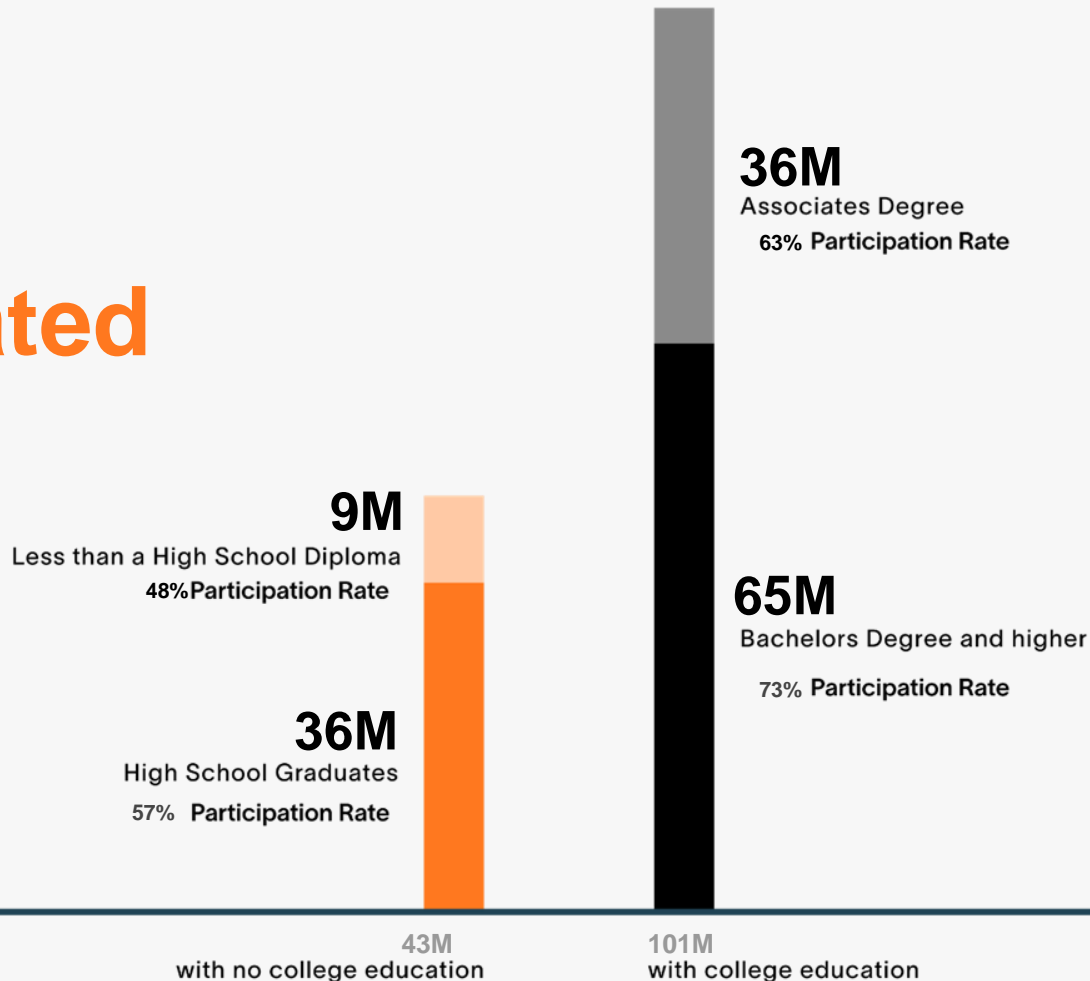
Now
~9-10 Million
Job Openings

Pre-Covid
7 Million
Job Openings



The U.S. is highly educated

And more educated people have a higher labor force participation rate



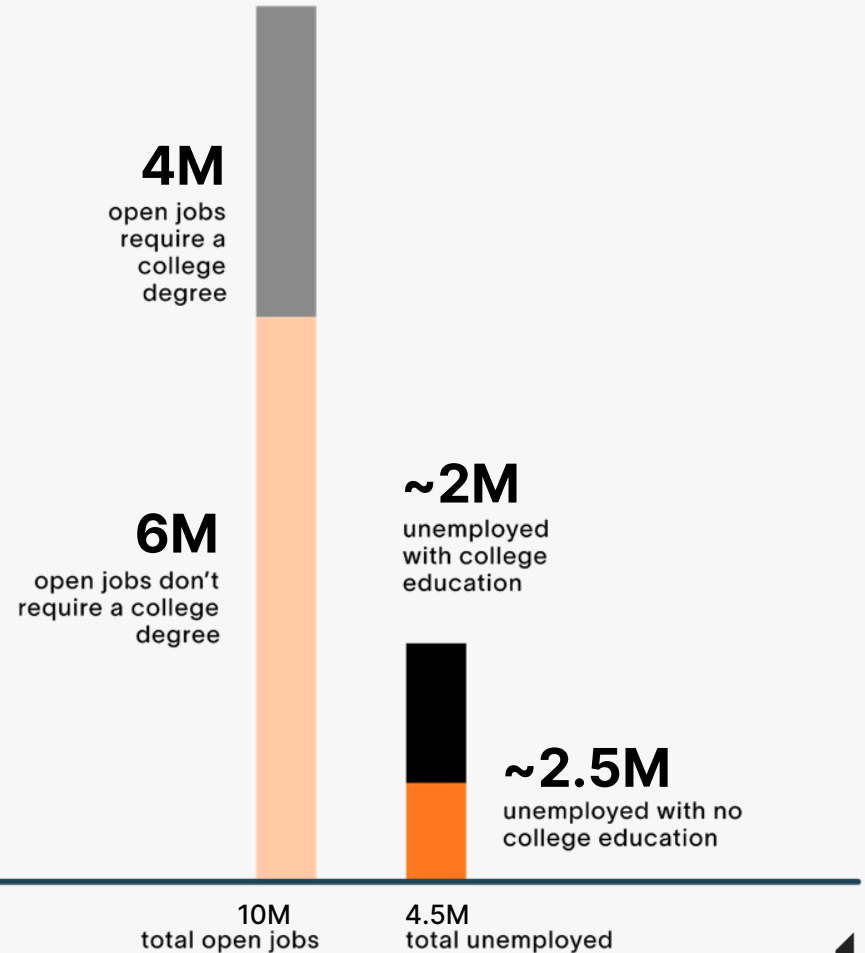
Roughly 6M of the 10M open jobs in America

need to be filled by people **without a college degree**

37% of people out of the labor force are those with a high school diploma.

Only 12% have a bachelors.

Unemployment rates for most college degreed jobs are low but not close to record low levels.



3x

In 2015, we had three times as many unemployed lower skilled job workers per job opening than we have now.



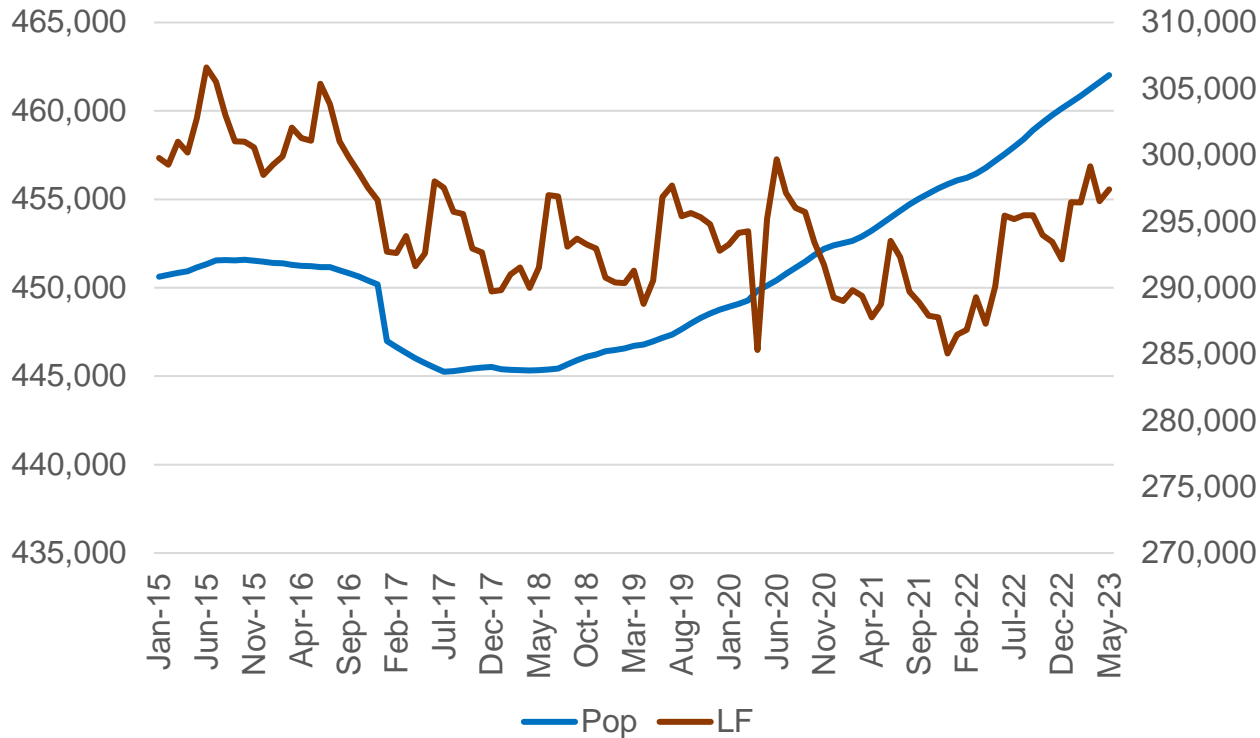
Wyoming Factors



Wyoming labor force growing but...

Over 16 non-institutional population has increased by over 14K since 2019.

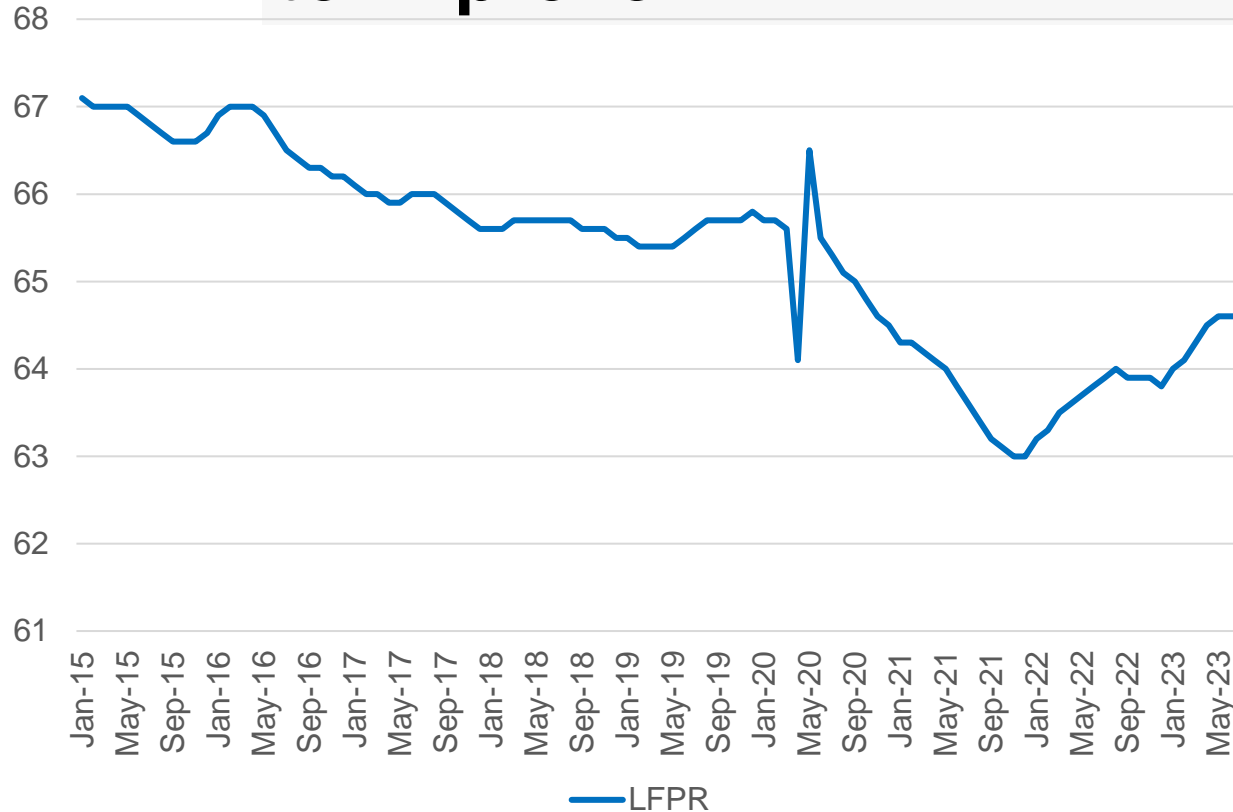
Texas Population vs Labor Force



Since bottoming out in early 2022, the labor force has surged back by 15K.



Labor force participation still needs to improve



There was already a downward trend prior to the pandemic, but participation is still well below what it could be. It is costing the State about 5K workers.



Wyoming's great growth could be stronger

Since February 2020	Feb 20 – Present Change	Current
Labor Force	+4.3K	299,183
Labor Force Participation Rate	-0.4	65.7%
Number employed	+9.3K	290,298
Number unemployed	-5K	9K
Unemployment rate	-1.7!	3%
Job openings	+3K	20K
Unemployed per job opening rate	-0.4	0.45!

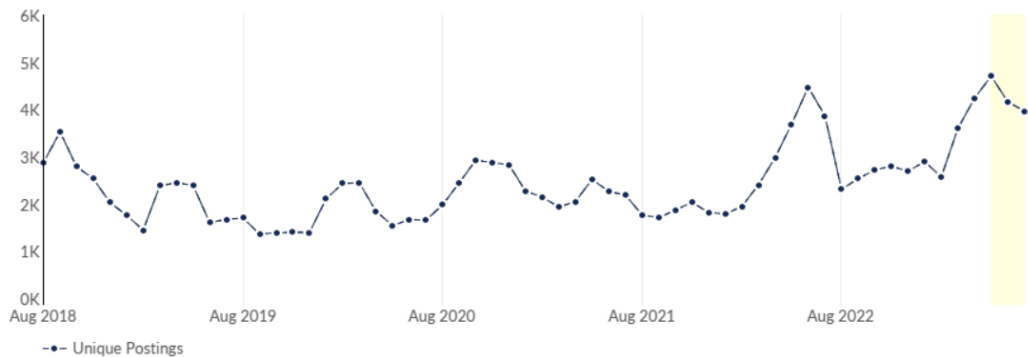
Employment growth has outgained labor force growth meaning Wyoming has taken many residents off the sideline and put them into the labor force. Also, many people moving into the State are being put to work or are bringing jobs with them. Still, the demand for workers has greatly outpaced the State's ability to find them. The industries hiring the most in the past year were construction, restaurants, and healthcare.



All Healthcare Postings – Wyoming

Unique Postings Trend

[Jump to Job Postings Table](#) ■■■



There has been a 62% increase in healthcare job postings since Feb '20 after being relatively flat for years. There are currently just under 4K postings and nurses are driving the demand.

Occupation (SOC)

Registered Nurses

Nursing Assistants

Physical Therapists

Licensed Practical and Licensed Vocational Nurses

Health Technologists and Technicians, All Other

Clinical Laboratory Technologists and Technicians

Medical Assistants

Pharmacists

Nurse Practitioners

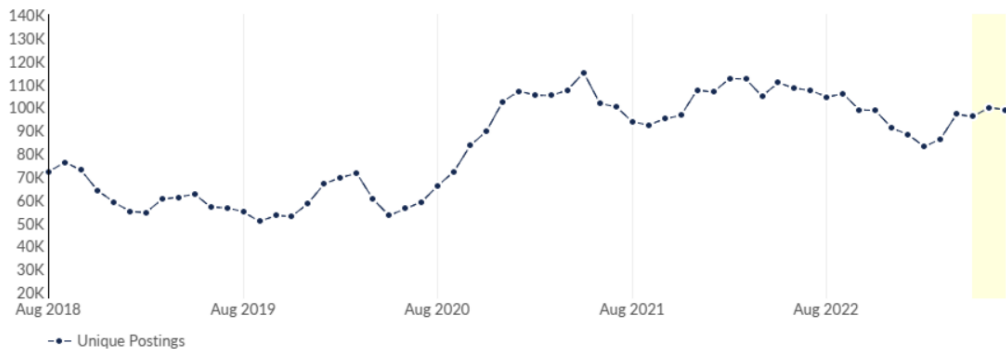
Home Health and Personal Care Aides



The 6 States around Wyoming have almost 100K healthcare postings

Unique Postings Trend

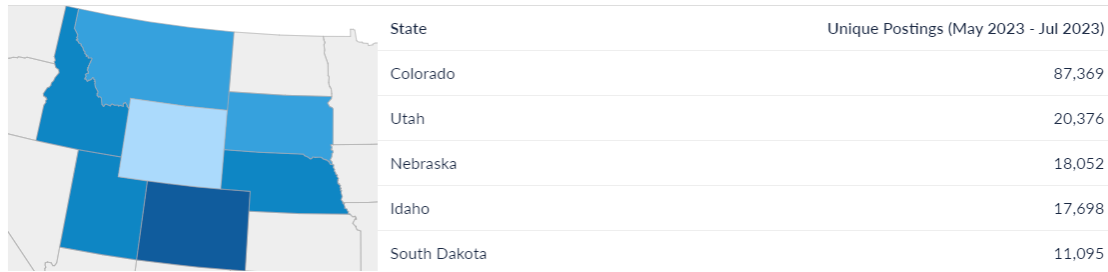
[Jump to Job Postings Table](#) ■■■



Postings are up 30% since Feb '20 and RNs are 8X larger in demand than the next highest occupation

Job Postings Regional Breakdown

[Jump to Map Job Postings](#) ■■■



U.S. Labor Pools

“The United States could also be facing a deficit of more than 6 million workers”

(by 2030) - Korn Ferry



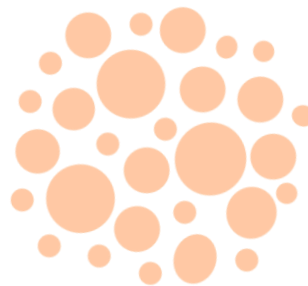
The U.S. has effectively 3 labor pools



Native
Born



Legal
Immigrants



Undocumented
Workers



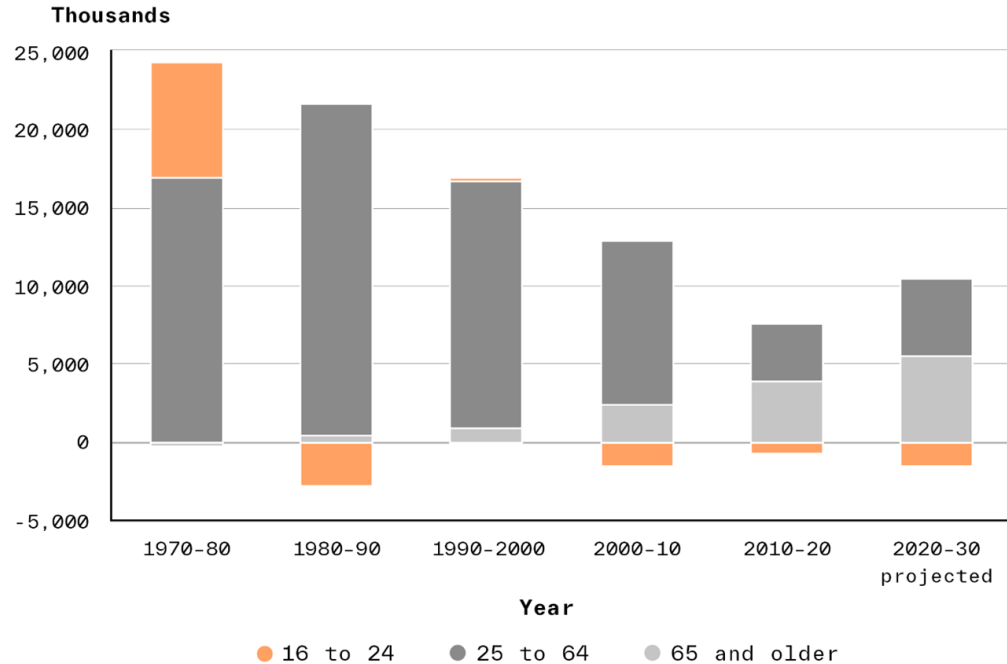
**Native
born
workers**



Most of our labor force growth to 2030 will be over 65 but the vast majority of those people will retire

According to Gallup as of '22, the average person says they will retire at 66, but, they actually retire at 61.

Labor force growth, by age group, for selected periods and 2020–30 projected



U.S. Bureau of Labor Statistics

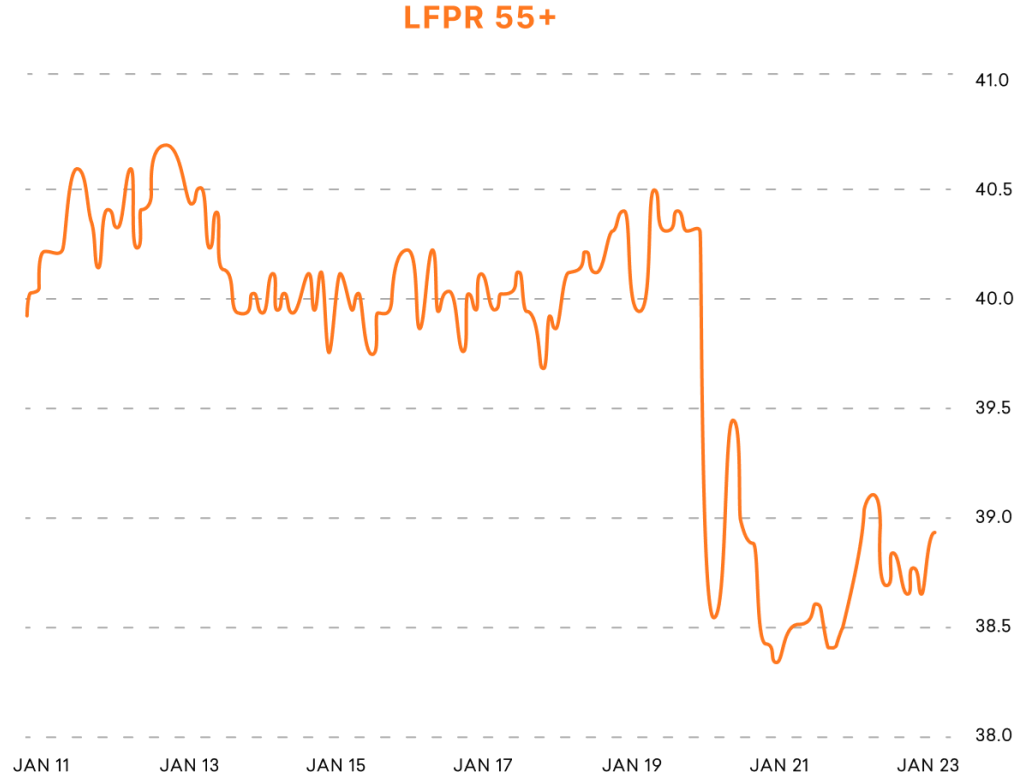


Labor force participation (55+) not recovering

Study by the St. Louis Fed:

Large majority of excess retirements from the **65–74**-year-old group.

Census data also shows small percentage of **55–61** yr olds retired early and the ones that did tended to be in poor health.



16-19 year olds are a key “first job” demographic

16–19-year-old population

Boomer children helped explode this group, but that will continue to erode going forward.



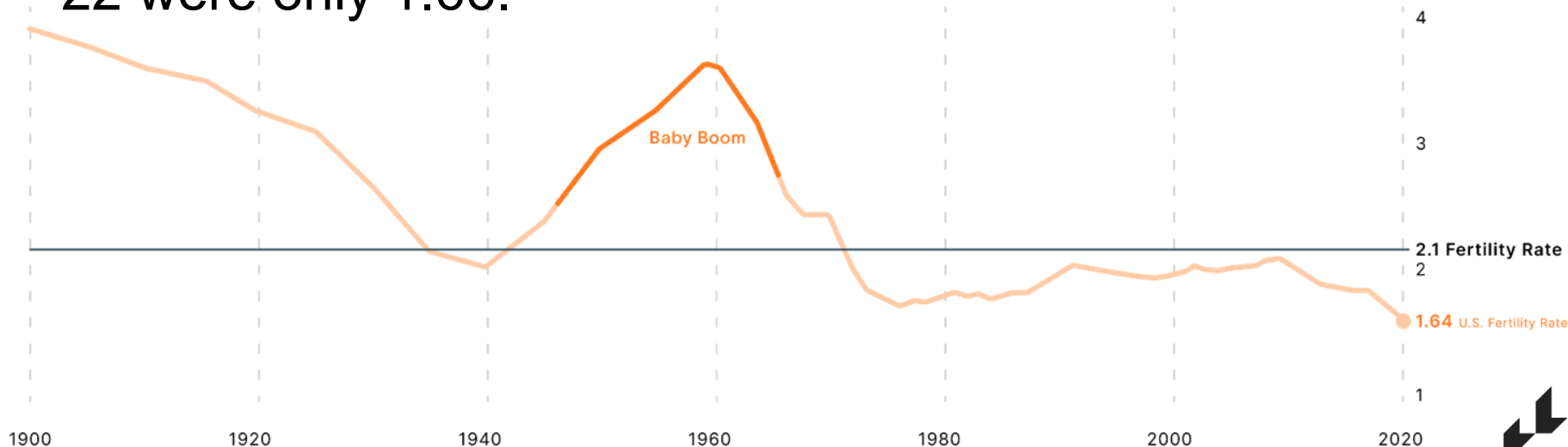
16–19-year-old labor force

Despite a somewhat stable population, the number in the labor force fell for decades and has plateaued lower for a decade.



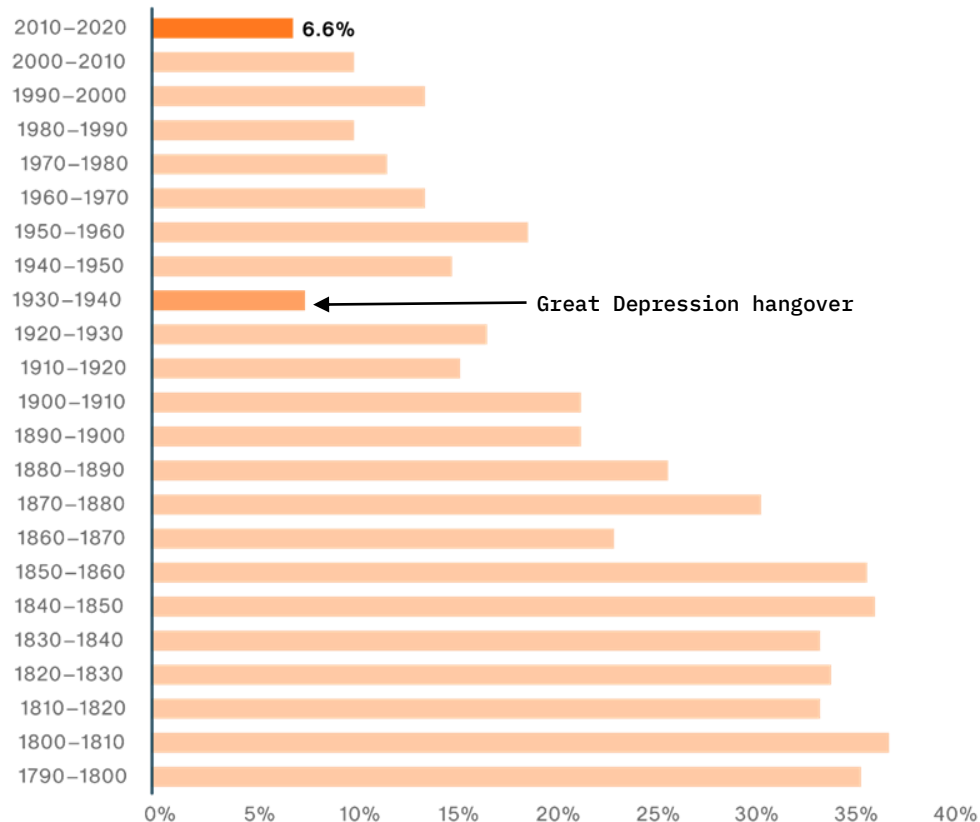
We're living below the 2.1 birth replacement rate

Birth rate hit all time low in 2020 at 1.64, both '21 and '22 were only 1.66.



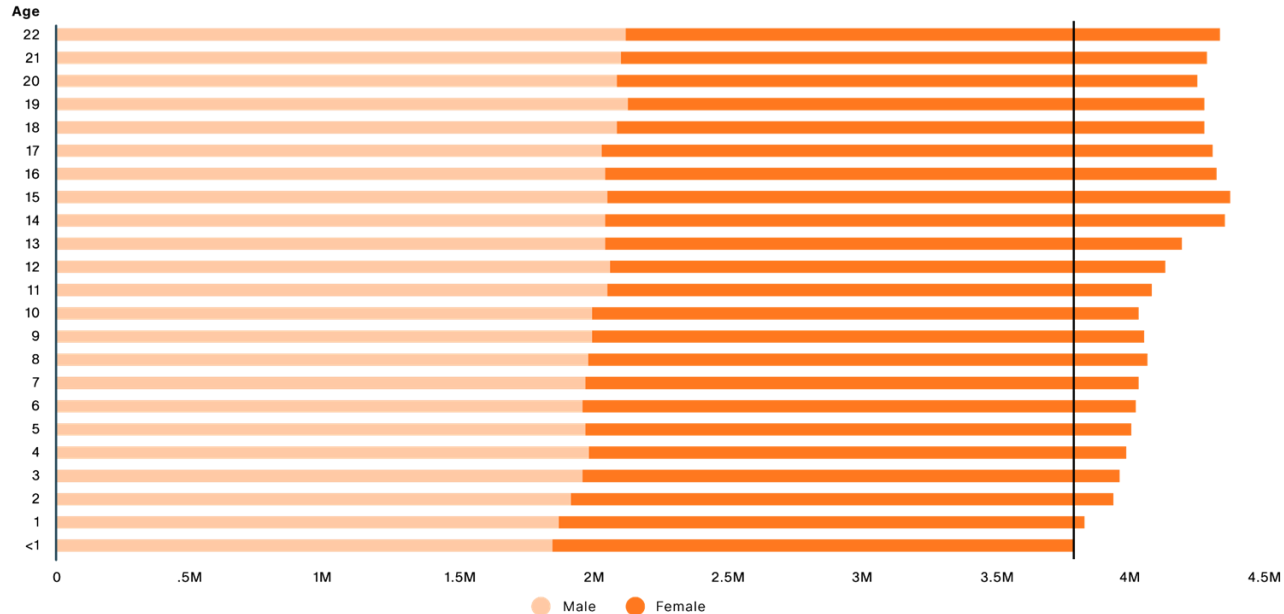
US population growth by decade

1790 to 2020 (estimated) censuses



Over the next 16 years, we will have nearly 1M fewer potential entrants

From 2010 to 2021, the 0 to 4 age group **declined 6.7%**, the largest drop of all age groups.
- USA Facts



“By **2034**, older adults will outnumber children for the first time in U.S. history.”

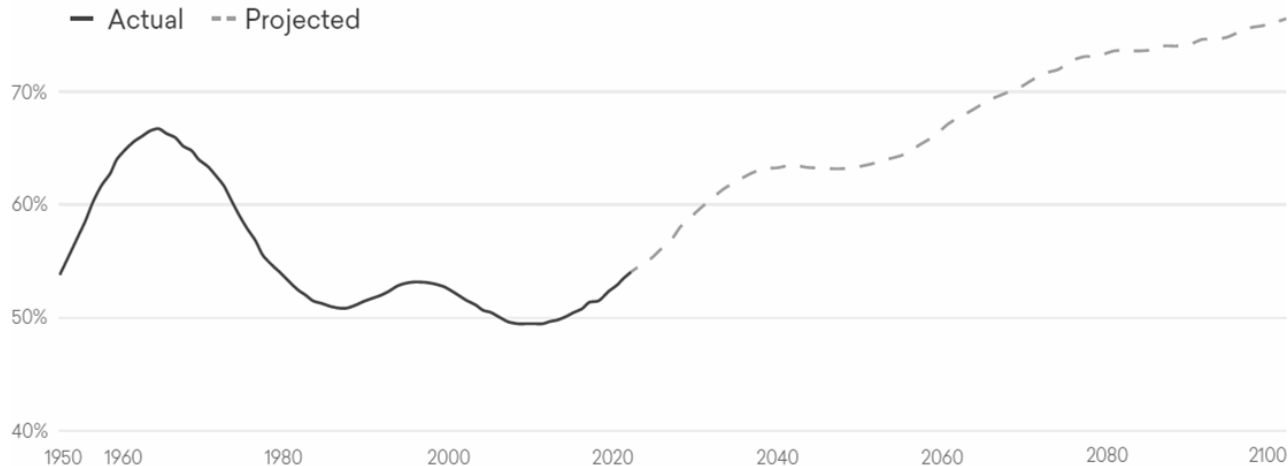
Demographic Drought: Bridging the gap in our Labor Force



The US age dependency will increase sharply

Currently the US age dependency ratio is **46%** but will hit **60%** by **2030**.

Age Dependency Ratio Projection



Source: United Nations- Population Division (2019 Revision)



Legal Immigrants



Immigration is bouncing back but there is still a significant deficit

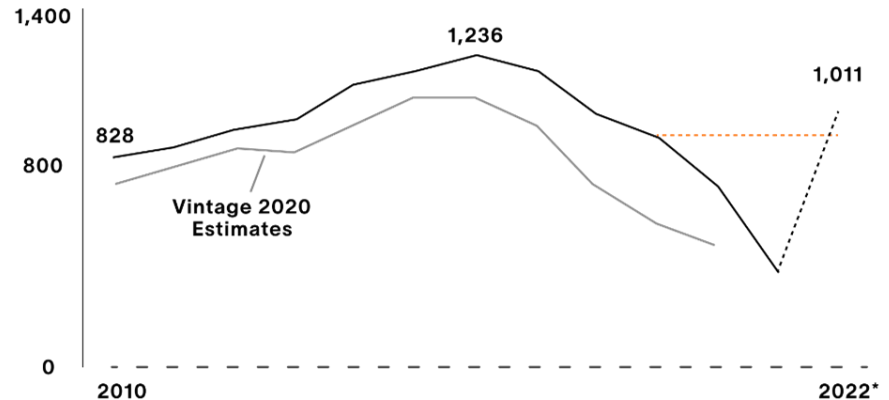
Immigrants per year

1990-99	977,500
2000-09	1,029,900
2010-19	1,063,300
2020	707,632
2021	740,002
2022	1,018,004

We have a gap of a million legal immigrants

Immigrants in the Civilian Labor Force 2010-2022

Net International Migration: 2010-2022 (in thousands)



* Data shown for 2022 are projections.

Note: Year represents the annual estimates period ending on June 30. Released estimates will report 2010 and 2020 as a quarter year (April 1-June 30) instead of a full year.

Source: U.S. Census Bureau Vintage 2020 Estimates (2010-2020); Internal Simulation of 2010-2020 Estimates; and Vintage 2022 Estimates (2021-2022).

Data suggests the highest additions were in young adults, 20-24, both genders and largely Hispanic but also Asian.



Healthcare relies heavily on immigration

1 out of every 4 physicians & surgeons

1 out of every 5 nurses

1 out of every 4 health aides

Select Healthcare Occupations in the US

Occupation	Immigrant Share of Workforce
Physicians & Surgeons	28.2%
Health Aides	25.3%
Lab Technicians	19.6%
Nurses	15.3%
Respiratory Therapists	13.6%
EMTs	5.1%

Immigrant Share of Healthcare Workers in Select States

State	Physicians and Surgeons	Nurses	Health Aides
New York	36.4%	30.9%	60.7%
New Jersey	40.3%	29.5%	53.7%
California	33.1%	35.2%	44.3%
Michigan	27.1%	7.0%	4.8%
Massachusetts	34.5%	17.1%	39.8%
Florida	36.5%	25.8%	45.6%
Illinois	30.6%	17.5%	20.9%
Washington	24.1%	15.9%	29.0%
Pennsylvania	23.7%	7.9%	11.7%
Texas	31.7%	20.6%	24.5%
Virginia	32.4%	12.7%	17.3%
Georgia	27.8%	11.1%	17.5%
Arizona	28.8%	13.0%	21.4%
Maryland	31.0%	26.6%	40.9%
North Carolina	16.7%	6.8%	4.4%
Ohio	27.1%	3.7%	7.8%

Table 4. Naturalization Share and English Proficiency of Immigrant Health-Care Workers (ages 16 and older), by Occupational Group, 2021

	Immigrant Workers	Share Naturalized (%)	Share English Proficient (%)
TOTAL IMMIGRANT WORKERS	26,875,000	53.0%	57.4%
ALL HEALTH-CARE WORKERS	2,775,000	70.4%	70.2%
Health-Care Practitioners & Technical Occupations			
Physicians & Surgeons	262,000	76.6%	93.9%
Registered Nurses (RNs)	546,000	79.2%	82.9%
Therapists	106,000	73.1%	83.0%
Other Health Diagnosing & Treating Practitioners	225,000	79.4%	84.6%
Health-Care Technologists & Technicians	438,000	72.6%	74.6%
Health-Care Support			
Home Health Aides	222,000	54.7%	38.7%
Personal Care Aides	426,000	59.0%	48.7%
Nursing Assistants	279,000	69.5%	62.6%
Health-Care Support, All Others	272,000	66.7%	65.0%

Notes: The term "English proficient" refers to workers who reported speaking English exclusively or "very well." The estimates of health-care workers here refer to their numbers by occupation, regardless of their industry of employment (many occupations can span several industries).

Source: MPI tabulation of data from the U.S. Census Bureau 2021 ACS.

10% of all immigrant workers are in healthcare and 2/3rds are English proficient

Immigrants come from different places

Different countries, different specialties.

Registered Nurses

Country	#	% of all immigrants	% of RNs
Philippines	142,800	29.3%	4.5%
India	32,400	6.7%	1.0%
Nigeria	21,200	4.4%	0.7%

Physicians and Surgeons

Country	#	% of all immigrants	% of RNs
India	56,500	21.3%	6.1%
China	13,600	5.3%	1.5%
Pakistan	12,600	4.9%	1.4%

Home Health Aides

Country	#	% of all immigrants	% of RNs
Mexico	133,300	15.5%	3.9%
Philippines	87,600	10.2%	2.5%
Jamaica	59,300	6.9%	1.7%



Undocumented Workers



Myths about undocumented workers

We don't know how many are here or where they live

We don't know where they work

Everyone who comes to the US stays here (roughly 1M return home every year)

They're all fentanyl dealers (77% of all drug traffickers are American, 2% of all border drug seizures in 2022 were fentanyl/heroin. Drug seizures were down dramatically in 2022 despite record border encounters)

They all cross the border (~40% of undocumented immigrants overstayed their work or travel visas)



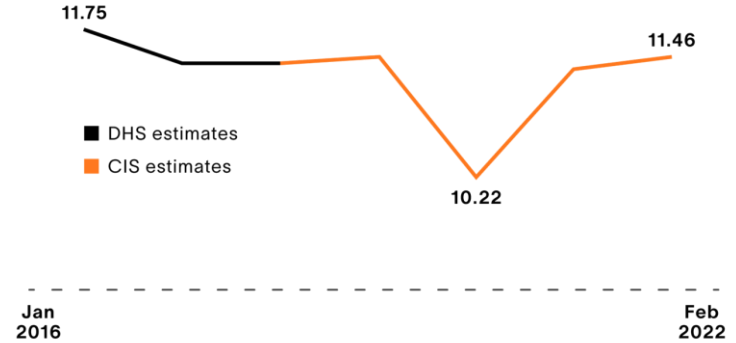
12M Illegal Immigrants are in our population, 2/3rds are employed

Undocumented immigrants make up approximately 3.2 percent of the U.S. population, but **4.4 percent of the country's workforce.**

There are more than 8.5 million* undocumented immigrants working in the United States.

In 41 states and Washington, D.C., there are more than 10,000 undocumented workers, and in 16 states that total is greater than 100,000.

DHS and CIS Estimates of the Illegal Immigrant Population, January 2016 to February 2022 (in millions)



Source: Department of Homeland Security and Center for Immigration Studies estimates of the illegal immigrant population.



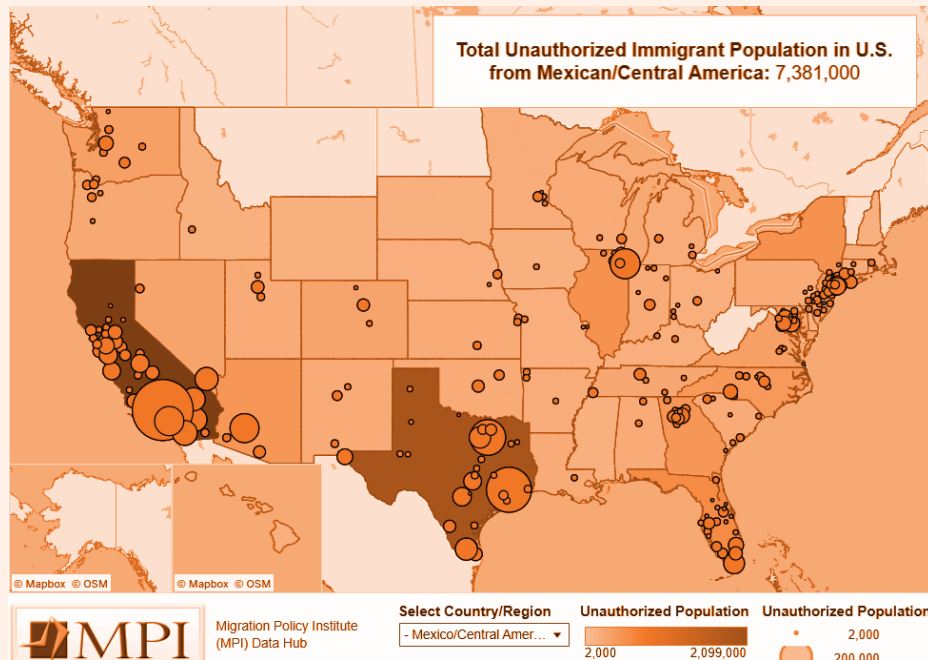
Unauthorized immigrants are largely geographically concentrated

Unauthorized immigrants are highly concentrated in southern States

California and Texas are home to the largest undocumented workforce, with **1.4 million** and **1.2 million** undocumented workers, respectively.

In 41 states and Washington, D.C., there are more than **10,000** undocumented workers, and in 16 states that total is greater than **100,000**.

SOURCE: www.migrationpolicy.org data



They work in critical sectors



1.4M work in construction, **13%** of all construction workers.



15% of workers in building and grounds cleaning and maintenance occupations



1M work in accommodation and food services, approximately **8.4%** of the industry



Nearly **one-quarter of a million** are working as health care providers and 188K as custodians, food servers for healthcare



~ **1.7M** work in the nation's food supply chain—from **358,000** farmworkers and food processors to **154,000** working in supermarkets, grocery stores, and convenience stores.

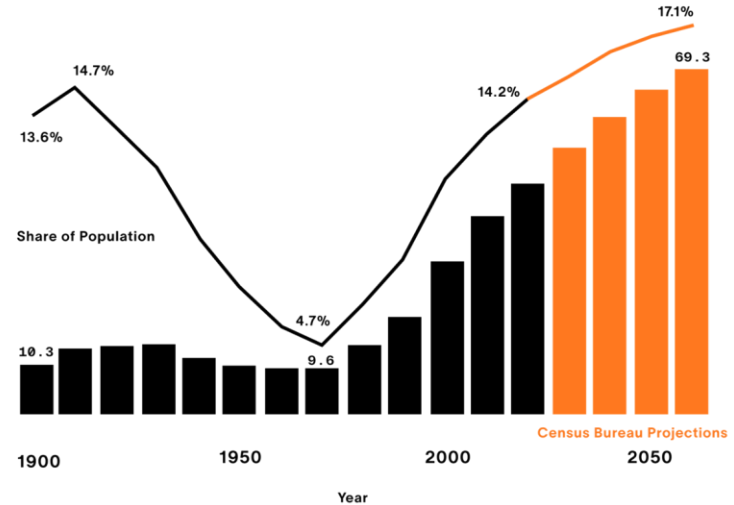


Immigrants are now the most significant driver of employment growth in the US.

“The monthly CPS also shows that the total foreign-born population (legal and illegal together) grew to 46.7 million in February 2022, a new record high in American history and an increase of 1.7 million since January 2021.”

“Illegal immigrants account for more than one million (about two-thirds) of the increase in the total foreign-born population since January of 2021.”

Foreign-Born in the U.S. Number and Percent, 1900-2022, plus Census Bureau Projections to 2060



Source: Decennial Census for 1900 to 2000, American Community Survey for 2010, February Current Population Survey (CPS) for 2022. The CPS does not include the institutionalized. For 2030 to 2060, see



Between 2021 and 2022, Immigrants of all kinds went from 17.4% of all workers to 18.1%

Their Labor Force Participation Rate of foreign born men is around 77% compared to native born around 66% and 71% were 25-54 years old.

They went from a high of 23.5% of all of the labor force in the West to a low of 10.2% in the Midwest. (Northeast 21.5%, South 17.5%).

Their median weekly wage in 2022 was \$945 compared to \$1,087 for native born.

Source: Decennial Census for 1900 to 2000, American Community Survey for 2010, February Current Population Survey (CPS) for 2022. The CPS does not include the institutionalized. For 2030 to 2060, see





Who is going to do the work?

The US labor force is currently predicted to grow by 23M to 2038

Unskilled Labor

(high school diploma or less)

College Educated

(Bachelors, Masters and Doctorate)

Skilled trades

(high school, trade school or Associate's degree)

A battle has been forming and will intensify between 3 occupational groups



The math problem

Sector breakdown



The math problem:

Non White Collar Jobs: Food Supply

There are 860K people employed in the beef cattle production industry in the US alone. *Most food supply jobs do not require a college degree*

Agriculture

Food & Bev Processing

Cold storage

Food Wholesalers

Restaurants

Grocery stores



Home product
wholesalers

Home building
manufacturing

The math problem:

Non White Collar Jobs: Homes

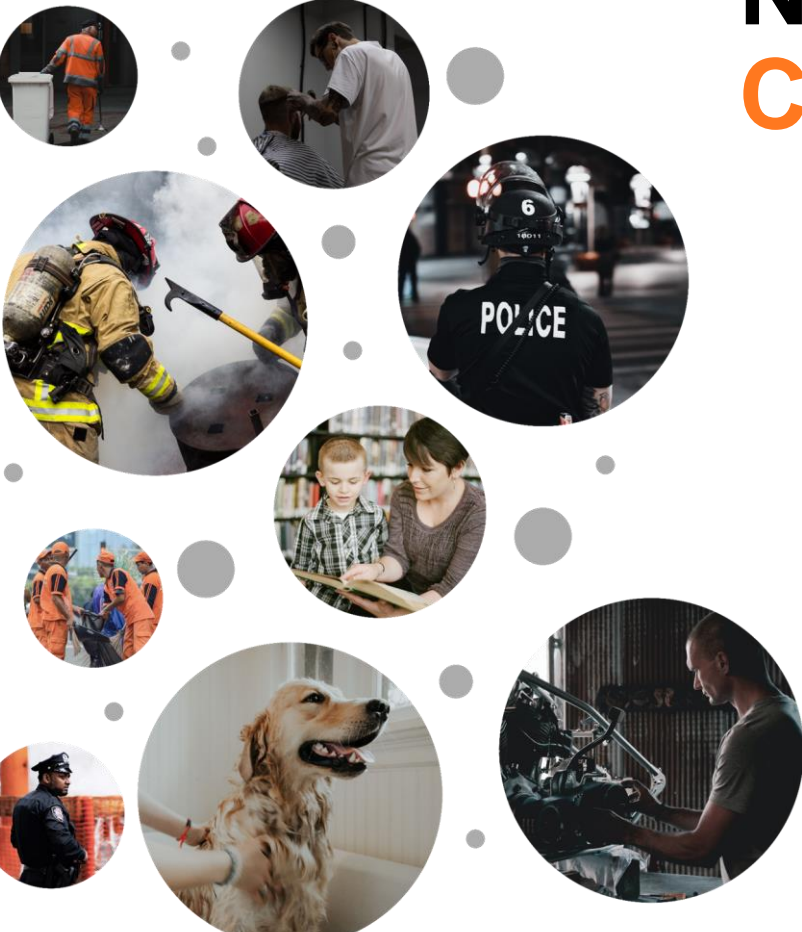
Home product retailers

Many industries that are related to housing are predicted to lose employment to 2031, however, they still have to replace significant numbers of retirees and those leaving these industries



The math problem:

Non White Collar Jobs: Community Welfare



Occupation	Employed	Annual Job Openings	Net new needed yearly
Firefighters	326	28,000	1,300
Police Officers	688	59,000	2,200
Security Guards	1,087	155,000	3,800
Janitors	2,298	335,500	8,500
Animal caretakers	291	70,400	8,600
Barbers/Hair Stylists	609	94,000	6,500
Childcare workers	949	170,000	6,100
Recreation workers	280	62,000	2,800
Garbage Collection	139	20,600	750
Automotive technicians	1,759	178,000	6,400

1.2M

47K



Oh, and this as well...

Every branch of the military is struggling to make its 2022 recruiting goals, officials say

With a record low number of Americans eligible to serve, and few of those willing to do it, this "is the year we question the sustainability of the all-volunteer force," said an expert.



The math problem:

White Collar Jobs: Healthcare

As the US struggles to find critical service workers, the industry most in demand will be healthcare as aging boomers put historic pressure on the industry.





Nursing care facilities

Employment: 3.1M

New jobs/yr: 14K



Hospitals

Employment: 5.3M

New jobs/yr: 32K



Home Health Care

Employment: 1.6M

New jobs/yr: 33K



Doctor's Offices

Employment: 2.9M

New jobs/yr: 27K



Projected annual job openings:

647K, net new jobs will equal **79K** annually, current openings around **2M!**

Occupations most used, annual hiring need:

Registered Nurses: **203K**

Physicians: **22K**

Health technologists (lab techs): **256K**

Therapists: **56K**

LPNs: **59K**

Pharmacy techs: **44K**

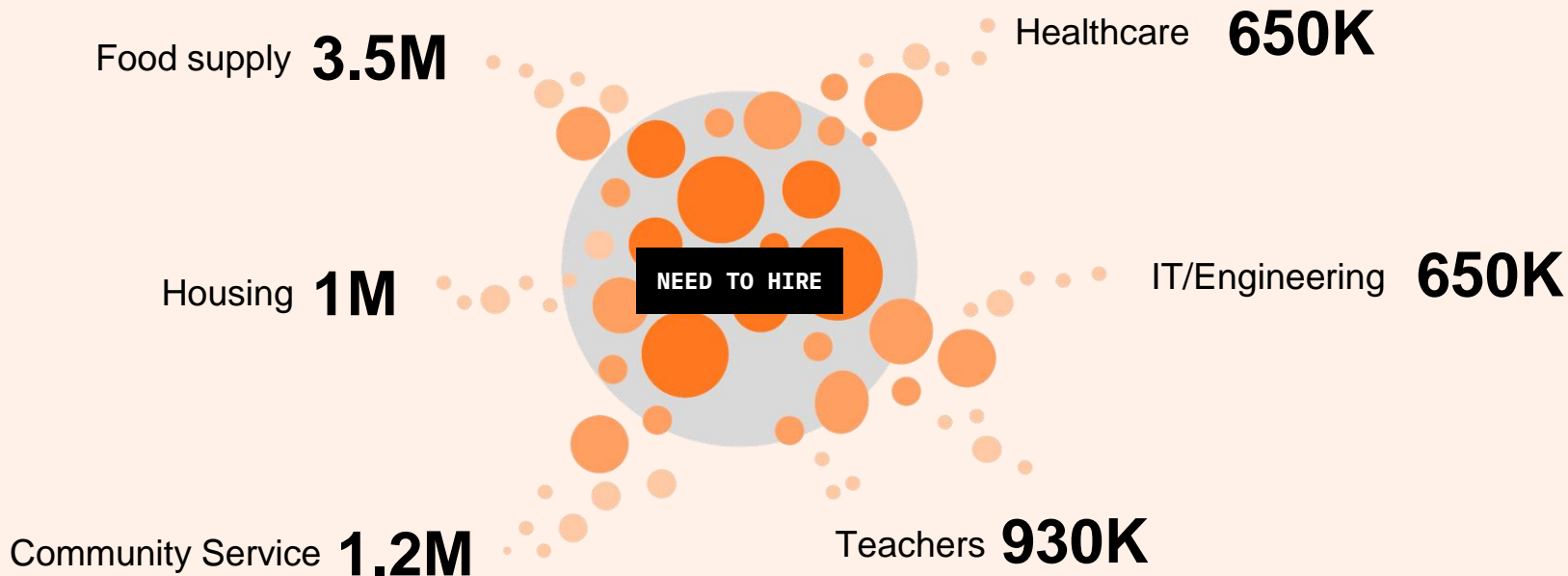


The math problem:

White Collar Jobs: IT and Engineering

Automation, robotics, and the internet will increasingly become the way of dealing with chronic labor shortages.





8M jobs to fill every year



THE BOTTOM LINE

There is very little chance that the US will be able to fill the critical jobs that keep an economy functioning outside of immigration.

This could improve if certain fundamental aspects of society change.



Employer Solutions



What do Gen Zs want in a job?

Better work/life balance. “More than half (56%) of Gen Z said they would leave their job if it interfered with their personal lives”

“I want to **make a difference** before I want to make money,”

“42% of Gen Zers would rather be at a company that gives them a **sense of purpose** than one that pays more.” – Lever report

“62% of Gen Z plans to start or possibly **start their own business** in the future.”

“I want to **know what is expected** of me at work”

“The **mission or purpose** of my company makes me feel my job is important”



1 Many jobs suffer from a marketing problem

Value to society

Few are more equipped to give back to their community, help disadvantaged populations, travel the world and contribute to charitable agencies like those in healthcare

Dealing with “Self-Disqualification”

Many healthcare companies are willing to train or make training available for certain healthcare roles such as respiratory therapists, nursing assistants, etc... but their postings are not positioned to catch the attention of the general job seeker.



2 Create Social Networks

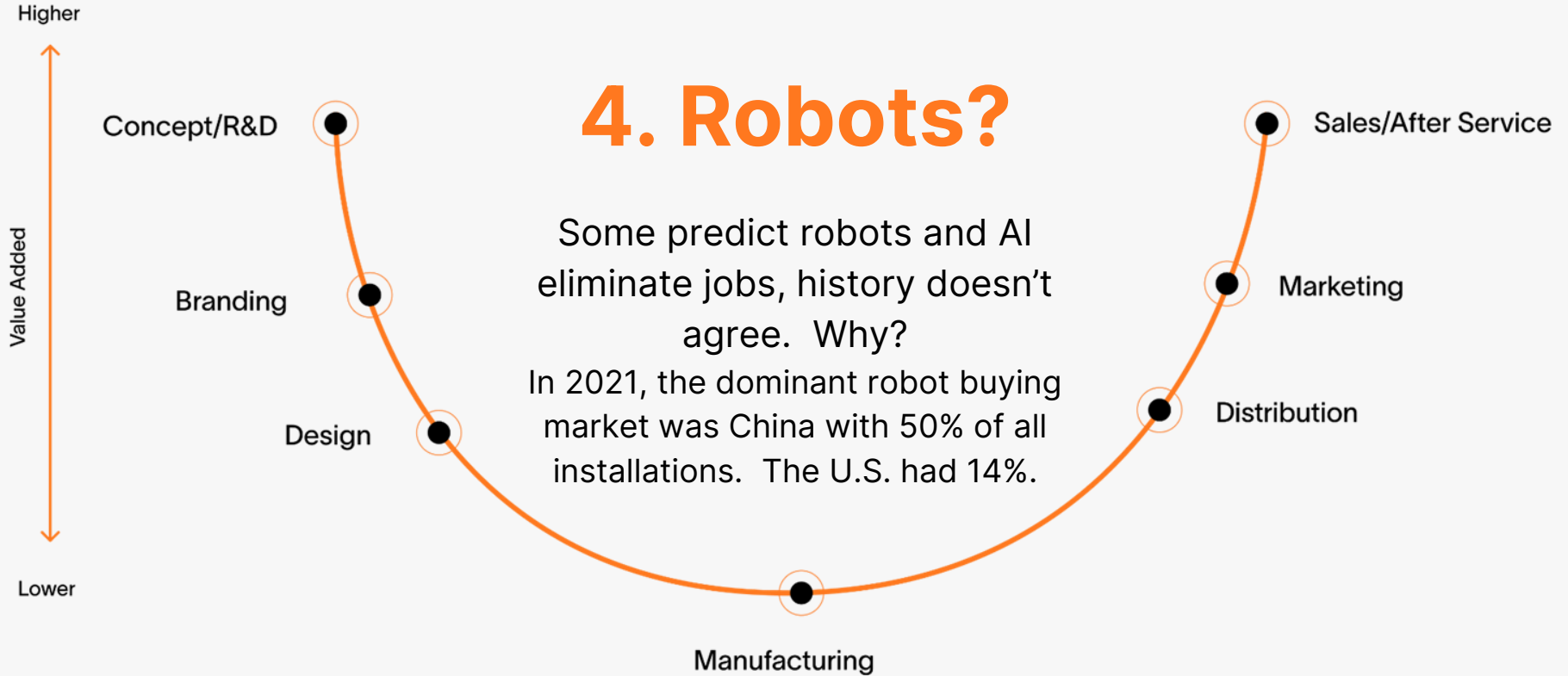
If they value the “**coming of age**” **experience** of college, work with other businesses to socialize young people with their peers



3 Earlier Messaging.

Get your **message** to them at **younger ages** and then stick with them through graduation.





Robotics, he said, are good at “garnering headlines,” but “it’s not practical in the vast majority of restaurants.” McDonalds CEO Kempczinski, July 2022

Source: the Smiling Curve:
Stan Shih.



Develop a less worker dependent model...

- Industrial Engineering
- Desk Audits
- Core Competency

... and then allocate
workers **appropriately**

**What do you want to be great?
What can be just good?
What can you get rid of?**

“Taco Bell and Tim Hortons are both leaning hard on drive-thru prototypes that ditch the dining room. Starbucks, Chick-Fil-A and Panera have all dramatically expanded in last few years around dual-drive thru and takeout-heavy business focuses that drive revenue up and costs down.”



Create your workforce

5. Apprenticeships, Internships

- **600K** registered apprentices in the US, +120K new in 2021. Mostly in skilled trades.
- **Emerging apprenticeships** after 2015 are spanning out across occupations.
- **Informal apprenticeships** (not registered with DOL) but advertised as such are twice the size of formal ones.
- **Apprenticeships STARs:** Workers who are skilled through alternative routes. STARs, as a talent category, are more than half the workforce. 65% of Black workers are STARs as are 55% of Hispanics workers. 52% of all women in the workforce are STARs

From the Lightcast & Opportunity at Work joint article, “The Changing Face of Apprenticeships”



Apprenticeship quick hits

Not just a skilled trades focus anymore, they are now occurring in healthcare (nursing, pharmacy techs), and IT, especially in emerging technologies, management analysts, & project managers.

IT is growing in emerging industries like cyber security and renewable energies

Despite only **8.2%** of its population having a college degree, **India is the largest IT** offshoring destination in the world.



Create your workforce

6. Skills based hiring, and re-examining your ATS screens

The average corporate job opening receives 250 applications while the average job opening gets 118 applicants

Numerous articles exist showing how qualified candidates can get past ATS “bots”. Why would those articles need to exist?



40-60% of companies cited a **lack of skills** as the barrier to hiring but they had received numerous applicants.

- NFIB (Jan '22) Forbes
May 17, 2022

The surplus of job seekers when boomers flooded the market created a “**ready made employee**” mindset. That did not exist prior to the boomer population.

From the 1950s to the early 70s, **only 15%** of the US population had **completed a 4 year degree**, so most management positions were filled by workers who had started at the very bottom of the organization.



7. Artificial intelligence

*“job posts related to generative AI are up 230%”
Upwork, July 11, 2023*

When thinking of skilled trades, healthcare and other dire labor shortages, will AI solve any of them? And who is going to fill all these new AI jobs?



Consumers don't want an “artificial” experience



Put all your cards, all options on the table.

Assign risk and tolerance levels.





Society Solutions

**Ease up on the message
that everyone needs to go
to college and STEM jobs
are the only ones of
value.**



1

Organic approach – Young people need to be encouraged to follow whatever employment path they choose.

2

Take guilt and pressure out of the equation. College is always an option. It may make sense for many young people to begin their career and then add college on later to advance their business skills.

3

Career diversity matters – We are all created differently and parents, guidance counselors, leaders need to see all paths as equally valuable.



Modernize thinking and policies around immigration



A close-up, high-angle photograph of a person's hand holding a pen, poised to write on an open book. The lighting is dramatic, with a strong orange-red glow from the top, creating deep shadows and highlighting the texture of the paper and the hand. The overall mood is one of quiet contemplation and intellectual pursuit.

The Big Question



**Will labor force participation
increase in the future?**



Factors affecting Labor force participation into the future

Mix shift.

Aging boomers with lower LFPRs will pull the overall percentage down for awhile and then it will improve as they age out of the workforce

Wealth transfer.

Millennials will receive an estimated \$68T through wealth transfers from their boomer parents at an average of \$1.2M per family. This should drive more older millennials out of the labor force.

Elderly parent care.

As the population ranks of aging boomers swells and a lack of labor to work in nursing care facilities becomes more compounded, more adults will have to stop working to take care of their parents. Currently that number is 2M of those out of the labor force.

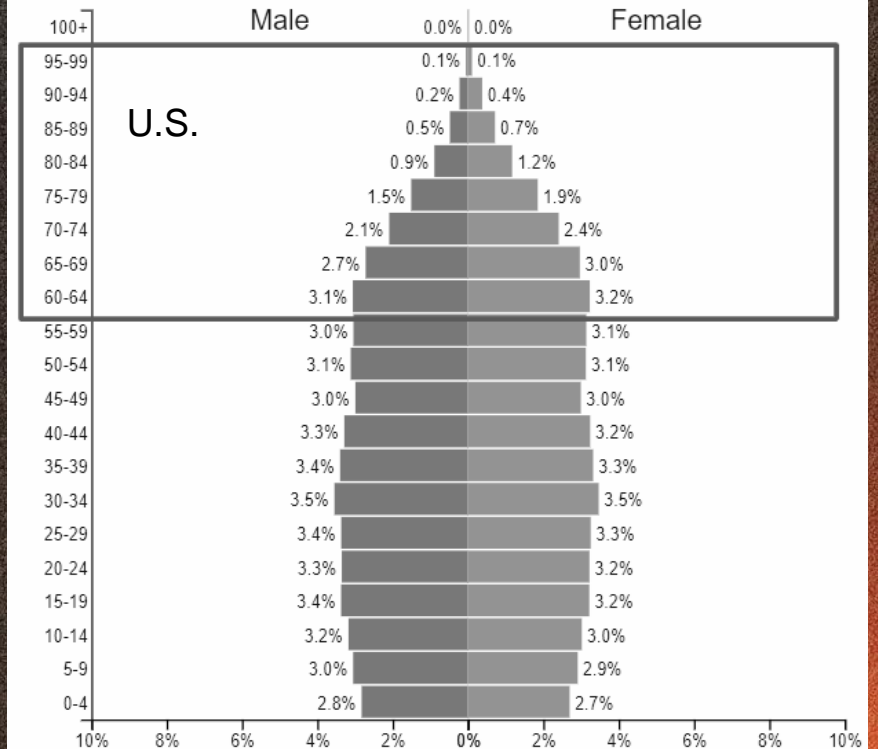
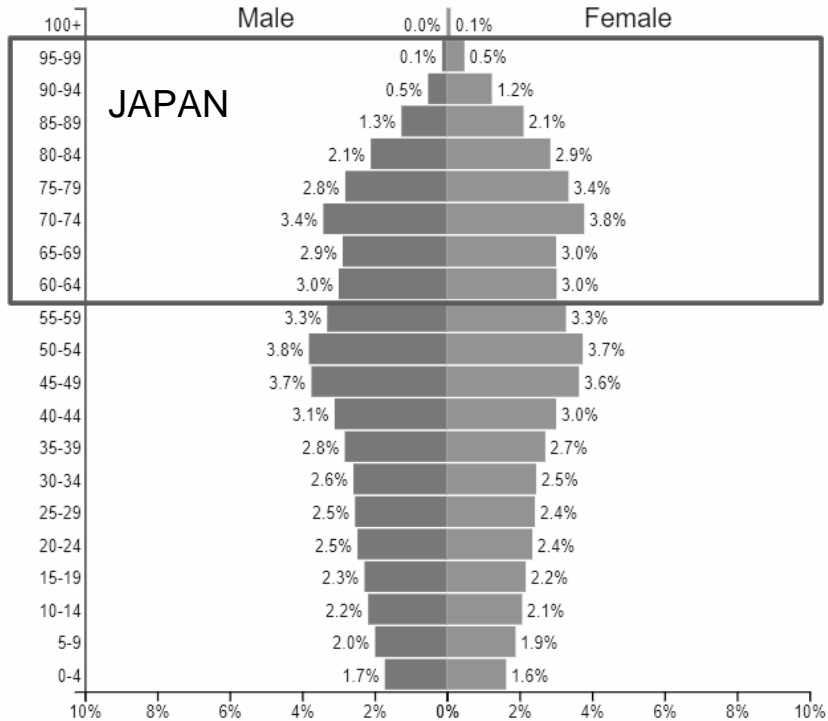


*“The labor force participation rate is projected to continue to trend down, declining from **61.7** percent in 2020 to **60.4** percent in 2030.”*

- BLS projections



There is good news. We are not imminently going to follow Japan's route



Who does the work in the future will be determined by the actions we take now.





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