

CERF HRTC Meeting
April 28, 2023
8:30 to 9:30am
Zoom Video Conferencing

<https://us02web.zoom.us/j/86993468590?pwd=bkRibjZGaCtoSVFZMTNxNEtwN2ZJdz09>

Webinar ID:
869 9346 8590
AGENDA

1. **Call to Order** (Micah Weinberg)
2. **Public Comments** (Micah Weinberg)
3. **Appoint New Member to the HRTC** (Micah Weinberg)
 - A. Collective Partnership Agreements from Potential HRTC Members (p.2)
 - **VOTING ITEM- CONSIDERATION FOR APPROVAL:**
 - ***Dennis Arp, Citizens Climate Lobby***
4. **Equitable Postsecondary Outcomes** (California Competes) (p.3)
5. **Impact of AI** (UN AI for Good/UCI) (p.28)
6. **Equitable Economic Development** (Milken Institute, Center for Regional Economics and California Center) (p.)
7. **Stakeholder Mapping and Outreach and Engagement** (p.61)
 - A. Part of the Regional Plan Part I is to conduct stakeholder mapping to identify entities that could be involved and the role they may play. Complete the survey [HERE](#)
 - B. Outreach and Engagement RFP has been released to get individual business and resident input. View the RFP [HERE](#)
 - C. Stakeholders Convening
8. **Next HRTC Meeting**
 - **Friday, May 12, 2023**
9. **Adjourn**
10. **Research Deep Dive (Optional)**
 - Additional Research other than today's presenters
 - [Equity Inclusiveness Map](#)
11. **Other Item:**
 - **Digital Broadband and Equity** (Communications Workers of America)

Collective Partnership Agreement Letter
Community Economic Resilience Fund: Orange County Region

April 13, 2023

Dear Orange County Highroad Transition Collaborative:

Citizens' Climate Lobby, Orange County Chapters, is pleased to inform you that we agree with the goals and objectives of the Community Economic Resilience Fund (CERF) and therefore, will serve as a Highroad Transition Collaborative member (HRTC) for your proposal in the Orange County region. As a member of the HRTC, we agree to participate in developing a fair governance structure, an effective outreach and engagement plan, and attend HRTC meetings and meetings related to our sector. As an HRTC member, we commit to working towards the goals set out in the grant and collectively share the weight of responsibility in creating a more inclusive, equitable, resilient, and competitive regional economy.

Citizens' Climate Lobby is a nonprofit nonpartisan grassroots environmental coalition of volunteers working to advance policy solutions that address the existential threat of climate change. We work collaboratively in our communities to help create the political will for a livable world.

CCL brings to the HRTC a deep-seated knowledge of how to engage civil society groups on climate and the environment. Our organizing model equips us to engage with "Grass Tops" as well as "Grass Roots" individuals and organizations to come to a consensus on climate solutions. CCL has for years been effectively advocating to members of Congress on what climate policies would be beneficial to enact into law. In Orange County, CCL volunteers have engaged local governments to pass measures that will shift the county's dependence on fossil fuels to renewable energy, all while forming coalitions with other environmental groups that seek the same goal - a just transition to a carbon-neutral economic future. By joining the table, CCL can provide the Orange County Highroad Transition Collaborative with the perspectives of climate activists who seek every opportunity to engage with stakeholders in a respectful, consensus-based fashion.

Contact person: Dennis Arp
Title: Citizens' Climate Lobby Group Leader
Email Address: dennisansellarp@gmail.com

Thank you for your time and consideration.
Authorized signatory: Dennis Arp

Dennis Arp

Dennis Arp

Group Leader, Citizens' Climate Lobby, Orange County Chapters

Orange County's Path to a Stronger Economy:

Advancing Higher Education and Workforce Alignment

SU JIN JEZ, PHD
CEO, CALIFORNIA COMPETES



HIGHER EDUCATION FOR A STRONG ECONOMY

California Competes:

Higher Education for a Strong Economy

What we
believe

Higher education is both a vaccine and an antidote against economic stagnation and social stratification—for individual Californians, our communities, and the state's economy.

Agenda

1. State Higher Education Goals

2. Opportunity in Orange County

3. Higher Education Trends & Demands

4. Recommendations for Action

Governor's State Attainment Goal and *Current Status*

Attainment Goal



70%
postsecondary
attainment

by 2030

State

52%

Orange County

58%

California's Public Higher Education *Compacts and Goals*

Compacts with each higher education segment *incentivize efforts* towards meeting the governor's attainment goal.

CCC

Increase
completion
by

20%

by 2026

CSU

Increase
4-year
graduation to

40%

by 2025

UC

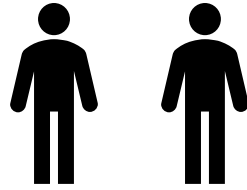
Increase
4-year
graduation to 2-year
graduation* to

76%

70%

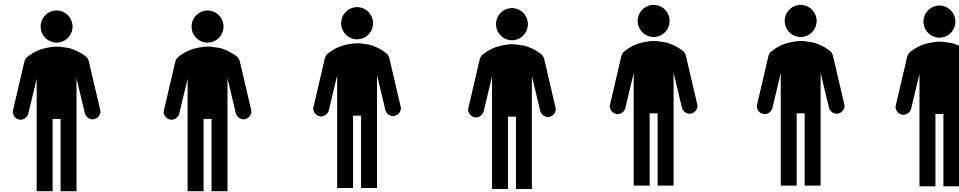
by 2030

Closing the California Credential *Gap*



2 Million

Shortfall of college-educated professionals



6.8 Million

*Adults aged 25–54 with a HS diploma and
no college degree*

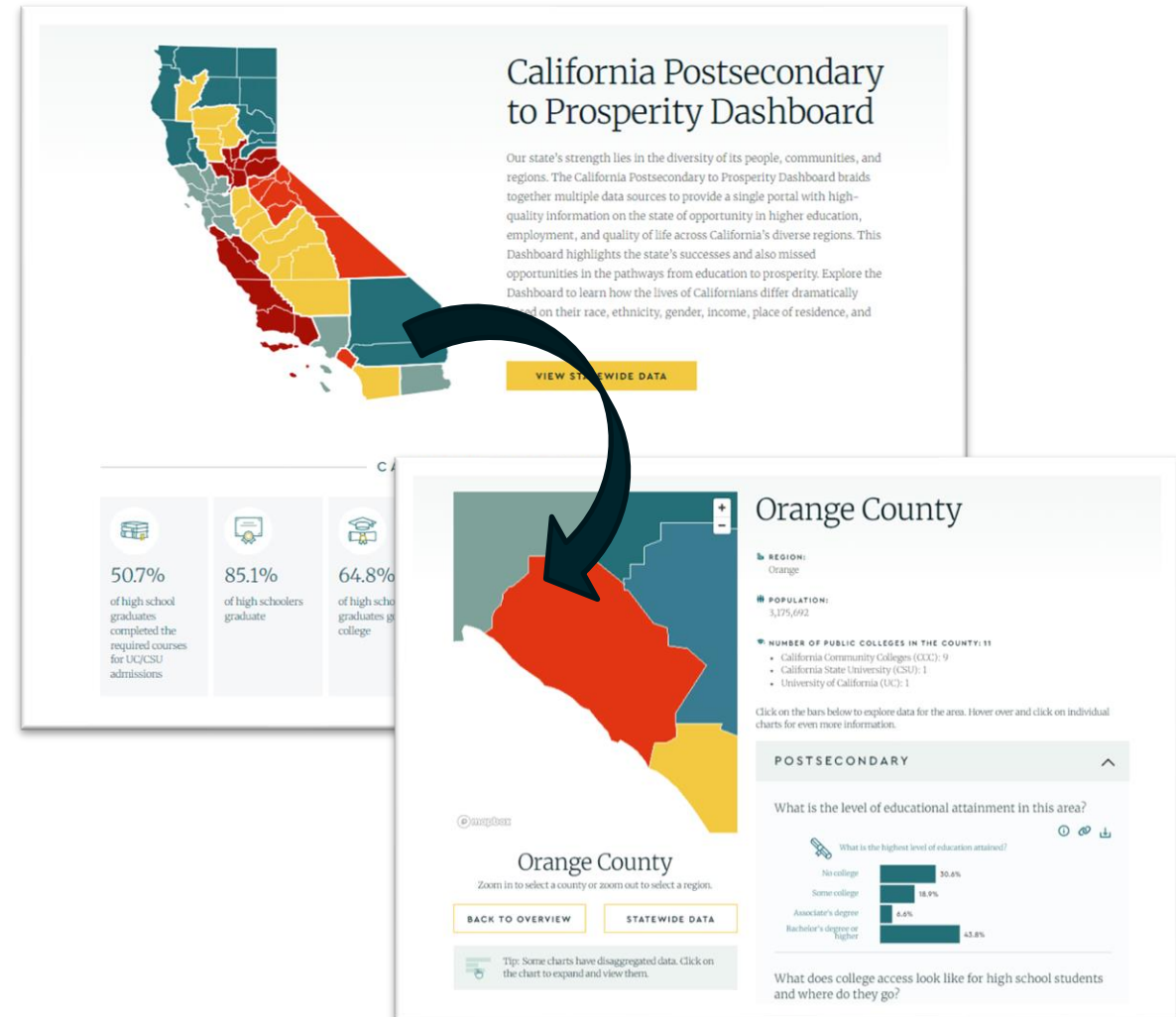
California Postsecondary to Prosperity *Dashboard*

Who is
flourishing?

Who is
struggling?

Explore more at :

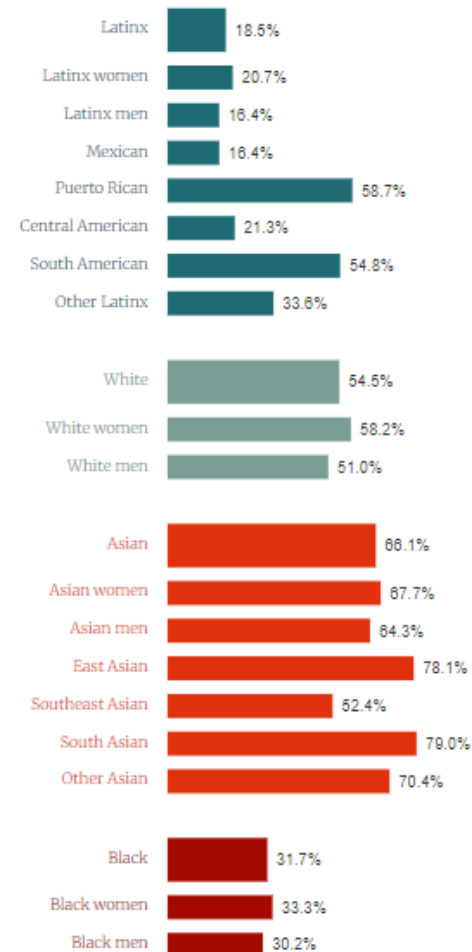
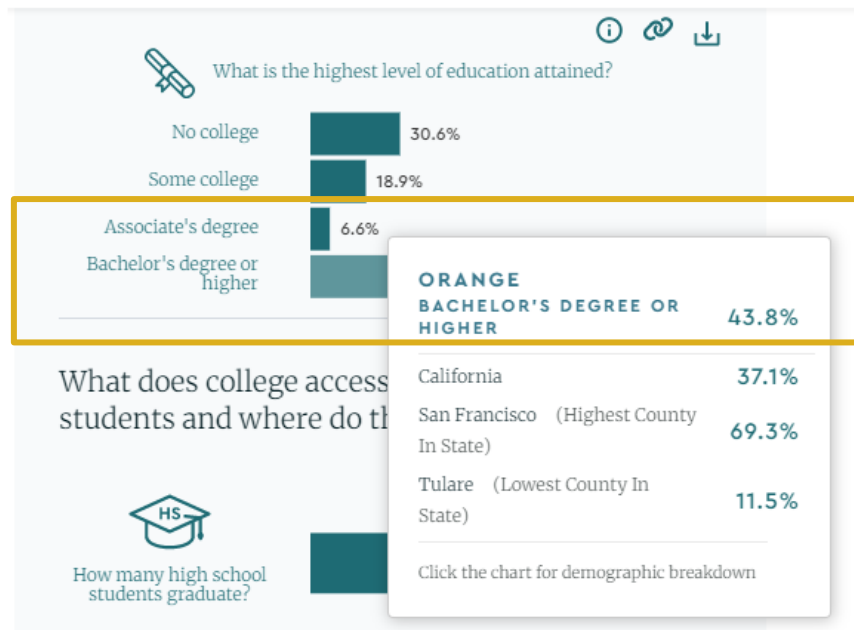
p2p.californiacompetes.org



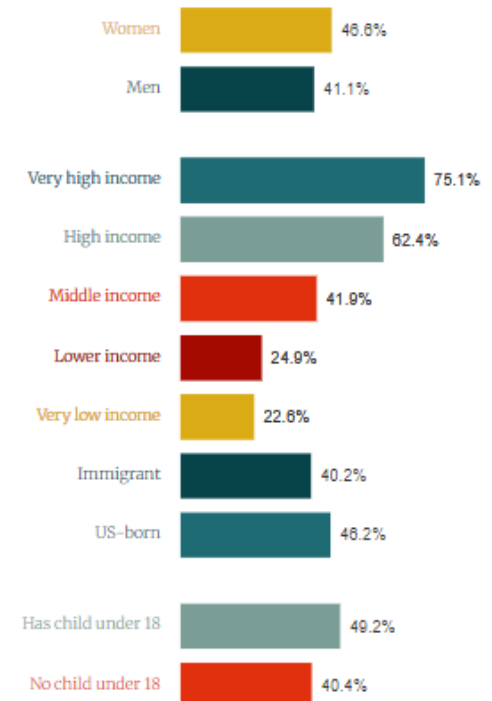
Orange County Snapshot:¹⁰

What is the highest level of education attained?

51% of adults in Orange County have at least an associate's degree.



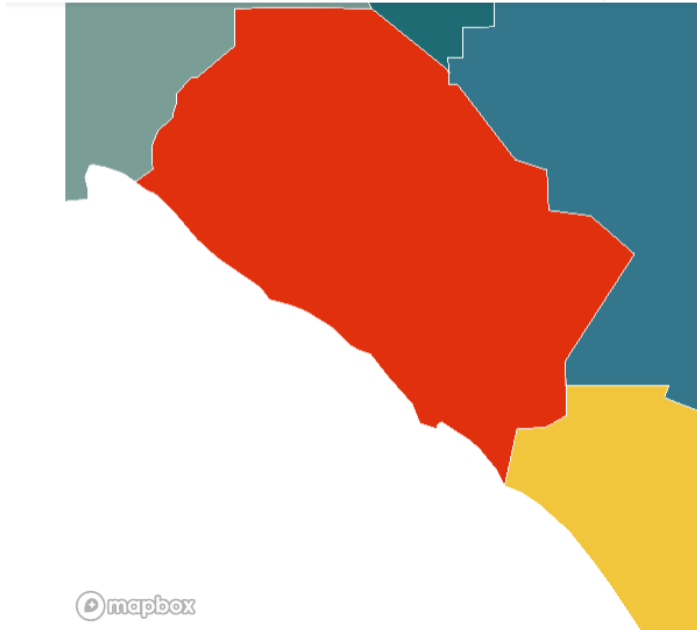
However, equity gaps exist.



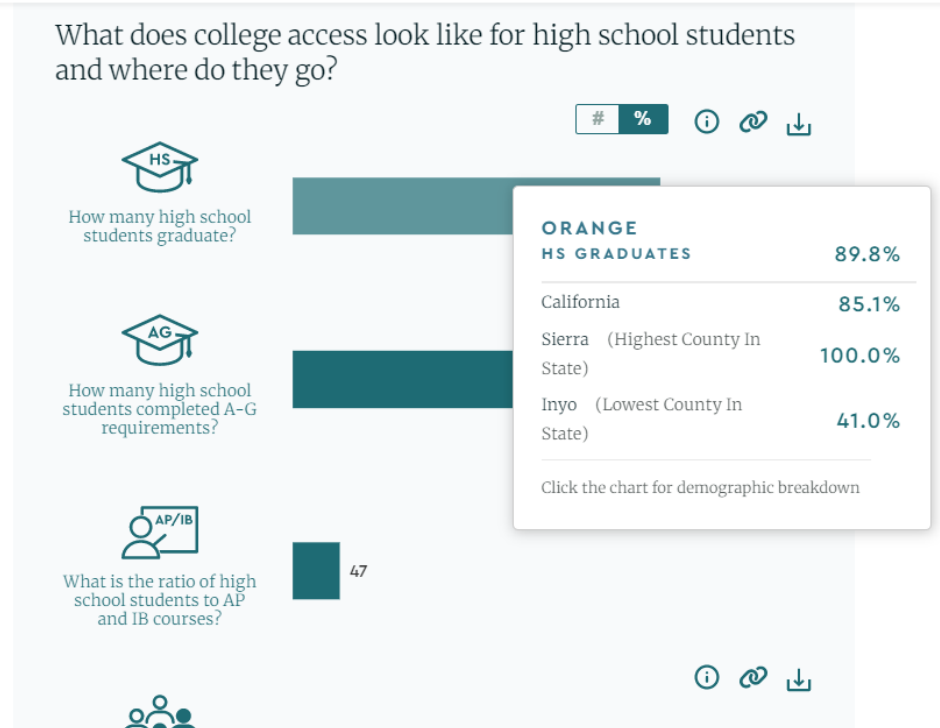
Orange County Snapshot¹¹

How many high school students graduate?

Orange County has a high school graduation rate of **89.8%**, above the state average.



Orange County



55% of high school graduates complete the required courses for admission to a CSU/UC.

| | |
|-------------------------------------|--------------|
| ORANGE COMPLETED A-G COURSES | 55.0% |
| California | 50.7% |
| Marin (Highest County In State) | 70.7% |
| Trinity (Lowest County In State) | 7.1% |

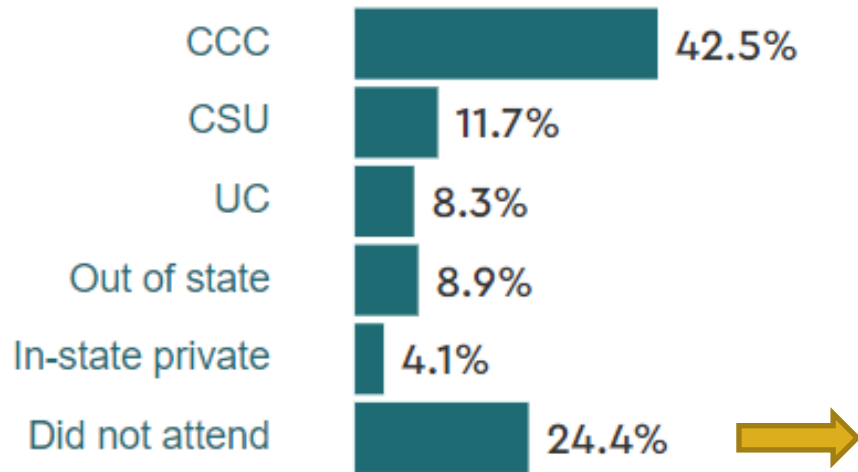
Orange County Snapshot:¹²

How many high school graduates go to college?

76% of high school graduates enroll in college within a year.

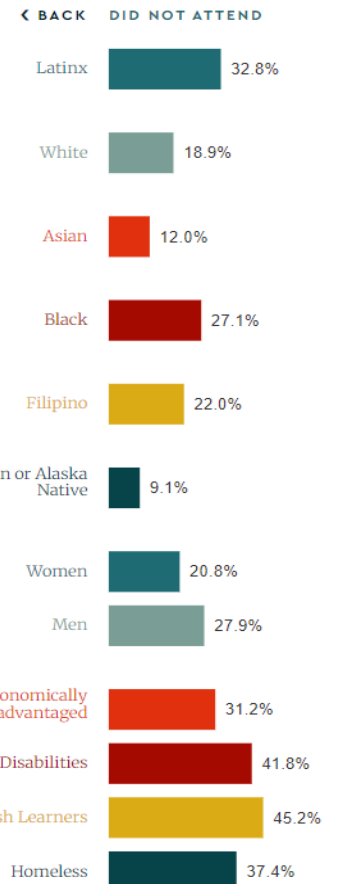


Where do high school graduates go to college?



| | |
|--|-------|
| ORANGE | |
| DID NOT ATTEND | 24.4% |
| California | 35.2% |
| Central Sierra (Highest Region In State) | 55.2% |
| Orange (Lowest Region In State) | 24.4% |


Disparities in college access exist, despite Orange County having a high matriculation rate.



Orange County Snapshot:¹³

What is the median annual income?


Despite Orange County's median income being higher than the state average, it still falls within the low-income range.


What is the median
annual income for
individuals?

 \$30,500



| ORANGE MEDIAN INDIVIDUAL INCOME | |
|---------------------------------------|----------|
| | \$30,500 |
| California | \$29,000 |
| Bay Area (Highest Region In State) | \$41,000 |
| Imperial (Lowest Region In State) | \$13,000 |


What is the median
annual income for
households?

 \$94,400



| ORANGE MEDIAN HOUSEHOLD INCOME | |
|--------------------------------------|-----------|
| | \$94,400 |
| California | \$80,000 |
| Bay Area (Highest Region In State) | \$112,000 |
| Imperial (Lowest Region In State) | \$47,500 |

Orange County Snapshot:¹⁴

How many households earn a living wage?

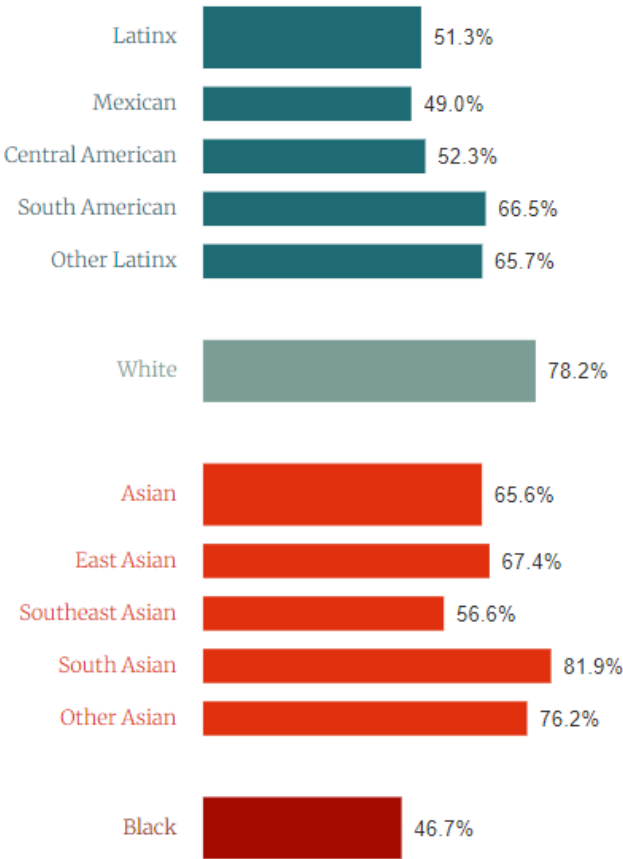
71% of households in Orange County earn a living wage.



How many households
earn a living wage?



| | |
|--|-------|
| ORANGE | |
| EARNING A LIVING WAGE | 71.0% |
| California | |
| Sacramento-Tahoe (Highest Region In State) | 74.5% |
| Imperial (Lowest Region In State) | 55.0% |

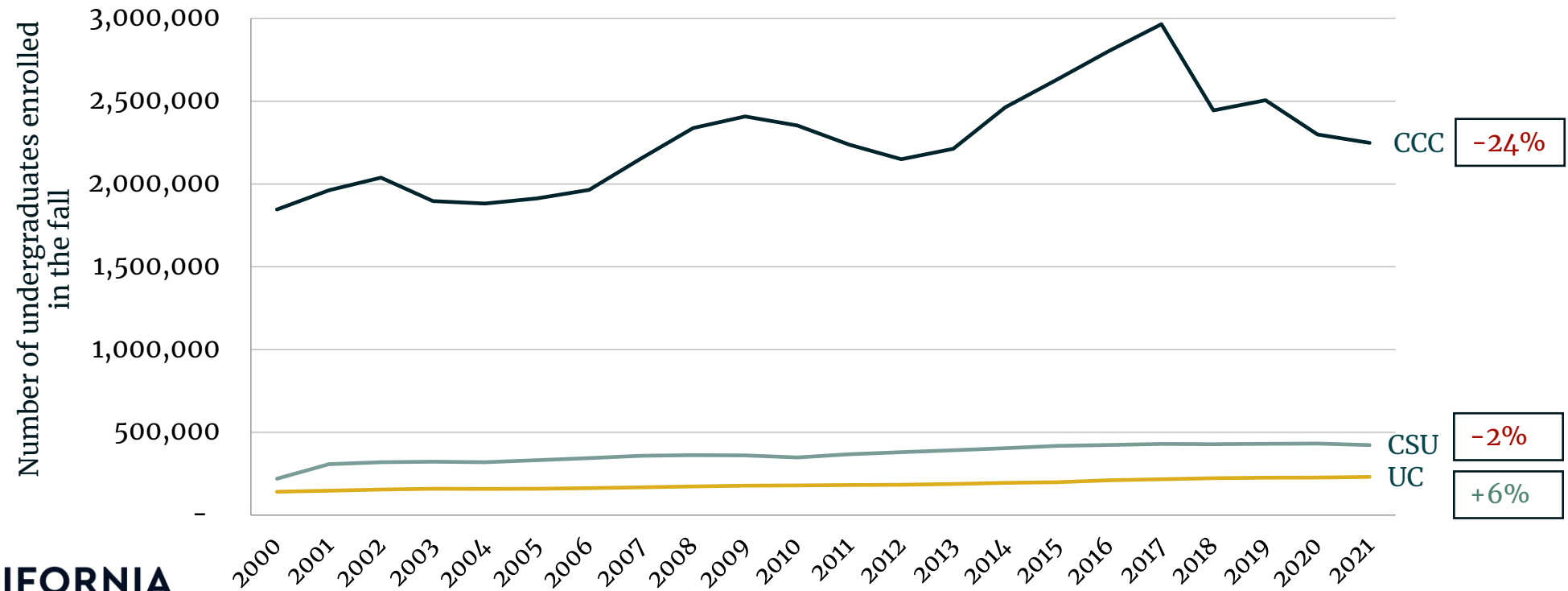


Earning a living wage is less prevalent among residents of color.

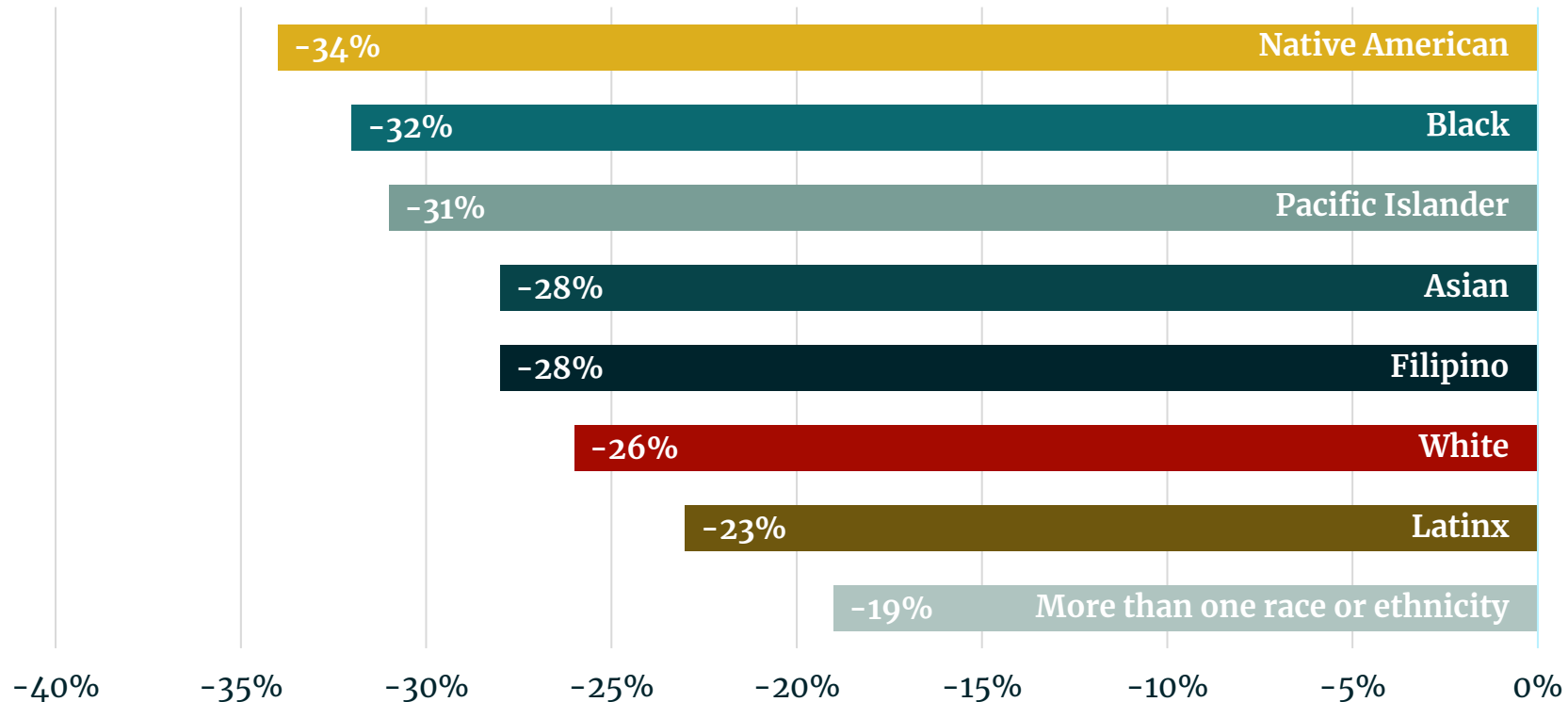
Current California Higher Education Landscape:

The state continues to face declines in college enrollment.

California community colleges experienced the **largest** declines.



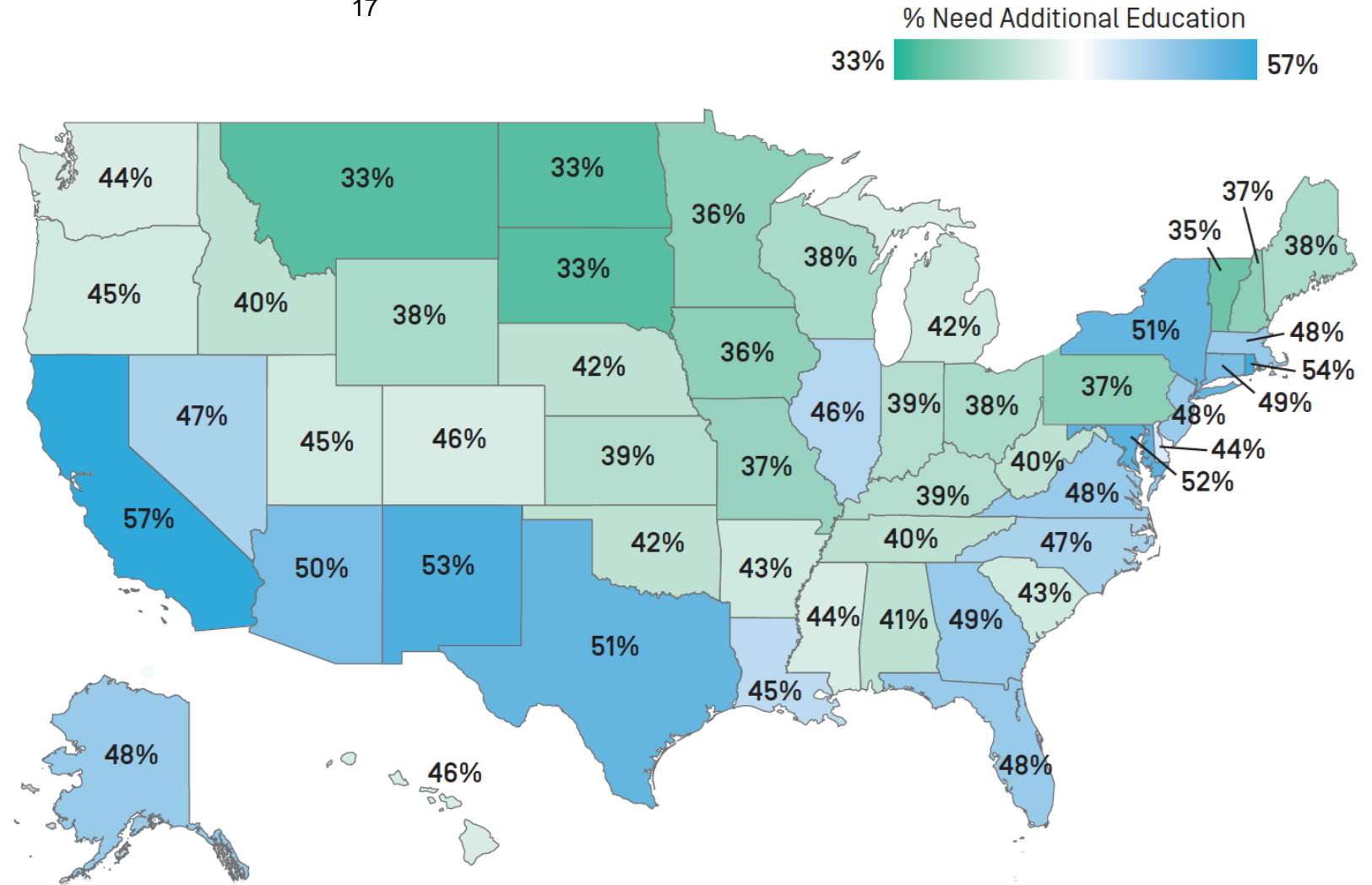
Larger enrollment declines in CCC seen among *underrepresented* students.



Percentage change of undergraduate fall enrollment by race and ethnicity

Source: CCCC Datamart

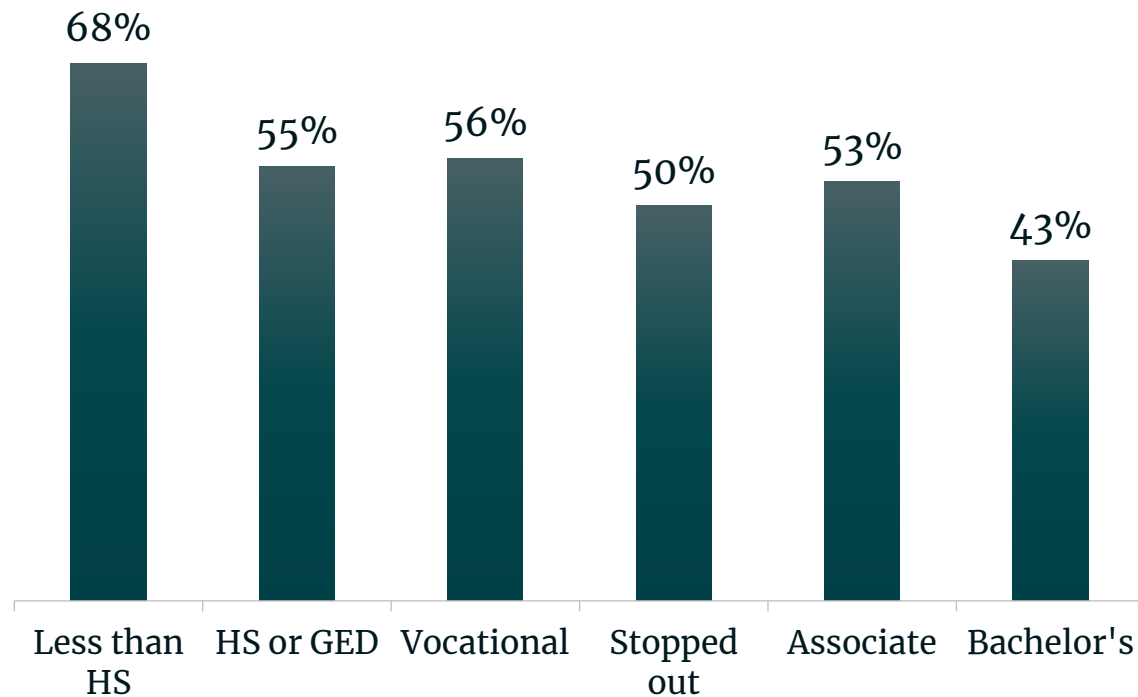
Most Californians perceive a need for *additional* education.



Residents of State not currently enrolled

Source: Strada-Gallup Education Consumer Survey 2016-2019. Base: U.S. Adults 18-65 with less than an associate degree and not currently enrolled, n=106,214.

Perceived need is *highest* among Californians of color, women, and those without HS diplomas



Overall

California: 53%
National: 44%

Gender

Female: 57%
Male: 50%

Race/ethnicity

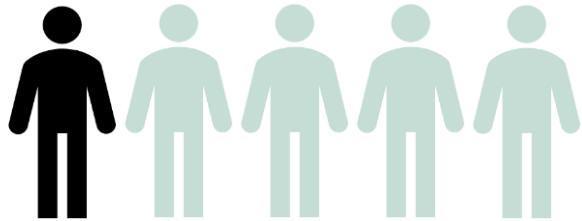
Latinx: 67%
Black: 58%
Asian: 47%
White: 36%

Urban/rural

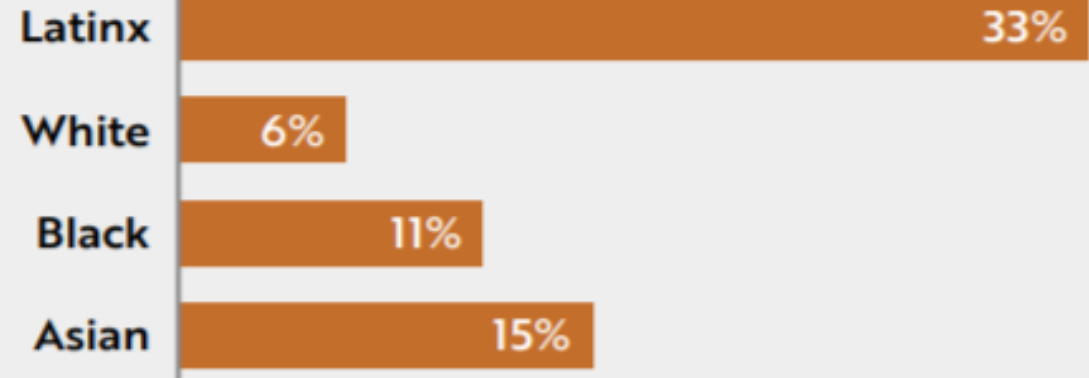
Urban: 53%
Rural: 39%

5.1 million adults plan to enroll in college in the next two years.

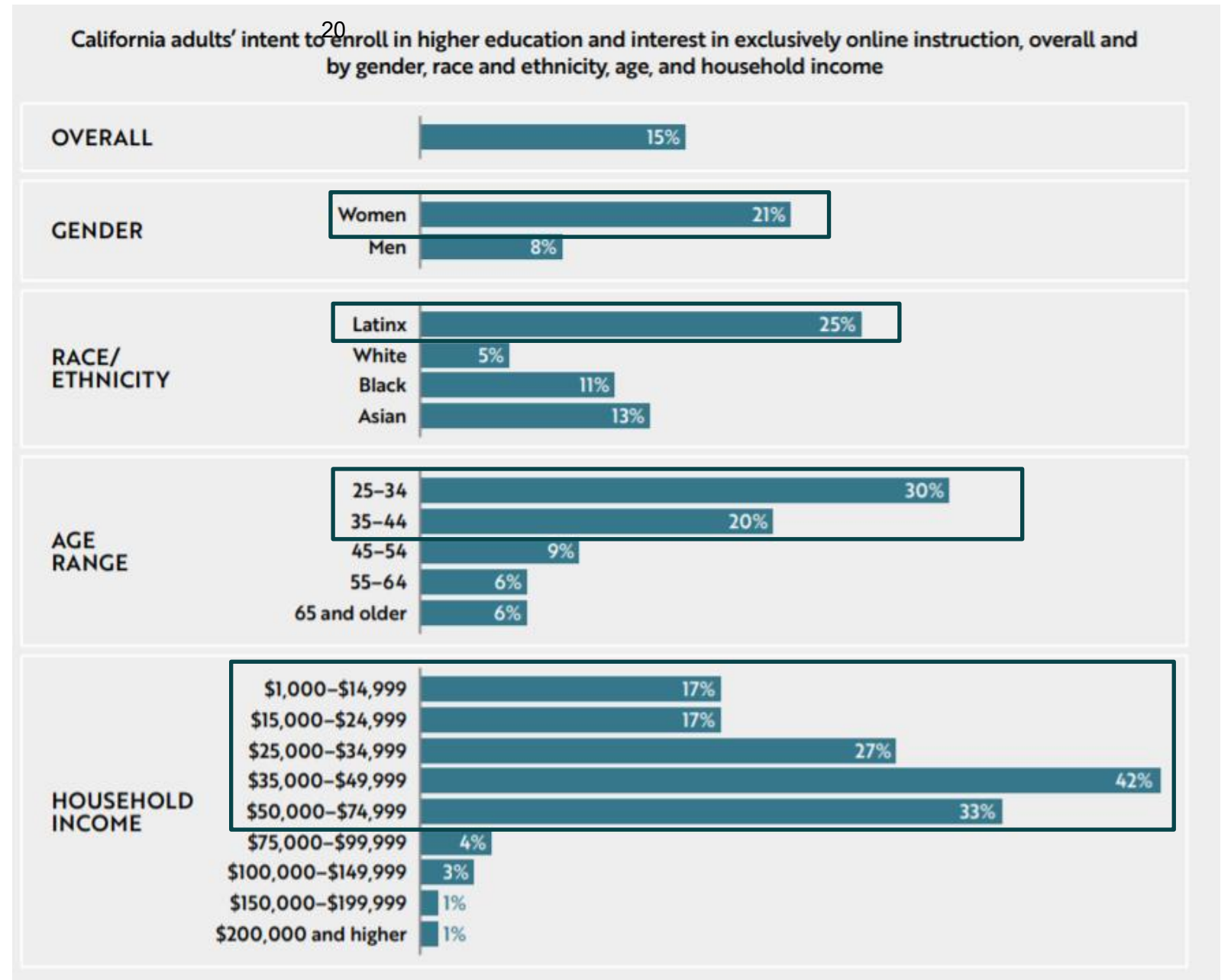
One in five adults in California intend to enroll within two years.



Estimated intent of California adults to enroll in higher education, by race and ethnicity



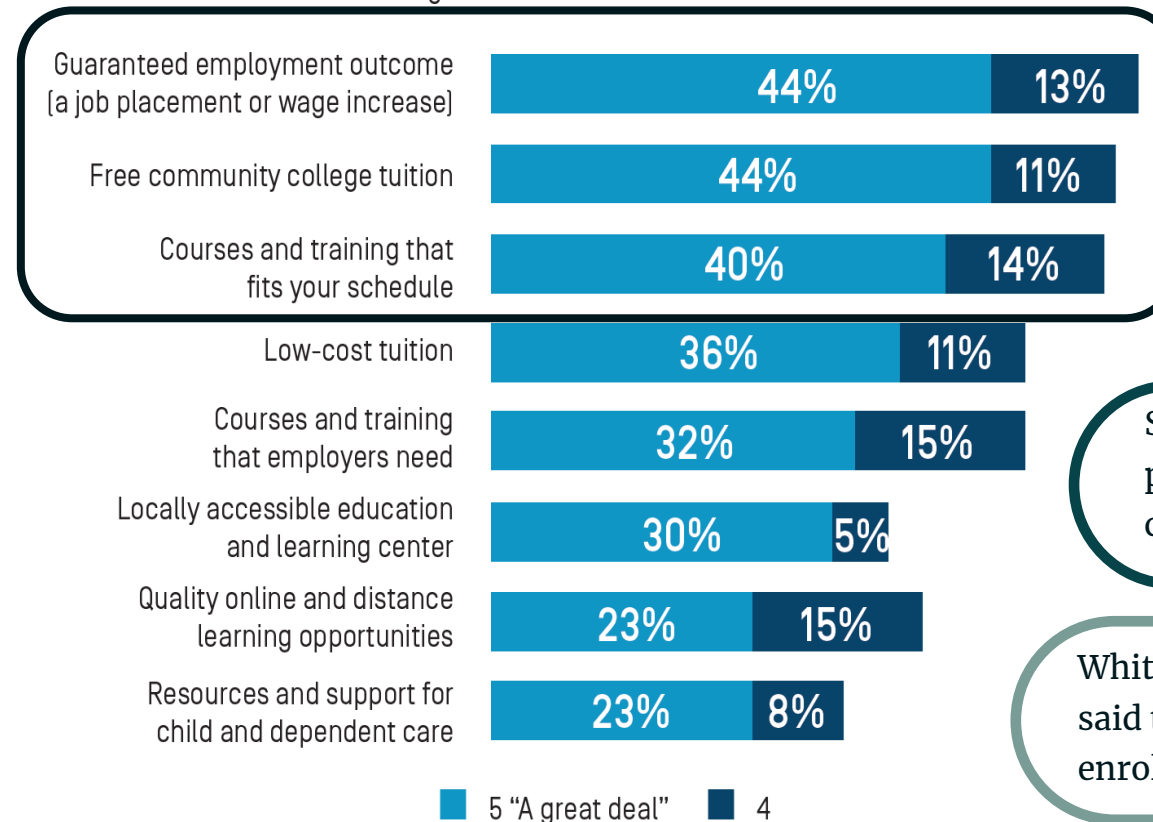
Californians
who intend
to enroll
want
exclusively
online
courses.



Job advancement is a **top** priority.

How would each of the following impact your likelihood of enrolling in additional education?

Please use a five-point scale where 5 means it would impact your likelihood a great deal and 1 means not at all.



These top three priorities are consistent across every demographic group.

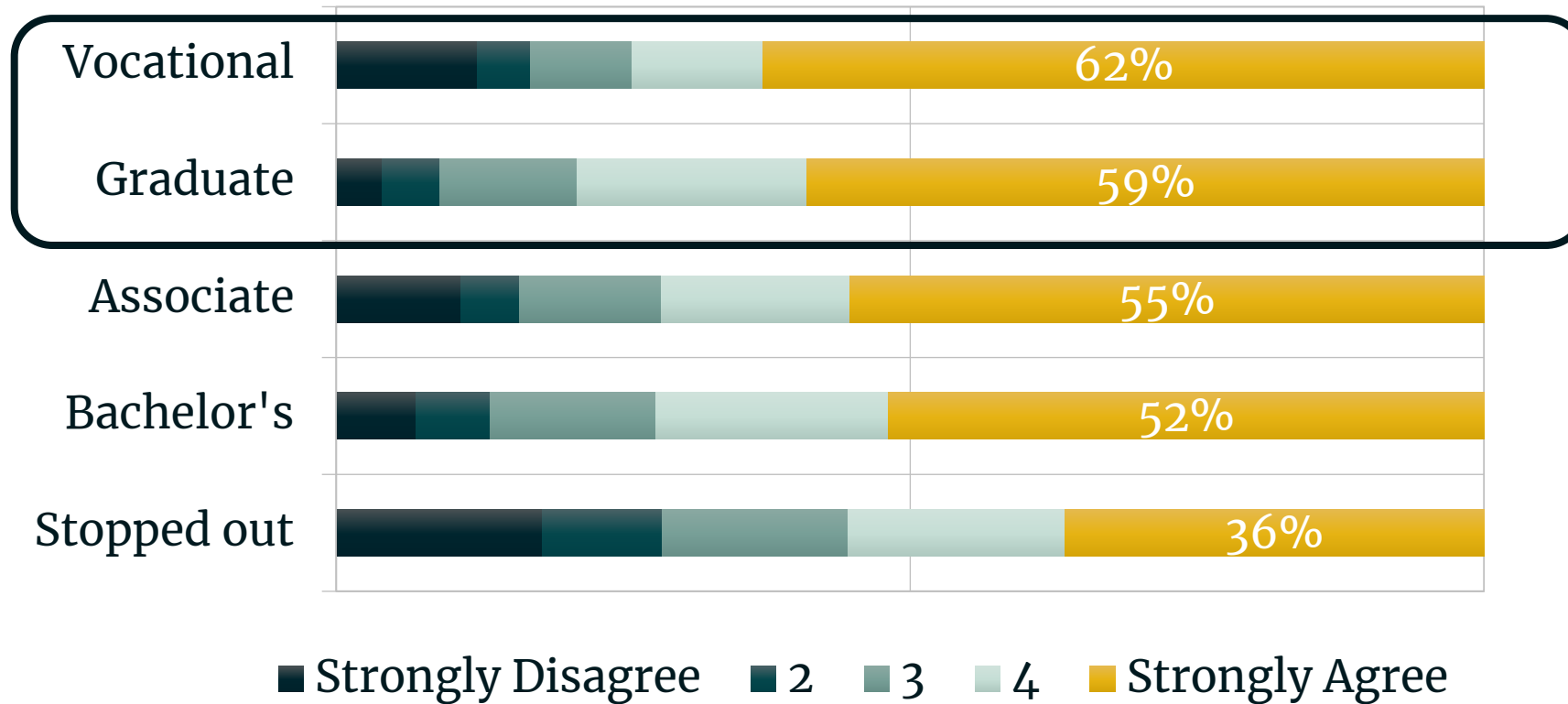
Stop-outs and women were particularly interested in free community college tuition.

Whites, men, and older people said they would be less likely to enroll than other populations.

Source: Strada-Gallup Education Consumer Survey 2019. Base: U.S. Adults 18-65 with less than an associate degree and who are not currently enrolled. N=8,849

Californians report programs with stronger career connection as most *worth* the cost.

Cost Value: My education was worth the cost



How can we *transform* systems to better support state attainment goals and meet workforce needs?

Foster cross-sector collaboration and build equitable structures that *weave career readiness across students' educational experiences*.



Advance adult learner success, including student parents



Engage employers and craft pathways and programs with clear connections to better jobs



Strengthen higher education and workforce alignment



Coordinate services and programs to holistically drive student success

Promising Practices to *Advance Attainment Goals*

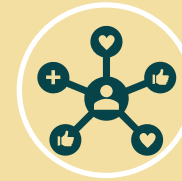
There is **strong evidence** for the effectiveness of these solutions.



Promote full-time and summer enrollment at community colleges



Provide direct support in applying for financial aid



Offer wraparound services that go beyond tuition

Promising Practices to *Advance Attainment Goals*

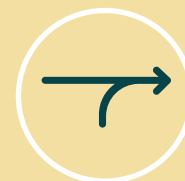
There is *moderate evidence* for the effectiveness of these solutions.



Ensure access to basic needs supports such as childcare and case management



Offer competency-based education



Incorporate basic skills education (reading, math, digital, and employability skills) into technical training



Employ career navigators

Additional Promising Practices to *Advance Attainment Goals*

There is *moderate evidence* for the effectiveness of these solutions.



**Strengthen
employer-college
partnerships to
train students in
high-demand
field**



**Implement a GI
Bill-like grant
program for
underpaid
essential frontline
workers without
degrees**



**Create
postsecondary-
workforce
compacts**



**Expand career
pathway
initiatives**

Questions ?

Contact information:

Su Jin Jez, PhD
CEO,
California Competes
jez@californiacompetes.org



change
is here.

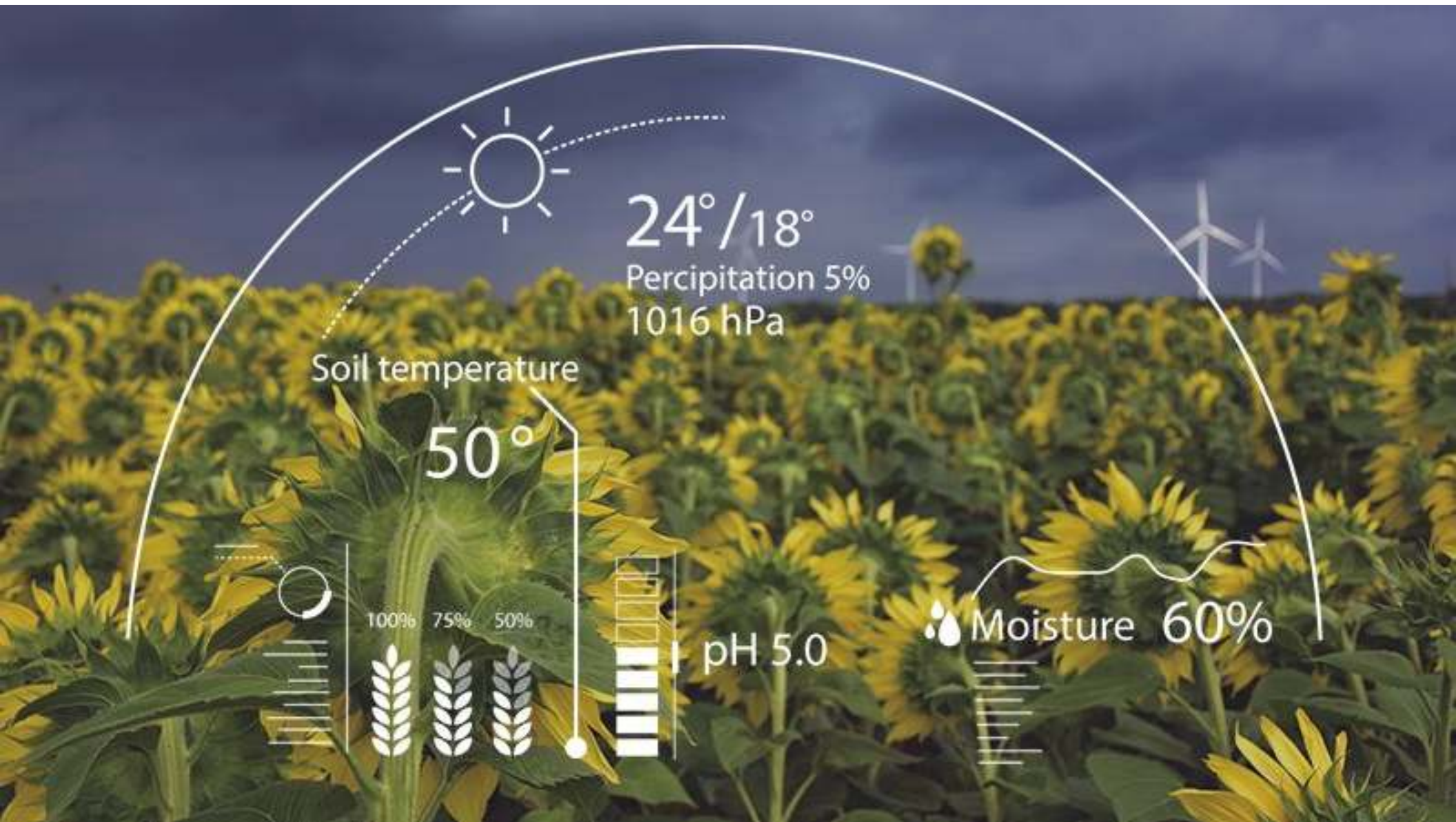
The Stats

- By 2030, AI and robotics will contribute \$15T to the global GDP (PWC)
- From 2020-2025, 85M jobs supplanted by automated machines (World Economic Forum)
 - 2022 – 30% of all tasks are done by machines; *estimated to be 50% by 2025*
 - Future: tech driven economy will create 97M jobs
- Within the next three years, 120M global workers will need retraining based on AI's impact (IBM)
 - ~11.5M workers in the U.S.

“The world’s most advanced cities aren’t ready for the disruptions of artificial intelligence.”

----- Management Consulting Firm Oliver Wyman









Unlocks 20-30% of value

Focuses on making the ***process/system*** better by making it faster, cheaper, and/or with less errors.



Can unlock full potential

Focuses on ***changing the process/system*** by finding a new way to perform the work.



New Way of Working





Farmer

Farmers will use technology to carefully raise engineered crops. The future of farming is also set to become vertical as creating these spaces in urban areas will help boost food supply.



Self-Driving Car Mechanic

As the direction of travelling in the future becomes more about self-driving cars, these vehicles will not be self-fixing. The mechanic of the future needs to be comprehensive in technology too.



Space Miner

Fossil fuels and other rare elements are running out and will eventually cease to exist on our planet. In the future we may need to use space miners to retrieve rare Earth elements from the Moon or asteroids.



Climate Change Reversal Specialist

A new breed of engineer-scientists will emerge with the ability to rebuild ecosystems around the planet, such as rainforests and ocean beds, as global warming devastates vulnerable landscapes around the world.



Space Junk Recycler

These people will have to identify the orbital locations of where junk is greatest in the atmosphere surrounding Earth. They will then develop cost effective methods to remove it from orbit.



Autonomous Transportation Specialist

These people will monitor and integrate two-transit into current towns and cities, then monitor the results.



Virtual Identity Defender

Advancements in AI could lead to the creation of fake video and audio tapes, putting data at risk. Therefore, in the future, there will be a need for this role where people will use digital watermarks that can be authenticated to prove the truth.



Data Detective

With businesses and large corporations storing more data than ever before, the need for security and data protection continues to grow. This role will require people to go through large data sets and generate answers to business questions.



Virtual Teacher

In the future, teaching will be less about the bricks and mortar school building and will focus more on online classrooms and lessons.



Space Tourism Guide

Voyages into space are beginning to take off with the appearance of Virgin Galactic. Commercial flights to space will become the next top holiday destination.



Drone Manager

In the future, a specialist will be trained to organise, maintain and direct a fleet of drones.



AI Business Manager

The AI sector is booming, however AI cannot sell itself, therefore there is a need for human effort and skill in this department. This role will be in charge of promoting and selling AI to new and existing companies.



Human Intelligence

people and experiences

flexible
creative
emphatic
instinctive
commonsensical

Hybrid Intelligence

fast
efficient
cheap
scalable
consistent

data and algorithms

Machine Intelligence

More focus on people in the future of work



I think, therefore I am.
What is reality?
Is truth relative?
What is the meaning of life?





The Stats

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Orange County CERF Advisory

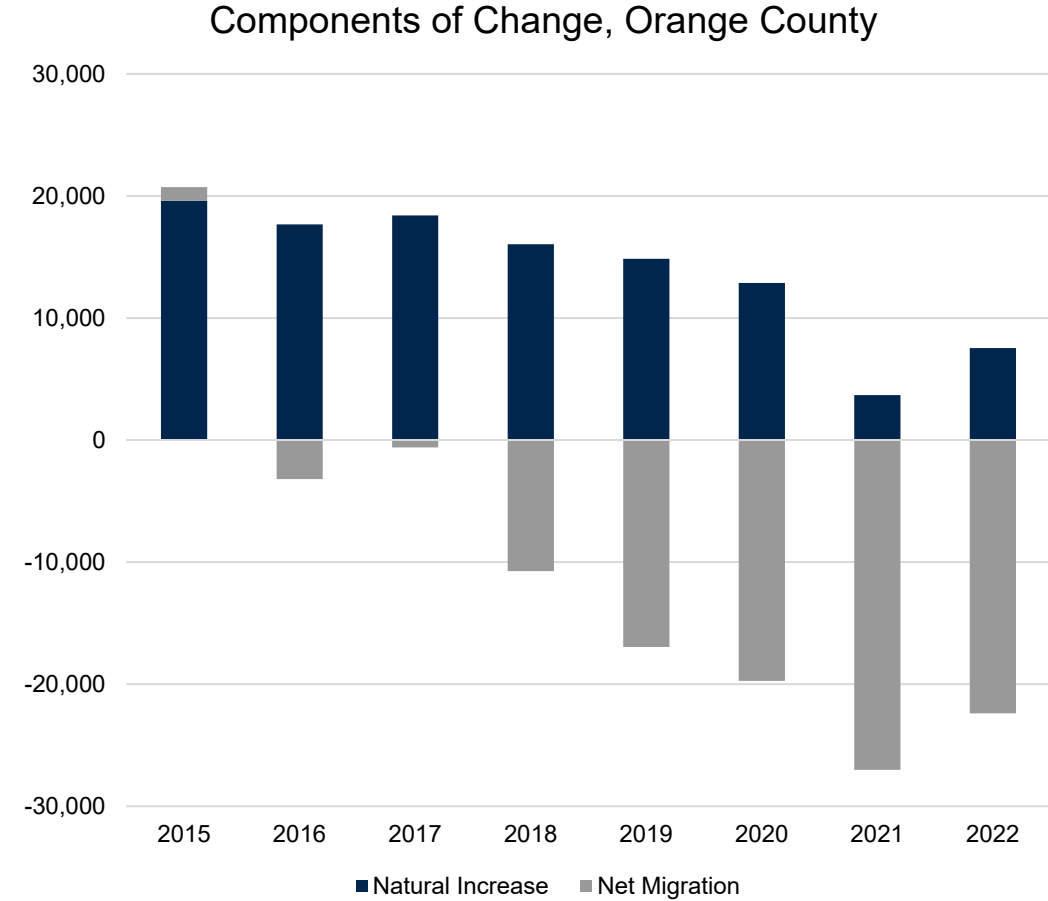
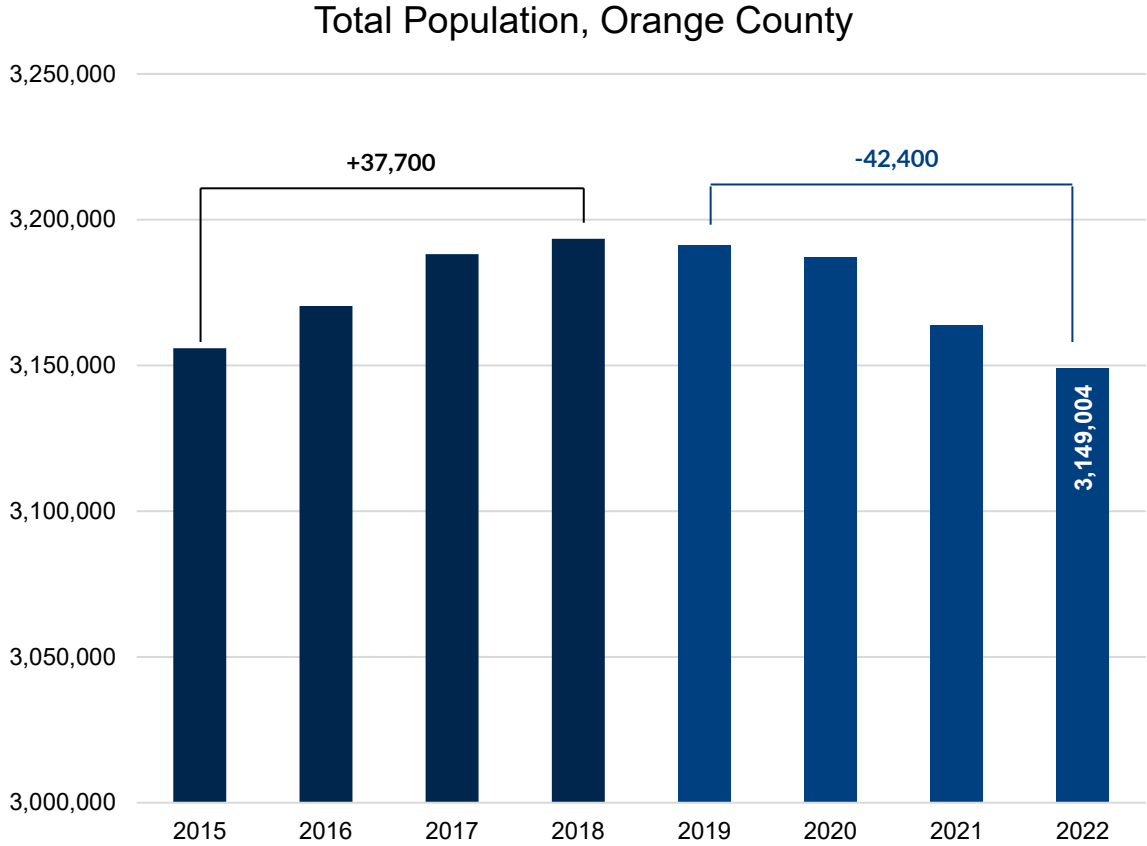
Enhancing equitable economic development, economic resilience, and competitiveness

Matt Horton, Senior Advisor, Milken Institute

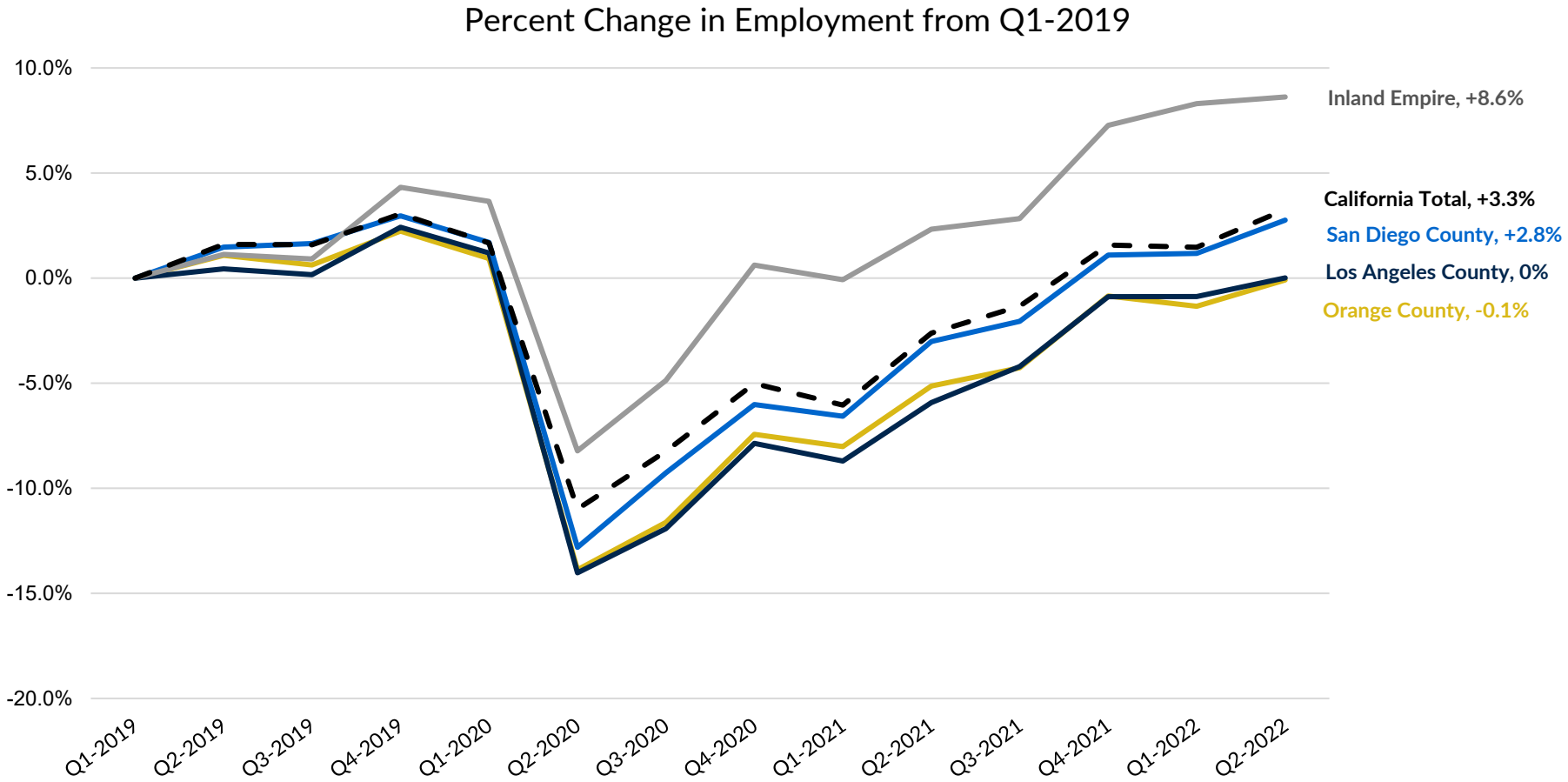
Milken Institute Best Performing Cities Rankings, California

| Metropolitan Statistical Area/Metropolitan Division Name | California Rank |
|--|-----------------|
| San Jose-Sunnyvale-Santa Clara, CA MSA | 1 |
| Riverside-San Bernardino-Ontario, CA MSA | 2 |
| San Francisco-Redwood City-South San Francisco, CA MD | 3 |
| San Diego-Carlsbad, CA MSA | 4 |
| Santa Maria-Santa Barbara, CA MSA | 5 |
| ... | ... |
| Anaheim-Santa Ana-Irvine, CA MD | 8 |

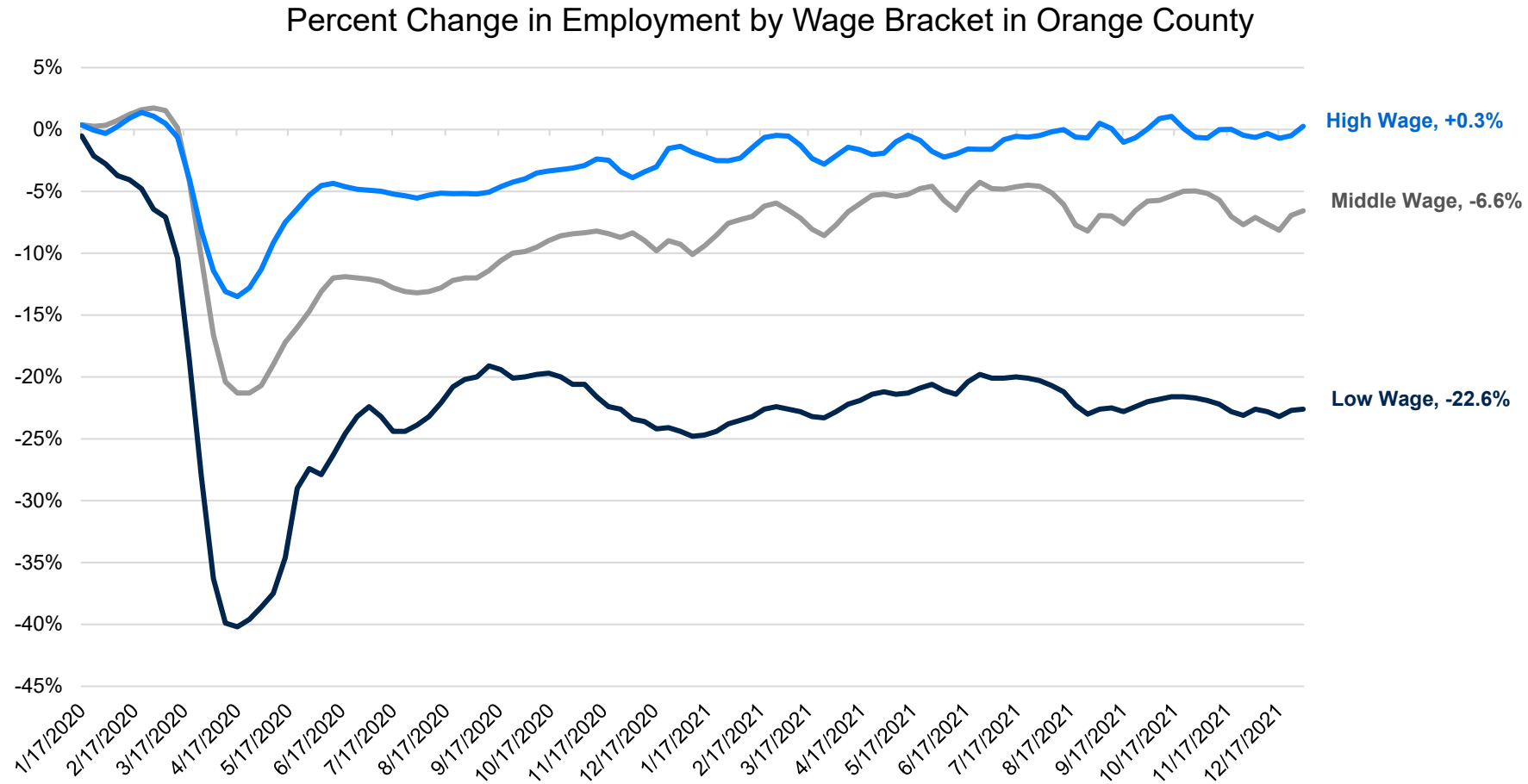
Between 2019 and 2022, Orange County lost more people than it gained in the previous 4 years—driven by out-migration



Employment growth since the pandemic has not been as strong as in other surrounding regions.



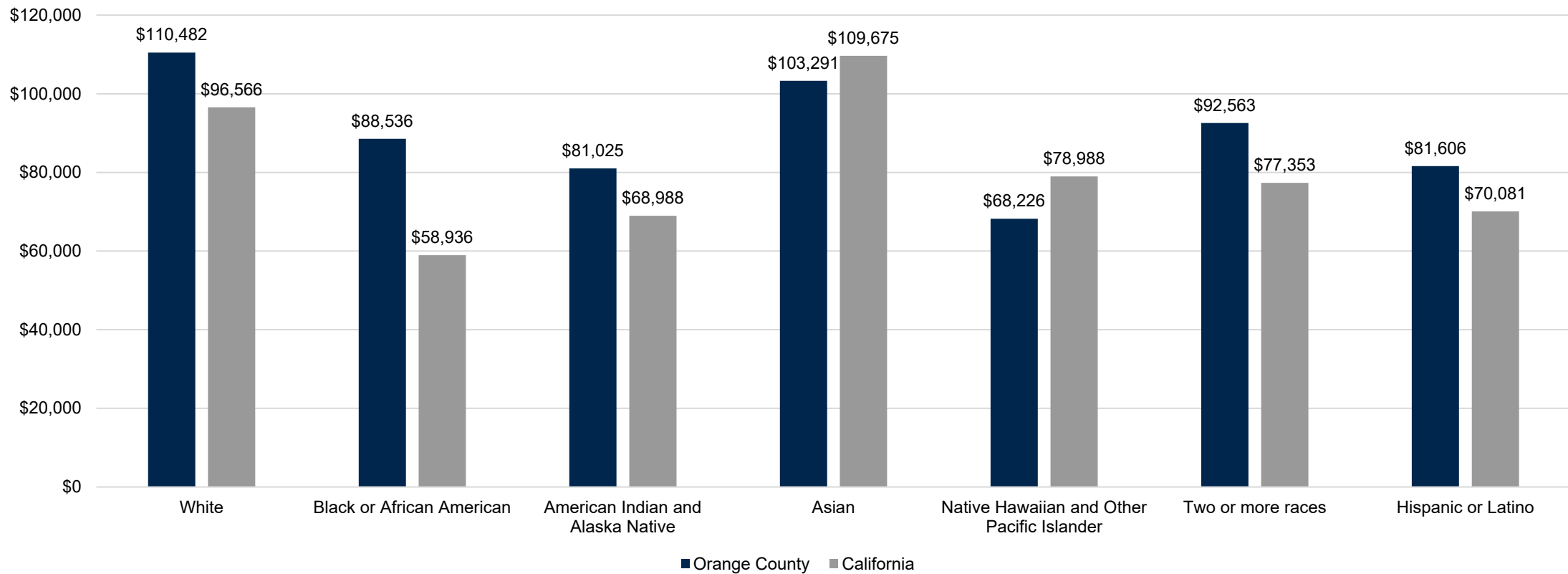
Employment growth has been uneven.



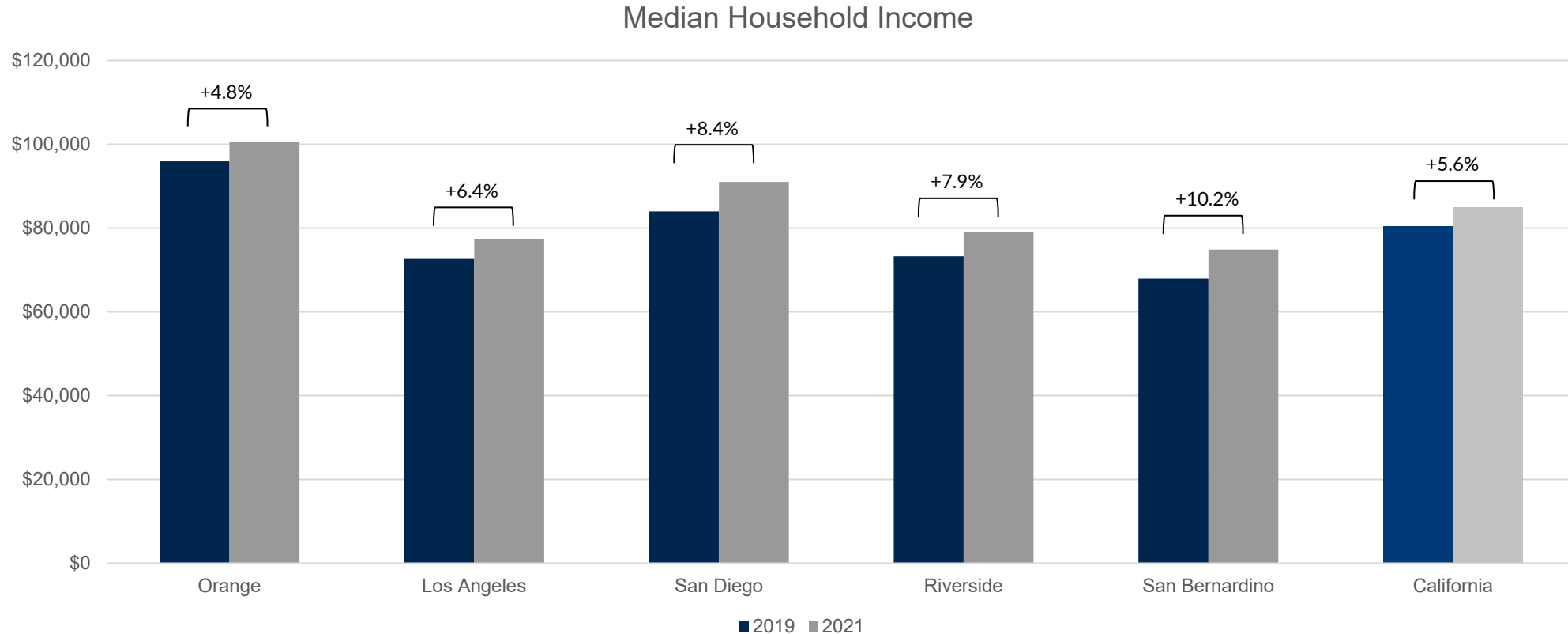
Note: Low wage employees earn below \$29,000, middle wage employees earn between \$29,000 and \$73,000, and high wage employees earn above \$73,000.

People of color tend to make lower wages overall.

Median Income by Race and Ethnicity in Orange County vs. California, 2021



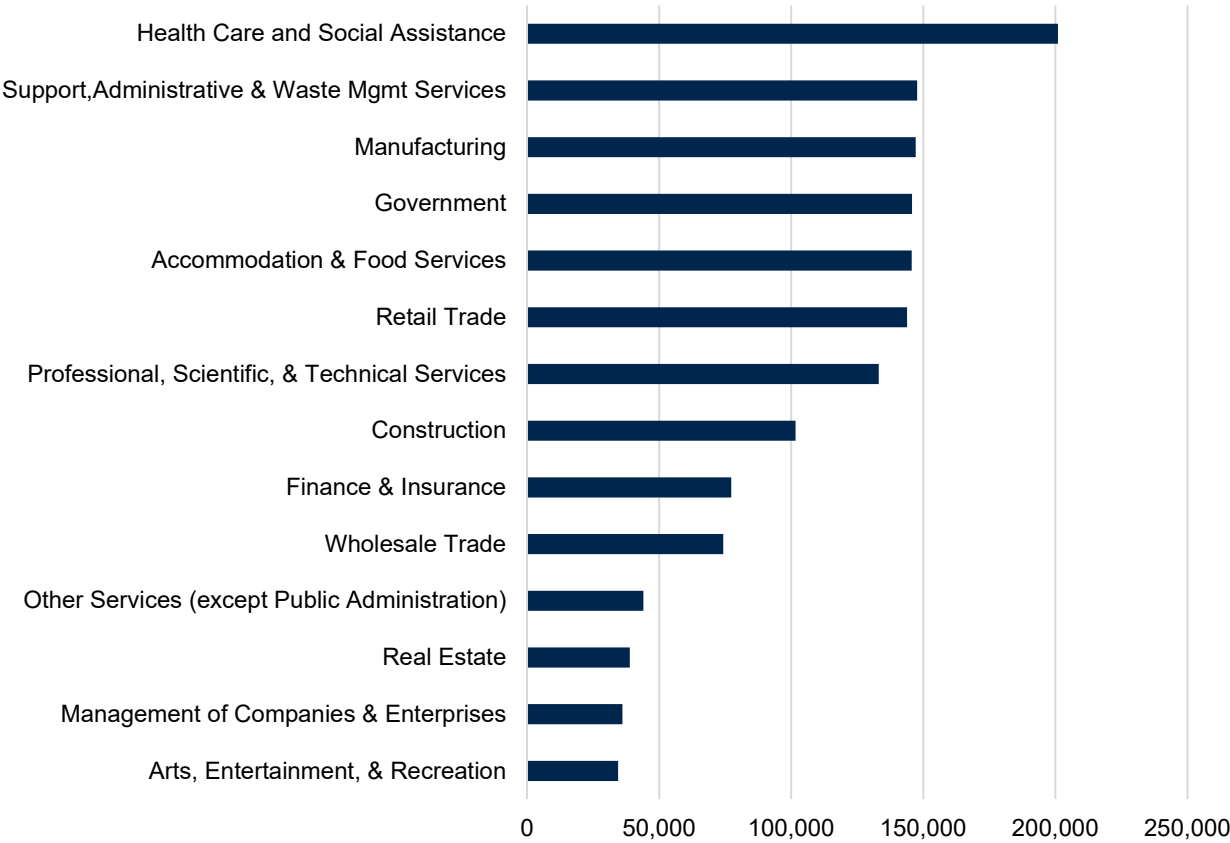
While Orange County has higher incomes than other neighboring counties, recent income growth was not as high.





Orange County has a high concentration of high-value industries.

Top Industries by Employment



Concentration of High-Value Industries in Orange County

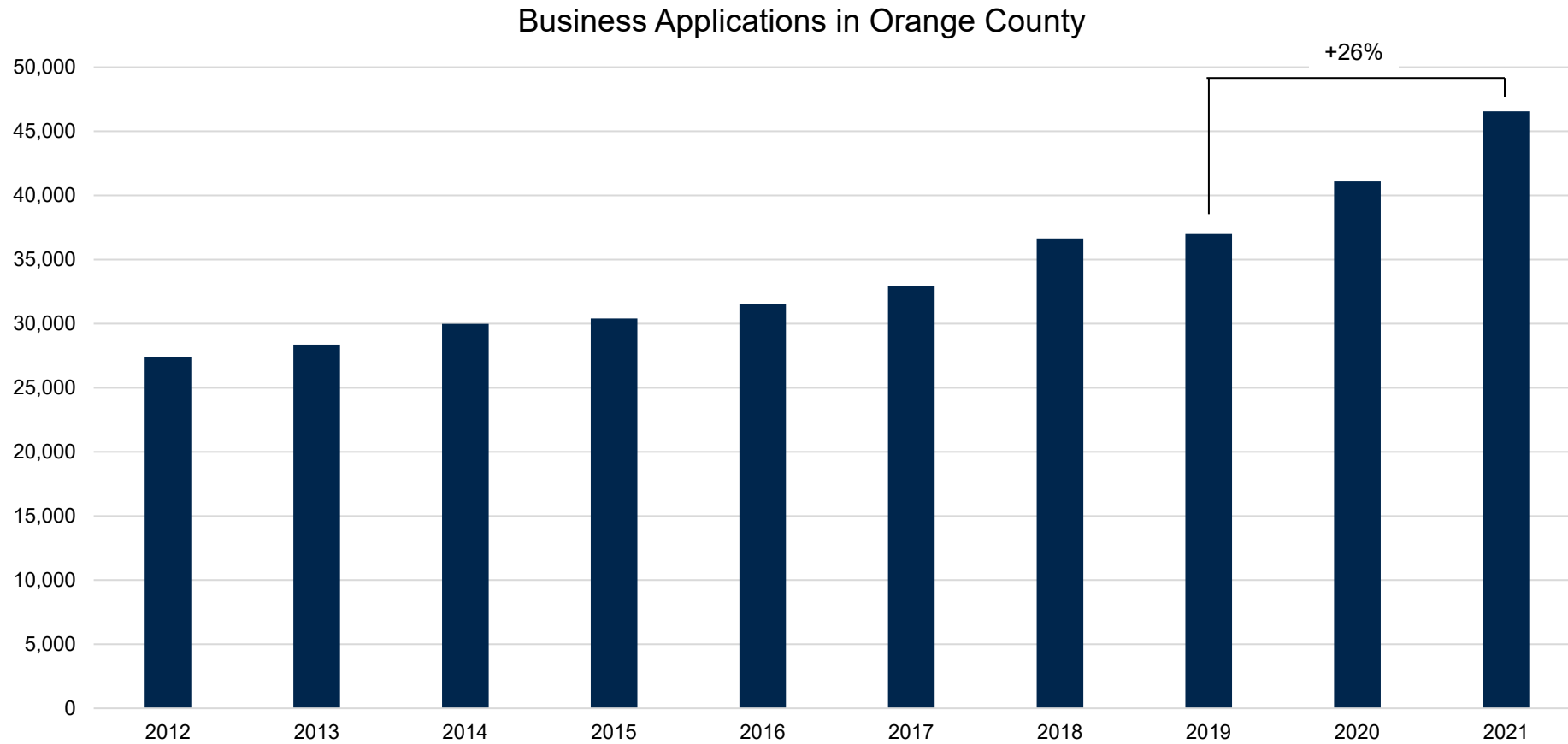
| Description | 2021 Location Quotient |
|--|------------------------|
| Industrial Design Services | 11.23 |
| Dental Laboratories | 10.86 |
| Electromedical and Electrotherapeutic Apparatus Mfg. | 8.54 |
| Computer Storage Device Manufacturing | 7.42 |
| Surgical and Medical Instrument Mfg. | 7.16 |
| Dental Equipment and Supplies Mfg. | 6.73 |
| Ophthalmic Goods Mfg. | 5.23 |

OC universities also have significant life sciences R&D spending.

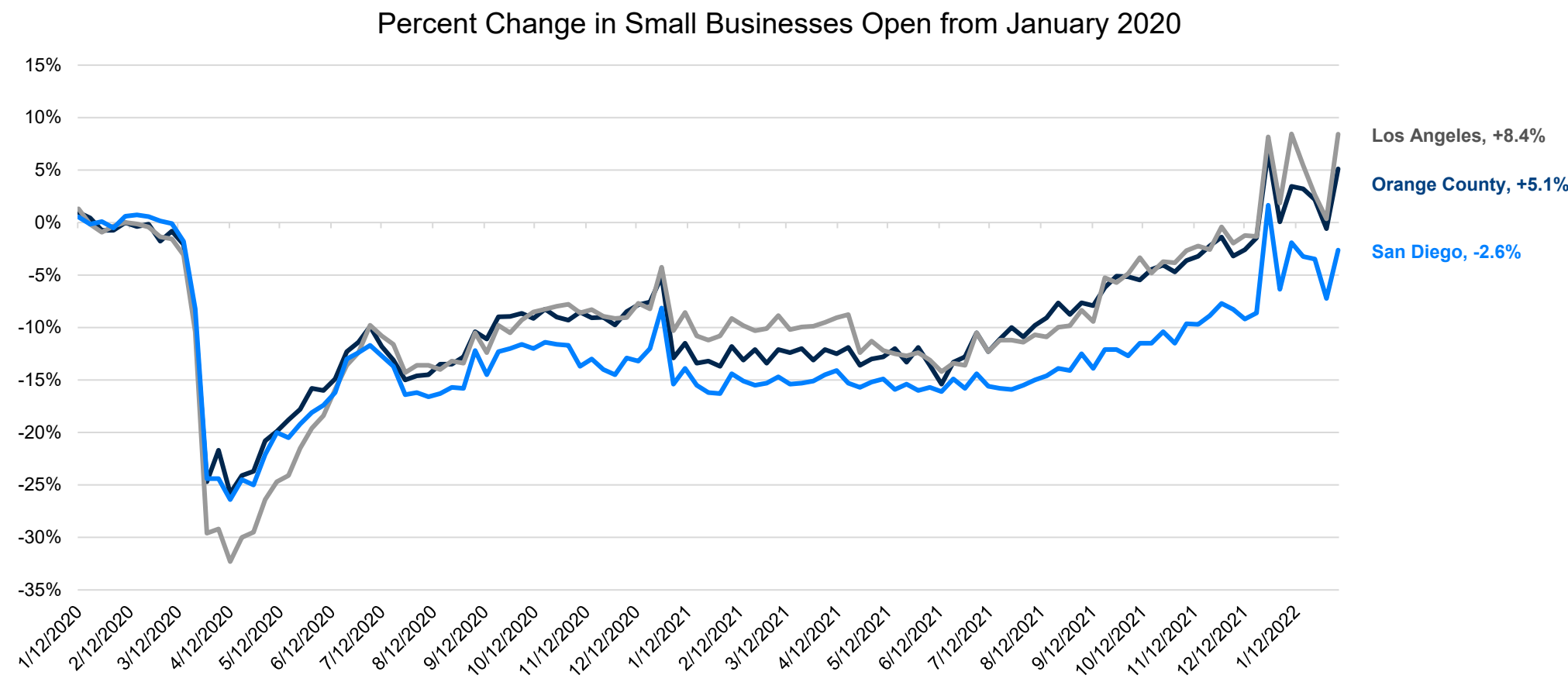
Higher Education R&D Spending

| | Total R&D Spending 2021 | Computer and Information Sciences | Geosciences, Atmospheric Sciences, and Ocean Sciences | Life Sciences | Mathematics and Statistics | Physical Sciences | Psychology | Social Sciences | Other Sciences | Engineering | Non-S&E Fields |
|--------------------|-------------------------|-----------------------------------|---|---------------|----------------------------|-------------------|------------|-----------------|----------------|-------------|----------------|
| CSU Fullerton | \$9.0 million | 2.2% | 2.5% | 27.8% | 2.4% | 14.9% | 3.0% | 3.8% | 6.6% | 7.3% | 29.3% |
| Chapman University | \$25.8 million | 2.7% | 1.2% | 36.8% | 0.1% | 5.1% | 4.5% | 12.6% | - | 1.3% | 35.7% |
| UC Irvine | \$523.8 million | 4.5% | 2.5% | 60.3% | 1.2% | 7.4% | 2.1% | 2.4% | 0.2% | 12.5% | 6.9% |

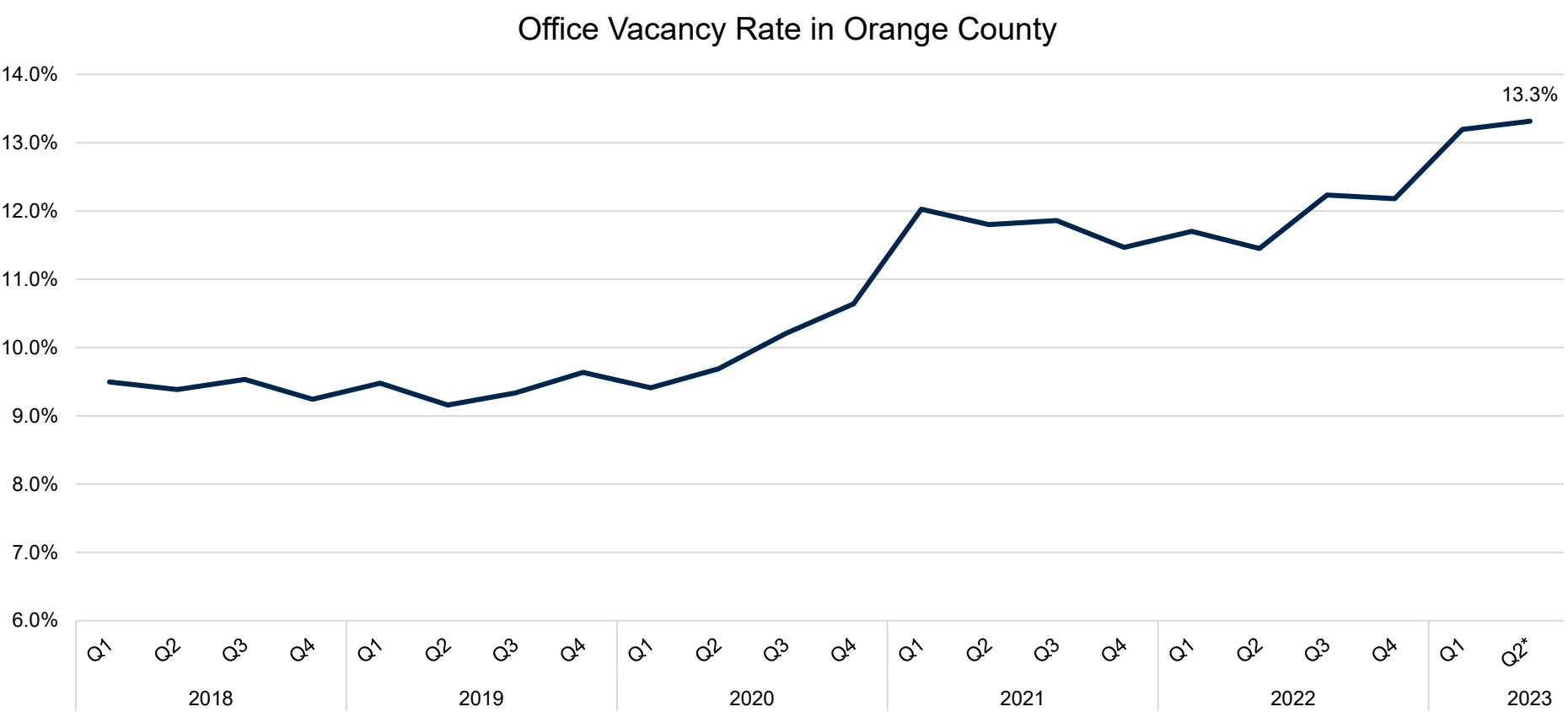
Business applications are up 26% from 2019.



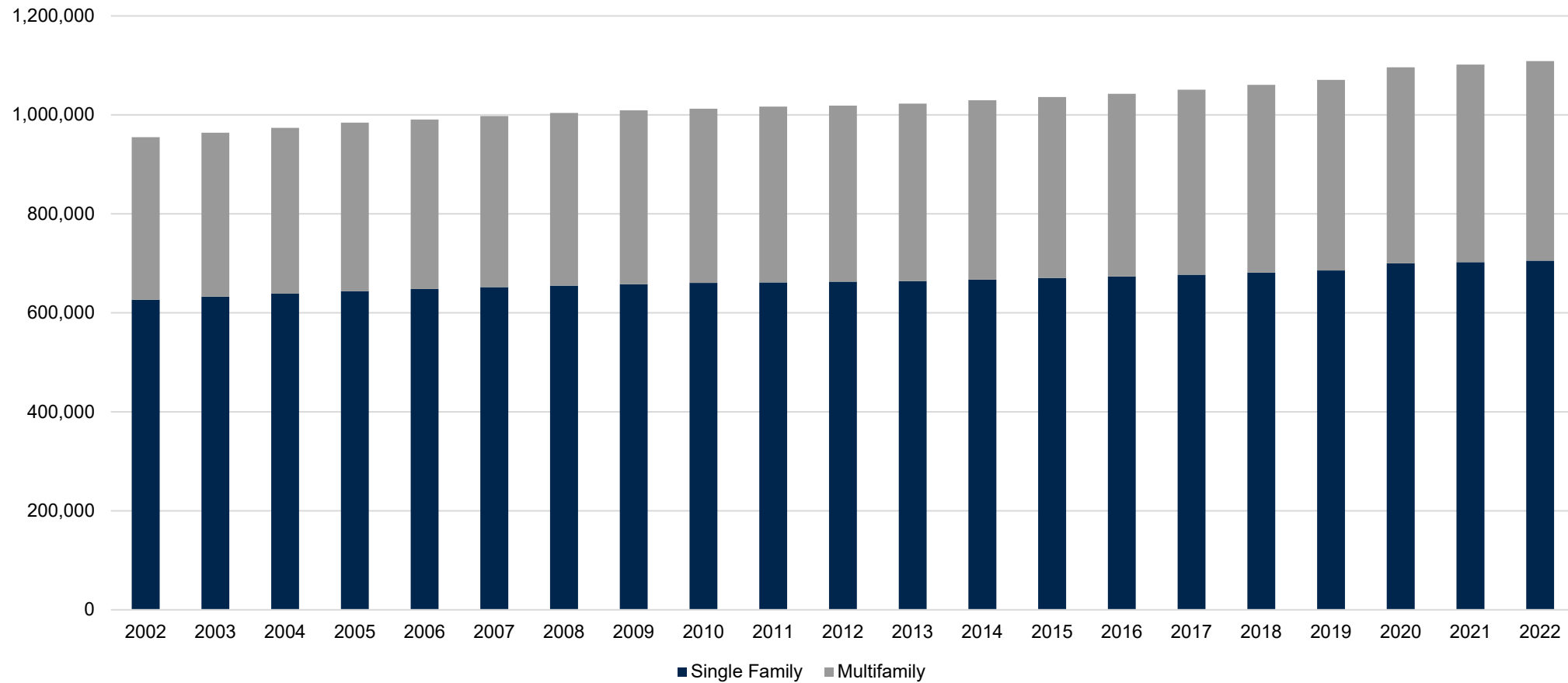
The OC small business environment is regaining strength: the number of small businesses is 5% above Jan. 2020 levels.



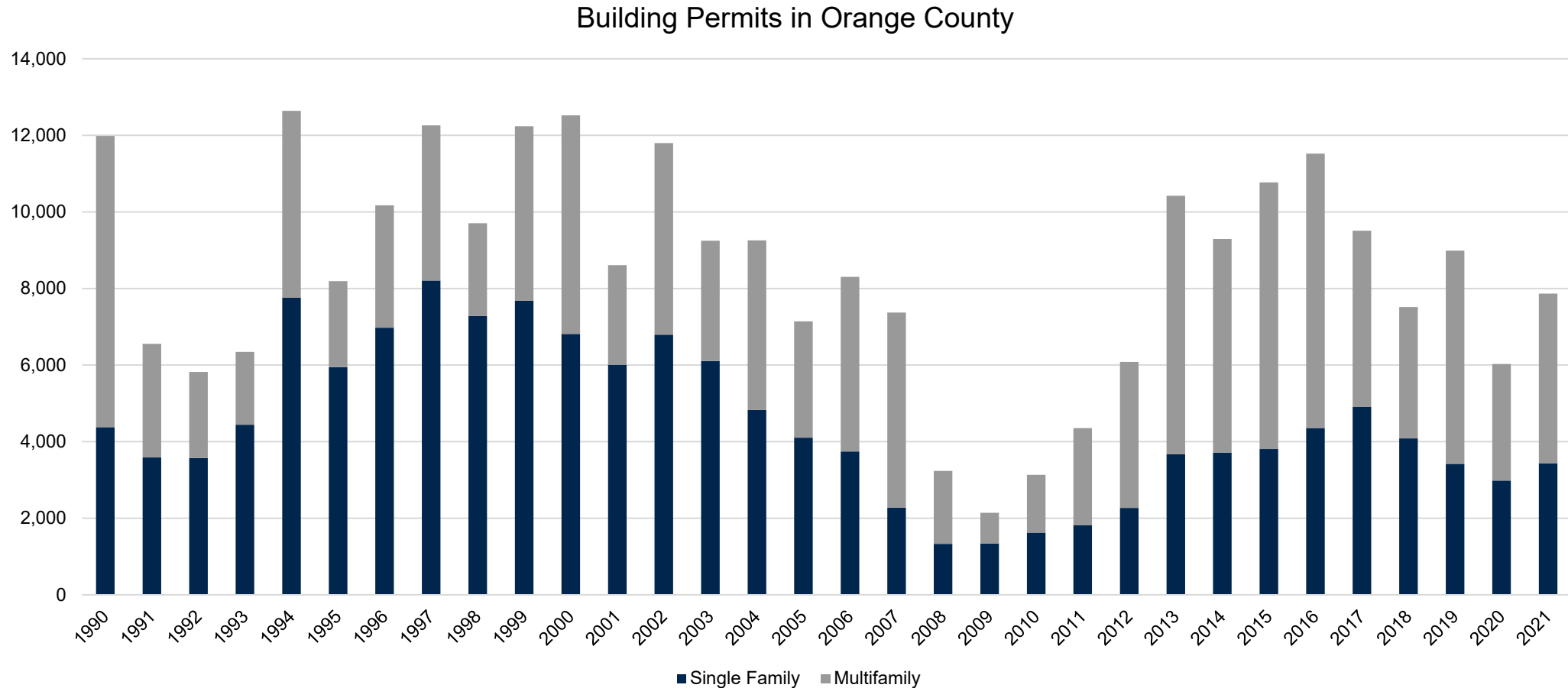
Office vacancy rates remain elevated as remote work continues to take hold.



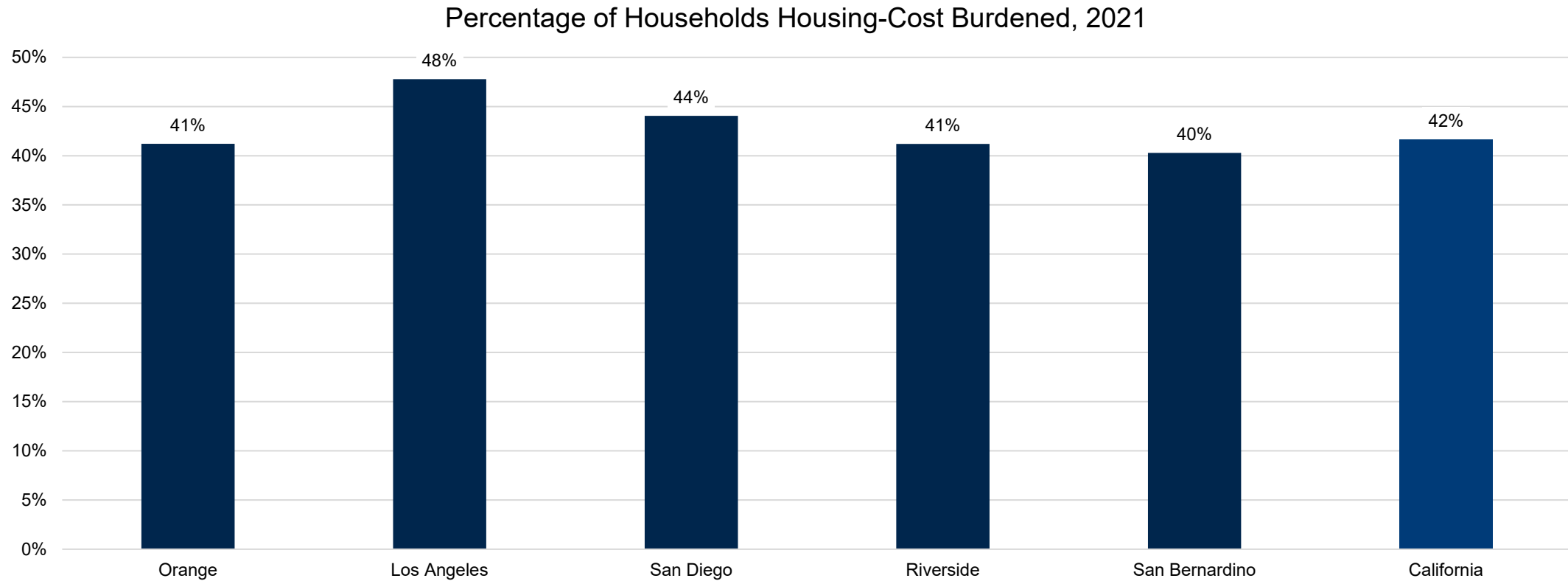
Housing units in Orange County



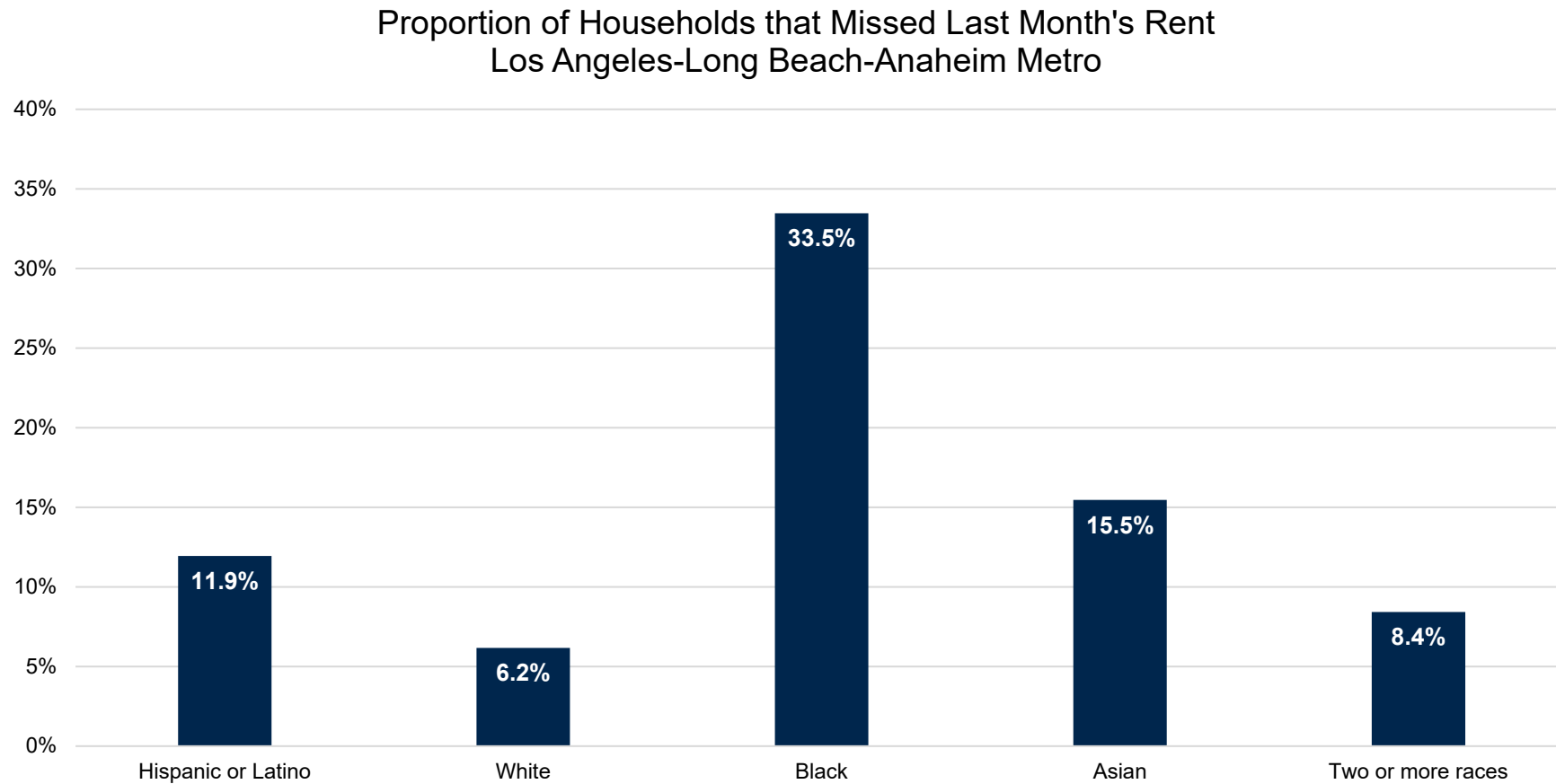
Overall housing development has slowed, but there have been more multifamily permits than single family permits in recent years.



About 41% of OC households are housing-cost burdened, below Los Angeles, San Diego, and the Statewide average.



Renters of color are struggling most.



Note: Responses for the period March 1 – March 13, 2023

What do Successful Metros Have in Common?

In a study of 184 US metros, Professors from USC and UC Santa Cruz found that metros experiencing sustained economic growth have:

- Less economic inequality

- More unified/collaborative power in regional governance**

- More social cohesion

Metros with the longest periods of growth had communities of diverse regional actors committed to working in the long-term with one another: “the most important topics involve the political processes of regional development and the role of participation in planning processes.”

Sustained high-tech growth requires coordination of investments and a unified vision



Stakeholder Mapping Survey is LIVE!

- A critical part of the Planning Phase is identifying the organizations/entities that could be involved and the role they may play
- The Stakeholder Mapping Survey is a key way we are gathering this information

Who? All HRTC members, Sector Leads and organizations involved in sector stakeholder groups should complete the survey, as well as others identified by the sector stakeholder groups

When? ASAP. We will be pushing out the survey for the next several weeks, but the sooner we gather this input, the better. Our stakeholder mapping report needs to be completed in June.

We are working on translating the survey and will share in other languages as soon as available.



<https://www.surveymonkey.com/r/CERFStakeholderSurvey>

Map Link:

Title:

Equity & Inclusiveness in Orange County

Summary:

A comparative assessment of economic, educational, and community resource access OC communities of color have in comparison to each other and their white counterparts.

Extended Explanation:

While the OC CERF's extended definition of "Disinvested Communities," layer spatially orients the "Equity and Inclusiveness" map outlining where communities of color reside, additional layers in this map more closely examines not only where communities of color are suffering, surviving, and thriving, but also who. While AAPI resident attainment levels are often near white resident attainment, Latino & Black populations face gross inequity based exclusions across the board. Low wages and pay gaps negatively impact homeownership rates and are compounded by lower average home values in these communities. Additionally, although AAPI residents and whites reach similar educational levels, gender-based inconsistencies remain.

DIGITAL EQUITY & BROADBAND POLICY.

**KENNY WILLIAMS
SENIOR CAMPAIGN LEAD
CWA DISTRICT 9
APPRENTICESHIP
PROGRAM**



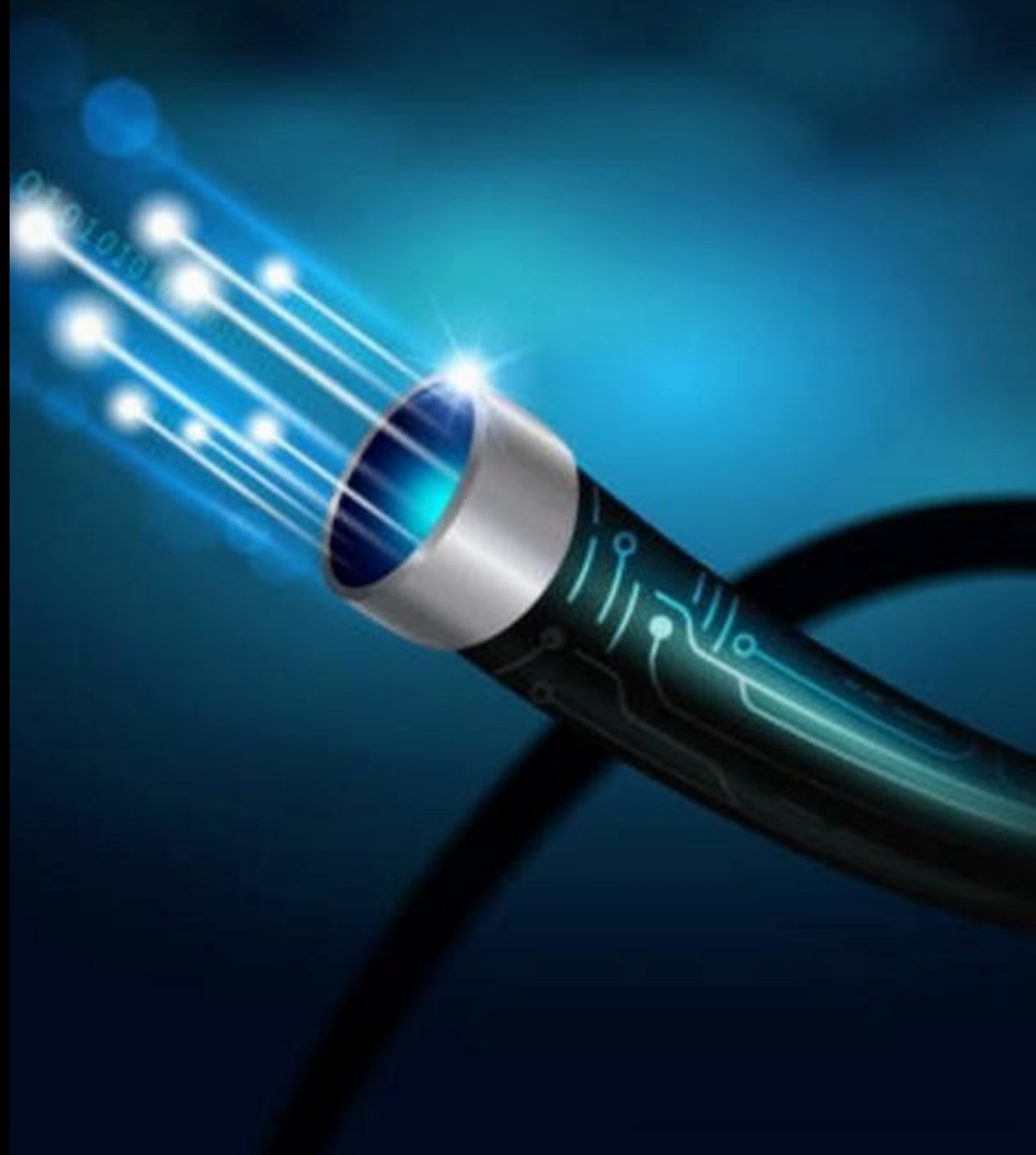


BUILD BROADBAND BETTER

CWA

COMMUNICATIONS WORKERS OF AMERICA

Represents working people in telecommunications, technology, media, airlines, health care, public service and education, manufacturing, technology, nonprofits and other fields.



Broadband Implementation for California

In July 2021, Governor Gavin Newsom signed historic broadband legislation into law to help bridge the digital divide and provide reliable and affordable internet access to all Californians. Senate Bill 156 (Chapter 112, Statutes of 2021) expands the state's broadband fiber infrastructure and increases internet connectivity for families and businesses.

The goal of this investment is to provide equitable access to high-speed broadband to unserved and underserved populations in California. The \$6 billion is allocated for the following:

- \$3.25 billion for an open-access statewide broadband middle-mile network,
- \$2 billion for broadband last mile infrastructure projects,
- \$750 for a loan loss reserve to support local government broadband infrastructure development,
- \$50 million for local agency technical assistance grants including funding for Tribal entities

The California Public Utilities Commission (CPUC) is implementing these investments and requesting public input through the Broadband Infrastructure Deployment Proceeding Rulemaking 20-09-001 and through the California Advanced Services Fund (CASF) Rulemaking 20-08-021.



TERMS

Wireless = Basic Cell Service -

Fixed wireless broadband connects your office to the internet via a wireless radio connection. This involves installing a unit similar to a satellite dish on your property, which will communicate with a similar unit placed on a tower or building that has direct line-of sight.

The term fiber to the premises (FTTP) refers to equipment used in fiber access deployments where fibers extend all the way to the end -user premises and the equipment is designed and optimized for use on residential or business applications.

Fiber customers passed – The number of locations that are within one mile of fiber run.

How long can cell towers go without power?

Verizon reminds investors that the FCC imposes "specific mandates" on wireless carriers including "backup electric power at most cell sites." Therefore, cell towers typically have battery backup arrangements that support operations for two to four hours, depending upon call traffic.



Internet "Miles"

FIRST MILE

The greater Internet. Big "pipes" transmitting data between large servers.

MIDDLE MILE

The network connection between the last mile and greater Internet. Often looped through major metro centers.

Connects: Big housing buildings, large office and non-profit buildings

LAST MILE

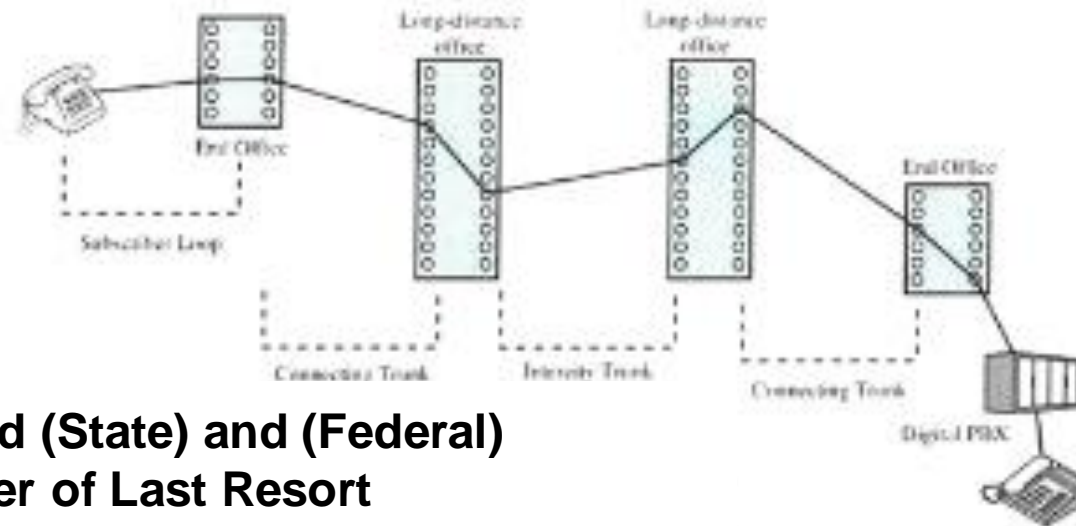
The final leg of a connection between a service provider and the customer, i.e. into your home.

Connects: Small offices, home



Produced by DC Broadband Bridge

EXAMPLE CONNECTION OVER A PUBLIC CIRCUIT-SWITCHING NETWORK

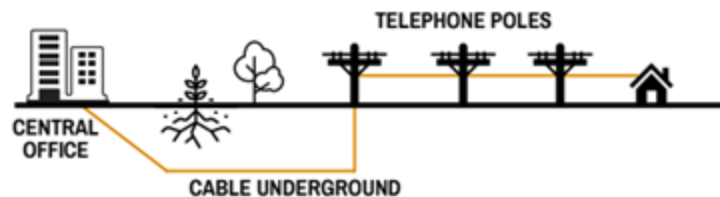


1. Regulated (State) and (Federal)
 - (a.) Carrier of Last Resort
 - (b.) Lifeline Services
 - (c.) Repairs must be timely
1. Reliable
2. Everyone had access on an equal level
3. Unionized for over 70 years

How does broadband work?

DSL (DIGITAL SUBSCRIBER LINE)

- (A) Dedicated Bandwidth to your house but...
- (B) Speeds are slow and fluctuate (most often between 10 and 40 mbps) and...
- (C) Service only available to those who live close to the providers Central Office



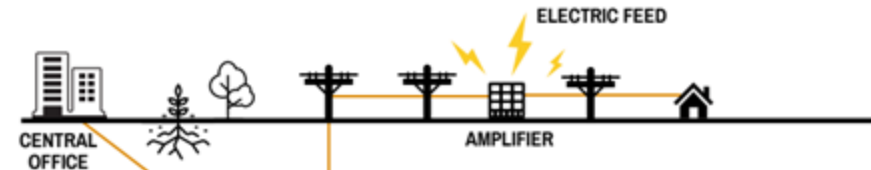
CELLULAR SERVICE

- (A) Provides service to wide areas via a cell tower which is connected to the landline network but...
- (B) Draws power from the electrical grid, increasing its carbon footprint and complicating repairs during storms/electrical outages
- (C) Provides relatively fast speeds (advertised as 4G/5G) but, the greater distance from the cell tower the less reliable the connection and...
- (D) ...bandwidth is shared by all users connected wirelessly to the cell tower...so speeds get slower as more people connect to that tower, causing problems when people need it most.



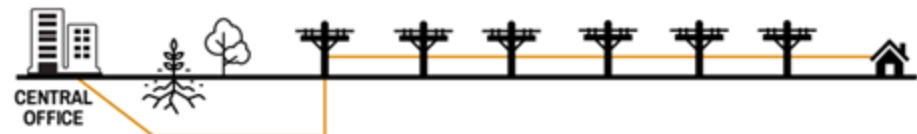
CABLE MODEM

- (A) Can provide service to areas further away from the central office but...
- (B) ...Does so with amplifiers mounted on telephone poles which draw power from the electrical grid, increasing its carbon footprint and complicating repairs during storms and/or electrical outages
- (C) Provides relatively fast speeds (300 mbps advertised), but...
- (D) ...Bandwidth is shared so the more people that use it in a neighborhood, the slower it gets, causing problems when people need it most (pandemic/storms/etc)



FIBER OPTICS TO THE HOME/BUSINESS

- (A) Provides the fastest speeds (1000 mbps) available to areas a great distance from the Central office and can handle even faster speeds in the future
- (B) Does not need amplifiers on telephone poles to transmit signal...reducing its carbon footprint and simplifying repairs during storms/electrical outages
- (C) Bandwidth is dedicated to the home/business, so thousands of people in a neighborhood could use simultaneously without speeds being affected, so...
- (D) ...speeds are maintained when needed most (pandemic, storms, etc)



Questions

1. Who gets what?

- A. Copper
- B. Fixed wireless
- C. Cable
- D. Fiber

2. Who is doing the work?

- A. Unreliable contractors
- B. Skilled trained work force

3. Who decides?



What are some of the factors that determine where fiber is deployed?

- Average Revenue Per Unit
- Median Income
- Disposable Income



AT&T plans to decommission about half of its legacy copper network by 2025

- A. This initiative began in earnest early in 2013**
- A. In California in Early 2023 AT&T petitioned the CPUC to obtain wholesale permission to abandon the guarantee of communications services for an unspecified number of customers in unknowable areas simultaneously and in bulk.**
- A. Frontier started their decommissioning initiatives in the 2010 time frame.**



**The Major Providers want
to give you 2 options:**

Fiber or Fixed wireless

**Their position is that in
many communities it is
cheaper to have fixed
wireless than provide fiber
in the last mile**



DEFINING THE "DIGITAL DIVIDE"

The background of the image is a dark blue field filled with a complex network of glowing blue lines and dots. These lines and dots are arranged in a way that suggests a global or digital network, with many lines converging and diverging, creating a sense of movement and connectivity. The dots are small and bright, acting as nodes in the network. The overall effect is a futuristic, high-tech aesthetic.

Interaction between human and computers has greatly increased as we embark on the twenty-first century.

The ability to access computers and the internet has become increasingly important to completely immerse oneself in the economic, political, and social aspects of not just America, but of the world.

However, not everyone has access to this technology.

The idea of the **"digital divide"** refers to the growing gap between the underprivileged members of society, especially the poor, rural, elderly, and handicapped portion of the population who do not have access to computers or the internet; and the wealthy, middle-class, and young Americans living in urban and suburban areas who have access

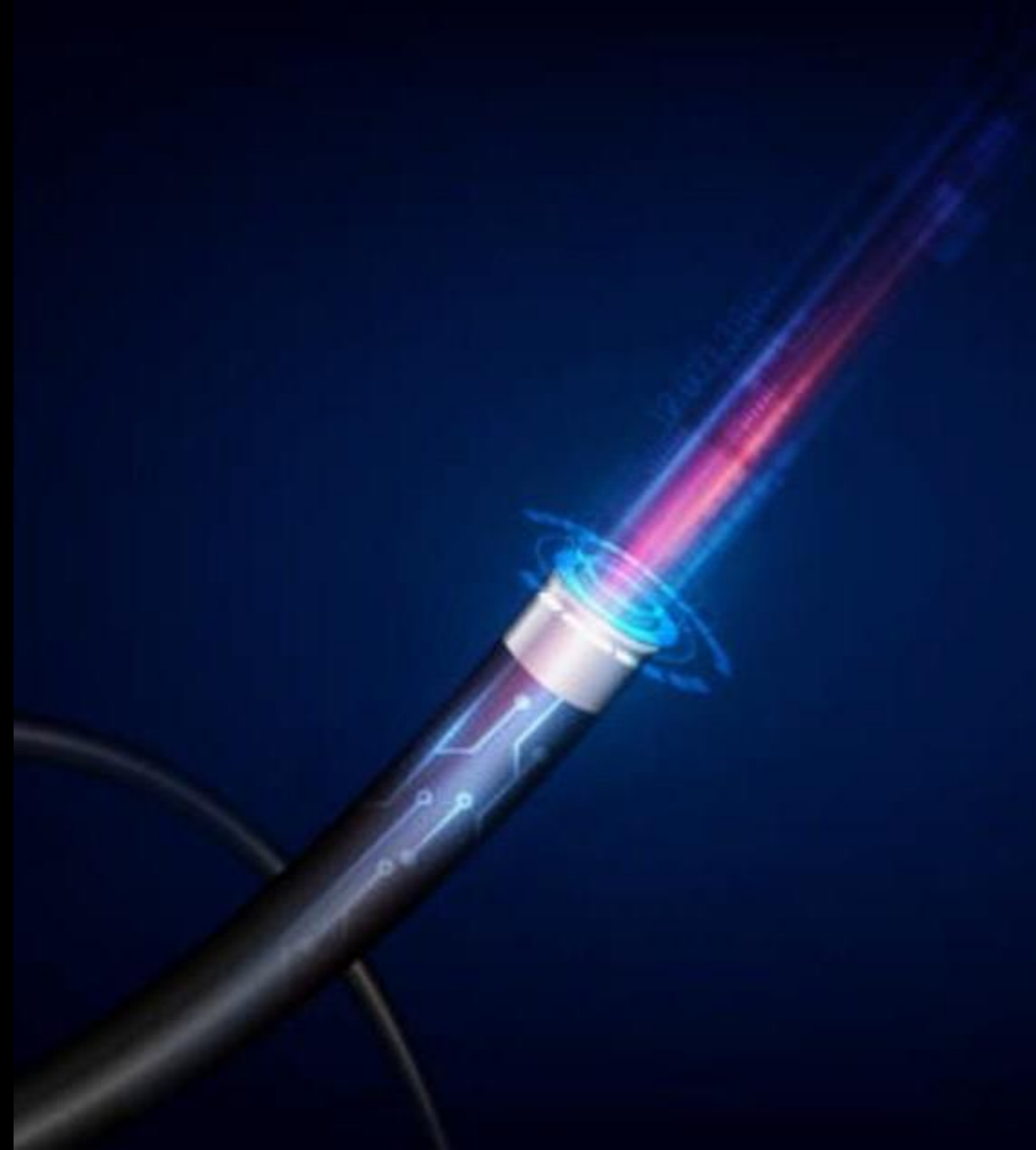


Although the number of Americans with access to computers and the Internet continues to soar on a yearly basis, the digital divide also continues to grow at an alarming rate.

On the one hand, sections of society already connected - such as higher income, educated White and Asian Pacific Islander households - are adopting newer technologies faster and are connecting even more.

On the other, groups with traditionally lower rates for Internet and computer usage continue to lag far behind.

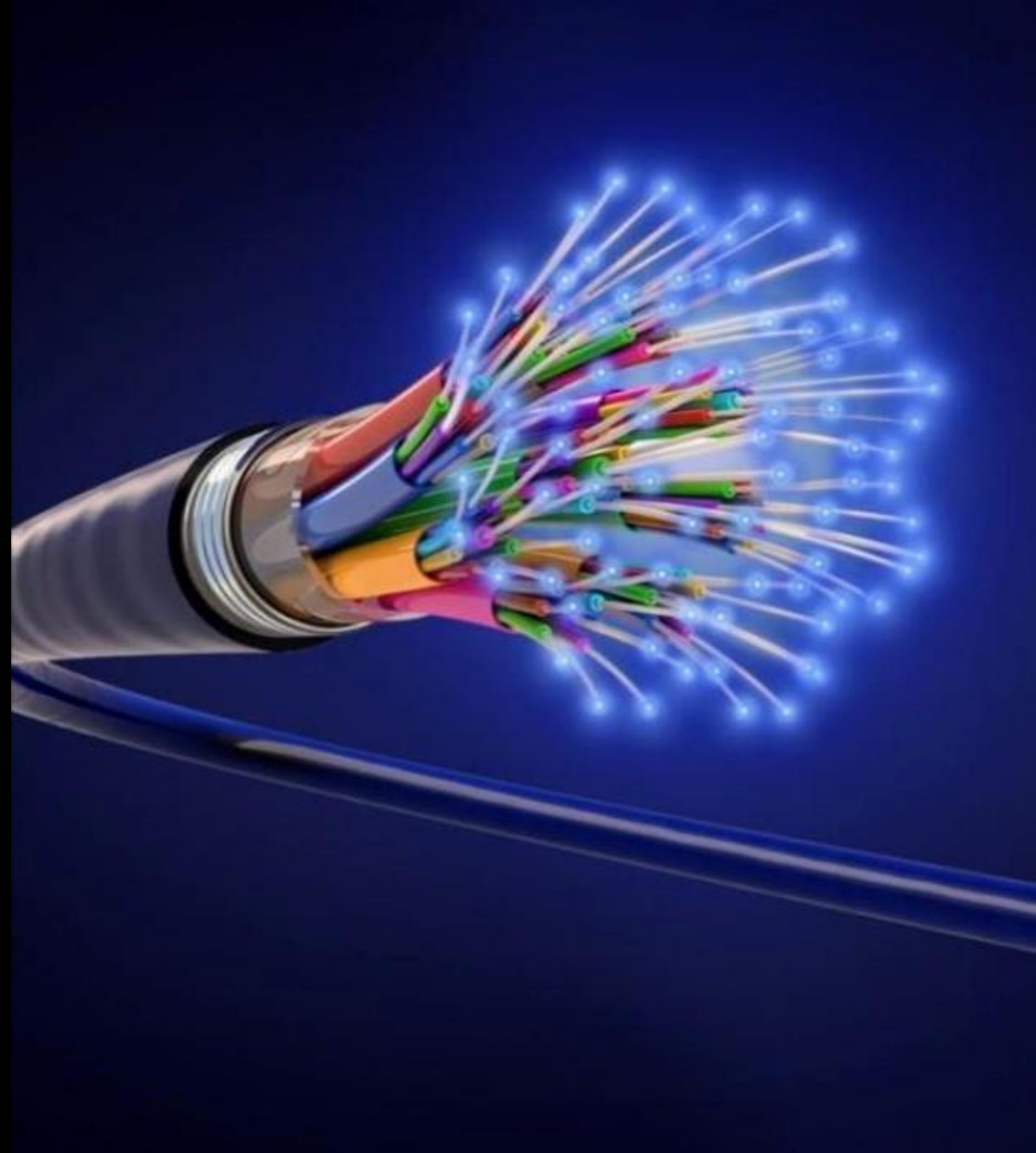
Unfortunately, according to a study conducted by the National Telecommunications and Information Administration (NTIA), entitled Falling Through the Net: Defining the Digital Divide, the gap is widening along already strained economic and racial lines



Healthcare data from Cigna Healthcare shows that patients save an average of \$93 when using non-urgent virtual care instead of an in-person visit.

Similarly, patients save an average of \$120 when the virtual visit involves a specialist, and \$141 with a virtual urgent-care clinic over an in-person one. Given that the savings in healthcare alone, fiber deployment likely pays for itself.

In addition, as Brookings Metro has previously noted, widespread broadband access also leads to improved outcomes in education, jobs, and social services.





**MOST HOUSEHOLDS HAVE
MULTIPLE INTERNET
USERS—AND GREATER
BANDWIDTH NEEDS.**

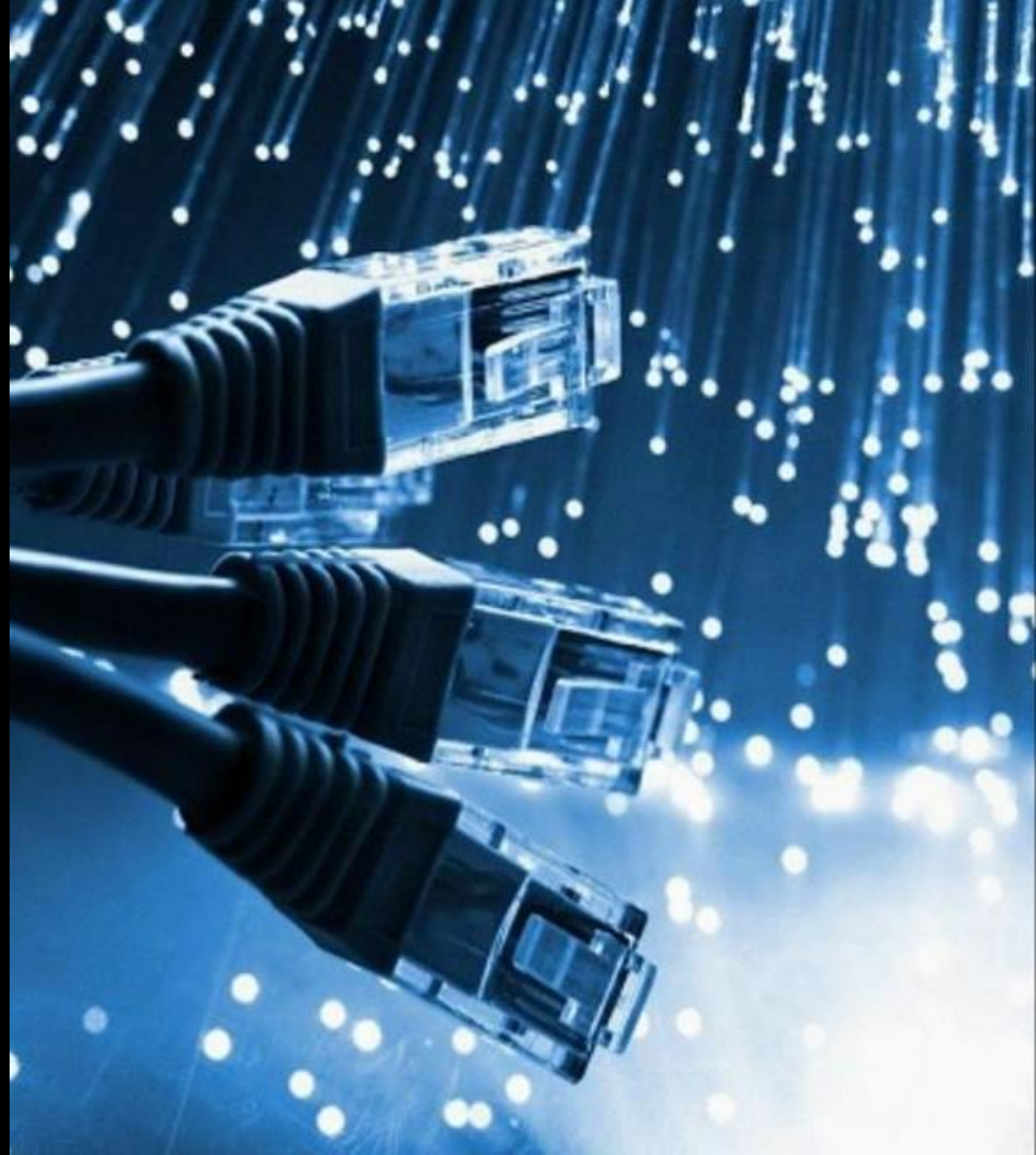
- Most Californians share broadband with others in their households: as of 2020, 77% of households reported having multiple users.

- Households with multiple users require additional bandwidth for reliable access to online instruction and videoconferencing—which became a necessity for many during the pandemic.

- The average-size household in California includes 2.7 people; the average size of households with school-age children is 4.5

- Home broadband access has been increasing across most demographic groups, but racial/ethnic gaps persist: 80% of Latino households and 83% of Black households reported having broadband in 2020, compared to 87% of white households.

- Households headed by adults 65 and older (83%), households with annual income below \$50,000 (76%), and households headed by non–college graduates (80%) were less likely to report broadband access in 2020.



**SEPARATE IS NOT
EQUAL**

**ALL PEOPLE
SHOULD HAVE
OPTIONS, WIRED OR
WIRELESS**

**THE FIBER
NETWORK SHOULD
BE AVAILABLE TO
ALL BUSINESSES
AND HOMES**

**THE COPPER &
FIBER NETWORKS
SHOULD BE
MAINTAINED UNDER
PROVIDER OF LAST
RESORT
OBLIGATIONS**

**NO COMMUNITY
SHOULD HAVE ONLY
ONE OPTION
(WIRELESS)**

**SKILLED AND
TRAINED
WORKFORCE
REQUIREMENTS
MUST BE IN PLACE
TO RECEIVE PUBLIC
FUNDS**

WHY WE MUST UNIONIZE THE TELECOMMUNICATIONS INDUSTRY

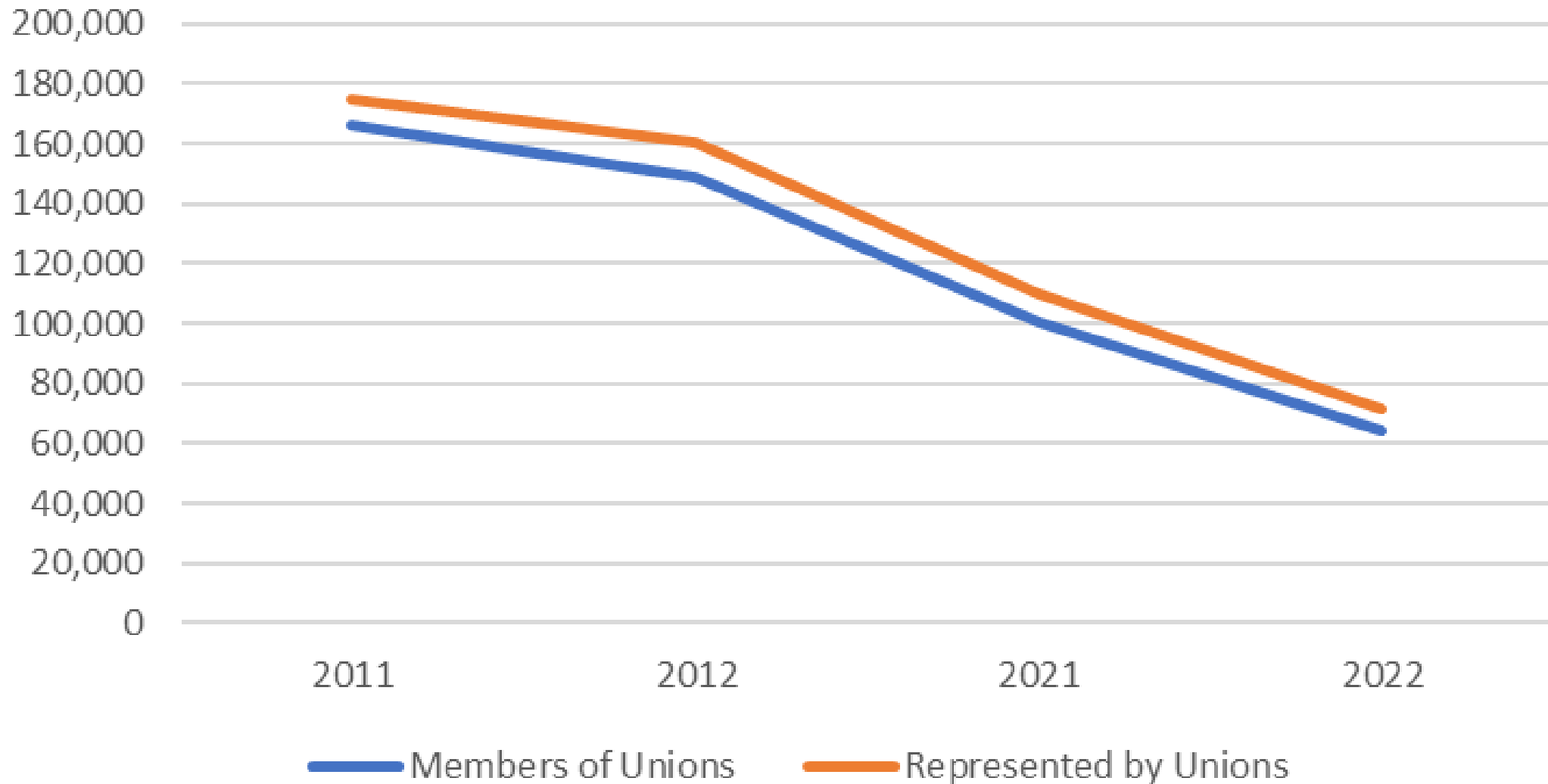
The background of the image is a dark blue gradient. It features a series of glowing blue lines that curve and flow across the frame, creating a sense of motion and connectivity. Scattered throughout the background are numerous small, bright blue dots, resembling stars or data points. The overall aesthetic is high-tech and digital, consistent with the telecommunications theme of the text.

Share of workers represented by a union in telecommunications and in U.S. workforce overall, select periods, 1973 to 2019

| | 1973–1979 | 1983–1986 | 2003–2006 | 2016–2019 |
|-----------------------------|-----------|-----------|-----------|-----------|
| <i>Telecommunications</i> | | | | |
| Total | 59.8% | 50.4% | 22.8% | 16.1% |
| <i>Wired</i> | n.a. | n.a. | 24.6% | 17.7% |
| <i>Other</i> | n.a. | n.a. | 18.7% | 13.0% |
| Total U.S. workforce | 26.0% | 21.3% | 13.7% | 11.8% |

Source: EPI analysis of Current Population Survey data (EPI 2020).

Telecommunications Workforce



- **The best projection is from the Brookings Institution which estimates that a federal injection of \$80 billion into deployment would spur creation of 50,000 new technician and related jobs that would last for 4 years, or 200,000 “job years.” This doesn’t fully account for operational jobs.**
- **Based on estimates of California’s share of the BEAD funds (\$3.5B), which is 8% of total BEAD funds, we could guess that CA will need at least 8% of the 50,000 jobs to be related, which would be 4,118 jobs. California will likely get more than its share due to the large investment under SB156, so we could bump that number up by 50% to 6,175 jobs as a rough estimate.**
- **It’s entirely possible we're underestimating the amount of job creation, but industry has not produced any independent research to back up their 800K figure.**



Higher Wages and Decreased Income Inequality

On average, a worker covered by a union contract earns 10.2% more in wages than a peer with similar education, occupation, and experience in a nonunionized workplace in the same industry (EPI 2021e). This wage advantage is known as the “union wage premium.” But unions don’t just help union workers-they help all workers (Bivens et al. 2017).

When union density is high, nonunion workers benefit too, because unions effectively set broader standards-including higher wages-which nonunion employers must meet to attract and retain the workers they need (Rosenfeld, Denice, and Laird 2016; Mishel 2021). The combination of the direct wage effect for union members and this “spillover” effect for nonunion workers means unions are crucial to raising wages for working people and reducing income inequality (Card 1996, 2001; Card, Lemieux, and Riddell 2018).

As Union density shrinks in an industry it also creates downward pressure on Benefits (Medical, Dental, Vision, Pension, Paid Sick Leave, Paid Vacation, 401K, Paid Disability, etc.



Declining Standards, Poor Work Quality and Danger to Health and Safety



Risks from Contractors

- Low-road, non-union, out-of-state contractors can create risks to safety
 - Paid per job, causing dangerous speed ups
- ISPs should use directly employed workforce whenever possible
- Telecoms have laid off thousands, experienced techs standing by – if good jobs are available

Incomplete connections,
inferior splices



No PPE



Poorly rehung
cables

**Carrier/Infrastructure
Company**

**General
Contractor / Turf
Vendor**

Subcontractor

Subcontractor



The project involved several companies. Verizon, which received a permit for the fiber optic cable installation, hired MasTec, a Florida infrastructure engineering firm, to be the job's main contractor.

MasTec hired Advanced Fiber Works, a New Jersey-based telecommunications company, to install the cables. Advanced Fiber Works, in turn, hired Kilford to dig a trench, install conduit and seal up the excavation. Advanced Fiber Works was expected to eventually snake cables through the conduit.

Anatomy of a Cell Tower Death

A half dozen companies, including AT&T, played a role in the cell site project on which William "Bubba" Cotton died. So who controlled the work site? And who was responsible for the safety of subcontractors working on it?

by Liz Day and Ryan Knutson, June 6, 2012, 10:20 a.m. EDT

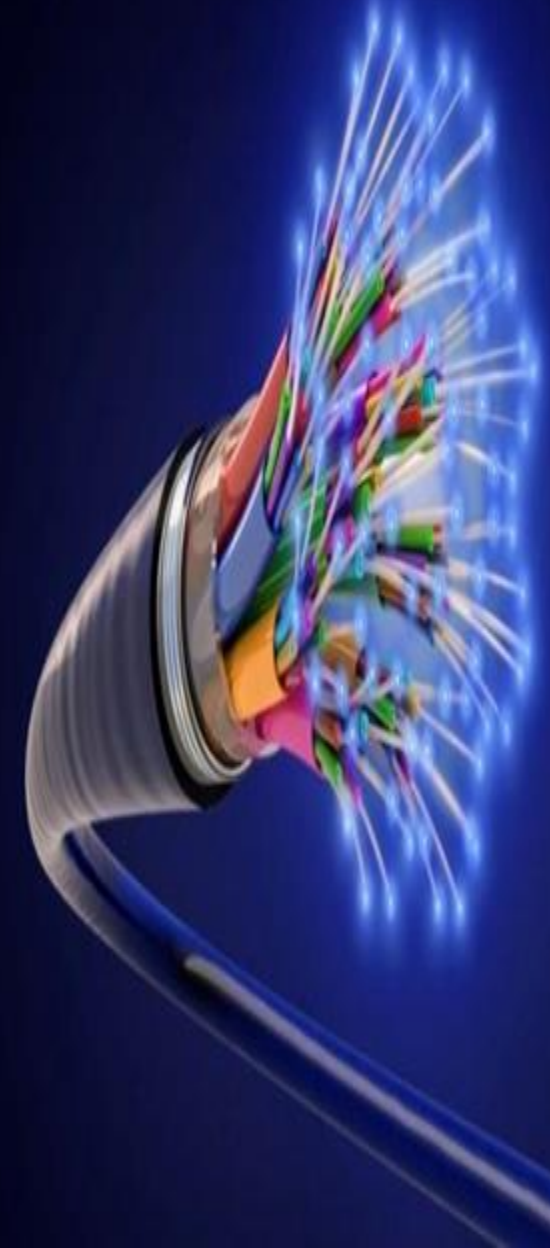


Derek Mims, 19, had his fingers crushed in a ditch-digging machine while installing fiber cables for an AT&T contractor on Oct. 31, 2016. The company that hired him treated its workers as independent contractors.



Here is what we are doing –

- 1. At the Federal, State, County and City levels we are actively pursuing labor language that raises the bar on issues like safety, prevailing wages, and benefits which will guarantee a skilled and trained workforce. This is intended to protect the unionized workforce.**
- 1. We are expanding our Apprenticeship Program to union employees and are in active discussion with major employers right now.**
- 1. Establishing a job referral service to match displaced workers with potential employers and use community involvement to facilitate that effect. Also, to possibly match new employees to good union jobs.
CWAD9JRS.org**
- 1. Actively involved in organizing drives to build union density in the telecommunications industry.**
- 1. Seeking the participation of the Local Unions to protect the members by actively organizing the industry.**





CWA DISTRICT NINE TELECOMMUNICATIONS APPRENTICESHIP PROGRAM

The CWA District 9 Telecommunications Apprenticeship Program is approved by the California Department of Industrial Relations, Division of Apprenticeship Standards (DAS) and the U.S. Department of Labor (DOL). It combines training on the job with related and supplemental instruction at school. Chabot/Las Positas Community College District is our partner in the program. The Instruction, supplementing the training on the job, gives apprentices a comprehensive understanding of the theoretical aspects of their work. Related instruction is one of the fundamental features of apprenticeship and has been developed and accepted as standard practice in every trade. The Program requires students to attend classes four (4) hours each week for at least 108 hours per year. In class apprentices learn the theories, hands-on applications, and each day on the job they learn the practical applications under the supervision of skilled workers. We also provide certifications by OSHA and the Fiber Optic Association of America.

It is a 3 year program (36 months) with the possibility of up to 30 months credit based on verifiable work experience. It contains 1500 hours per year of on-the-job training and 108 hours per year of classroom instruction with college credit available.

We currently have a location in San Jose, California and under the DOL grant we can add 3 more Locations in the next 2 years. The additional locations will be in the North, Central Valley and Southern California.

With our H RTP Grant we can open additional locations throughout the State.

Some of the highlights of this program are 5 weeks of Wages and Fringe Benefits. Also, some supportive services may be available as well to Apprentices who might benefit from such offerings.

CWA is a diverse and inclusive Union and the Apprenticeship Program will reflect those values in our recruitment and retention process.

It is estimated that in California that there will be over 6,000 jobs created due to the Federal and State investment in Broadband Expansion. Our focus is on the Installation, Placing, Splicing, and Maintenance of Fiber Optic Cable.

GOALS

Provide a CAREER not just a Job in the 21st Century Fiber Optic Technology. This will be an inclusive Program for Veterans, LGBTQ+, the Justice Involved, Women, and Minorities

Provide a path to the Middle Class for Working People with good benefits.

Ensure that Workers are Trained to Work Safely!

Partner with communities to be sure they are included in the decisions about what kind of Technology is offered in their neighborhoods (Cable, Fixed Wireless, Copper or Fiber). Also promote Local hire so folks in communities can gain skills that they can take anywhere as well as improving the neighborhoods where they live.

Reach out to all levels of government to ensure that subgrantees will perform the work using high road labor practices with binding commitments. We are also promoting contractor transparency and safety language.

Unionize the Industry.



The background is a dark blue field filled with glowing, swirling lines of light in shades of cyan and blue. Scattered throughout the background are various hexadecimal characters (0-9, A-F) in a lighter blue, semi-transparent font, giving the impression of digital data or code. The overall effect is one of high-tech connectivity and data flow.

[HTTP://CWAD9JRS.ORG/](http://CWAD9JRS.ORG/)

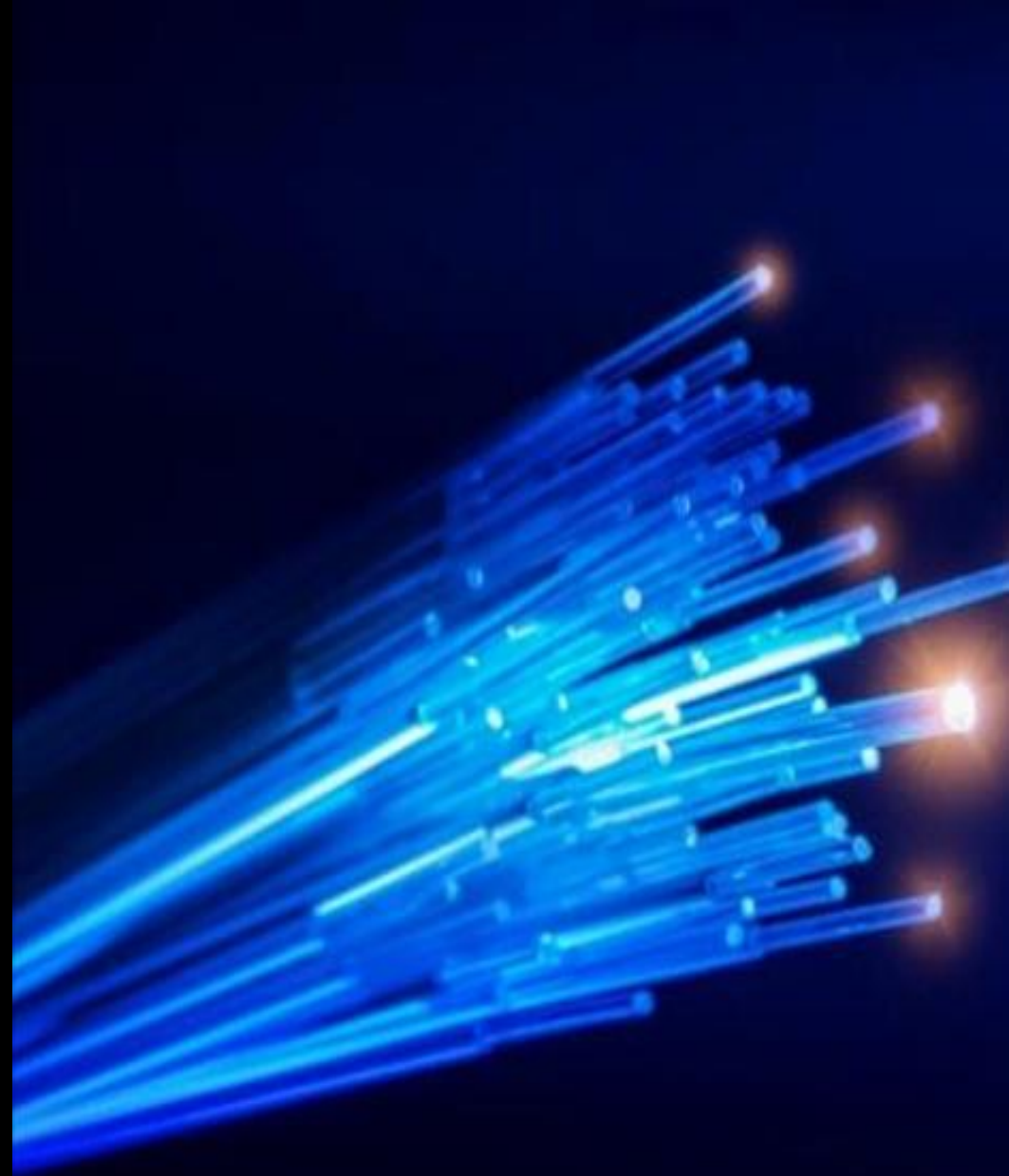
Last Mile (Approximately 2 Billion) Unserved and Underserved Preferred

Scenario 1: Fiber is placed down the main street of a rural, disadvantaged, immigrant, or minority community totaling 10,000 residences. The ISP then reports to the Stockholders that they passed 10,000 residence (Fiber Customers Passed) but never deploy it to the homes or businesses in that Community (Last Mile). The Fiber run continues to a more affluent community where they deploy it to homes and businesses. The primary contractor subcontracts the work out to another contractor who subs it out to another contractor who brings in another contractor who may have wage and safety violations in other states. Who then brings in Out of State non-union workers to do the work.

Result: no 21st century communications and no jobs.

Scenario 2: Same 10,000 residences get passed. However the work gets subcontracted out to a non union contractor who subs to another company who then goes back into the community where they did not deploy and offer low wage jobs with minimal skill training, no safety training, and little or no return to their communities where nothing has changed or gotten worse as far as broadband.

Result: no 21st century communications and low road jobs not a career.



Last Mile (Approximately 2 Billion Unserved and Underserved Preferred (cont):

Scenario 3: They deploy Fiber to all communities along this Fiber Run based on need not greed. PLA'S and CWA'S are signed with Unions to ensure work is done correctly, safely and on time. Local hire provisions are enforced and Certified Apprenticeship Programs are utilized so that Careers with a living wage and benefits (Paid sick leave, paid vacation, pension, medical dental, vision etc) are created. The Digital Divide starts to close and not become wider. Many people who have aptitude will now also have access.

Result: 21st century communications deployed equitably; careers are created. All communities are included.

Middle Mile (Approximately 3.25 Billion) Unserved and Underserved Preferred

1. Approximately 10,000 miles covering the State.
2. Fifty percent Indefeasible Rights of Use (Lease Dark Fiber)
3. Thirty percent new build
4. Fifteen percent Joint Build (possible Public, Private partnerships).
5. Five percent other



The Middle Mile (cont.):

Scenario 1: Little or No safety or labor protections out of state contractors do the work.

Result. No jobs for Community members. Possible safety and labor violations.

Scenario 2: Skilled and Trained Force Requirements as well as Safety training. Local hire using Certified Apprenticeships Programs.

Result: Careers for the Community who can take those learned skills back home and use them in the Last Mile project. Those skills can also be used anywhere in the Country and can be used to maintain Fiber for decades to come.

