



Massachusetts
Taxpayers Foundation

Urban Economies on the Precipice: A Tale of Six Cities

Redefining Work as a Thing We
Do, Not a Place We Go?





Economic Background

High-Cost Urban Hubs Are Not Getting Back to 2019 Economic Levels

- Activity metrics in Northeast and Midwest economic hubs are running 30 to 40% below pre-COVID activity.
- Hybrid/remote work has cut foot traffic and office occupancy rates by half and transit ridership by 20 – 40%.
- Commercial real estate values – particularly Class B and C – continue to fall as leases expire, dragging down local economies and putting city finances at risk.
- It will get worse: Generative AI could disrupt 25% or more of U.S. jobs, cutting foot traffic and office space use.

It's a Sprint, Not a Marathon: Preparing for the Next Competition

- Private sector funds pivot fast as demographic and market changes strain future growth.
- Southern states are expanding rapidly, having surpassed the Northeast in several economic measures.
- Federal and private funds spur a manufacturing burst, further tipping the economic balance to the South.
- Think of a 5-year window – how can Massachusetts thwart the flight of talent and capital?
- Lengthy policy debates and fragmented efforts paralyze action. Delays lead only to success – for others.

We Knew this Might Happen, But We Didn't Foresee the Economic Havoc it Could Create

“Population and job growth is dispersed throughout the state, as the importance of physical location has diminished via increased reliance on telecommunications networks.

Central cities have lost some of their significance as spatial concentration is not as necessary for places to be economically competitive.

Workers now have the option to live in less expensive, low-density suburbs and rural areas, which supports home-based lifestyles, as more work and services move online and the increase in severe weather keeps people indoors more often.

Climate change makes some coastal locations and inland, flood-prone areas unviable for residents and businesses...”

Choices for Stewardship: Recommendations to Meet the Transportation Future, Volume I, 2018

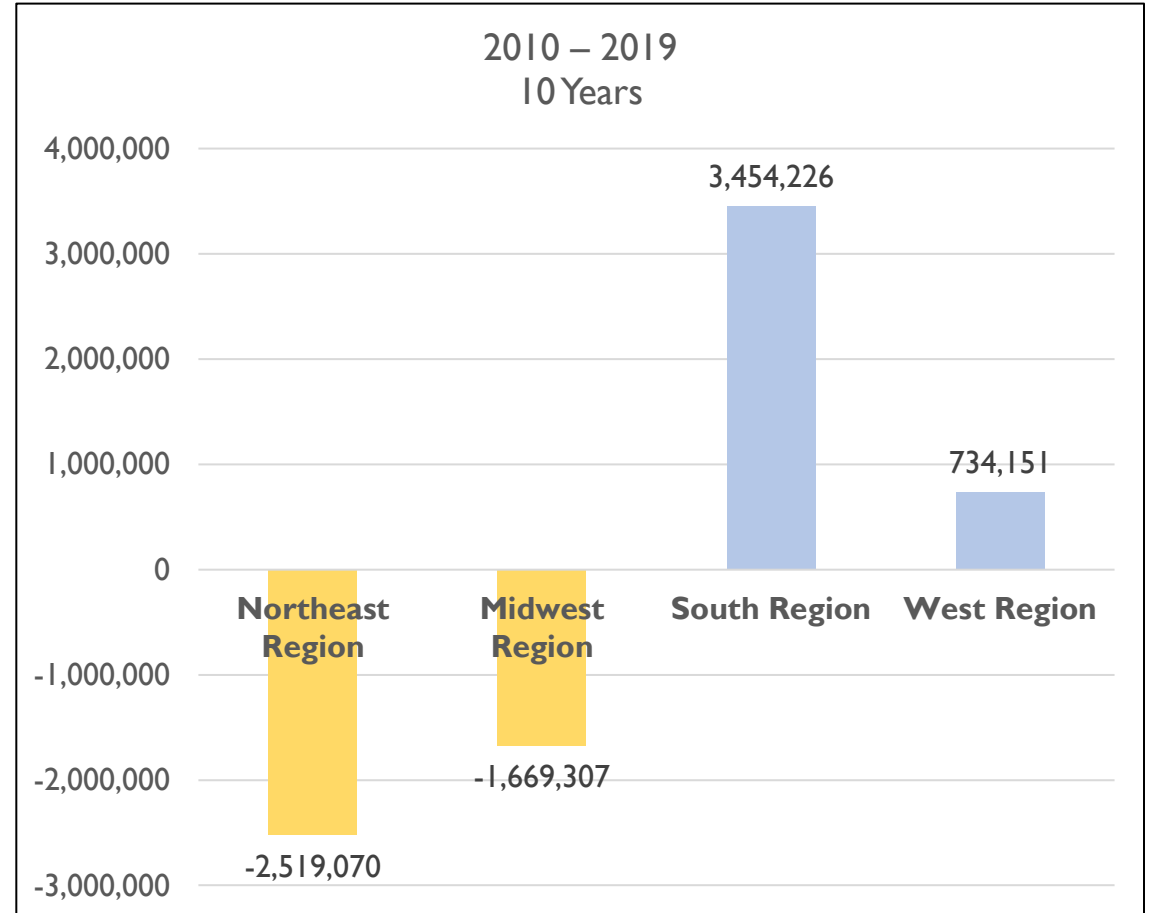
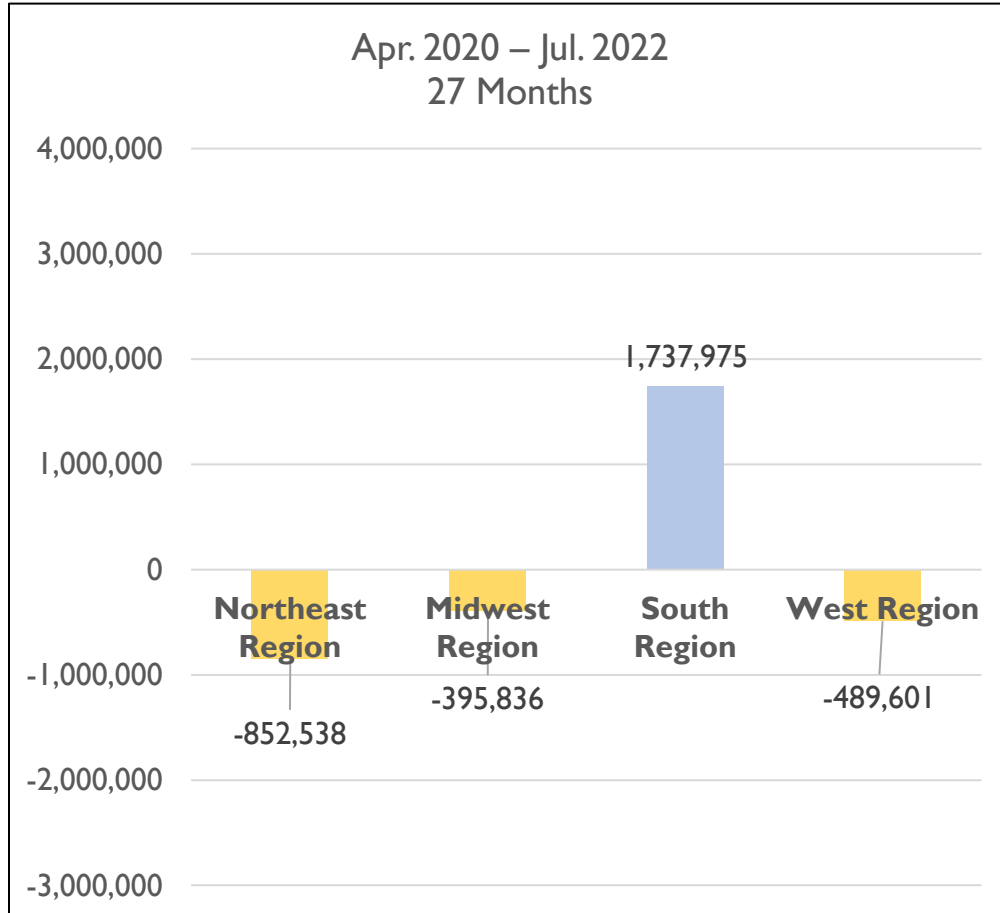
Boston, Chicago, New York, Philadelphia, San Francisco, and D.C. – Why These 6 Cities?

- 6 manufacturing-based economies that transitioned to services.
- The 6 cities drive regional economies, currently producing ~ \$4 T or 18% of U.S. GSP.
- They operate the six largest public transit agencies by ridership.
- They are among the highest in housing costs and commuting times.
- During COVID, costs and remote work led to substantial outmigration.
- They suffer from high office vacancy rates and low occupancy rates.
- They face the same challenge – how to replace office worker-driven economies.
- Their plans and experiences could inform Massachusetts about which policies may work and on what schedule.

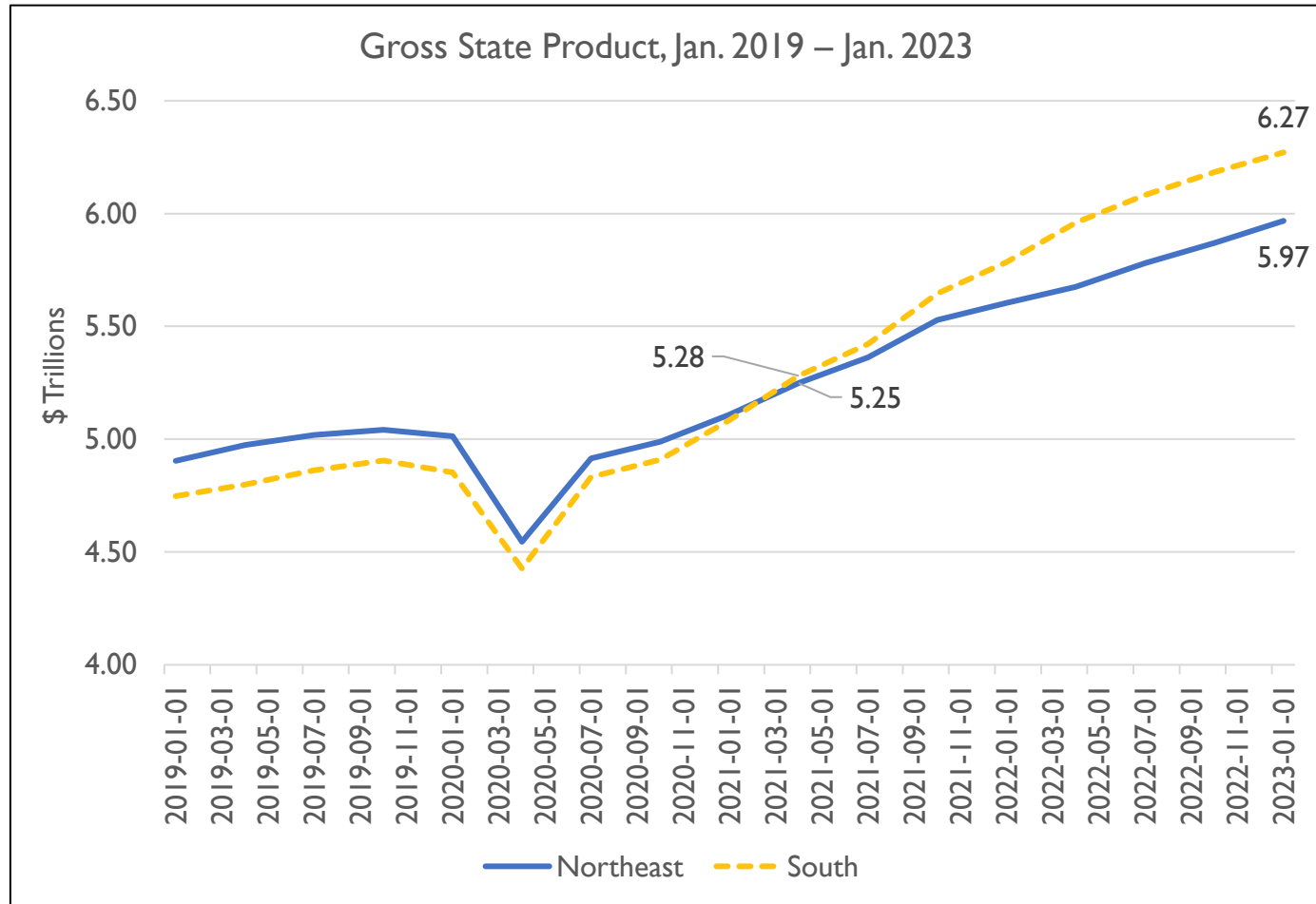
A night view of a city skyline, likely New York City, featuring several illuminated skyscrapers and a bridge over water. The sky is a deep blue, and the city lights are reflected in the water. A dark blue rectangular box is overlaid on the bottom half of the image, containing yellow text.

**During COVID, the U.S.
Economy's Center of
Gravity Shifted South**

COVID Accelerated a Decade-long Trend of People Moving South; since 2010, 2/3 from the Northeast

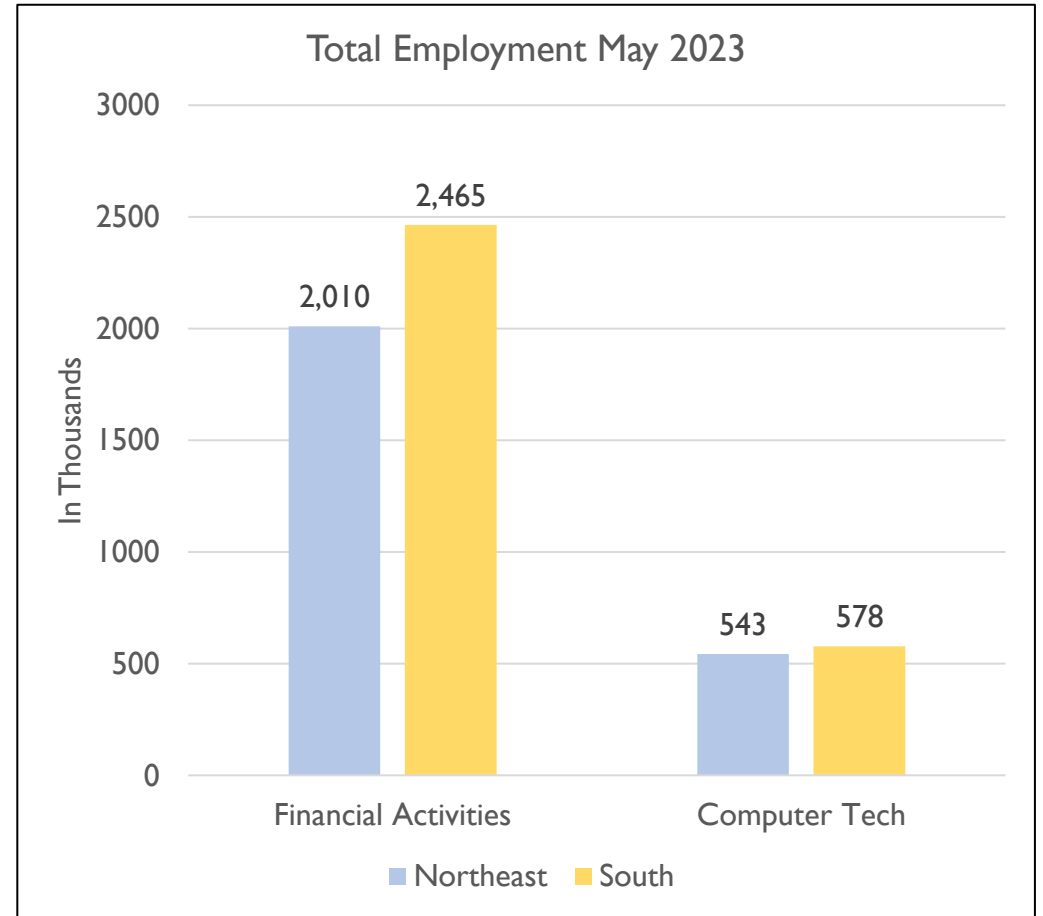
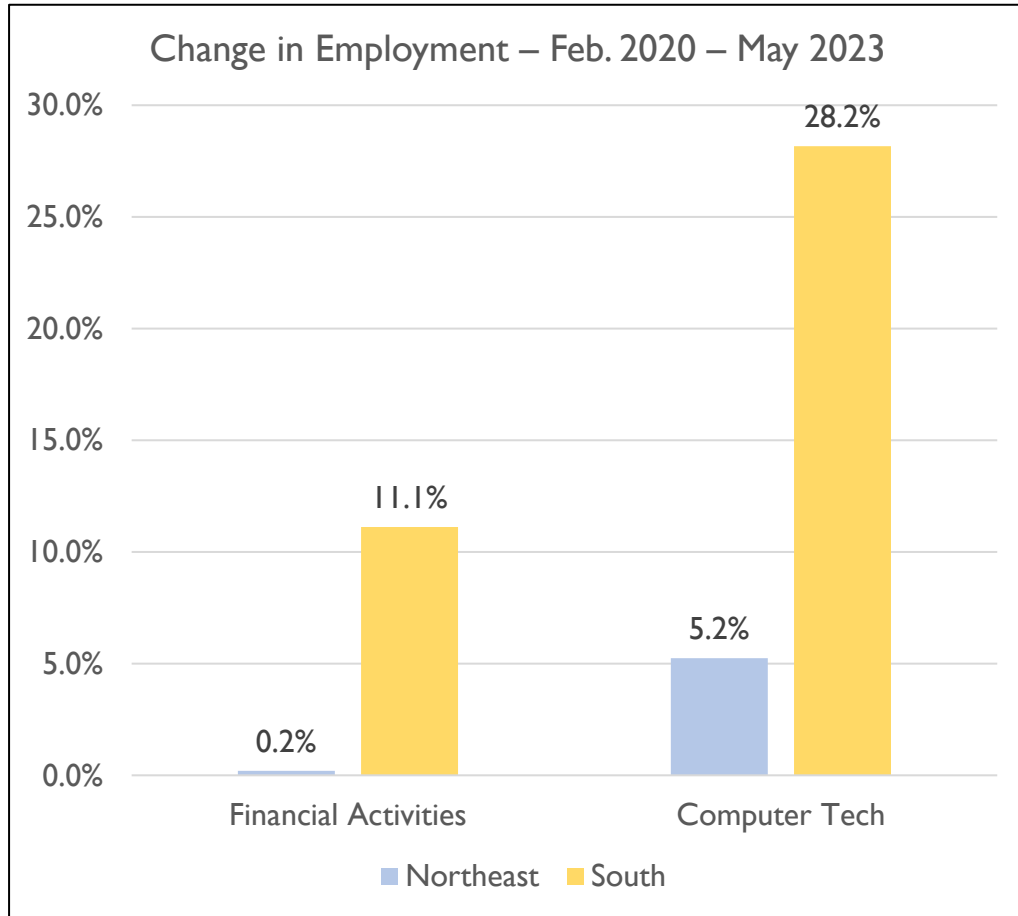


In April 2021, Six Southern States Surpassed the Northeast in Gross State Product



- Northeast: Connecticut, Massachusetts, Rhode Island, New Hampshire, Vermont, Maine, D.C., Maryland, Delaware, Pennsylvania, New Jersey and New York.
- South: Florida, Georgia, North Carolina, South Carolina, Tennessee, and Texas.

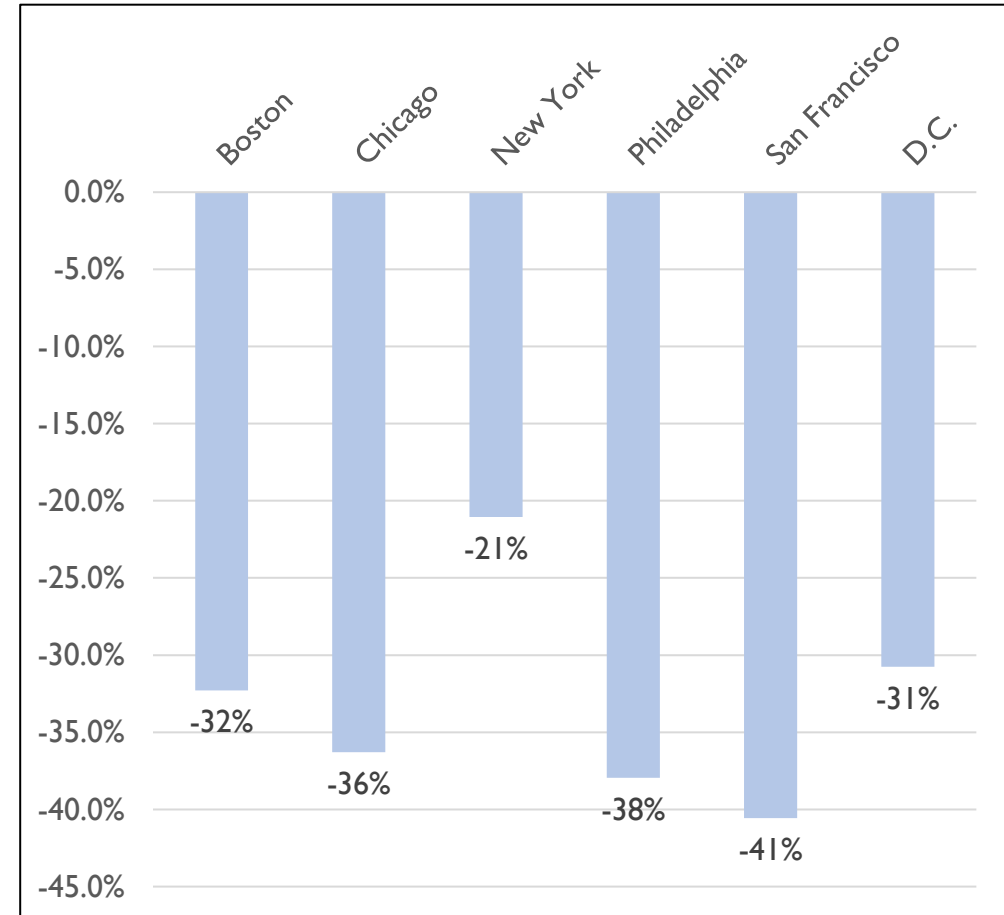
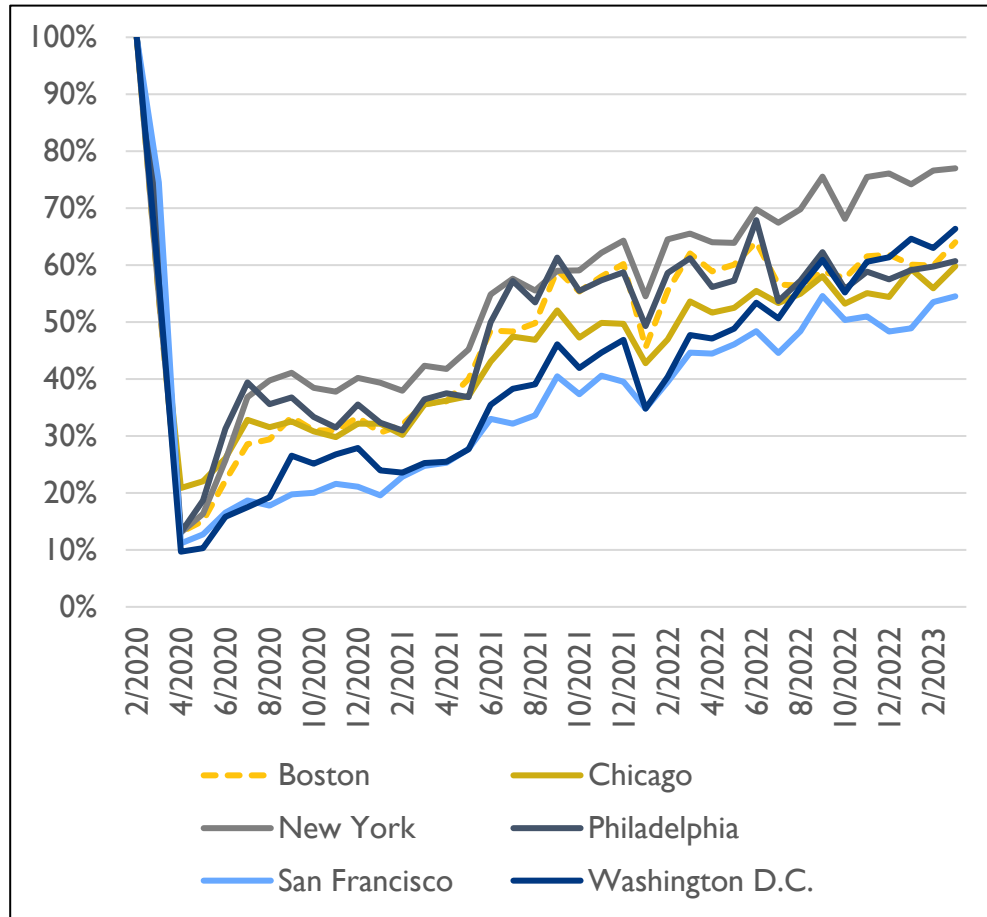
Growth Rates and Total Computer Tech And Finance Jobs In These 6 States Outpace the Northeast



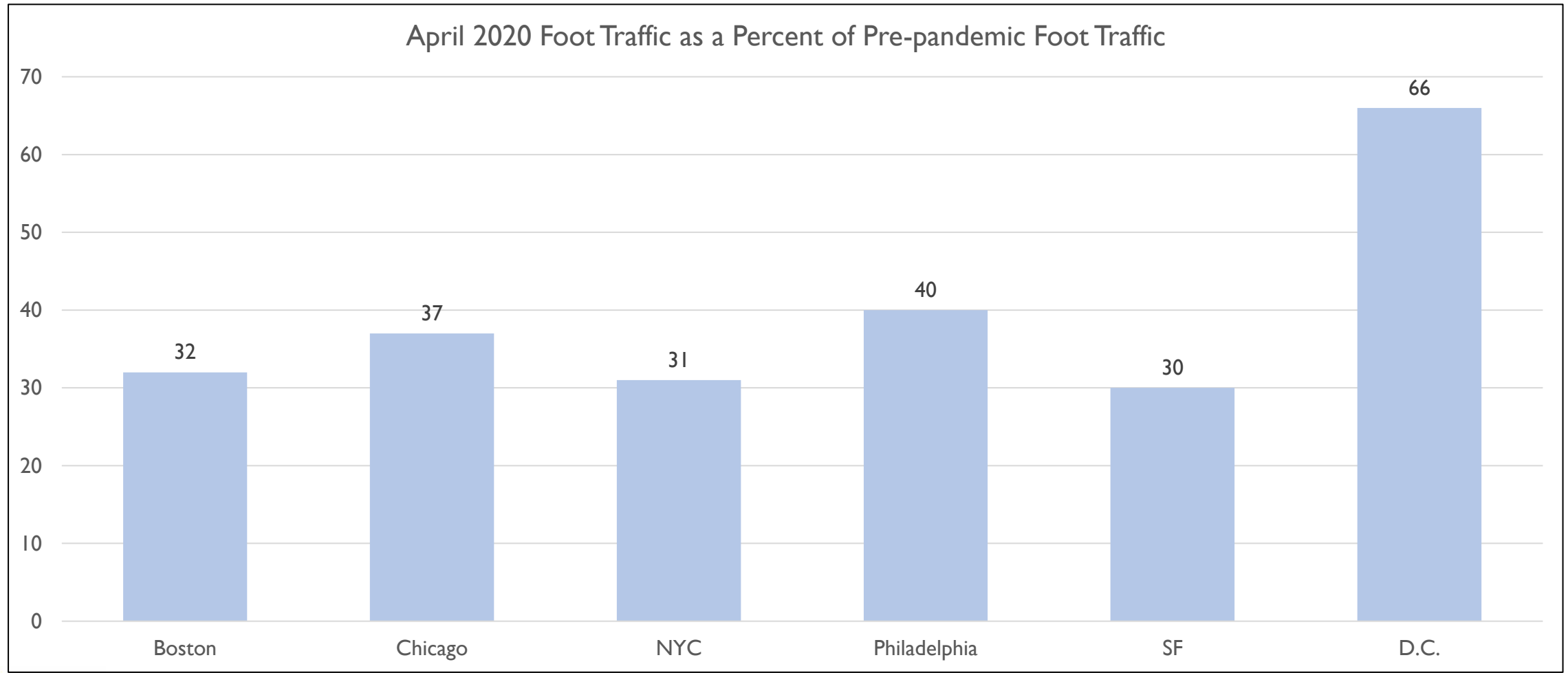
A nighttime photograph of a city skyline, likely Boston, viewed from across a body of water. The buildings are illuminated with warm yellow and orange lights, and their reflections are visible on the water's surface. A bridge is visible on the left side of the frame. A dark blue rectangular box is overlaid on the bottom half of the image, containing the text "COVID: What Else Happened" in a bold, yellow, sans-serif font.

COVID: What Else Happened

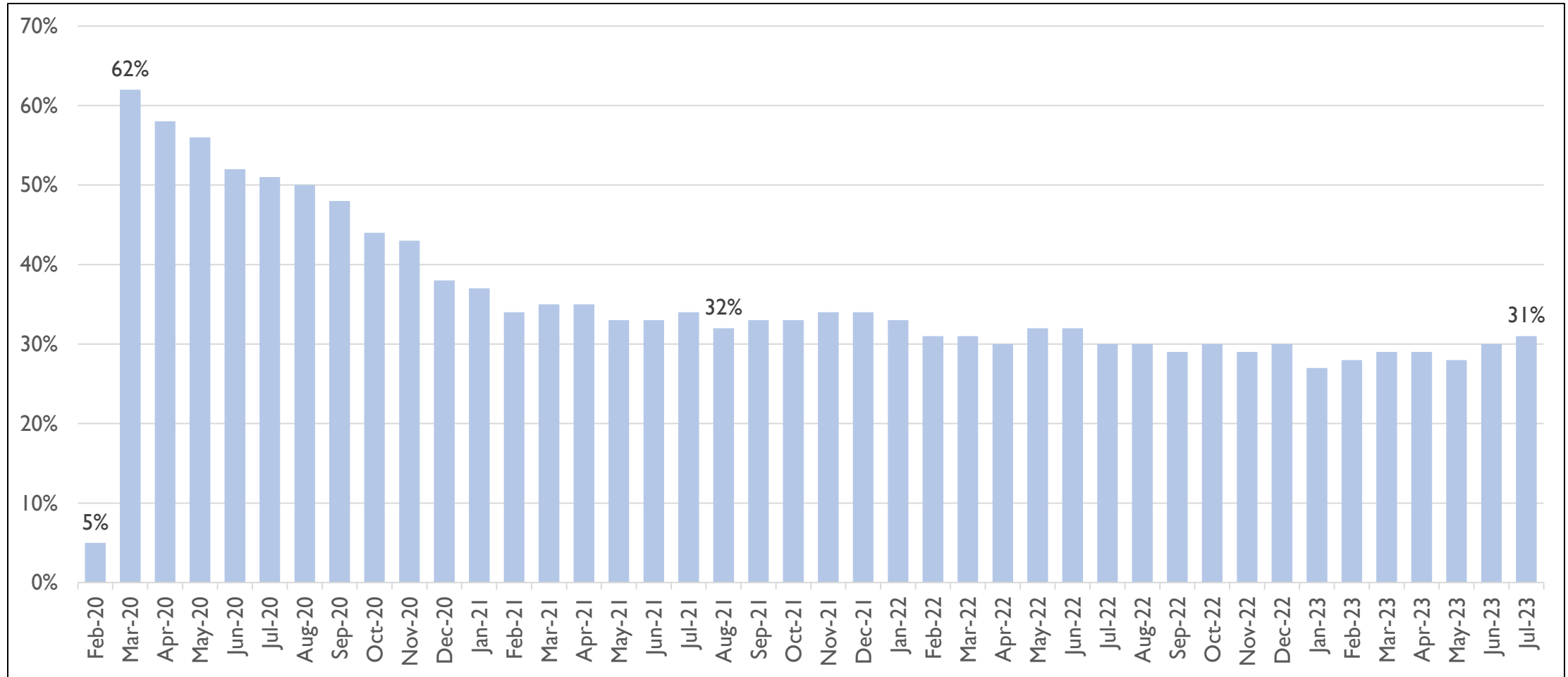
Transit Ridership Cratered, Remains 20-40% Lower Through May 2023



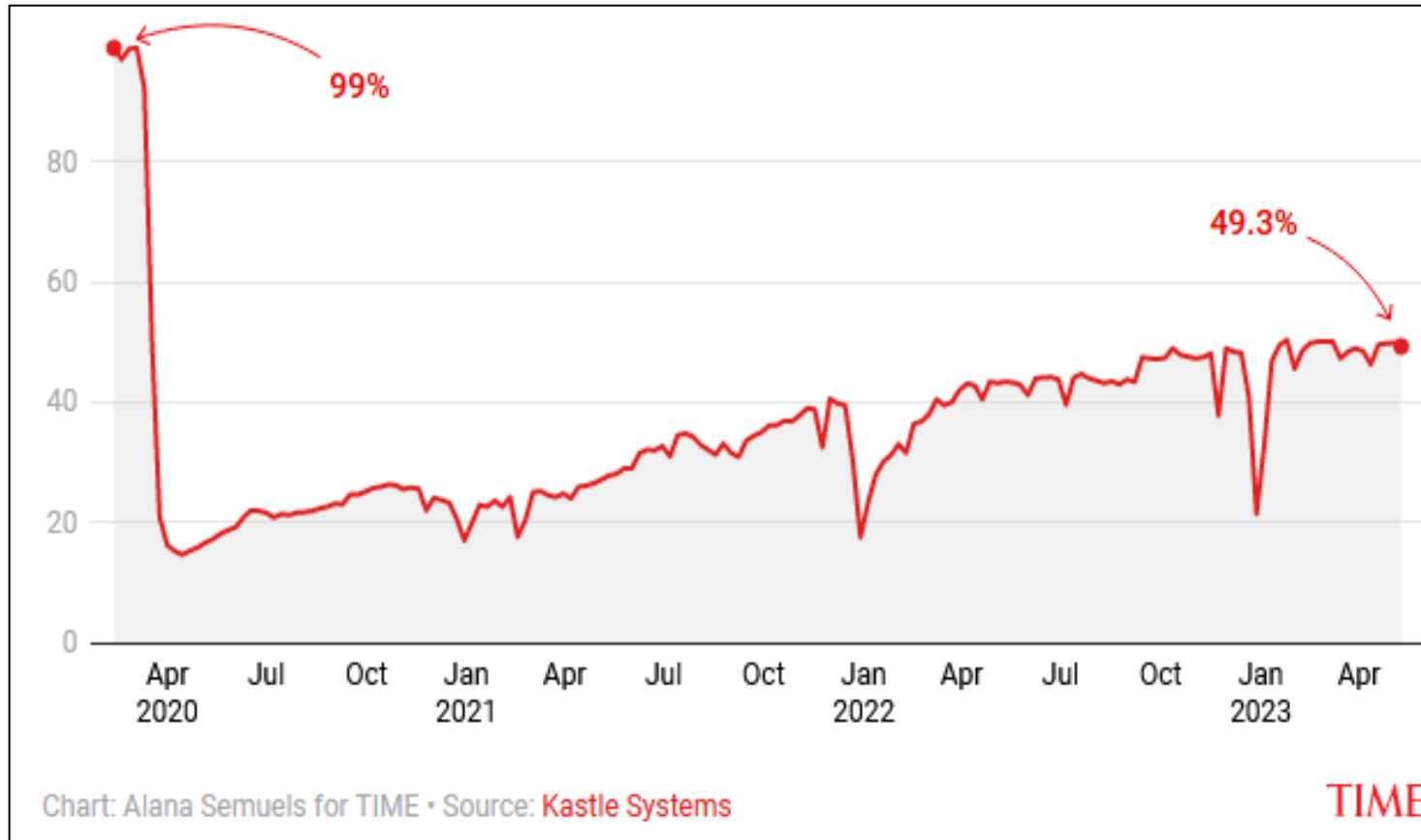
Foot Traffic Collapsed



National Work From Home (WFH) Quickly Spiked from Just 5% to 60% in 2020, Settling ~ 30% in 2023



3+ Years After the Start of COVID, Offices in 10 Large Cities Remain 50% Unoccupied



Pre-COVID, Kastle's occupancy rate was 99% for 10 large cities.

Although not included in Kastle's office occupancy reports, Boston officials estimated downtown occupancy at 30-35% in October 2022.

(See slides 21 & 24 [here](#))

Source: [Return-to-Office Full Time Is Losing. Hybrid Work Is On the Rise](#),
Time Magazine, May 19, 2023

A photograph of a city skyline at dusk, with buildings illuminated and their lights reflecting on the water. A semi-transparent blue rectangular box is overlaid on the center of the image, containing white text.

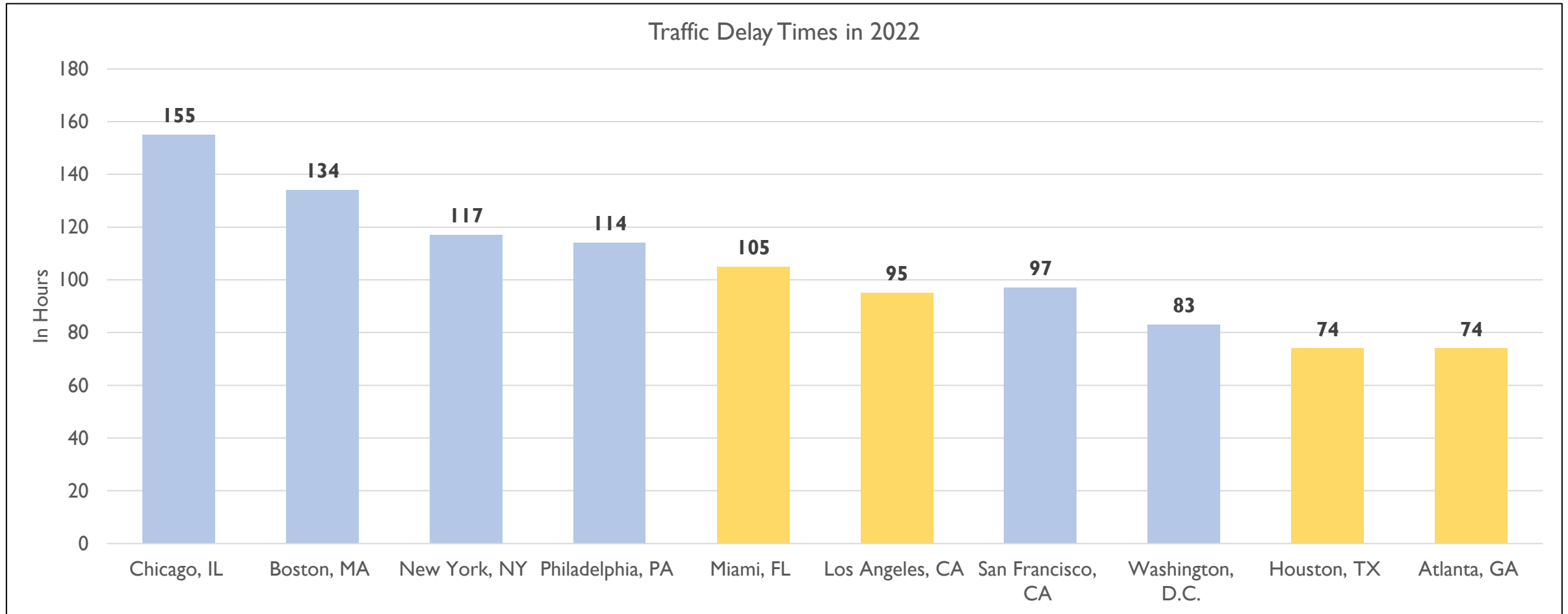
Despite Substantial Economic Growth, Underinvestment in Housing and Transportation Systems Stymies Recovery

Large Urban Hubs Have the Highest Housing Costs

Rank	City	Median Rent
1	<i>New York, NY</i>	<i>\$4,046</i>
2	<i>Boston, MA</i>	<i>\$3,911</i>
3	<i>San Jose, CA</i>	<i>\$3,690</i>
4	<i>San Francisco, CA</i>	<i>\$3,659</i>
5	<i>Los Angeles, CA</i>	<i>\$3,544</i>
6	<i>San Diego, CA</i>	<i>\$3,443</i>
7	<i>Miami, FL</i>	<i>\$3,066</i>
8	<i>Seattle, WA</i>	<i>\$2,873</i>
9	<i>Riverside, CA</i>	<i>\$2,793</i>
10	<i>Denver, CO</i>	<i>\$2,724</i>
11	<i>Washington, D.C.</i>	<i>\$2,685</i>
12	<i>Sacramento, CA</i>	<i>\$2,636</i>
13	<i>Providence, RI</i>	<i>\$2,590</i>
14	<i>Portland, OR</i>	<i>\$2,511</i>
15	<i>Philadelphia, PA</i>	<i>\$2,347</i>
16	<i>Chicago, IL</i>	<i>\$2,337</i>

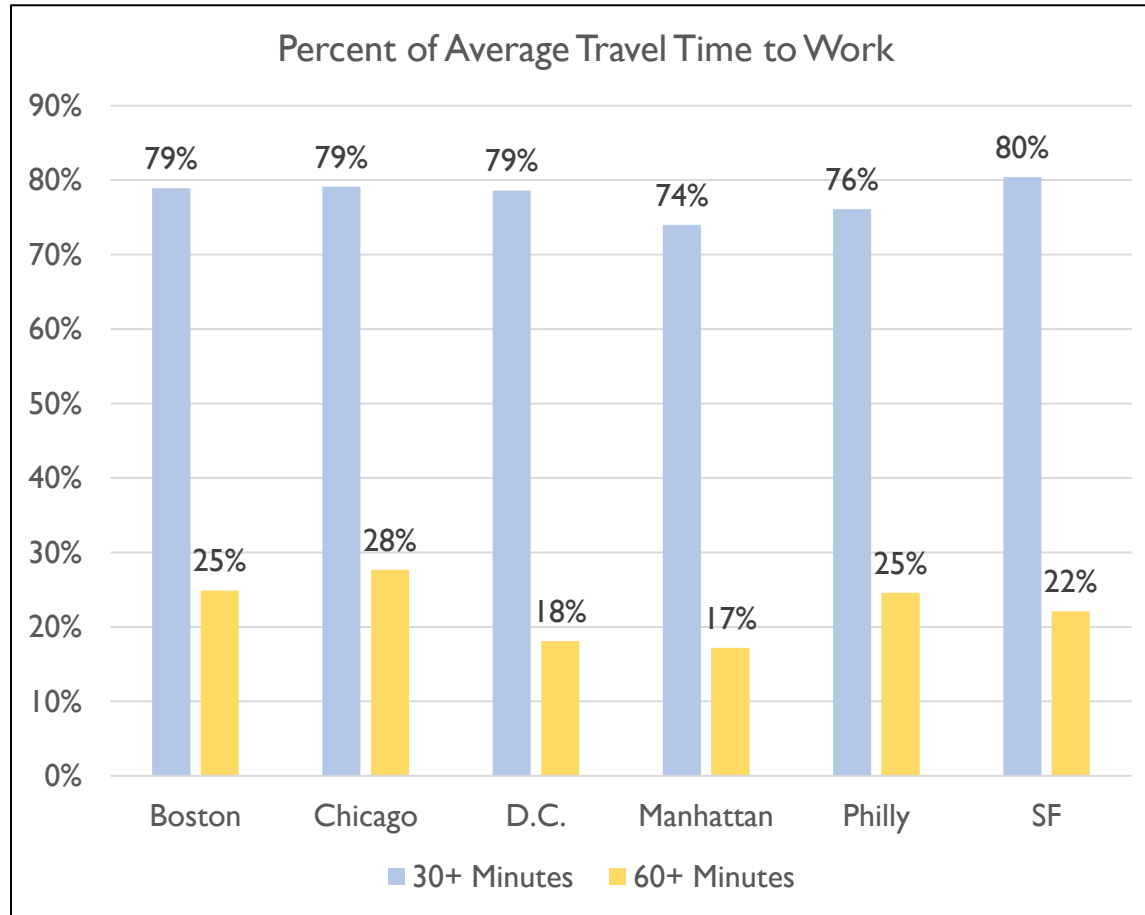
The inability to add to the housing stock in urban cores, combined with significant jumps in income and wealth (for some), continue to drive housing beyond the reach of many residents.

These Cities Also Have the Longest Traffic Congestion Times



Source: [INRIX 2022 Global Traffic Scorecard](#)

Longer Transit Commutes Further Deter RTO Policies



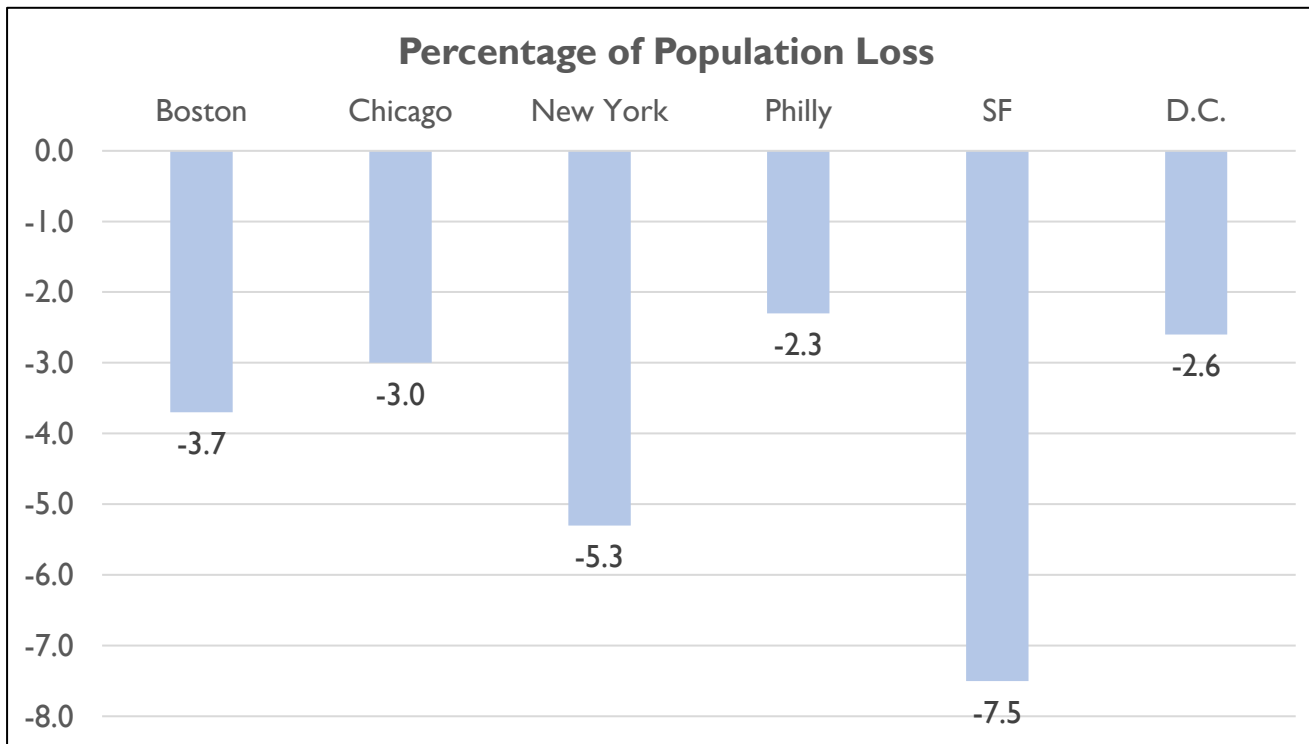
- The average travel time via public transit is longer than 30 minutes for nearly 80% of commuters in all six cities.
- Roughly 1 in 5 people (1 in 4 in Boston) spend more than 2+ hours each day traveling to and from work on public transportation.

A photograph of a city skyline at dusk, with buildings illuminated and reflected in the water. A dark blue rectangular overlay is positioned in the lower half of the image, containing white text. The text reads: "Many Left the City: Relocate and/or Work Remotely".

**Many Left the City:
Relocate and/or Work
Remotely**

They Moved Out

Lower Housing Costs, Shorter Commutes, and Remote Work Led to Relocations.
(April 1, 2020 – June 30, 2022)

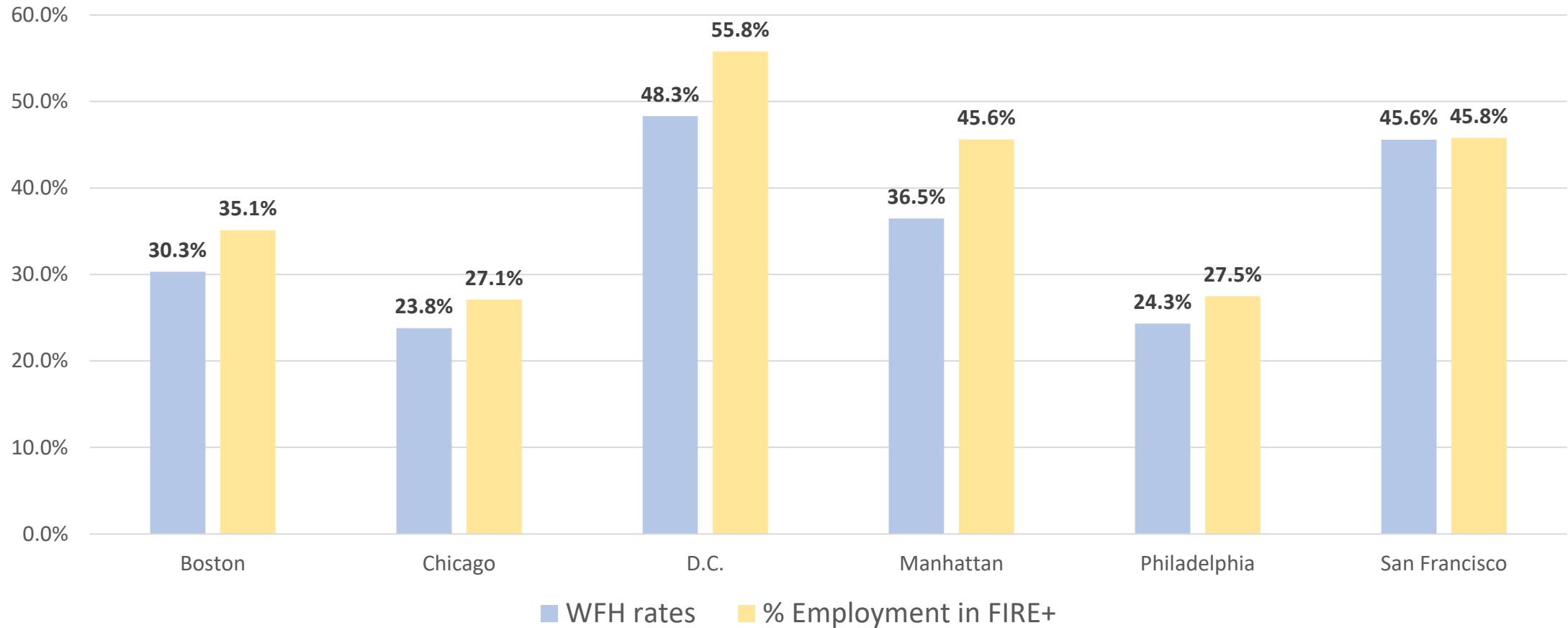


Cost of living matters

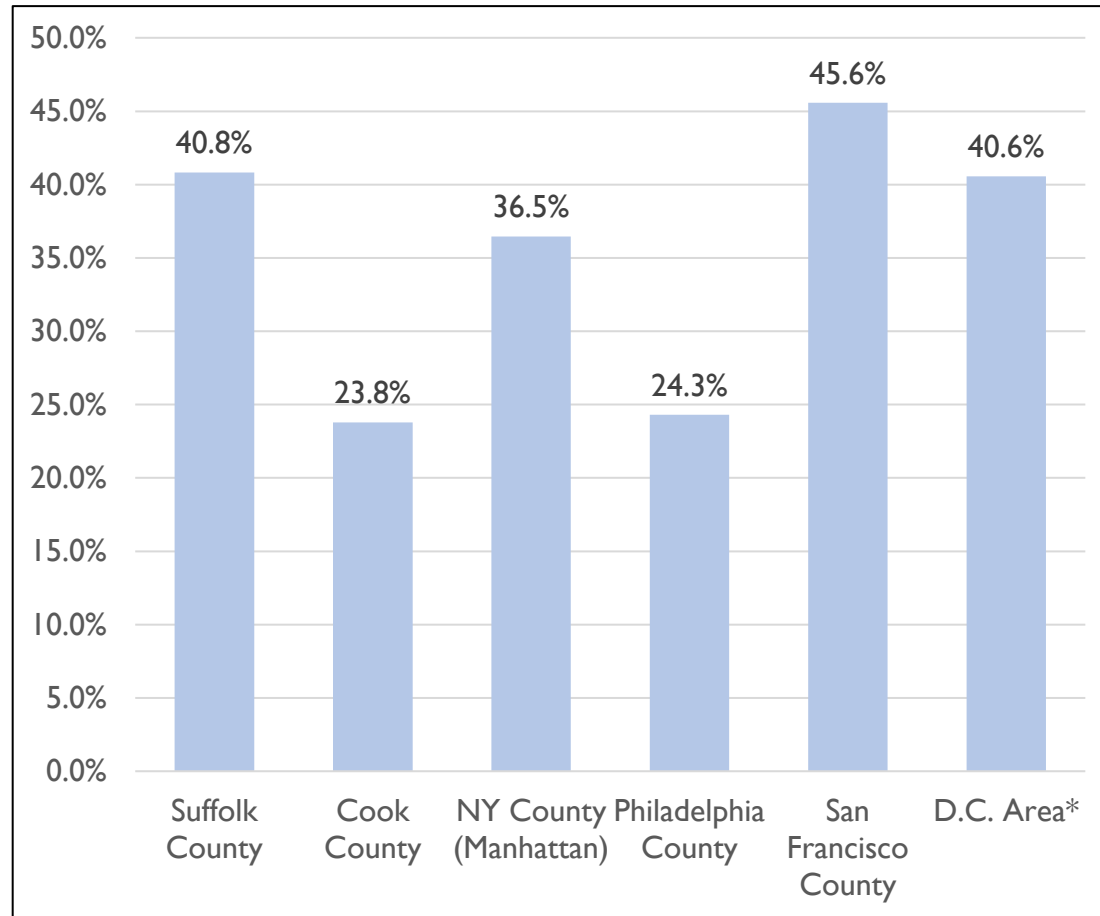
- All six cities saw a significant number of residents leave since the start of COVID led by three of the most expensive – San Francisco, New York, and Boston.

WFH Rates Correlate with WFH Friendly Industries

FIRE+ (Information, Finance, Insurance, Professional Services, and Public Administration)



Surrounding County Data Show Strength and Resilience of WFH in 2023



WFH rates in 2023 demonstrate the current playing field for employers in tight labor markets.

*D.C. Area includes D.C., Montgomery County, MD, and Fairfax and Arlington Counties, VA

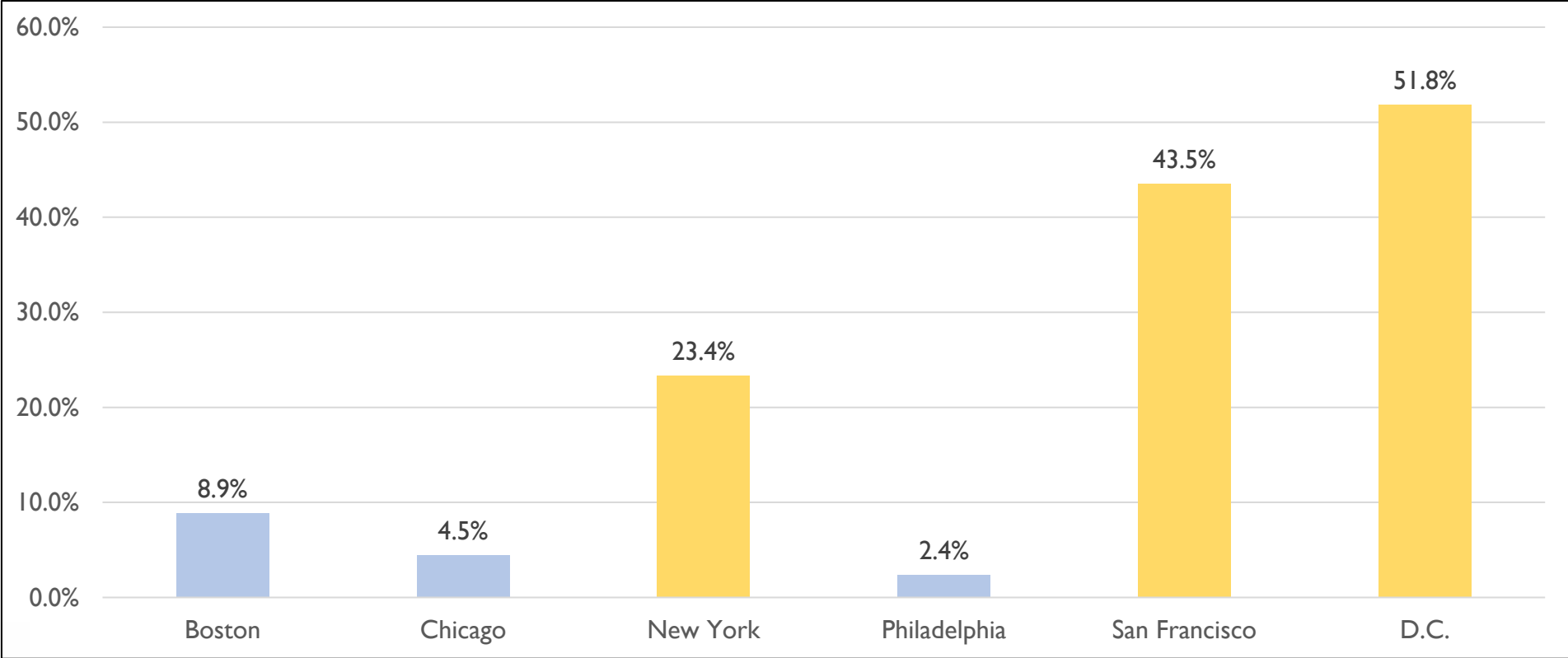
Source: U.S. Census, [Pandemic's Impact on Commuting and How It Changed U.S. Cities](#), July 5, 2023

A night view of a city skyline, likely Boston, with numerous illuminated skyscrapers and buildings. The scene is reflected in a body of water in the foreground. A dark blue rectangular box is overlaid on the lower half of the image, containing white text.

**Transit Ridership, Foot Traffic,
Ridesharing, and Hotel Stays All
Plunged, Disparate Recoveries**

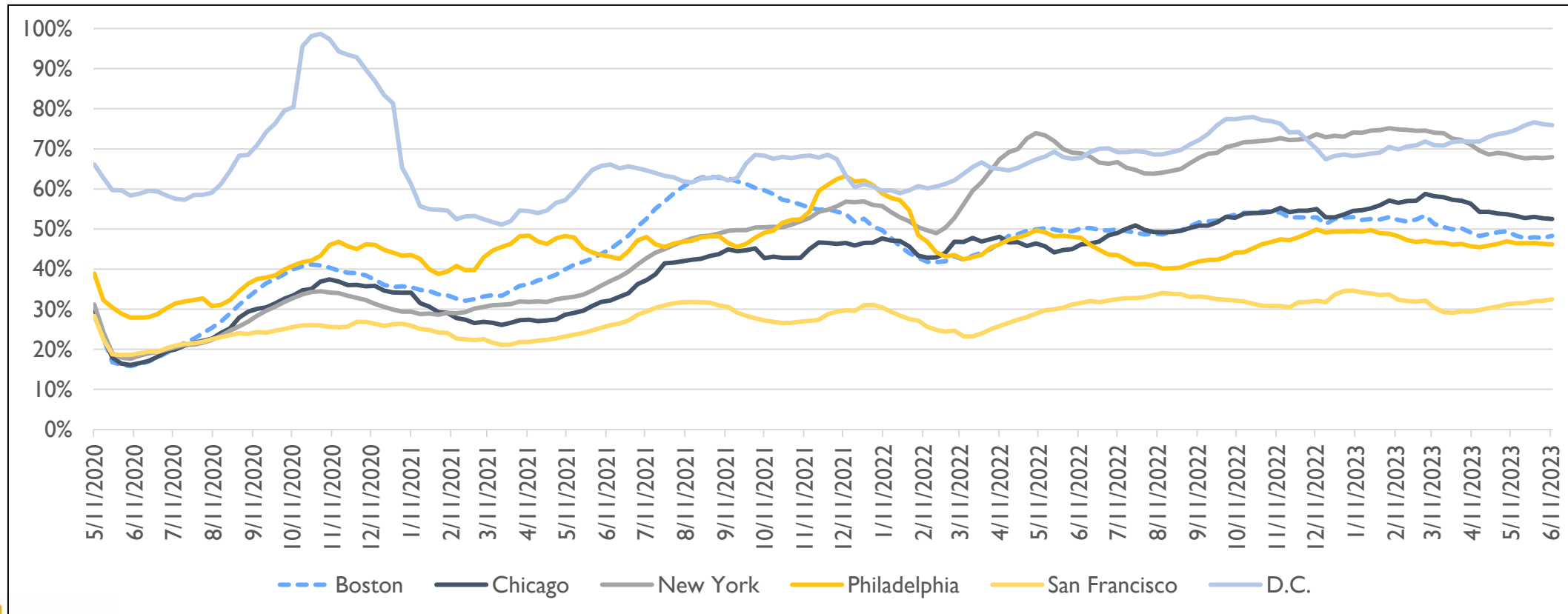
Transit Ridership Growth Through May 2023

Since Oct. 2021, Transit Ridership in New York, San Francisco, and D.C. Rebounded; Boston, Chicago, and Philadelphia Plateaued.



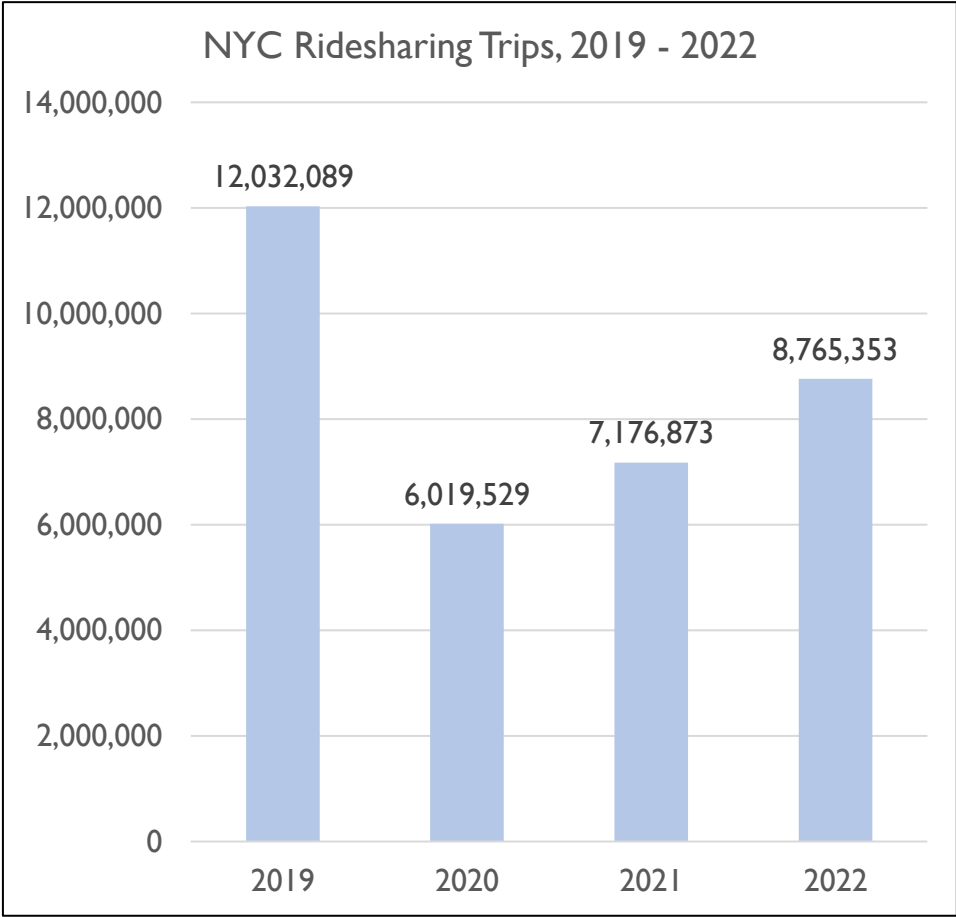
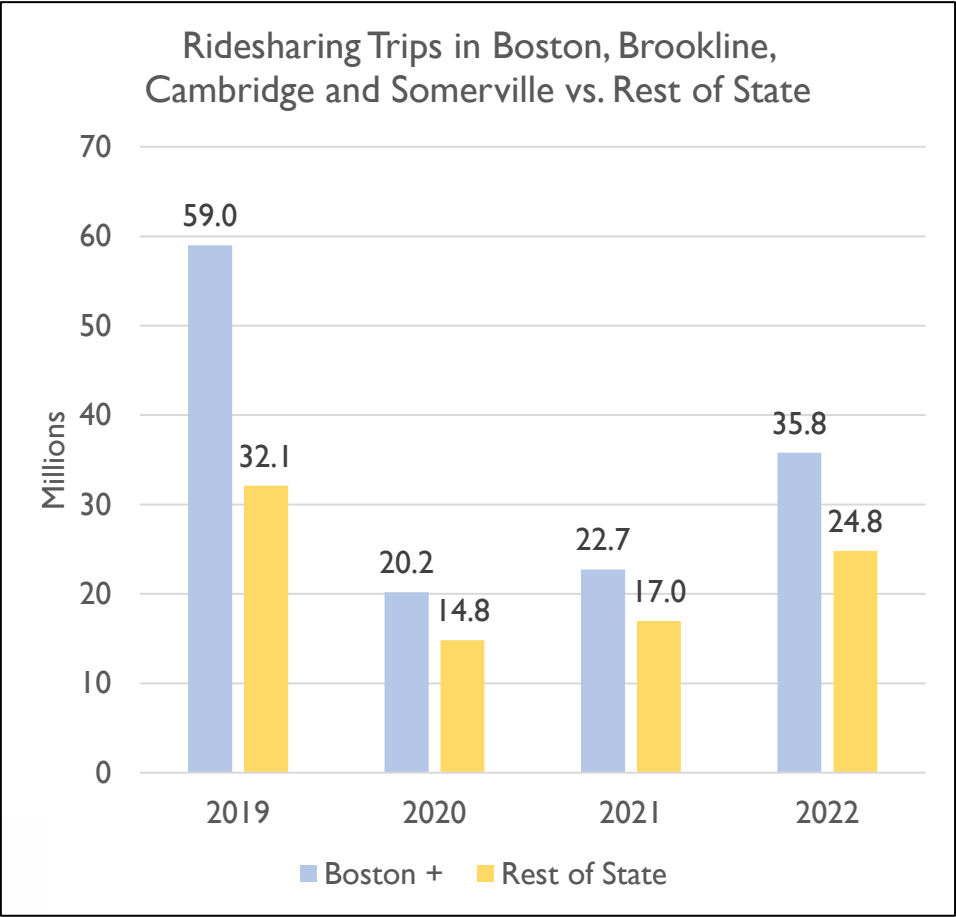
Foot Traffic

Since Fall 2021, Foot Traffic in New York and D.C. Recovered; Boston, Chicago, Philadelphia, and San Francisco Remain Flat at or Below 50%



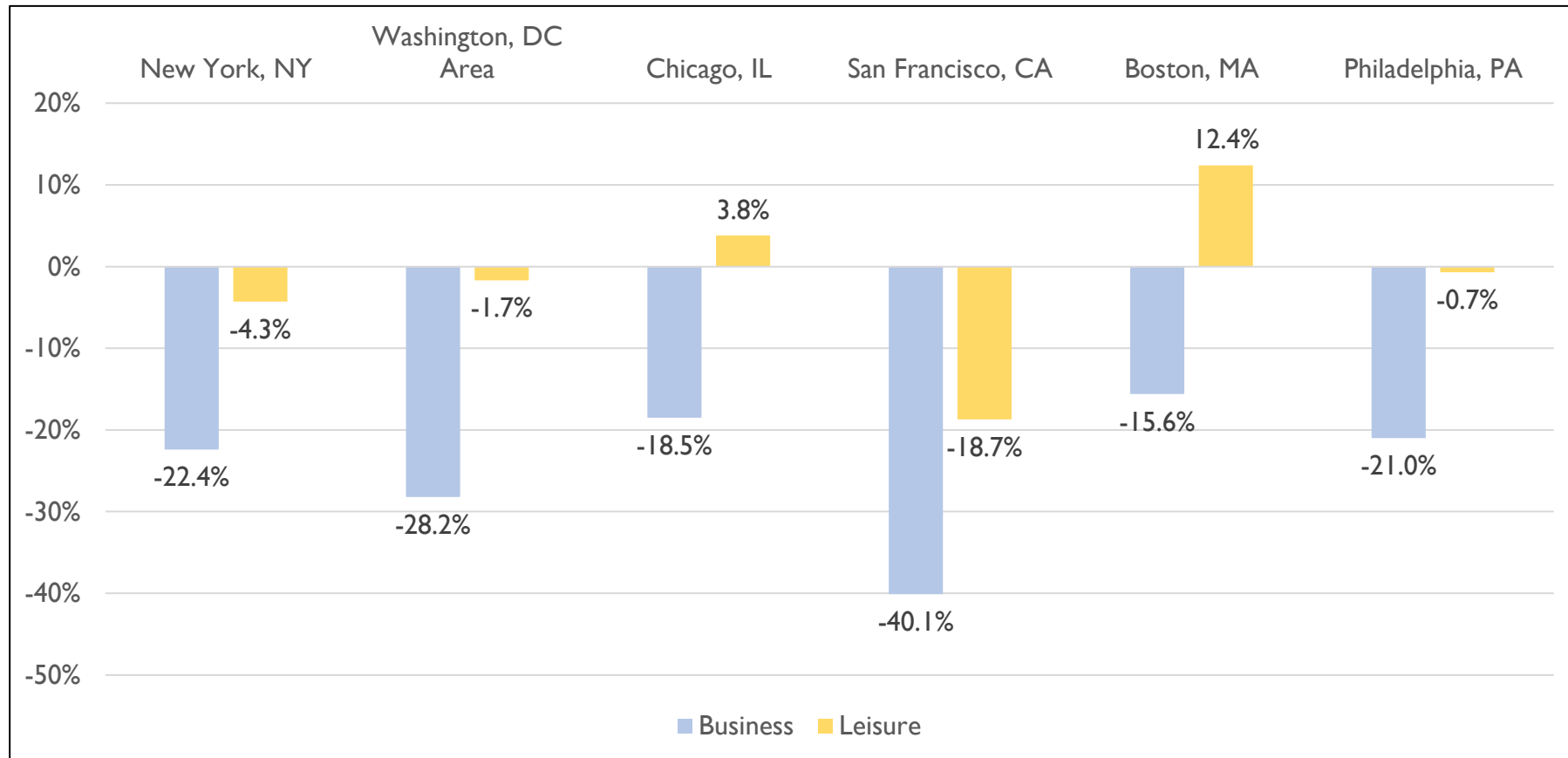
Ridesharing

Ridesharing Trips in Boston Down 39% from 2019, Rest of State Fell 23%; NYC Down 27%



Business and Leisure Hotel Stays

Change in Business & Leisure Hotel Revenue from 2019 to August 2022; Boston Shines



A photograph of a city skyline at dusk, with numerous skyscrapers and buildings illuminated by warm lights. The sky is a deep blue with some light clouds. In the foreground, there is a body of water reflecting the city lights. A dark blue rectangular overlay is positioned in the lower half of the image, containing the text "Commercial Office Space Risks Rise" in a bold, yellow, sans-serif font.

Commercial Office Space Risks Rise

Effect of Remote Work

“...remote work led to large drops in lease revenues, occupancy, lease renewal rates, and market rents in the commercial office sector.

We find that firms that allow their employees to work more days from home reduce their office space demand by more over the past three years. The same is true for firms with a larger share of remote job postings.

We also find that industries and cities with more WFH exposure see larger declines in office demand.” (Work From Home and the Office Real Estate Apocalypse May 15, 2023)

- Even in cities with exceptionally high foot traffic such as Salt Lake City’s 139%, a record-high vacancy rate of 21.8% in Q1 2023 make it clear that “the widespread adoption of hybrid work has caused a structural shift in the office market, resulting in decreased demand and increased vacancy rates.” (Office market woes get worse – here’s the latest, Luke Garrott, Building Salt Lake, April 17, 2023)

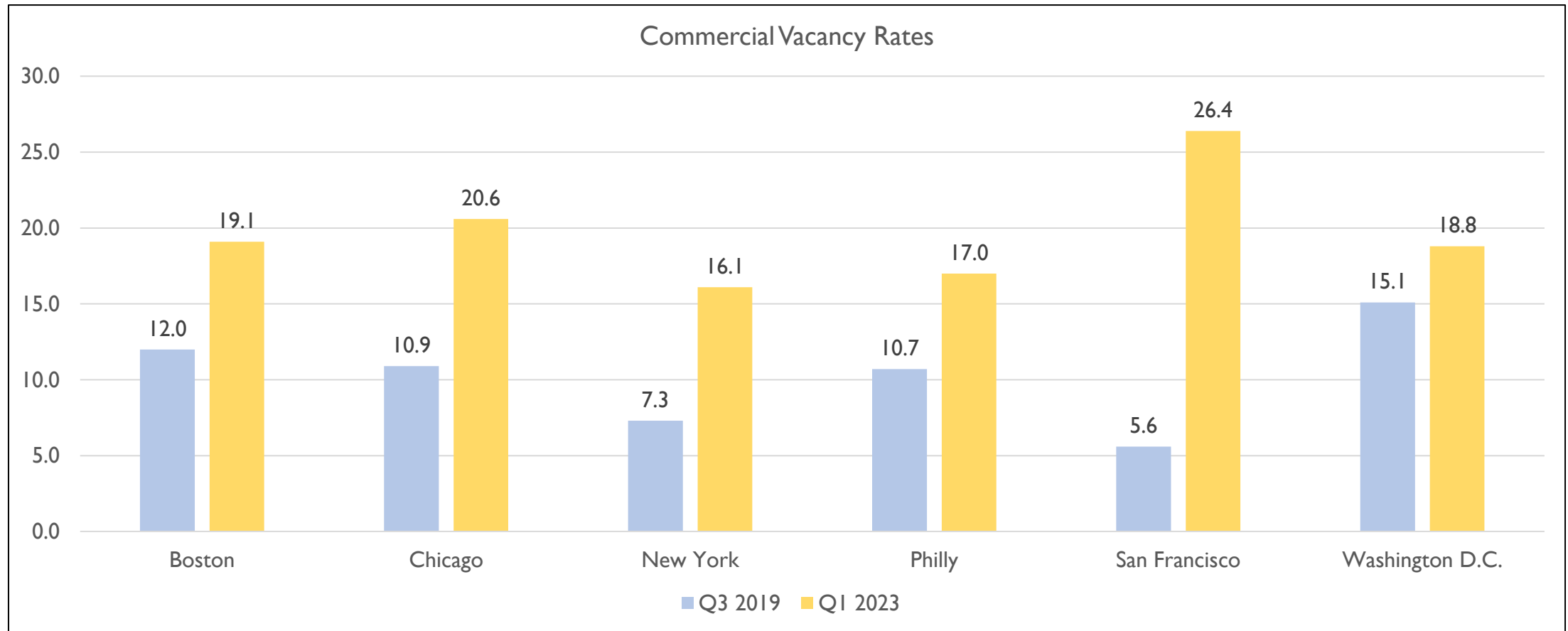
Lost Commercial Office Market Value

New York, SF, DC, Boston and Chicago Are 5 of the Top 7 in Lost Commercial Office Space Value, Portending Financial Risks to Banks and Cities

Rank	Market	Active SF (mi)	Lease Rev Chg	New SF Chg	NER Chg	Value Chg	Coverage (%)	Value Chg Scaled
1	New York	290.2	-15.54	-43.15	-8.41	-51.2	73.58	-69.58
2	San Francisco	61.52	-18.55	-62.78	-31.99	-20.35	62.14	-32.75
3	Charlotte	23.67	-1.33	-88.44	-8.06	-2.43	47.54	-5.11
4	Washington DC	88.72	-27.09	-78.31	-16.11	-14.19	98.81	-14.36
5	Los Angeles	72.33	-26.36	-93.25	-43.79	-10.64	42.83	-24.84
6	Boston	57.42	-12.03	-34.65	9.75	-7.85	35.33	-22.22
7	Chicago	90.29	-21.66	-91.22	-13.54	-6.25	43.25	-14.45
8	Seattle	41.14	-18.35	-81.5	-21.34	-4.15	36.1	-11.5
9	Atlanta	41.97	-15.45	-85.26	-23.08	-3.23	31.33	-10.31
10	Dallas	46.34	-25.64	-73.18	-4.35	-3.92	26.6	-14.74
19	Philadelphia	26.45	-18.87	-75.06	-4.68	-1.97	23.24	-8.48

Source: [Work From Home and the Office Real Estate Apocalypse](#), p. 42, May 15, 2023

Commercial Vacancy Rates Soared, Leaving Millions of Square Feet of Empty Offices (Q3 2019 & Q1 2023)



Source: JLL Office Insight, see for example [Boston](#)

A photograph of a city skyline at dusk, with numerous skyscrapers and buildings illuminated by warm lights. The sky is a deep blue with some light clouds. In the foreground, there is a body of water reflecting the city lights. A dark blue rectangular overlay is positioned in the lower half of the image, containing the text "What's Ahead Could Be Worse Disruption for All" in a bold, yellow, sans-serif font.

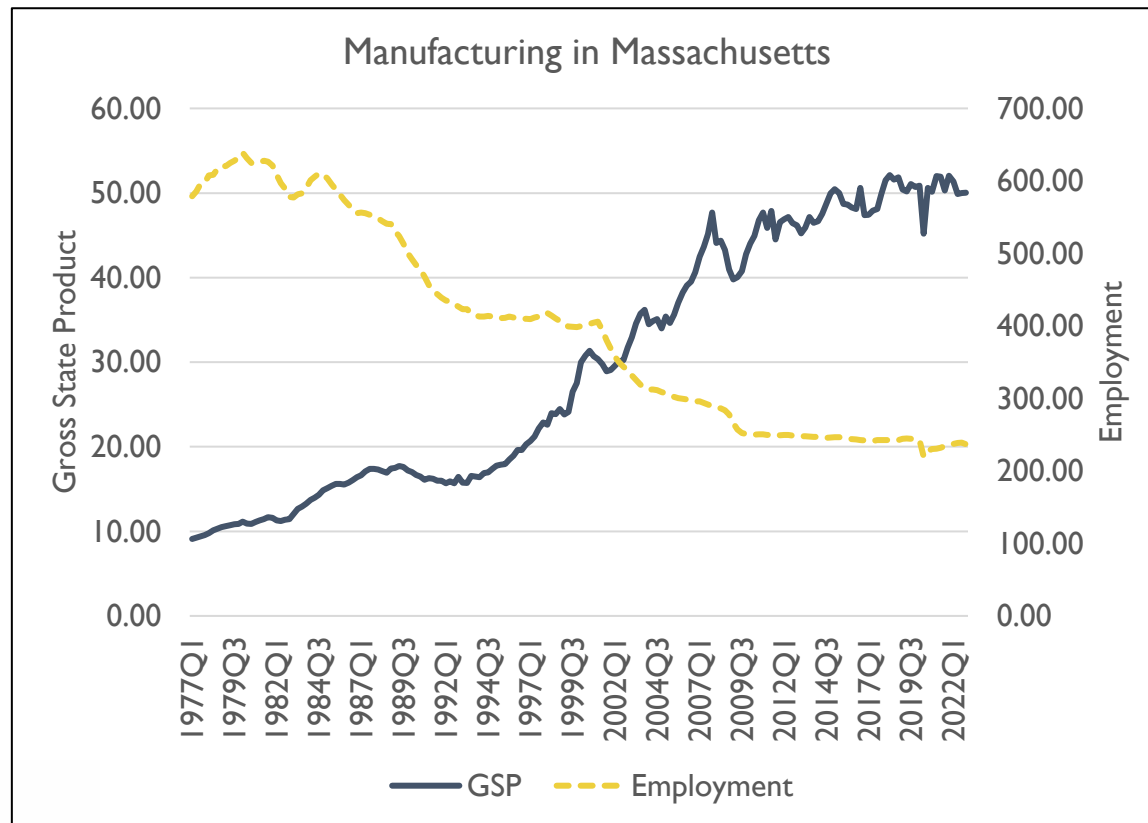
**What's Ahead Could Be
Worse Disruption for All**

Prepare for the Next Disruptive Waves

- COVID was just the first wave, and the global impacts, while light years beyond anything imagined, are still unfolding.
- Generative AI arrived with ChatGPT and is poised to disrupt work and the workforce. It could replace ~25% or more of U.S. jobs, reducing the need for commercial office space in urban centers.
- Heat domes, droughts, wildfires, air quality alerts, tornadoes, extreme precipitation events, floods, sea level rise, storm surge, with hurricane season about to start – climate change is here, and the impacts are accelerating.

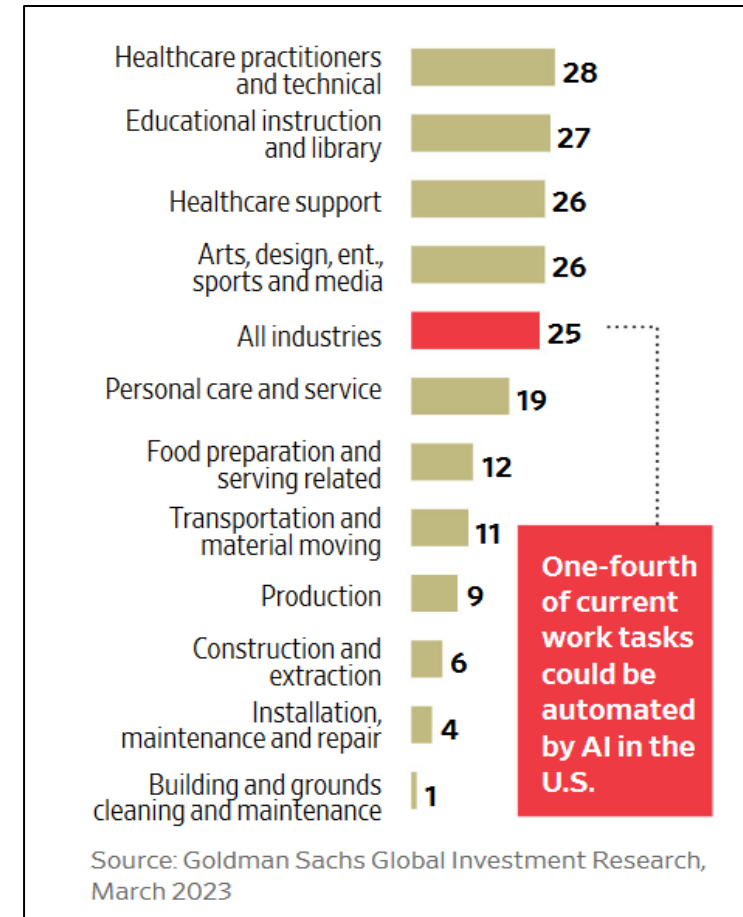
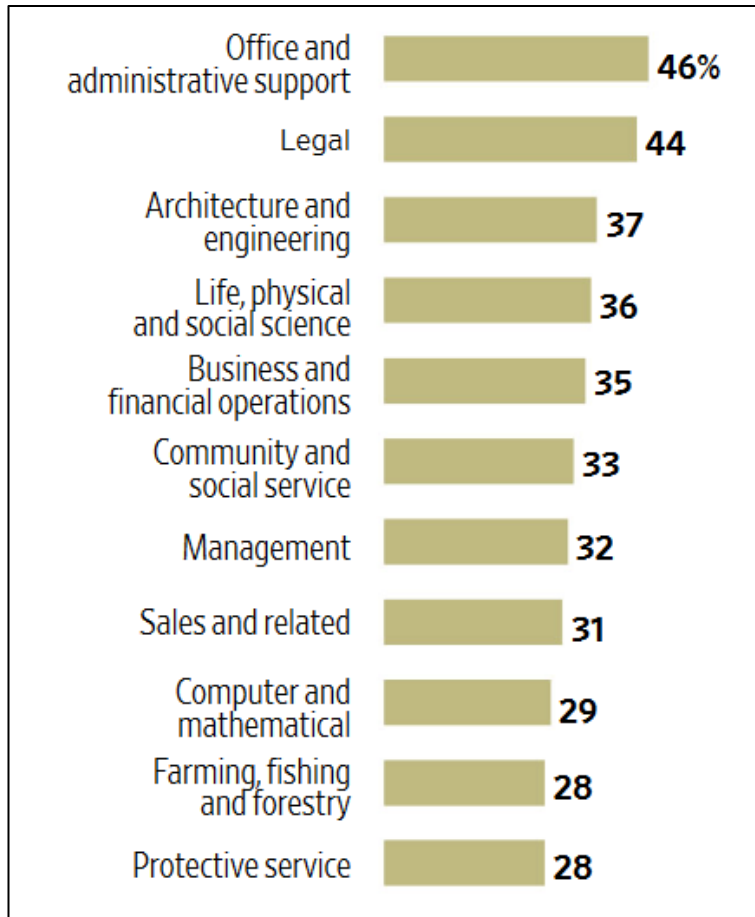
Effects of Technological Advances

Technological Advances Reduced Manufacturing Jobs by 60% While Driving GSP Up by 500% in the Past 20 Years.



- Advanced manufacturing employs information, automation, computation, software, sensing, and networking that has dramatically reduced the need for workers.
- Generative AI will exert similar downward pressure on service jobs and demand for office space.

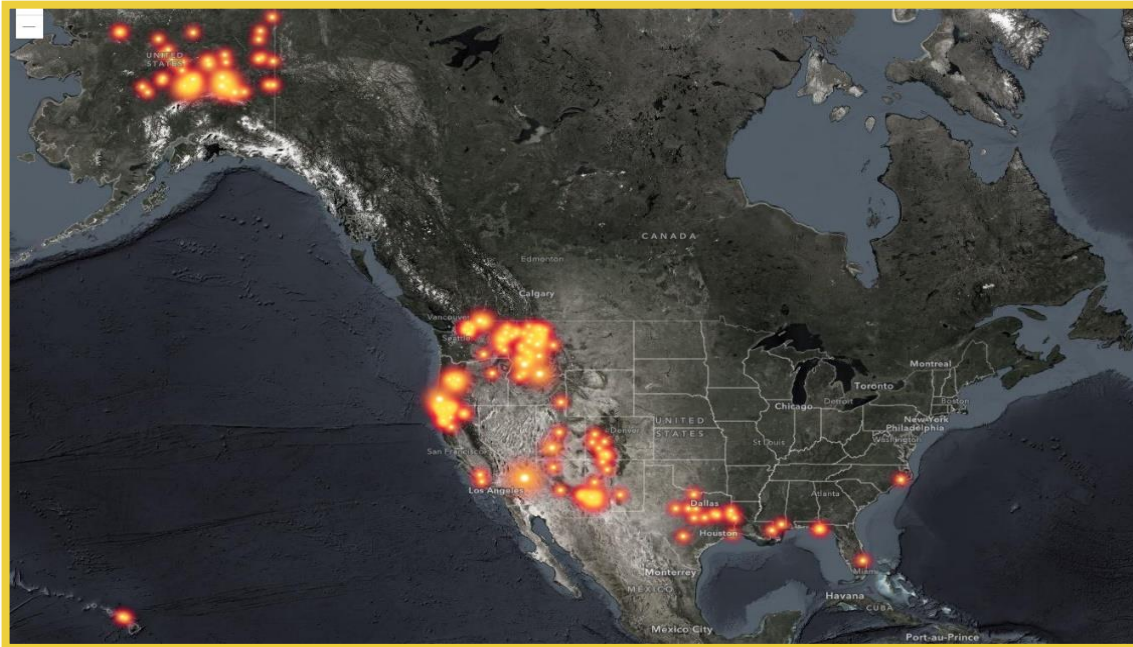
Generative AI Could Reduce U.S. Service Jobs, Further Weakening Office Space Demand




Source: [The Potentially Large Effects of Artificial Intelligence on Economic Growth](#), Goldman Sachs, 23 March, 2023

Effects of Climate Change

Wildfires, Smoke, Floods Dominate this Summer's Weather



“Droughts and floods will become more frequent and severe as our planet warms and climate changes.” [NASA](#), March 13, 2023

A nighttime photograph of a city skyline, likely Boston, with numerous skyscrapers illuminated against a dark blue sky. The buildings are reflected in the water in the foreground. A dark blue rectangular box is overlaid on the lower half of the image, containing white text.

**If You Build It, They Will Come:
Expanding Massachusetts Status
as a Hub of Innovation**

Coordinate, Cooperate, & Promote: Expanding Innovation in the Bay State

- Massachusetts has all the requisites: higher ed and research institutions, talent, ideas, resources, and a history of success.
- Our success has been driven by market factors, but it has also resulted in fragmentation and inefficiencies that impede growth.
- Regions are pushing to align their core assets and growth potential with industrial policies to make their location a leader in a particular technology.
- In the next competition, which has already begun, we need tools to coordinate, cooperate, and promote the Bay State as a center of gravity in innovation if we are to maintain our global position.

It Worked Before: Building a Global Center for Biotech and Life Sciences

- The state created the Massachusetts Life Sciences Initiative to attract global pharmaceutical companies and bio-manufacturing.

A Northeastern University [report](#) concluded “...the Life Sciences Initiative has made Massachusetts the global leader in the field, creating jobs across disciplines and education levels.”

- But the biotech sector is dependent on research institutions and lab space in proximity, unlike most other areas of emerging tech.
- And innovation centers have changed: “...new innovation ecosystems are emerging globally, beyond well-known hubs. While often smaller or more specialized than, say, Silicon Valley, these clusters of activity are expanding the regional opportunities for corporate engagement in new locations. Meanwhile, digital interactions enable wider participation across geographic boundaries.” ([MIT Sloan Management Review](#), July 20, 2022)




South by Southwest, a Holistic Approach: Selling Austin as a Place to Live, Work, and Invest

- South by Southwest (SXSW) celebrates the convergence of tech, film, music, education, and culture annually. It is considered one of the most important tech events on the global calendar.
- Started in 1987 with 700 attendees, SXSW topped 300,000 in 2023, 25% of whom were from outside the U.S.
- The 10-day conference and exhibition attracted tech companies such as the Latin X Innovation [Hub](#), The Alberta Scaleup and Growth Accelerator [Program](#), The Greek [Delegation](#), the U.K. [House@SXSW](#), Berlin [Takeover@SXSW](#), Brazil Creative Economy [Meetup](#), and 30 companies as part of I: Made in [Israel](#), among others.
- 2023 Tech Innovation Award Winners came from the U.K., Canada, Norway, Israel, Brazil, and across the U.S.

Think Big, Go Fast, or Get Left Behind: Promoting a Global Center of Talent, Innovation and Diversity

- Build a comprehensive and collaborative system that helps people find public and private resources to expand entrepreneurship
- Include elements of the Life Science Initiative, such as public matches of private investments, workforce training programs, and student participation
- Create Events: a regularly scheduled platform that brings people together to share ideas, experiences, opportunities, and connections
- Think big: scale to a state model that weaves food, music, art, and quality of life with innovation and entrepreneurship opportunities (see, for example, the SXSW 2024 Conference Schedule in Appendix A)
- Go fast: companies and people have options; Massachusetts must promote and market its credentials to remain a global leader in talent and innovation

A night view of a city skyline, likely Seattle, with illuminated buildings and a bridge over water. The sky is a deep blue with some light clouds. The buildings are lit up with warm yellow and orange lights, and their reflections are visible in the water. A bridge with a steel truss structure is visible in the foreground on the left. The text is overlaid on a dark blue rectangular background.

Appendix A

The SXSW 2024

Conference Schedule

It's Working for Others: SXSW – Selling Austin as a Place to Live and Work Since 1987

	Friday 3/8	Saturday 3/9	Sunday 3/10	Monday 3/11	Tuesday 3/12	Wednesday 3/13	Thursday 3/14	Friday 3/15	Saturday 3/16
CONFERENCE TRACKS	CULTURE								
	FASHION & BEAUTY								
	FOOD								
	GOVERNMENT & CIVIC ENGAGEMENT								
	PSYCHEDELICS								
	2050								
	ADVERTISING & BRAND EXPERIENCE								
	DESIGN								
	ENERGY								
	HEALTH & MEDTECH								
	STARTUPS								
	TECH INDUSTRY								
	WORKPLACE								
	CREATING FILM & TV								
	FILM & TV INDUSTRY								
	EXHIBITIONS			GAME INDUSTRY					
		XR							
				CREATOR ECONOMY					
				ARTIFICIAL INTELLIGENCE					
				MUSIC & TECH					
				MUSIC CAREERS					
				CLIMATE CHANGE					
				TRANSPORTATION					
			CREATIVE INDUSTRIES EXPO						
			XR EXPERIENCE						
FESTIVALS	COMEDY								
	FILM & TV*								
					MUSIC*				

Primary Access Key

SXSW 2024

- ALL SXSW BADGES
- PLATINUM & INTERACTIVE BADGES
- PLATINUM, FILM & TV & INTERACTIVE BADGES*
- PLATINUM, MUSIC & INTERACTIVE BADGES*

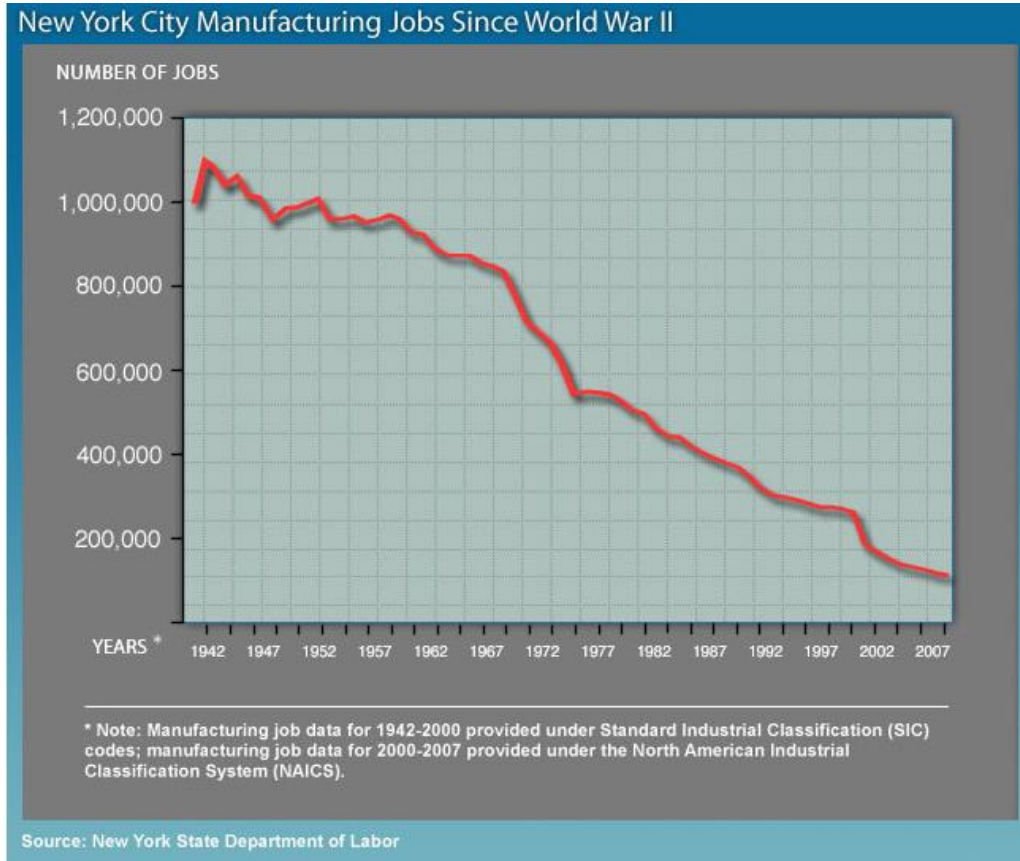
* Interactive Badges have Secondary Access to the Film & TV and Music Festivals



A photograph of a city skyline at dusk, with several tall buildings illuminated against a blue sky. The buildings are reflected in the water in the foreground. A dark blue rectangular overlay is positioned in the center of the image, containing white text.

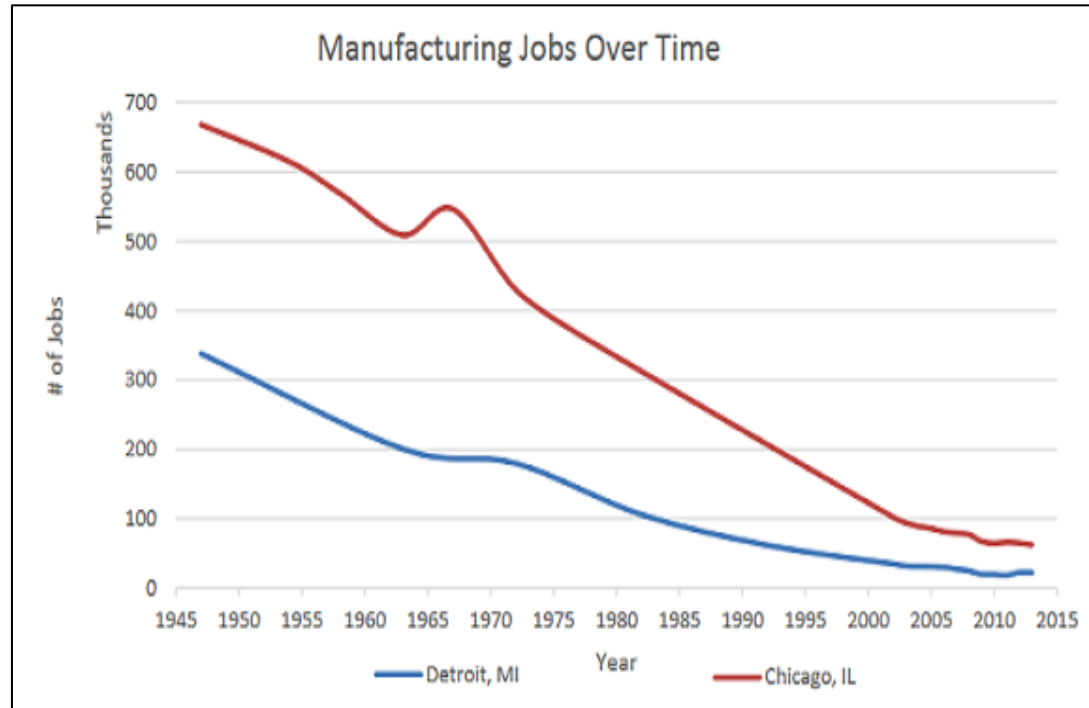
Appendix B
Cities Have Been Here Before
But the Transition to a
Service-based Based Economy
Took Years

Manufacturers Left Urban Centers



New York City lost 1 million manufacturing jobs from 1945 to 2007

Several Midwest Cities Lost ~ 90% of their Manufacturing Jobs



Chicago lost 600,000 between 1945 and 2015

Detroit lost auto manufacturing jobs; total manufacturing employment fell by over 300,000

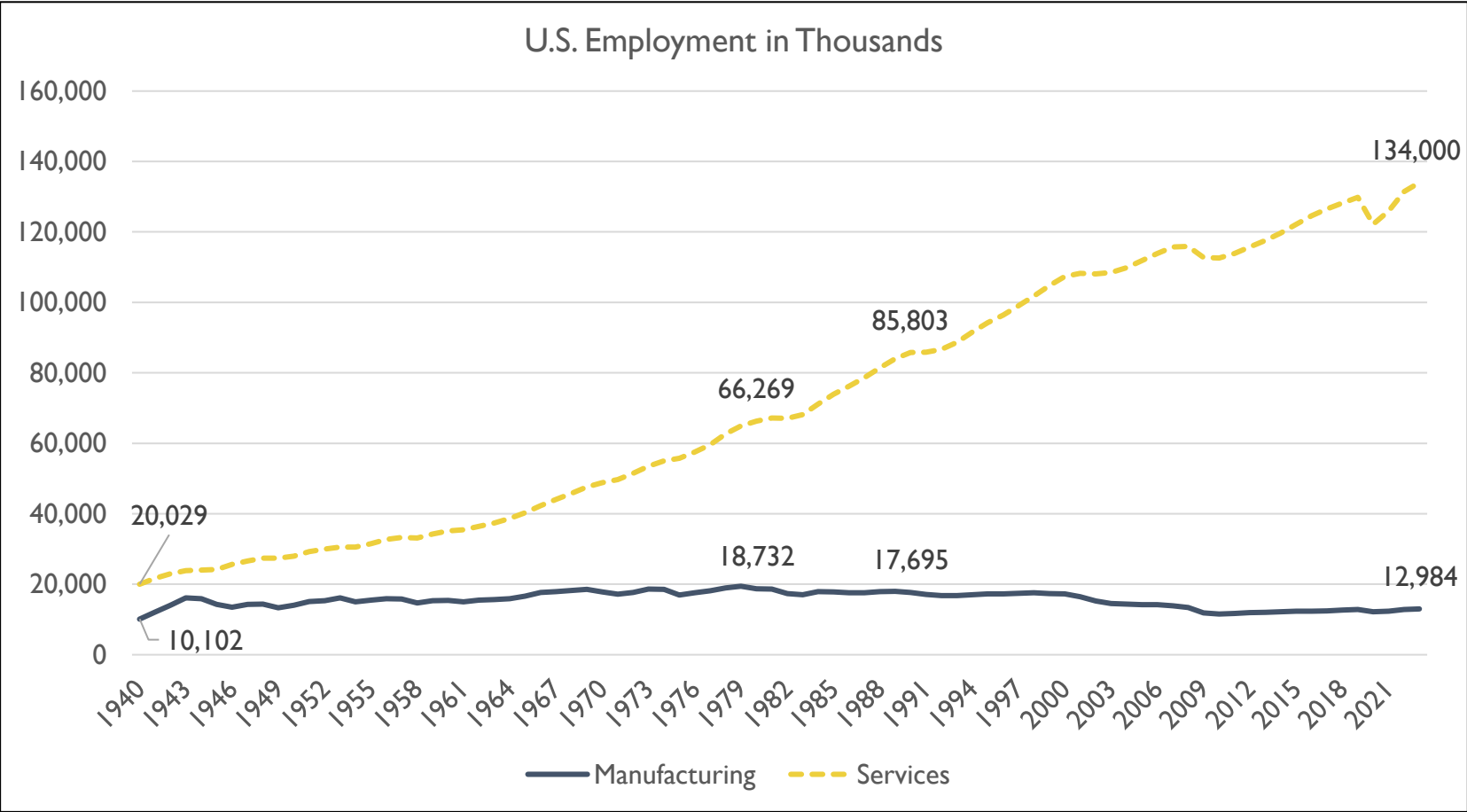
Manufacturing Perspectives

Bill Testa

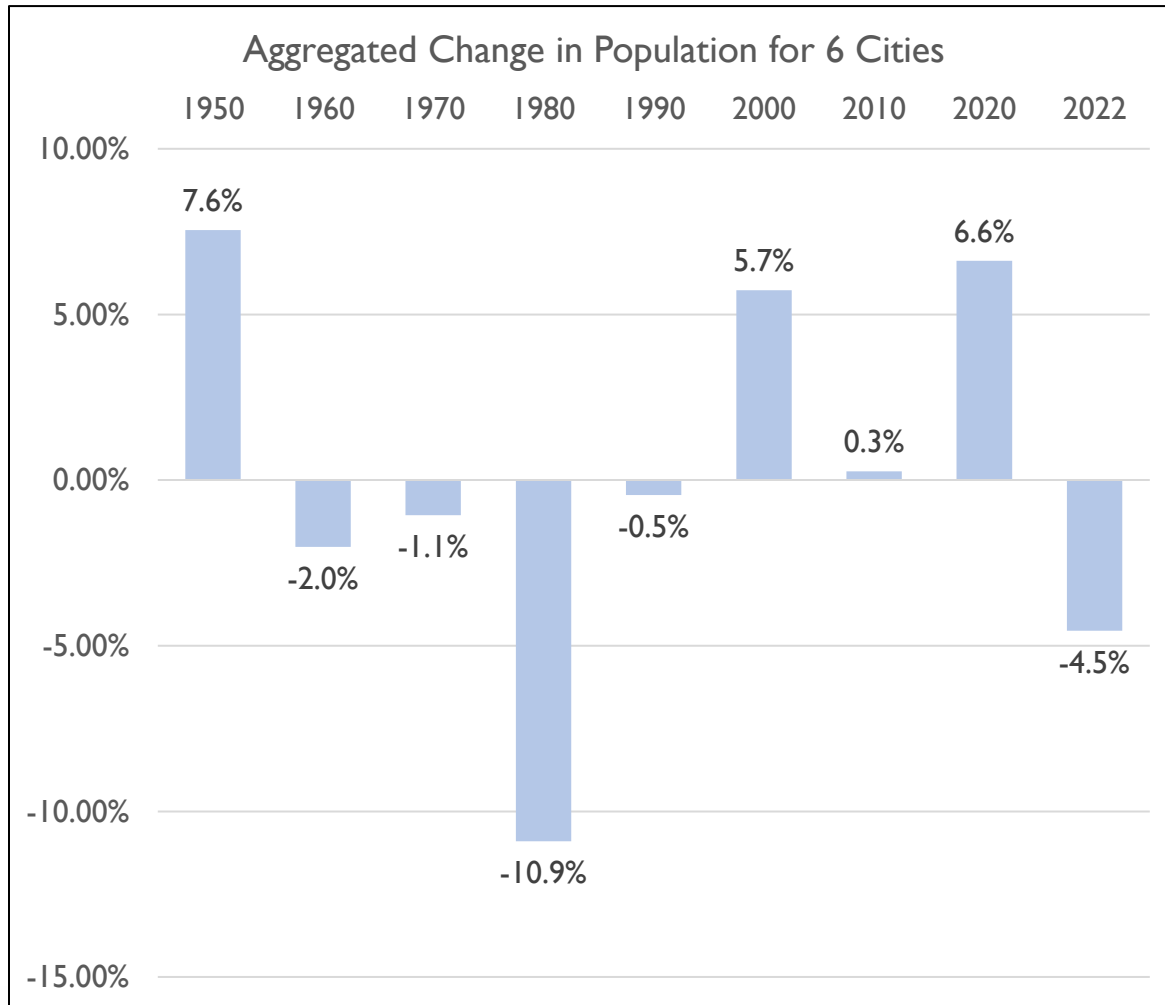
Federal Reserve Bank of Chicago

September 28, 2015

Service Jobs Replaced Manufacturing, Increased 6.8% Annually



After Leaving Cities (1950-1990), People Returned as the Service Economy Flourished

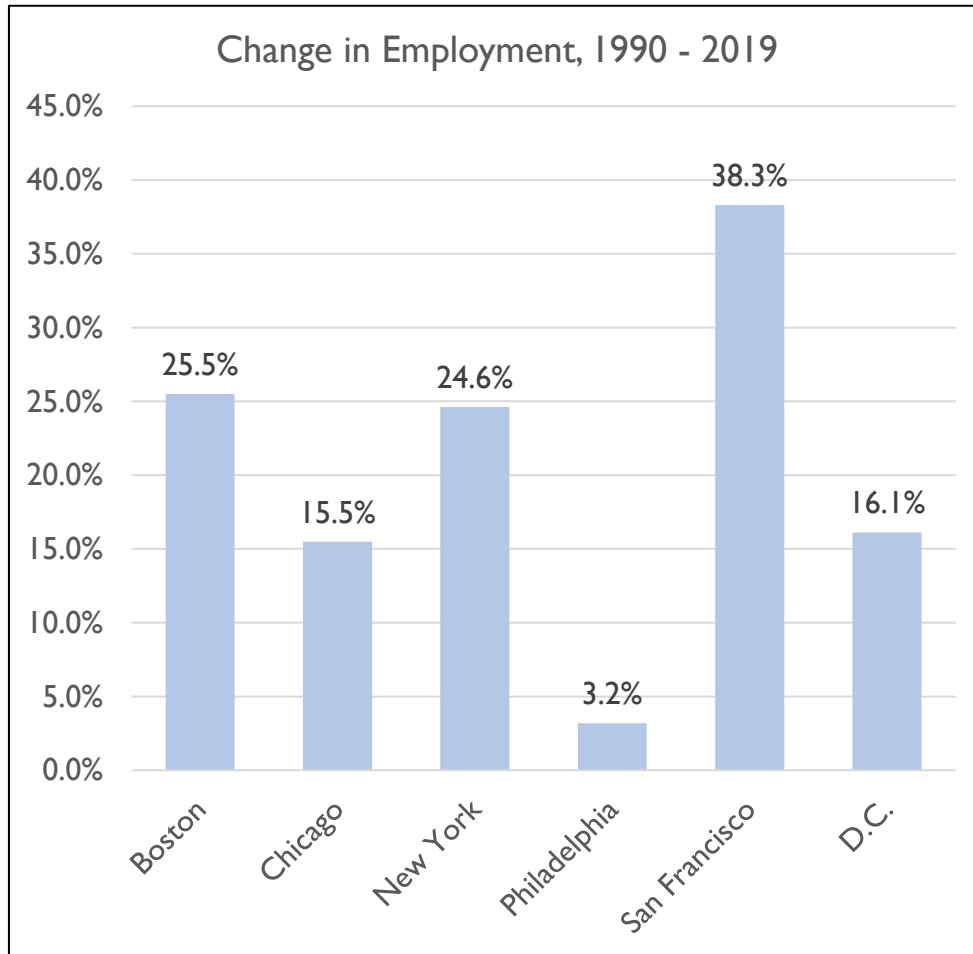


Beginning in the 50s and 60s, federal housing policies and a manufacturing exodus from cities triggered people to flee to the suburbs.

Four decades later, people began to return where economies flourished.

COVID happened and flight from high-cost cities was one of many important impacts.

Cities Recovered at Different Rates: Job Growth from 1990 - 2019



Differences among the six cities arise:

- From 1990 – 2019, San Francisco gained nearly 40% employment
- Boston and New York were nearly identical at 25%
- Chicago and D.C. saw job growth of roughly 16%,
- Philadelphia saw only marginal change at 3.2%

Success Comes at a Price – Areas with the Highest Levels of Venture Funding also Have the Highest Housing Costs

Metro Area	2010 - 2022 \$ Billions
San Francisco	425.3
New York	210.5
San Jose	160.8
Boston	156.0
Los Angeles	128.3
Seattle	41.6
Chicago	39.6
San Diego	38.6
D.C.	29.6
Austin	26.0
Miami	22.6
Philly	20.7
Atlanta	18.6
Denver	17.7
Dallas	17.4

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8	Seattle, WA	\$2,873
9	Riverside, CA	\$2,793
10	Denver, CO	\$2,724
11	Washington, D.C.	\$2,685
12	Sacramento, CA	\$2,636
13	Providence, RI	\$2,590
14	Portland, OR	\$2,511
15	Philadelphia, PA	\$2,347
16	Chicago, IL	\$2,337



Sources: [Pitchbook](https://pitchbook.com) and dealroom.co

Venture Capital Funding / NIH Grants Provide a Boost to Economic Activity and Job Creation

Metro Area	VC Funding 2010 - 2022
San Francisco	425.3
New York	210.5
San Jose	160.8
Boston	156.0
Los Angeles	128.3
Seattle	41.6
Chicago	39.6
San Diego	38.6
D.C.	29.6
Austin	26.0
Miami	22.6
Philly	20.7
Atlanta	18.6
Denver	17.7
Dallas	17.4

State	NIH Grants 2011 - 2023
California	51.9
Massachusetts	35.1
New York	32.4
Pennsylvania	21.7
Maryland	21.5
North Carolina	18.5
Texas	15.8
Washington	13.8
Illinois	11.3
Ohio	9.9
Michigan	9.2
Florida	7.8
Georgia	7.4
Missouri	7.3
Minnesota	7.2

Sources: [Pitchbook](#) and [dealroom.com](#)

(\$ Billions)

Source: [NIH Research Portfolio](#)

