




PHILADELPHIA *MOMENTUM*

**Leveraging College Graduate Retention for
Continued Growth in Greater Philadelphia**

Preface

Philadelphia continues to lead the way nationally in cultivating new, diverse, well-educated citizens to grow the region's civic life and economy. This report underscores the exceptional expansion of young, college-educated residents in Greater Philadelphia over the last two decades and how this growth is driving change in the regional economy. Despite the global challenges of the last few years, Philadelphia continues to gain momentum as a city and region that attracts and retains young talent. To retain this momentum, our region must:

- Prioritize college access and post-secondary opportunities for all current residents.
- Continue to retain a large share of Generation Z—those attending college now—despite being a smaller generation nationally.
- Collectively work to attract new residents to Greater Philadelphia who will add to the diversity and vibrancy of our region.



Philadelphia continues to gain momentum as a city and region that attracts and retains young talent.

Campus Philly recognizes
**The Chamber of Commerce
for Greater Philadelphia**
for their partnership
in producing this study.

Additional support provided by
Philadelphia Works and
the **City of Philadelphia
Commerce Department**.



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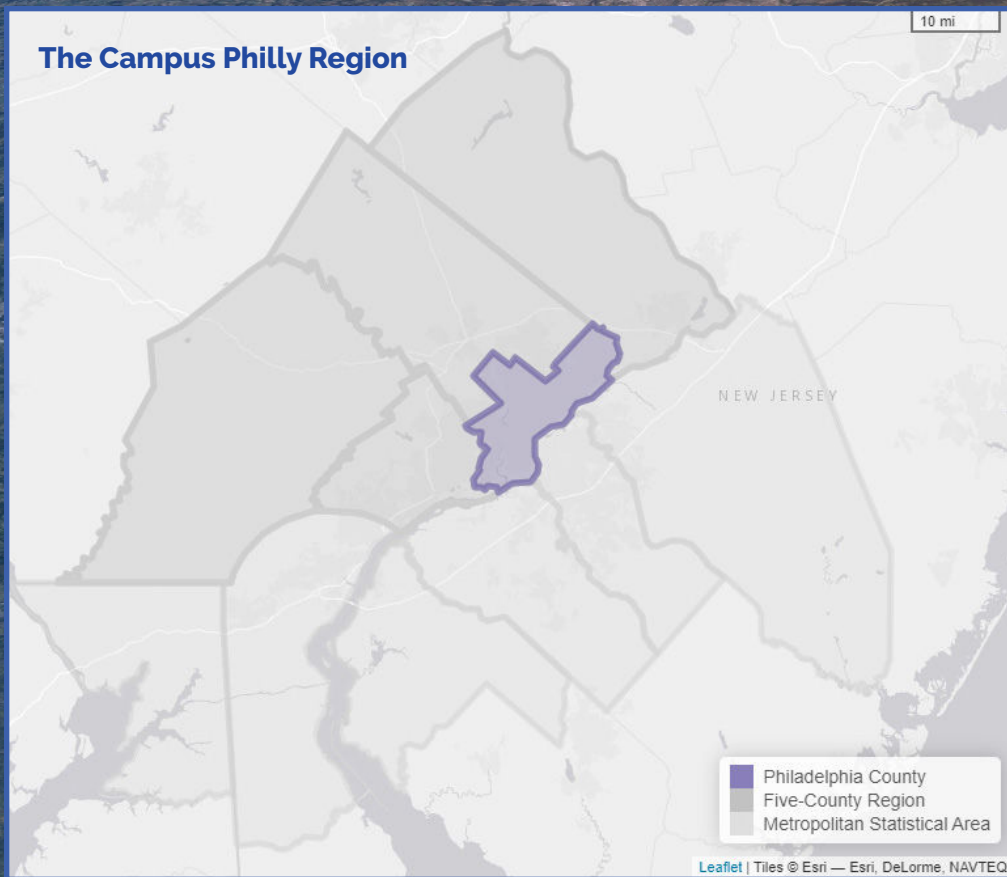
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Methodology

This analysis was produced with the assistance of Econsult Solutions, Inc. Information sources relied upon include the American Community and decennial Census from the U.S. Census Bureau, the Bureau of Labor Statistics, and Lightcast labor market data. Economic impact analysis is conducted using the industry-standard IMPLAN modeling framework.



Campus Philly serves Greater Philadelphia, a region that has leveraged its resources and resilience to ensure that recent college graduates choose to stay. New challenges are on the horizon, but Campus Philly is uniquely poised to support the region in the years ahead.

Data in this report was collected for two geographic regions: the city of Philadelphia (which is contiguous with Philadelphia county), and the remainder of the Philadelphia region, which is defined as the 10 suburban counties included in the 11-county Philadelphia-Camden-Wilmington Metropolitan Statistical Area (MSA). As of 2021, 6.23 million people live in the Philadelphia MSA.

By the Numbers

College Educated 25-to-34-year olds



155%

increase in Philadelphia between
2000 and 2021

College Student Retention Rate



50%

in the region, representing stable
growth and improved benchmarking

Jobs Supported



55,100

annual jobs in the region supported
by additional graduate spending

Regional Degree Holders 25-to-34-years old



181,400

increase over 2000

Tax Revenue



\$715 million

annual city and tax state revenue from
additional graduate earnings and
spending



Talent Growth Driving Economic Impact

The young adult population in Greater Philadelphia has grown dramatically in the past two decades, driving overall population growth in the region and outpacing national demographic trends. During this time, the expansion of young adults holding bachelor's degrees in Philadelphia has outpaced the growth seen in the same demographic within any comparable peer cities. This extraordinary growth points towards the success of Greater Philadelphia's colleges and universities, and initiatives such as Campus Philly, in attracting and retaining emerging talent in the region.

Sustained growth
does not happen by
accident. It's the result
of strategic investments
like Campus Philly.

Greater Philadelphia colleges and universities retain 50 percent of their graduates within the region. This figure reflects an enhanced comprehensive view of all 4-year degree granting institutions in the region and represents sustained retention and growth over the last five years.

Sustained growth does not happen by accident. It's the result of strategic investments, including the creation of Campus Philly. Founded in the early 2000s to engage and retain college students in Greater Philadelphia, Campus Philly is a trusted resource to tens of thousands of college students and recent graduates, as well as a steadfast partner to hundreds of higher education, corporate, and nonprofit organizations across the region.

Increase of Bachelor's Degree Holders

Growth Rate vs. Peer Regions

Educational Attainment and Average Earnings

Growth of Earnings

Employment Impact

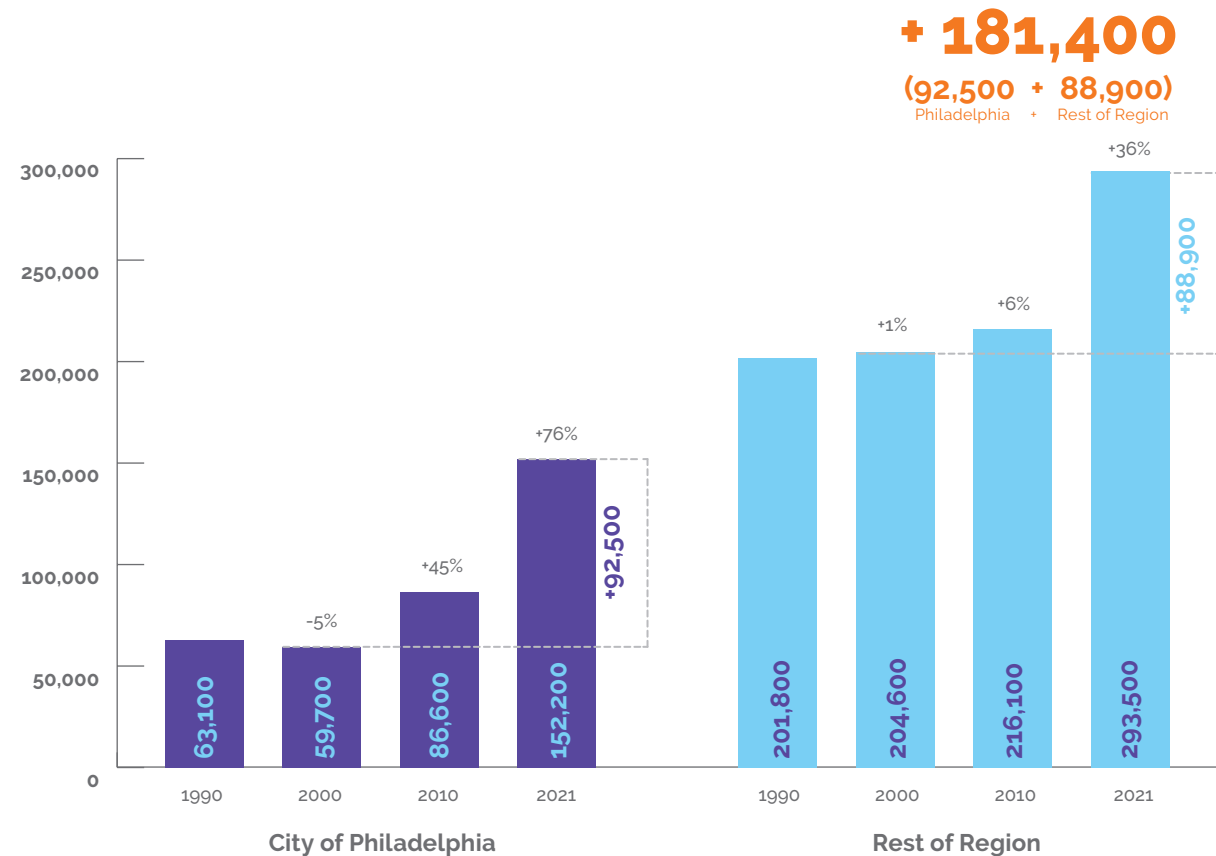
Tax Revenue Impact

Increase of Bachelor's Degree Holders

Between 1990 and 2000, both the city and the region experienced a decrease in the number of young adults with college degrees. This decline aligns with the slower population growth seen in the city and region during that time.

From 2000 to 2021, the city's population increased by 4% to reach 1.6 million, while the rest of the region grew by nearly 12% to reach 4.7 million. This growth was largely due to an increase in the number of young adults. In the city of Philadelphia, the population of 25- to 34-year-olds with bachelor's degrees more than doubled between 2000 and 2021, growing by 92,500 (a 155% increase). In the surrounding region, this population increased by 88,900 (a 40% increase).

**Greater Philadelphia Area Increase of Bachelor's Degree Holders
Ages 25-34, 2000-2021**



Source: Decennial Census (1990, 2000), American Community Survey (2010, 2020, 2021)

Growth Rate vs. Peer Cities

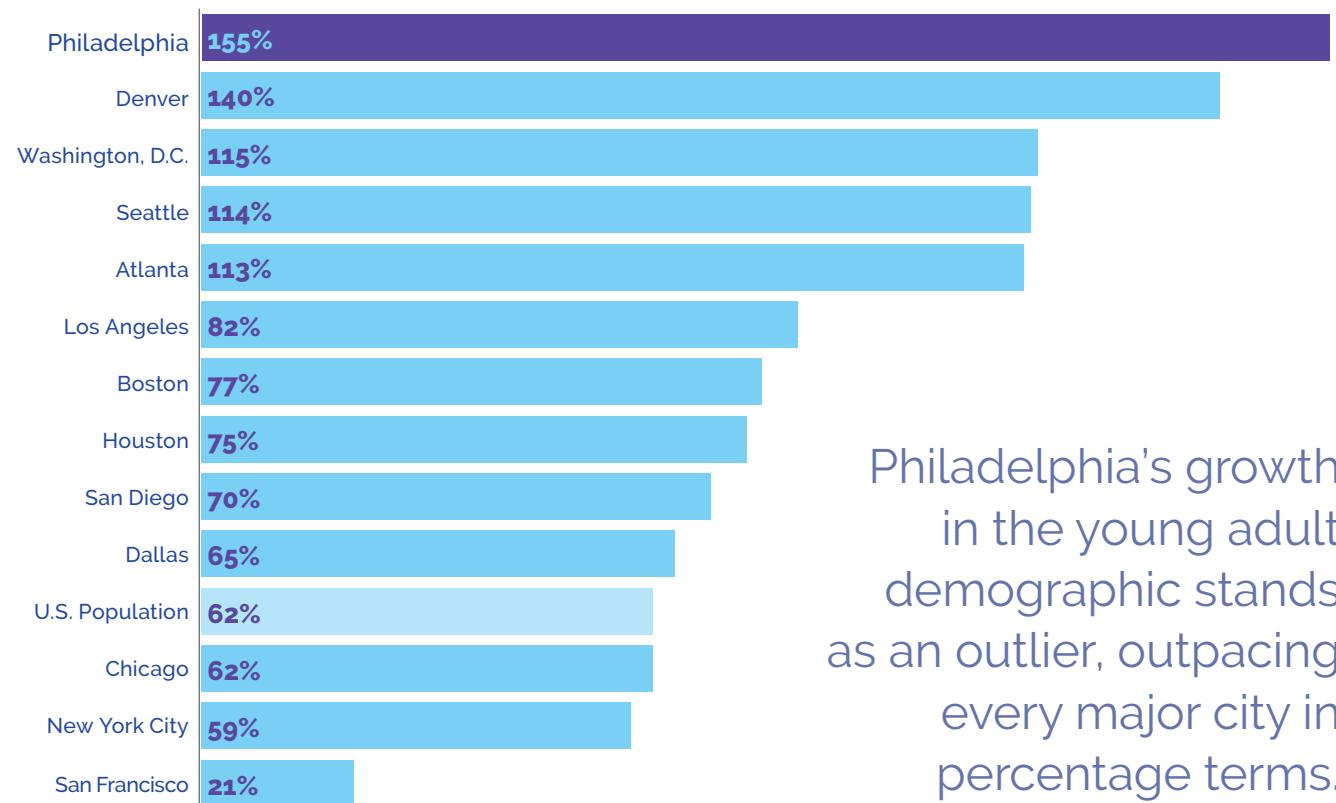
This growth is extraordinary when viewed in a larger context:

Between 1990 and 2000, Philadelphia lost 3,400 young college graduates to other regions.

The population of the city of Philadelphia grew by only 4% (to 1.6 million) between 2000 and 2021

The number of 25- to 34-year-old bachelor's degree holders increased by 92,500 in the city of Philadelphia from 2000 to 2021—that's 155% growth

**Growth Rate of Bachelor's Degree Holders' vs. Peer Cities
Ages 25-34, 2000-2021**



Philadelphia's growth in the young adult demographic stands as an outlier, outpacing every major city in percentage terms.

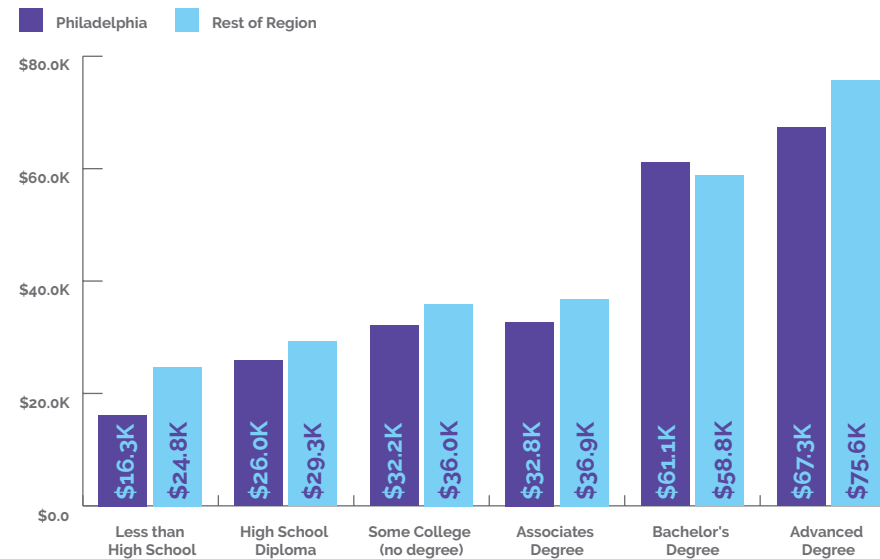
Source: American Community Survey (2021), Decennial Census (2000)

Educational Attainment and Average Earnings

Individuals with bachelor's and advanced degrees experience a notable rise in earnings compared to those without degrees in the region. The average 25- to 34-year-old bachelor's degree holder in Philadelphia earns 90% more than their peers with some college credit, but no degree and 135% more than those with high school diplomas. This is an important statistic to note when considering the ROI of higher education and degree attainment.

A significant opportunity exists in Philadelphia to engage the 16% of residents aged 25-34 that have earned some college credits but haven't completed a degree, and the additional 19% that hold high school diplomas. Supporting these two groups with resources and pathways to post-secondary completion is essential to our region's future growth and success.

**Average Earnings by Education Attainment Level
Ages 25-34**



**Philadelphia City
Educational Attainment
Ages 25-34**

	Count	Share
Less than 9th grade	8,500	2.9%
9th to 12th grade, no diploma	14,600	4.9%
High school graduate (includes equivalency)	56,800	19.2%
Some college, no degree	47,300	16.0%
Associate's degree	17,000	5.7%
Bachelor's degree	94,000	31.7%
Graduate or professional degree	58,200	19.6%
<i>Total</i>	<i>296,400</i>	

Supporting 25-34 year old Philadelphians in post-secondary education is essential to the future success and growth of the Greater Philadelphia region.

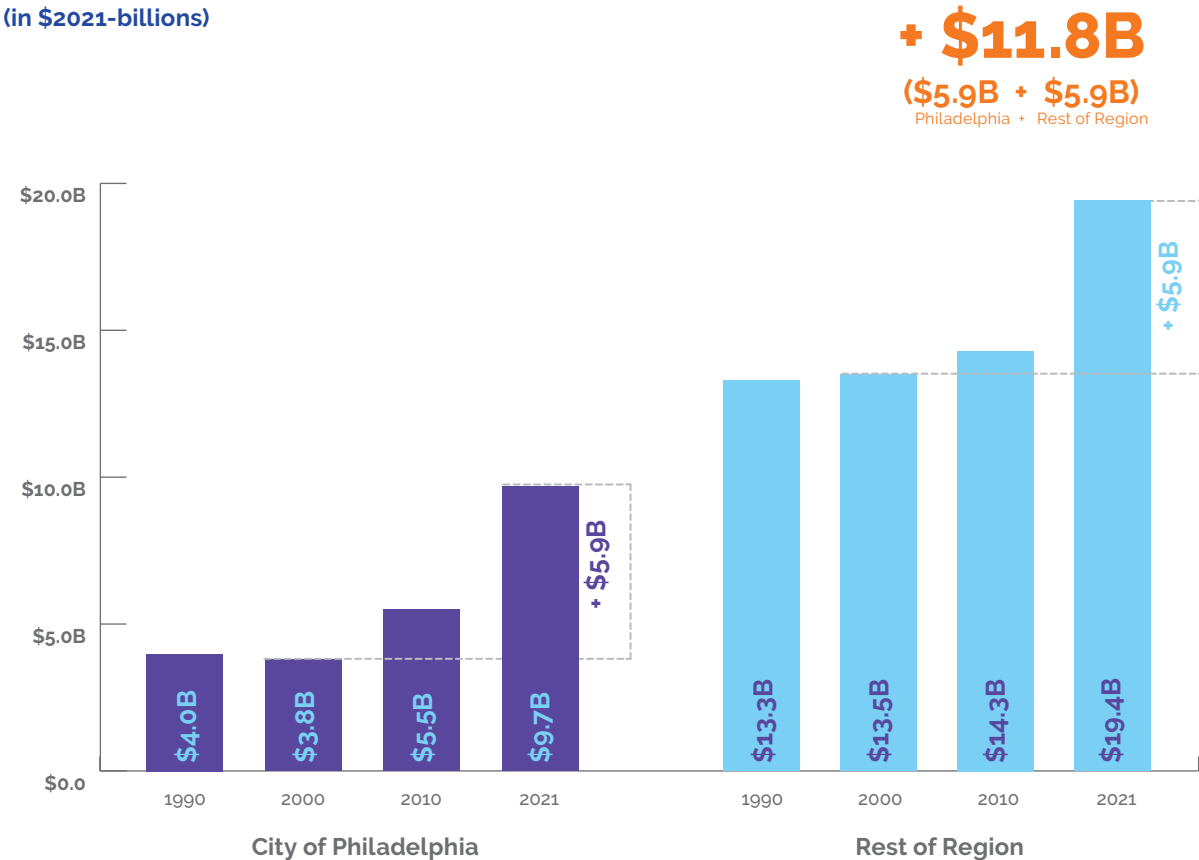
Sources: American Community Survey Public Use Microsample (2021)

Growth of Earnings

Over the past twenty years, Greater Philadelphia has seen a notable rise in the number of young adults with degrees who choose to stay. The collective earnings of this group across the region reached over \$29.1 billion in 2021, marking an \$11.8 billion increase from the year 2000. This increase is evenly distributed between graduates residing in the city and those in the broader region.

A significant portion of these earnings is expected to circulate within the local economy. Altogether, the added earnings generated by this growing population of young adults contribute to an annual economic output of \$11.8 billion in Greater Philadelphia. This infusion supports 55,100 jobs and leads to \$3.8 billion in additional annual earnings. Moreover, the tax revenues generated in the City of Philadelphia, the Commonwealth of Pennsylvania, the State of New Jersey, and the State of Delaware total a substantial \$715 million.

Greater Philadelphia Growth of Bachelor's Degree Holders' Estimated Earnings
Ages 25-34, 2000-2021
(in \$2021-billions)



Source: Decennial Census, American Community Survey, ACS Public Use Micro Sample (PUMS)

Employment Impact

Distribution of Employment by Sector due to Graduate Retention Philadelphia MSA

55,100 total employment supported
\$3.8 Billion in earnings supported

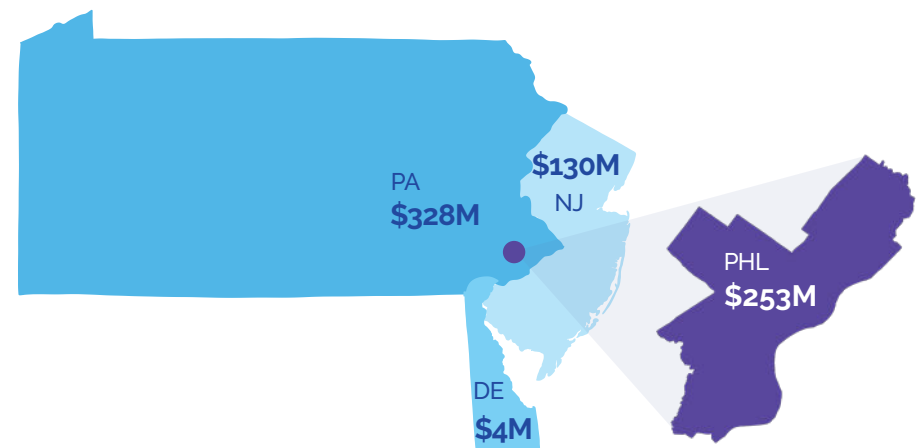
All Other Industries	5,220
Information	2,810
Public Administration	3,080
Real Estate	3,460
Professional Services	4,110
Retail Trade	4,860
Transportation & Warehousing	5,140
Health Care & Social Assistance	7,820
Other Services	8,510
Arts, Entertainment & Recreation	10,110

Source: IMPLAN (2021)

Tax Revenue Impact

Annual Tax Revenue Impact due to Graduate Retention

\$715M total tax revenue



While the city economy is wholly contained in the state economy and the regional economy, the City and Commonwealth governments are separate and distinct entities with distinct tax bases and revenues.

Source: Econsult Solutions Inc. (2022), IMPLAN (2021)

Planning for Demographic Change

Philadelphia's success over the past two decades in increasing its young and educated workforce is due in large part to the attractiveness of the region's strong college and university system and focused retention efforts like Campus Philly. However, it's also important to recognize that our region has benefited from broader demographic trends. The Millennial generation (those born between 1981 and 1995) is disproportionately large compared to those before and after it and more highly educated relative to prior generations. Millennials have been a driving force in the revival of young populations in many cities, including Philadelphia.

Meanwhile, Generation Z (those born between 1996 and 2011) is a comparatively smaller generation. This size of this cohort has already led to declining enrollments at many higher education institutions across the nation and has the potential to create significant labor shortages in our regional economy for the next decade.

To mitigate this impact and maintain the progress created by Philadelphia's young and educated workforce, the city and region will need to rely on a combination of strategies.

- **Building local talent**, by increasing educational attainment levels among Philadelphia's younger population cohorts
- **Retaining talent**, by persuading an increasing number of graduates from Philadelphia's many higher education institutions to remain within the city and region as they join the workforce
- **Attracting talent**, by drawing graduates from institutions in other areas to the city and region to meet the growth areas of the Greater Philadelphia economy

City of Philadelphia
Population by Age
Cohort

City of Philadelphia
Millennials and Gen Z

Generating Local Talent



BUILD



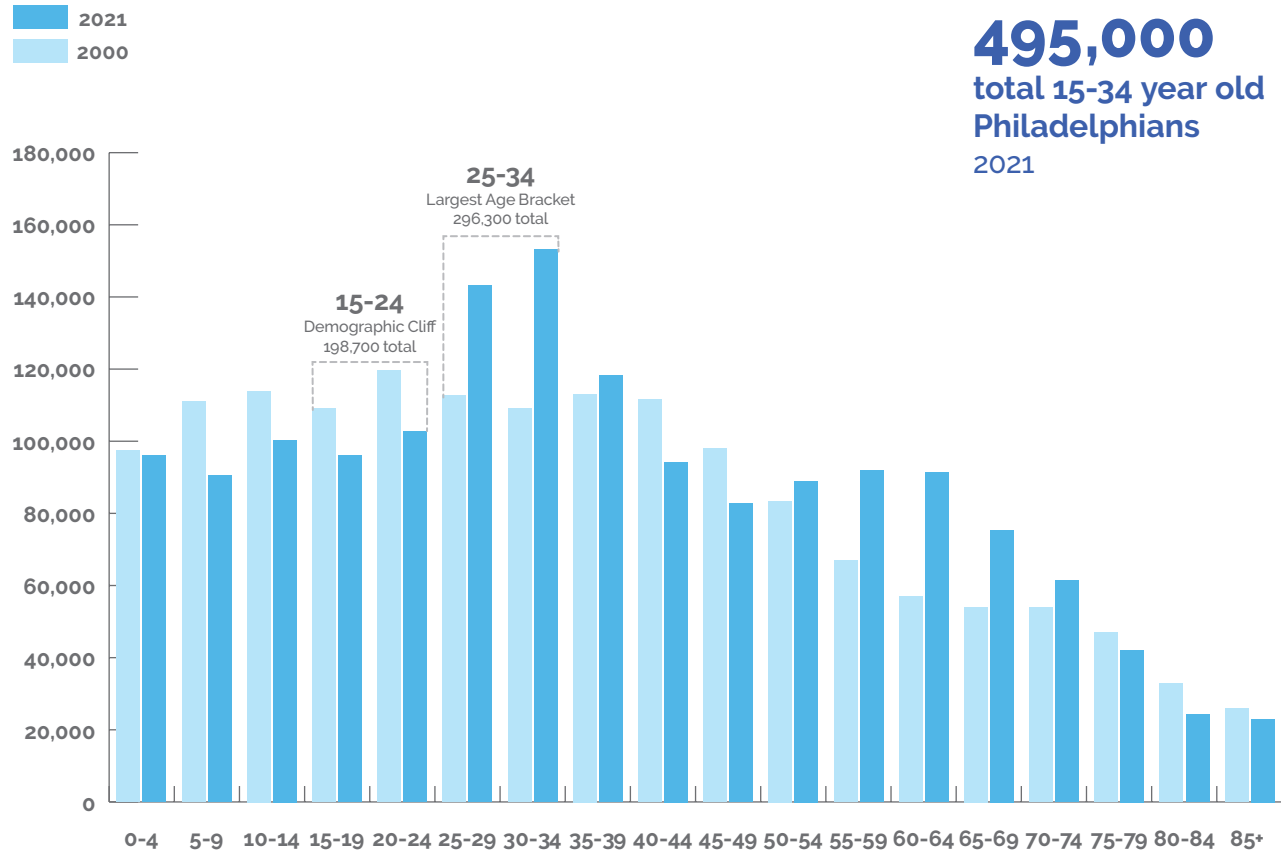
RETAIN



ATTRACT

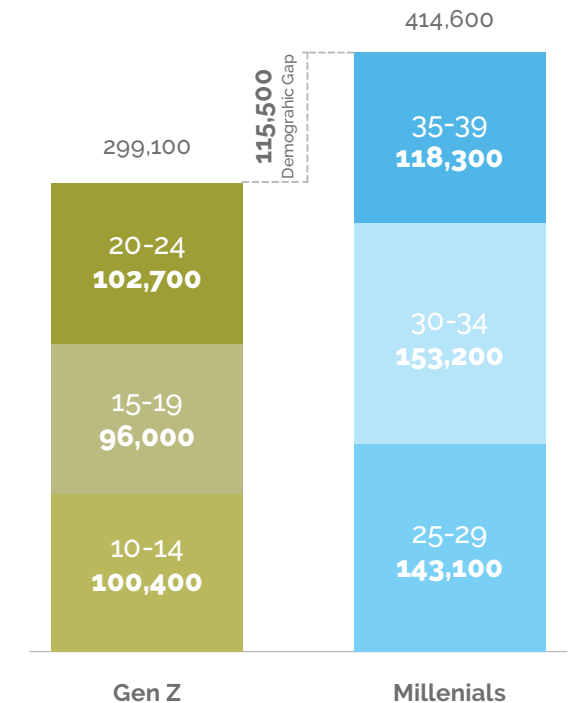
City of Philadelphia Population

City of Philadelphia Population by Age Cohort
2021



Source: American Community Survey (2021), Decennial Census (2000)

City of Philadelphia Population
of Gen Z and Millennials
2021



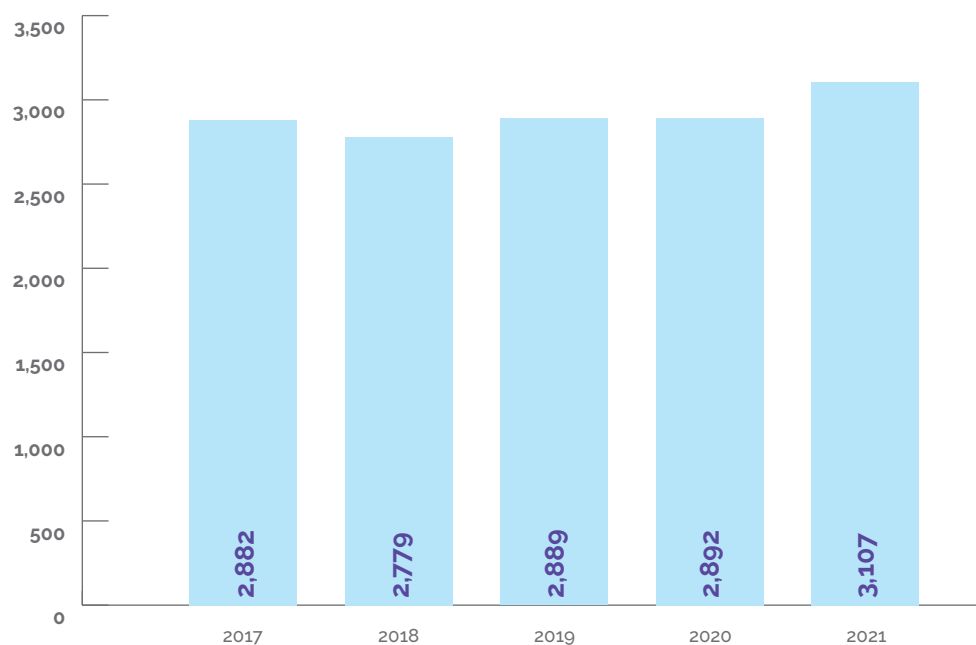
Source: American Community Survey (2021)

Spotlight: Life Sciences and Cell & Gene Therapy Sector

Ranked among the top ten markets in the United States, Greater Philadelphia is leading the way in life sciences and especially in the cell and gene therapy sector. The life science ecosystem is strengthened by the presence of multiple universities that consistently produce skilled talent at both undergraduate and graduate levels. Over time, the number of graduates from these programs has steadily been on the rise. When it comes to the concentration of life sciences graduates as a percentage of all graduates, the Greater Philadelphia region competitively ranks third overall, trailing behind Boston and San Francisco.

As of 2021, job postings in the life science industry outweighed completions of respective programs by more than twofold. The average location quotient, 1.3, indicates a high concentration of these jobs in the region. Furthermore, a significant proportion of target occupations included in this study are held by younger workers. Considered together, this data emphasizes the opportunity for students who pursue a career in the life science sector. It also underscores the imperative for educational institutions and workforce development organizations to align their offerings with the skills and qualifications that employers in life sciences actively seek.

**Life Sciences Target Programs Completion
Philadelphia MSA, 2017-2021**



Source: Lightcast (2023)

Spotlight: Life Sciences and Gene & Cell Therapy Sector

Life Sciences Programs Completion, Philadelphia MSA vs. Peer MSAs 2021

Metropolitan Area	Target Programs	All	Share of Life Sciences
1. San Francisco-Oakland-Berkeley, CA	2,733	71,734	3.81%
2. Boston-Cambridge-Newton, MA-NH	3,502	106,236	3.30%
3. Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	3,107	96,736	3.21%
4. Atlanta-Sandy Springs-Alpharetta, GA	2,147	68,624	3.13%
5. San Diego-Chula Vista-Carlsbad, CA	2,504	81,972	3.05%
6. New York-Newark-Jersey City, NY-NJ-PA	7,658	276,954	2.77%
7. Dallas-Fort Worth-Arlington, TX	2,577	93,847	2.75%
8. Houston-The Woodlands-Sugar Land, TX	1,923	72,796	2.64%
9. Seattle-Tacoma-Bellevue, WA	1,379	53,323	2.59%
10. Los Angeles-Long Beach-Anaheim, CA	5,711	286,380	1.99%
11. Washington-Arlington-Alexandria, DC-VA-MD-WV	2,123	112,627	1.88%
12. Denver-Aurora-Lakewood, CO	814	43,854	1.86%
13. Chicago-Naperville-Elgin, IL-IN-WI	2,684	147,191	1.82%
Total	38,862	1,512,274	2.57%

Life Sciences Target Programs Job Postings & Completions Philadelphia, 2021

Target Program	Unique Job Postings	2021 Completions	Jobs: Completions Ratio
Biology and Biological Sciences	4,056	2,086	2:1
Biochemistry	836	231	4:1
Cell and Molecular Biology	720	58	12:1
Molecular Biology	700	9	78:1
Immunology	540	12	45:1
Bioengineering and Biomedical Engineering	371	462	1:1
Bioinformatics	197	28	7:1
Biomedical Sciences	38	221	0:1
Total	7,458	3,107	2:1

Life Sciences Job Holders Aged 19-34 in Philadelphia & Regional Job Concentration

Occupation	Share of Job holders Aged 19-34	Location Quotient
Industrial Engineering Technologists and Technicians	24%	0.51
Biological Scientists, All Other	34%	1.32
Biological Technicians	42%	2.85
Life, Physical, and Social Science Technicians, All Other	50%	1.07
Clinical Laboratory Technologists and Technicians	33%	0.79
Health Technologists and Technicians, All Other	34%	1.07
Average	36%	1.27
<i>All Occupations</i>	<i>31%</i>	<i>1.00</i>

The Philadelphia area ranks 3rd among metropolitan areas in Life Sciences Program completions.

Source: Lightcast (2023)

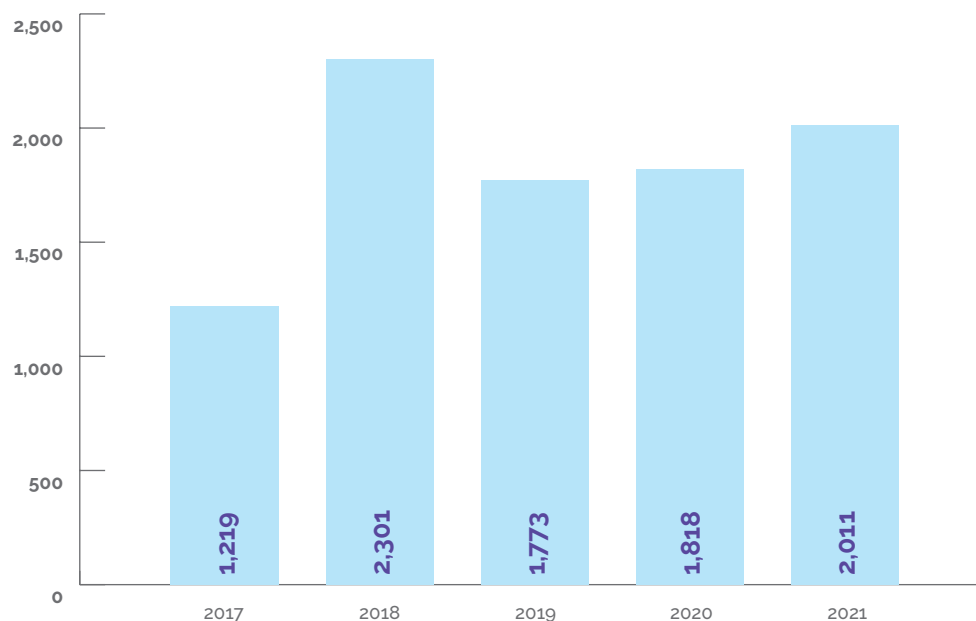
Spotlight: Technology Sector

Greater Philadelphia's potential as a top tech market is gaining momentum. The developing talent pool, lower cost of doing business, and proximity to other national tech hubs make Greater Philadelphia an attractive location for startups and established companies. Recent investments by the City of Philadelphia, including the Most Diverse Tech Hub Initiative, underscore our region's commitment to growth.

However, when focusing on twelve highly sought-after tech degree programs, Greater Philadelphia still has ground to cover. After a notable spike in 2018, followed by a drop in 2019, degree completions have been steadily on the rise. As of 2021, job postings linked to these tech programs outweigh completions by nearly four times. The average location quotient is 0.97, which indicates a lower-than-average concentration of these jobs in the region compared to the national average. Additionally, among 13 similar regions, Greater Philadelphia ranked 12th in terms of the proportion of tech degree completions.

For students and recent graduates of these targeted programs, Greater Philadelphia offers promising employment prospects. These statistics also underscore the importance of continued investment in the tech talent pipeline to ensure sustained growth and competitiveness in Greater Philadelphia.

Technology Target Programs Completion
Philadelphia MSA, 2017-2021



Source: Lightcast (2023)

Spotlight: Technology Sector

Technology Programs Completion, Philadelphia MSA vs. Peer MSAs 2021

Metropolitan Area	Tech Programs	All	Share of Total
1. Washington-Arlington-Alexandria, DC-VA-MD-WV	10,034	112,627	8.91%
2. Seattle-Tacoma-Bellevue, WA	3,416	53,323	6.41%
3. Atlanta-Sandy Springs-Alpharetta, GA	3,798	68,624	5.53%
4. Boston-Cambridge-Newton, MA-NH	4,556	106,236	4.29%
5. New York-Newark-Jersey City, NY-NJ-PA	9,797	276,954	3.54%
6. San Francisco-Oakland-Berkeley, CA	2,470	71,734	3.44%
7. Denver-Aurora-Lakewood, CO	1,502	43,854	3.43%
8. San Diego-Chula Vista-Carlsbad, CA	2,619	81,972	3.19%
9. Chicago-Naperville-Elgin, IL-IN-WI	4,336	147,191	2.95%
10. Dallas-Fort Worth-Arlington, TX	2,685	93,847	2.86%
11. Los Angeles-Long Beach-Anaheim, CA	6,387	286,380	2.23%
12. Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	2,011	96,736	2.08%
13. Houston-The Woodlands-Sugar Land, TX	456	72,796	0.63%
Total	54,067	1,512,274	3.58%

Technology Target Programs Job Postings & Completions Philadelphia MSA, 2021

Target Program	Unique Job Postings	2021 Completions	Jobs: Completions Ratio
Computer Science	6,104	769	8:1
Information Technology	1,096	200	5:1
Computer Software and Media Applications	262	8	33:1
Informatics	235	5	47:1
Network and System Administration/Administrator	212	4	53:1
Computer/Information Technology Administration	212	92	2:1
Information Science/Studies	208	263	1:1
Computer Programming, Specific Applications	183	20	9:1
Web Page and Digital Design	121	47	3:1
Computer and Information Systems	106	603	0:1
Cloud Computing	27	0	-
Computer Systems Networking	27	0	-
Total	8,793	2,011	4:1

Technology Job Holders Aged 19-34 in Philadelphia & Regional Job Concentration

Occupation	Share of Job holders Aged 19-34	Location Quotient
Computer Programmers	27%	0.94
Software Developers	35%	0.94
Software Quality Assurance Analysts and Testers	34%	0.90
Data Scientists	41%	1.08
Computer Systems Analysts	29%	0.95
Computer Network Architects	24%	1.00
Average	32%	0.97
<i>All Occupations</i>	<i>31%</i>	<i>1.00</i>

Greater Philadelphia's potential as a top tech market is gaining momentum.

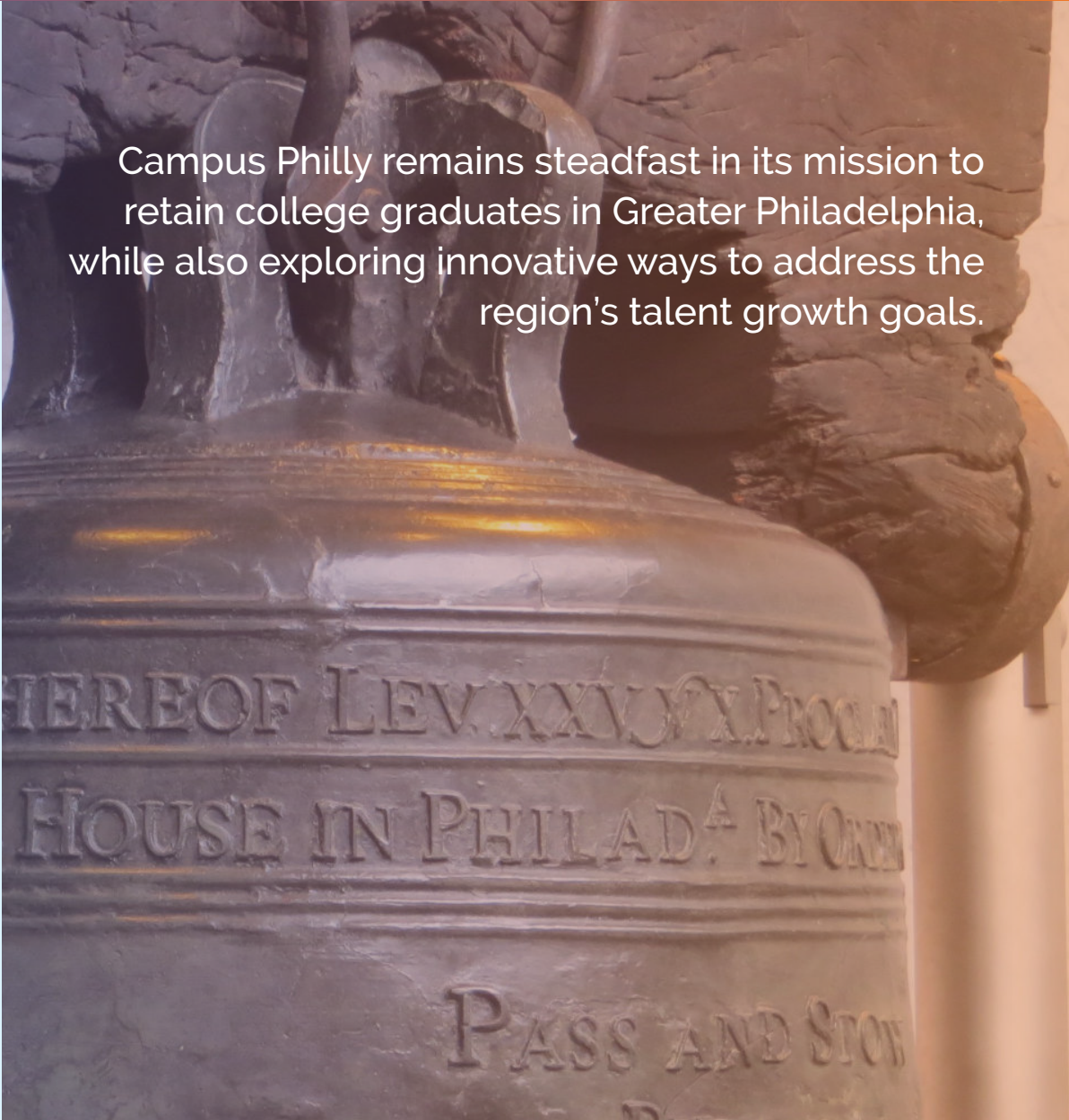
Source: Lightcast (2023)

Conclusion

Greater Philadelphia's remarkable growth in college graduate retention has been a key driver of the city and region's population increase over the past two decades. However, retaining a comparable percentage of Generation Z college graduates will not be enough to meet talent demands in the years ahead.

To address the evolving workforce needs of Greater Philadelphia, we must adopt a comprehensive strategy. This approach involves forging new pathways for local talent, intensifying efforts to keep college graduates in our region, and strategically attracting talent from elsewhere. Realizing this strategy will require a collaborative effort, bringing together a diverse coalition of regional organizations spanning post-secondary access, higher education, workforce development, and talent attraction.

Campus Philly remains steadfast in its mission to retain college graduates in Greater Philadelphia, while also exploring innovative ways to address the region's talent growth goals. Together with regional partners, we aim to harness our existing momentum, elevate our approach, and help build a region where all our residents can thrive.



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