



Healthcare & Biomedical Ecosystem

JUNE 2022

Build a Healthier Business in Greater Phoenix

Cutting-Edge Companies and a Legacy of High-Quality Care

Greater Phoenix has long been a healthcare destination because of its excellent quality of life and abundant healthcare providers. Today, a new innovative healthcare and biomedical industry has emerged from Greater Phoenix's legacy of care. Supported by outstanding educational partners and a talented growing workforce, the healthcare and biomedical industry is booming in Greater Phoenix.

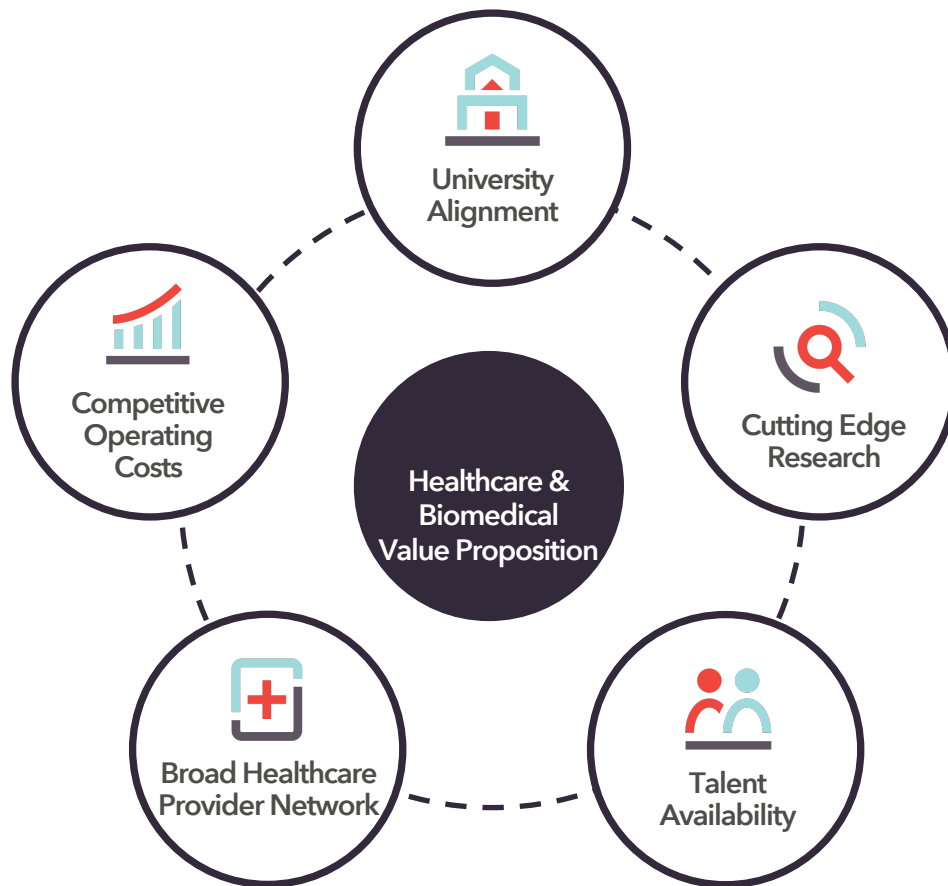
With an innovative and collaborative ecosystem in Greater Phoenix, it is no surprise that so many top companies choose the region.

Here are just a few reasons why so many top companies choose Greater Phoenix:

- A vibrant research and development ecosystem with thousands of clinical trials already taking place
- The perfect blend of workforce quality, talent availability, and lifestyle for scaling companies
- University and industry alignment to support research and development
- Significantly lower operating costs than competitor regions, allowing companies to grow



Value Proposition



University Alignment	Cutting-Edge Research	Talent Availability	Broad Healthcare Provider Network	Competitive Operating Costs
<ul style="list-style-type: none"> • Multiple medical schools throughout the region • Innovative programs at Arizona State University, driving health tech 	<ul style="list-style-type: none"> • Thousands of clinical trials take place in Greater Phoenix annually • Phoenix Bioscience Core (PBC) and Scottsdale Cure Corridor drive innovation through clustering 	<ul style="list-style-type: none"> • More than 10,000 graduates from related degree programs in 2020 • Workforce that is nearly 17,000 workers larger than San Diego 	<ul style="list-style-type: none"> • Many nationally recognized hospitals and institutes call Greater Phoenix home • Banner Health, headquartered in Phoenix, is the region's largest private employer 	<ul style="list-style-type: none"> • Operating costs are more than 13% lower than all competitor regions • Workforce costs that are thousands less than all peer markets • Housing costs that are three times less than San Francisco

Talent Pipeline

Notable Medical Schools in Greater Phoenix



University of Arizona College of Medicine – Phoenix

The University of Arizona College of Medicine – Phoenix is committed to four pillars that empower its mission and vision for the future. The education, research, clinical and community service pillars converge in many areas and synergistically for the foundation of the college.

- Nine clinical partners, anchored by Banner Health
- 2,000+ faculty
- 669 graduates since established and 120 new medical students per year



Mayo Clinic College of Medicine and Science

Since its 1987 arrival to Arizona, Mayo Clinic has expanded its footprint with education, research and medical facilities on its Phoenix and Scottsdale campuses. In 2023, Mayo Clinic is scheduled to complete its 1.4 million square-foot expansion to double the size of its Phoenix campus. Overall, its facilities account for more than 6,600 staff members, provide more than 65 medical and surgical specialties, and serve more than 100,000 patients annually. In addition, the Mayo Clinic Alix School of Medicine and Arizona State University (ASU) offer dual degree programs in health care delivery, health informatics and biomedical diagnosis.



Creighton University School of Medicine

Located at Dignity Health St. Joseph's Hospital and Medical Center in Phoenix, the students from the Creighton University School of Medicine have served clinical rotations at this location since 2005. In 2017, the school founded an alliance alongside Dignity Health, District Medical Group and Valleywise Health to provide access to high-quality teaching environments for Creighton students and medical residents. Creighton University and ASU partnered on education and research in 2020. In 2021, the school opened a 195,000-square-foot full four-year medical school campus in midtown Phoenix, which will accommodate roughly 900 students by 2025.

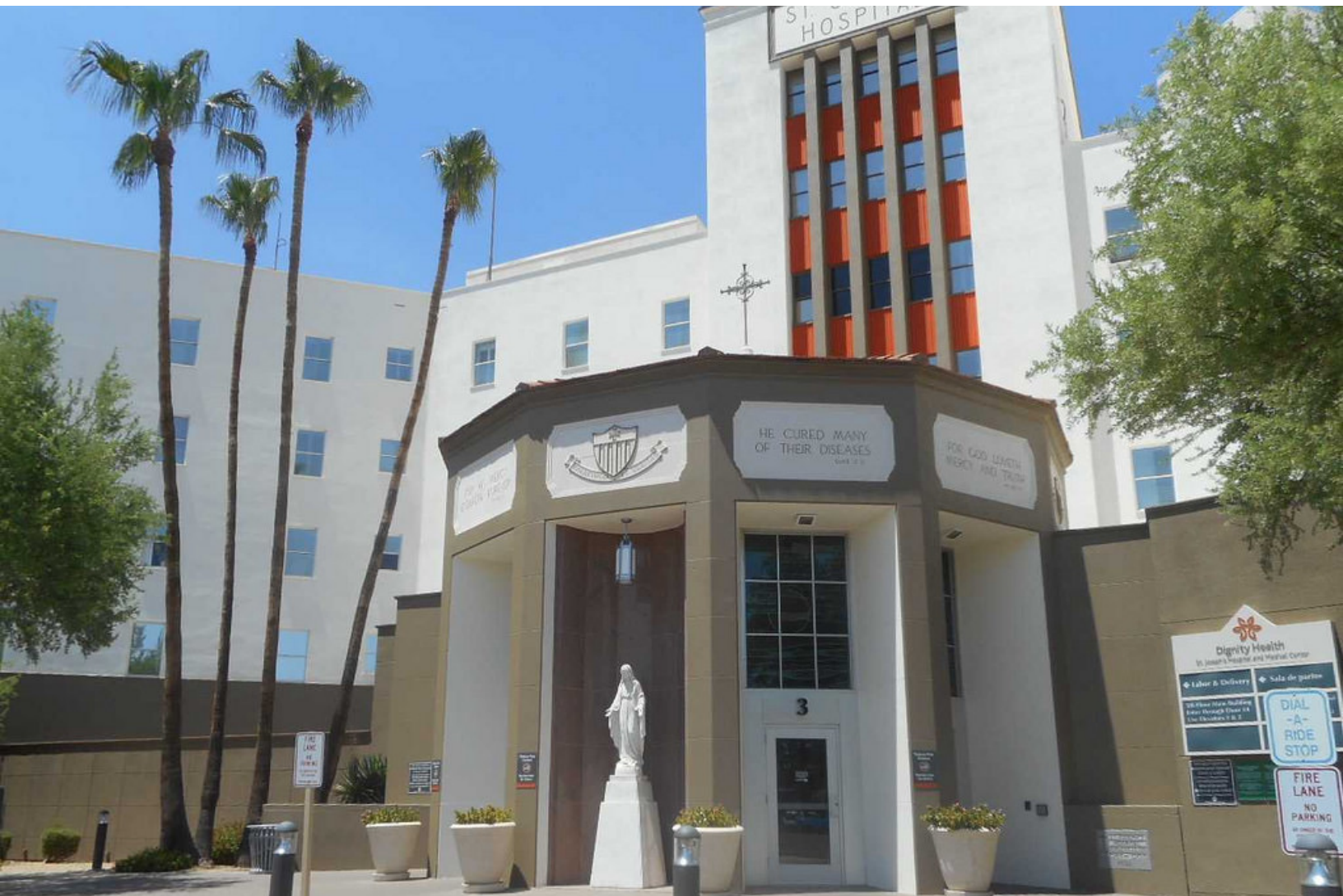
Talent Pipeline

Notable Medical Schools in Greater Phoenix (cont.)



Midwestern University

Founded in 1900, the Glendale-based Midwestern University focuses on healthcare education. It has colleges focusing on dental medicine, health science, osteopathic medicine, optometry, pharmacy, podiatric medicine, and veterinary medicine. The University has invested over \$400 million in Glendale and has created over 900 campus-based jobs. In 2019, the Phoenix Business Journal named the Midwestern University one of the region's large (with 1,500+ employees) Healthiest Employers. As of September 2020, it had more than 13,000 graduates, among which over 40% of them worked in Arizona.



Talent Pipeline

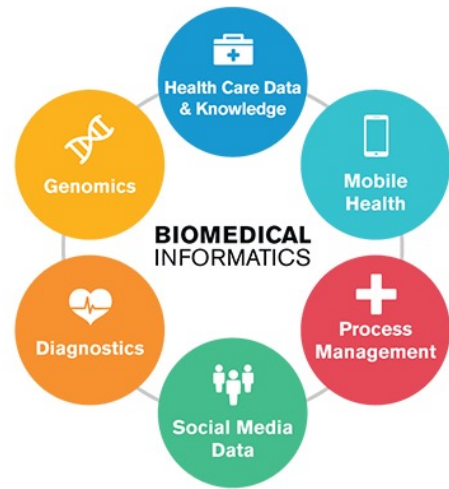
Biomedical Informatics and Biomedical Diagnostics at Arizona State University (ASU)

ASU's College of Health Solutions offers a range of programs in healthcare and biomedical. Two of the emerging fields thanks to the rise of big data and various technologies are biomedical informatics and biomedical diagnostics.

The School offers the following programs:

- Biomedical Informatics (B.S.)
- Biomedical Diagnostics (M.S.)
- Biomedical Informatics (M.S. & Ph.D.)
- Health Informatics (M.S.)

Biomedical informatics is a field that emphasizes the analysis of biomedical/health data and the transformation of analytical work into practice in improving the health outcomes of human beings.



Biomedical diagnostics focuses on four major areas including science, technology, business, and application of diagnosis. From the business perspective, it touches the business and regulatory environments where diagnostic firms, state authorities, and federal agencies interact with each other.

Health informatics covers the effective use of information technology, data science, and knowledge representation to impact health and health care. Focus areas include workflows, population health management, and data analysis.



For more information about ASU's College of Health Solutions , please visit:
<https://chs.asu.edu/>

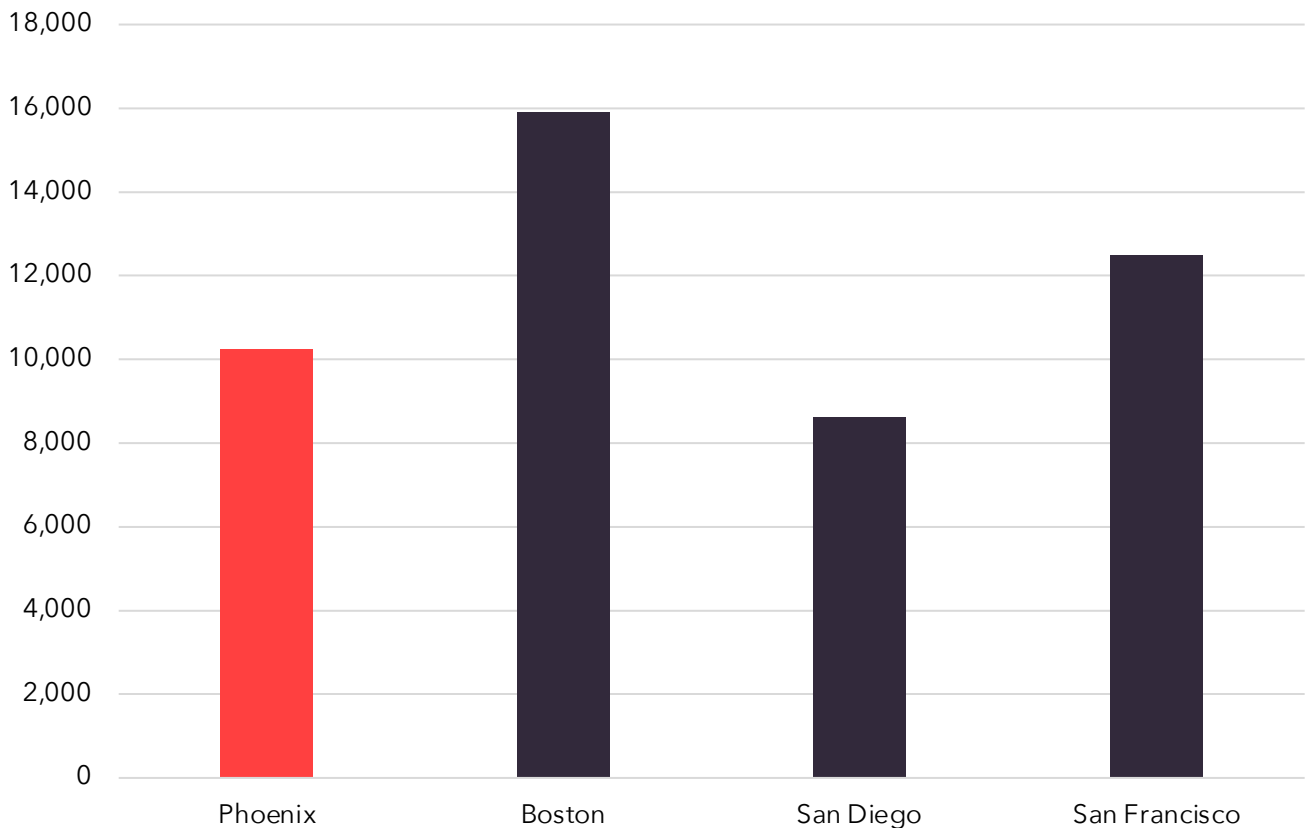
Talent Pipeline

Greater Phoenix Talent Pipeline

Below are the total number of non-distance program completions at colleges and universities in Greater Phoenix for healthcare and biomedical fields. The region produced over 10,000 graduates in these fields in 2020. The region's universities are committed to supplying the workforce needed to enable companies to scale in the region. Comparison data for peer markets with comparable total populations has been provided below.

Certificates	Associate	Bachelor	Master	Doctor	Total
4,062	1,845	2,761	776	801	10,245

Competitor Markets' Talent Pipeline



Research & Development

Industry Cluster in the Heart of Greater Phoenix

Phoenix Bioscience Core

Located in downtown Phoenix, the Phoenix Bioscience Core (PBC) is a premier and dynamic environment for research activities. The PBC currently hosts the highest concentration of research scientists and complementary research professionals in the region and provides firms with unprecedented opportunities for growth and collaborative efforts with industry leaders. It is a 30-acre urban medical and bioscience campus planned for more than 6 million square feet of biomedical-related research, academic, and clinical facilities. To date, the campus has been developed with approximately 1.5 million square feet of the anticipated 6 million square feet at build out.

It is a collection of Arizona's three major universities, three of the five major hospital systems that operate in the region, and a mixture of public and private research clustered in the same neighborhood in the heart of the capital.

Representing the full spectrum of the healthcare industry, PBC is home to educational institutions, government agencies, hospitals, and life science companies. Here is a sample of the industry's presence inside the core:

- Arizona State University
- Center for Entrepreneurial Innovation
- Dignity Health
- National Institute of Diabetes and Digestive and Kidney Diseases
- Northern Arizona University
- Phoenix Union Bioscience High School
- TGen
- University of Arizona

For more information about PBC, please visit:

<https://phoenixbiosciencecore.com/>



Research & Development

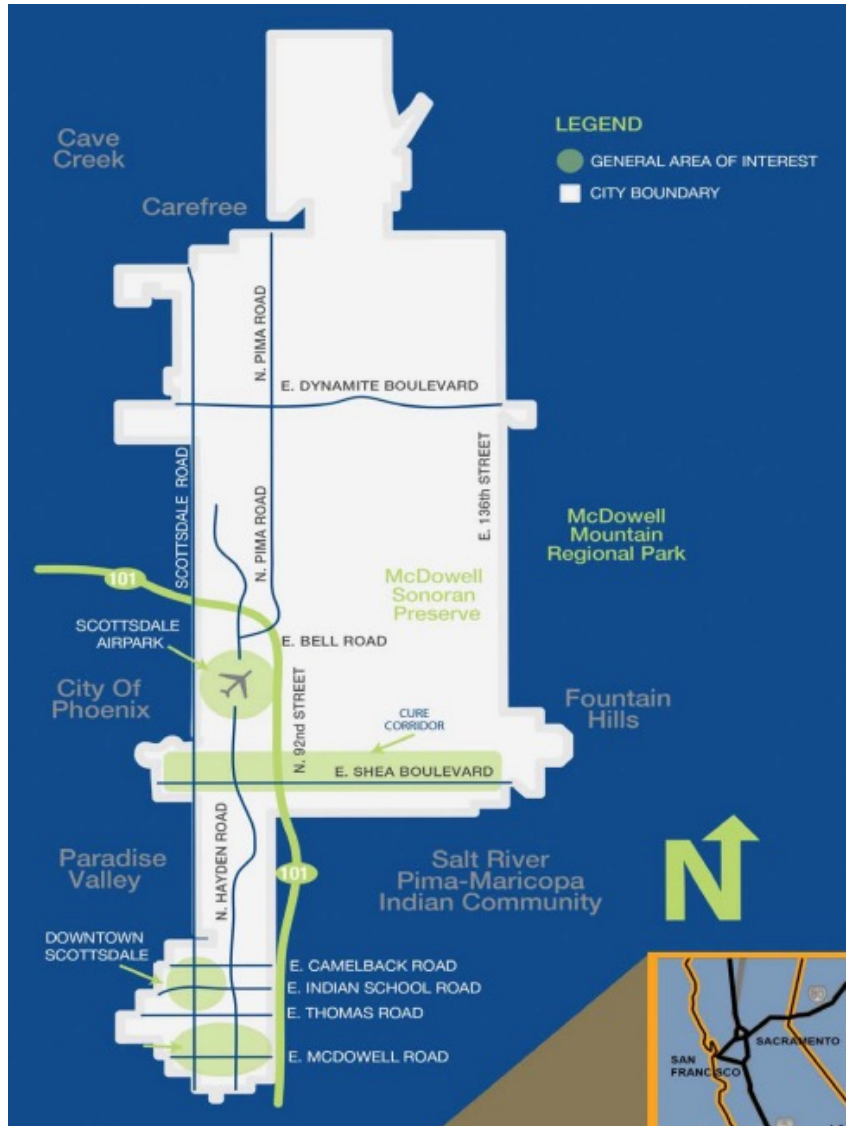
Industry Cluster in the Northeast Valley

Scottsdale Cure Corridor

The Scottsdale Cure Corridor (SCC) is a concept designed to promote innovative activities around the concentration of the bio-life sciences sector in Scottsdale. SCC is a locale for education and research, clinical trials and patient care delivery.

Select Businesses in SCC

- Arizona Breastnet LLC
- Arizona Oncology Associates
- ASU Department of Biomedical Informatics
- CVS Caremark
- GlobalMed Group
- IDM Lab Track
- LabCorp
- Mayo Clinic
- Provista Diagnostics
- Scottsdale Medical Imaging
- St. Jude Medical
- Translational Drug Development (TD2)
- US Oncology



Research & Development

Industry Cluster in the West Valley

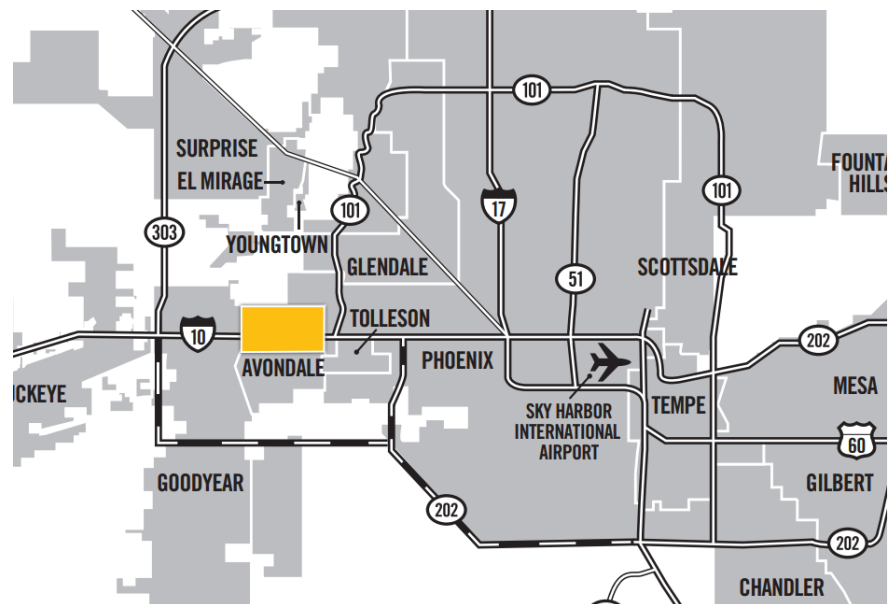
Avondale Health-Tech Corridor

The Avondale Health-Tech Corridor (AHTC) is a growing center in the West Valley. It runs along the I-10 from 99th Avenue west to Dysart Road between Thomas Road and Van Buren Street. It measures 8 square miles with over 392 companies and 8,557 employees.

Some representative healthcare-related providers include the Copper Springs Hospital and the Phoenix Children's Southwest Specialty and Urgent Care.

Recent Locates & Expansions

- AKOS Medical Campus
- Arizona Center for Cancer Care
- Bio Life
- Bridgewater Assisted Living
- Copper Springs Hospital
- IORA Health by Humana
- Legacy House of Arizona



For more information about AHTC, please visit:
<https://avondaleedge.com/health-tech-corridor/>

Research & Development

Healthcare Research and Innovation in the West Valley

Midwestern University – Glendale

Midwestern University (MWU), located in Glendale, is on the cutting edge of a variety of healthcare research. For example, in 2016, the College of Pharmacy established the Nanomedicine Center of Excellence in Translational Cancer Research. Students from Pharmacy, Biomedical Science, Osteopathic Medicine, Dental Medicine, and Veterinary Medicine can be trained to participate in the Center's initiatives. Its vision is to build a growing institutional research investment based on the experience of its multidisciplinary team of well-established investigators in nanoscience and nanomaterials, as well as expand the current collaborative research network with pre-clinical and clinical investigators with diverse experiences and skills.

Cancer Treatment Centers of America (CTCA)

CTCA's comprehensive cancer treatment hospital is committed to bringing its patients new and innovative cancer treatment options. It has a cancer hospital in Goodyear, and three outpatient care centers in the Greater Phoenix area including Gilbert, Phoenix, and Scottsdale.

Ironwood Cancer & Research Centers (ICRC)

With locations throughout Greater Phoenix, ICRC provides advanced cancer treatments to many in the region. ICRC has an active and expanding clinical research program and is committed to the advancement of medical knowledge and patient care. They have an active and expanding clinical research program that is helping to create the future of high-quality medical care.



Winning the fight against cancer, every day.®



Research & Development

Nationally Recognized Institutes in Greater Phoenix

Barrow Neurological Institute

Barrow Neurological Institute is an internationally renowned medical institution that offers care for people throughout the world with brain and spinal diseases, conditions, and injuries. This institute performs more neurosurgical procedures annually than anywhere in the United States. Michael Lawton, MD, one of the world's leading neurosurgeons, is the president and CEO of the institute. The U.S. News & World Report routinely lists Barrow as one of the best hospitals in the nation for neurological and neurosurgical care. The Doximity's 2021-2022 Residency Navigator ranked Barrow second place in neurological surgery in the nation.

Mayo Clinic

Mayo Clinic is one of the world's leading healthcare providers and has four facilities including Mayo Clinic Building, Mayo Clinic Hospital, Mayo Clinic Specialty Building in Phoenix, and Mayo Clinic Building in Scottsdale. Mayo Clinic opened its first Mayo Clinic Hospital in Phoenix in 1998.

Banner Alzheimer's Institute

The Banner Alzheimer's Institute is a leading Alzheimer's research center. The institute operates in three locations in the region: Phoenix, Sun City and Tucson.

Here is their three-part mission:

- End Alzheimer's without losing another generation
- Set a new national standard of patient and family care
- Forge new models of collaboration in biomedical research



Research & Development

Nonprofits Push for Bioscience in Greater Phoenix

Flinn Foundation

The Flinn Foundation is a privately endowed, philanthropic grantmaking organization established in 1965 with a mission to improve the quality of life in Arizona to benefit future generations. The Flinn Foundation offers funding in advancing the bioscience sector in Arizona. It also provides a full scholarship to high-achieving high school students bound for Arizona public universities, boosts the fiscal and creative capacity of the state's arts and culture organizations, and develops future state-level civic leaders.

Arizona Bioscience Roadmap

The Arizona Bioscience Roadmap is a long-term strategic plan originally commissioned by the Flinn Foundation in 2002 and updated in 2014 with the goal of Arizona becoming globally competitive and a national leader in select areas of biosciences by 2025. The goals include:

1. Forming an entrepreneurial hub
2. Turning research into practice
3. Developing bio-talent
4. Promoting Arizona's convergence of research, healthcare, and commercialization to economic partners in neighboring states, Canada and Mexico
5. Enhancing the state's "collaborative gene" reputation

Arizona Bioindustry Association (AZBio)

AZBio is a not-for-profit trade association promoting the growth of the Arizona life science sector. The Association is comprised of member organizations in business, research and education, health care delivery, economic development, government, and other professions involved in the biosciences. As the unified voice of our industry in Arizona, AZBio strives to make Arizona a place where bioscience organizations can grow and succeed.



Research & Development

Why a Leading National Genetics Research Firm Thrives in Phoenix



TGen - Translational Genomics Research Institute

On February 7, 2002, an assembly of more than 50 leaders and visionaries in science, medicine, government and business gathered at the Arizona state capitol to discuss the possibility of establishing Arizona as a player in the new economy of biotechnology industry. Their goal was to set up a one-of-a-kind genomics research institute. A positive group consensus decided the idea was not only feasible but represented a unique opportunity for Arizonans to rally together for a shared vision for the future. With an unprecedented cooperative spirit, the group rallied to the task of securing support for TGen on the order of \$90 million. They achieved this fundraising goal in a five-month window. Less than a year after that initial gathering in the Governor's office, TGen began operations.

TGen is an affiliate of City of Hope. They are a Phoenix-based, nonprofit medical research institute dedicated to conducting groundbreaking research with life-changing results. They work to unravel the genetic components of common and complex diseases including cancer, neurological disorders, infectious disease, and rare childhood disorders. By identifying treatment options in this manner, they believe medicine becomes more rational, more precise, and more personal.

"TGen is proud to have played a key role in the establishment of the Phoenix Biomedical Campus. We are delighted to see the progress that has grown up around us, and the City of Phoenix's continuing vision for future biomedical development."

-Tess Burleson, TGen COO

For more information on Tgen, please visit:

<https://www.tgen.org/>

Local Innovation

Phoenix-Based Health Tech Startups

Listed below are three examples of the type of innovative companies growing in the Greater Phoenix region.



BMSEED

Headquartered in Phoenix, BMSEED is a manufacturer of soft, compliant, and electromechanically robust (even stretchable) electrodes for research and clinical applications. BMSEED was selected for the Flinn Foundation Bioscience Entrepreneurship Program, was a semifinalist in the Arizona Innovation Challenge in 2017, and a 2018 finalist for the MassChallenge Accelerator in Boston.



Akos

Based in Phoenix, Akos provides telemedicine products and services with the support of artificial intelligence and augmented reality. Akos' devices and applications collect patients' data such as blood pressure and lung sound. Akos providers then verify AI-collected information and diagnosis, and confirm and modify system-formulated treatment plans. In June 2021, Akos Medical Campus opened in the Avondale Health-Tech Corridor. The City of Avondale estimated this new facility will generate 400 high-paying jobs.



Systems Oncology

Headquartered in Scottsdale, Systems Oncology utilizes big biomedical data and artificial intelligence in cancer research. The company also partners with leading universities and pharmaceutical companies in developing cancer therapies.



WebPT

Headquartered in Phoenix, WebPT offers the most-trusted software in outpatient rehabilitation. Their end-to-end business platform works for rehabilitation organizations, regardless of specialty, setting, or practice size. Founded in 2006, WebPT employs nearly 300 people and has more than 90,000 members.

Local Innovation

Venture Capital Funding

Below are some of the notable deals in the Greater Phoenix region in the past three years:



Solera Health

Headquartered in Phoenix, Solera Health is a digital healthcare platform that helps to connect patients, employers, and physicians with community organizations and apps to meet their specific health-related needs. In May 2019, the company completed its Series C funding round and raised \$42 million.



OncoMyx Therapeutics

OncoMyx Therapeutics is a cancer treatment development company headquartered in Tempe. The company, a spinout from Arizona State University, is developing its oncolytic virus (OV) therapeutic program intended to treat hard-to-cure cancers. The company completed its Series A and B funding rounds in June 2019 and December 2021 with \$25 million and \$50 million, respectively.



Paradigm Diagnostics

Headquartered in Phoenix, Paradigm Diagnostics uses technology to provide genomic and proteomic information about a patient's cancer to help the oncologist personalize the treatment of their patient. Paradigm raised \$15 million for their Series B funding round in May 2019.

Local Innovation

AZ Innovation Challenge Winners

Each year, the Arizona Commerce Authority hosts the Arizona Innovation Challenge, which awards \$3 million in total to winners. That's the largest available amount for any challenge of its kind in the country. Below is a list of winners from the healthcare and biomedical industry in Greater Phoenix from 2021.

Company	Winning Year	Description
Navi Nurses	2021	Navi Nurses is a personalized concierge nursing service that provides qualified, on-demand nursing at home to help patients and caregivers deal confidently with the challenges of providing care after hospital discharges or other health transitions.
ReSuture	2021	ReSuture's mission is to create the new standard for surgical training and evaluation through the use of the most realistic, continuous learning platform for surgical psychomotor skill.
SaiOx	2021	SaiOx has cultivated a team of executives with extensive experience bringing medical devices to market. Its patented breathing device utilizes the proven benefits of heliox technology in a novel system to provide relief to the 24 million Americans suffering with COPD.
Taproot	2021	As a SaaS digital healthcare company, Taproot Interventions & Solutions collects a monthly subscription fee based on per resident per month. TapRoot's Ella SM is the first AI care management platform for persons with Alzheimer's and mental illness. Taproot is disrupting the LTC market with technology that provides answers to managing high-risk behaviors prone to occur in 90% of this population.
The Patient Company	2021	The Patient Company has perfected lateral patient transfer with the development and production of SimPull TM . Lateral patient transfer: the act of moving a patient from one flat surface to another currently takes 22 minutes and is the number two cause of injury for healthcare employees, resulting in 12,000+ injuries annually in the US.

Industry Ecosystem

Largest Medical Device Manufacturers

Greater Phoenix is home to an assortment of innovative medical device manufacturers. Listed below are the largest, listed by employment.

Company	Employees
West Pharma	1,263
W.L. Gore & Associates	1,131
Dexcom	750
Medtronic	733
Abbott Laboratories	588
BARD Peripheral Vascular	472
Stryker Sustainability Solutions	281
GE Healthcare	175
GlobalMed	99
Cranial Technologies	90
Ultherapy	85
Regenesis Biomedical	76
Accutron	60
Innovative Health	55
VisionGate	33
GT Medical Technologies	20

Industry Ecosystem

Largest Healthcare and Biomedical Firms in Greater Phoenix

There are hundreds of healthcare and biomedical firms in Greater Phoenix. Listed below are the largest firms, listed by employment.

Company	Employees
Banner Health	27,387
HonorHealth	9,956
Dignity Health	8,571
Mayo Clinic	6,133
Phoenix Children's Hospital	4,826
Valleywise Health	2,246
Abrazo Healthcare	4,334
UnitedHealth Group	4,198
McKesson Corporation	2,010
Cigna Healthcare Of Arizona	2,004
Steward Health Care	1,863
Laboratory Sciences Of Arizona	1,702
Fresenius Medical Care	1,319
Express Scripts	1,031
Triwest Healthcare Alliance	1,027
Hospice of the Valley	930
SimonMed Imaging	864

Labor Analysis

Labor Pool

The table below shows the annual employment for relevant occupations in the selected regions.

Occupation	Phoenix	Boston	New York	San Diego	San Francisco
Registered Nurses	38,742	64,654	173,072	25,311	40,519
Software Developers and Software Quality Assurance Analysts and Testers	26,709	53,455	98,567	19,661	62,095
Clinical Laboratory Technologists and Technicians	6,983	9,178	18,437	3,027	4,476
Medical and Health Services Managers	6,010	12,617	27,658	4,003	6,844
Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians	5,100	5,375	13,367	3,588	4,300
Physical Therapists	2,736	5,209	15,914	1,794	3,280
Computer Hardware Engineers	1,550	2,099	1,711	1,088	2,163
Healthcare Support Workers, All Other	1,508	1,411	7,480	1,274	1,187
Medical Transcriptionists	1,156	516	2,254	217	189
Health Information Technologists, Medical Registrars, Surgical Assistants, and Healthcare Practitioners and Technical Workers	1,147	1,271	1,770	1,164	862
Medical Scientists, Except Epidemiologists	849	14,150	9,237	4,005	6,518
Biological Technicians	699	5,333	3,877	1,177	1,910
Natural Sciences Managers	393	3,738	6,363	2,400	5,369
Chemists	355	3,351	7,157	2,150	2,297
Chemical Technicians	306	1,138	3,829	1,165	1,135
Bioengineers and Biomedical Engineers	246	1,152	761	510	607
Biological Scientists, All Other	184	2,361	960	2,780	3,364
Epidemiologists	132	314	266	36	148
Biochemists and Biophysicists	107	4,219	3,909	2,347	2,556
Microbiologists	107	1,571	1,394	390	1,233
Total	95,020	193,111	397,981	78,086	151,052

Labor Analysis

Labor Costs

The table below shows the annual median wage for relevant occupations in the selected regions.

Occupation	Phoenix	Boston	New York	San Diego	San Francisco
Registered Nurses	\$80,601	\$91,849	\$92,831	\$112,507	\$154,734
Software Developers and Software Quality Assurance Analysts and Testers	\$102,053	\$120,164	\$121,588	\$118,934	\$146,045
Clinical Laboratory Technologists and Technicians	\$45,099	\$58,302	\$71,010	\$60,424	\$72,095
Medical and Health Services Managers	\$108,162	\$121,271	\$134,848	\$119,725	\$152,969
Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians	\$41,625	\$52,249	\$52,012	\$47,299	\$59,538
Physical Therapists	\$90,352	\$90,703	\$98,112	\$94,162	\$107,556
Computer Hardware Engineers	\$124,626	\$136,699	\$122,218	\$132,642	\$112,066
Healthcare Support Workers, All Other	\$40,083	\$42,184	\$38,796	\$51,834	\$54,210
Medical Transcriptionists	\$30,255	\$35,981	\$32,849	\$54,662	\$49,631
Health Information Technologists, Medical Registrars, Surgical Assistants, and Healthcare Practitioners and Technical Workers	\$48,989	\$64,527	\$69,371	\$43,430	\$64,464
Medical Scientists, Except Epidemiologists	\$81,788	\$97,770	\$101,500	\$100,776	\$125,999
Biological Technicians	\$43,472	\$56,180	\$53,646	\$47,674	\$59,437
Natural Sciences Managers	\$103,984	\$193,664	\$187,458	\$183,706	\$200,898
Chemists	\$64,297	\$98,105	\$90,584	\$70,034	\$102,808
Chemical Technicians	\$46,200	\$57,988	\$52,235	\$46,051	\$51,732
Bioengineers and Biomedical Engineers	\$90,314	\$111,347	\$103,981	\$85,467	\$122,975
Biological Scientists, All Other	\$83,987	\$95,014	\$88,642	\$91,582	\$103,386
Epidemiologists	\$59,458	\$85,746	\$115,950	\$90,700	\$108,207
Biochemists and Biophysicists	\$92,603	\$105,867	\$104,090	\$78,749	\$122,016
Microbiologists	\$61,030	\$116,982	\$91,160	\$76,565	\$125,163

Operating Cost Analysis

Healthcare and Biomedical Back Office Operation

The Annual Business Operating Cost Analysis has been prepared using the following parameters as an estimate for healthcare and biomedical operations in competitor markets. Component and custom analyses to match your company's operations can be provided upon request.

Assumptions

- \$1,500,000 personal property investment
- 10,000 square foot Suburban Class A, Lease
- Utilities (per month): Included in Lease
- 50 jobs (Bureau of Labor Statistics equivalent occupations)

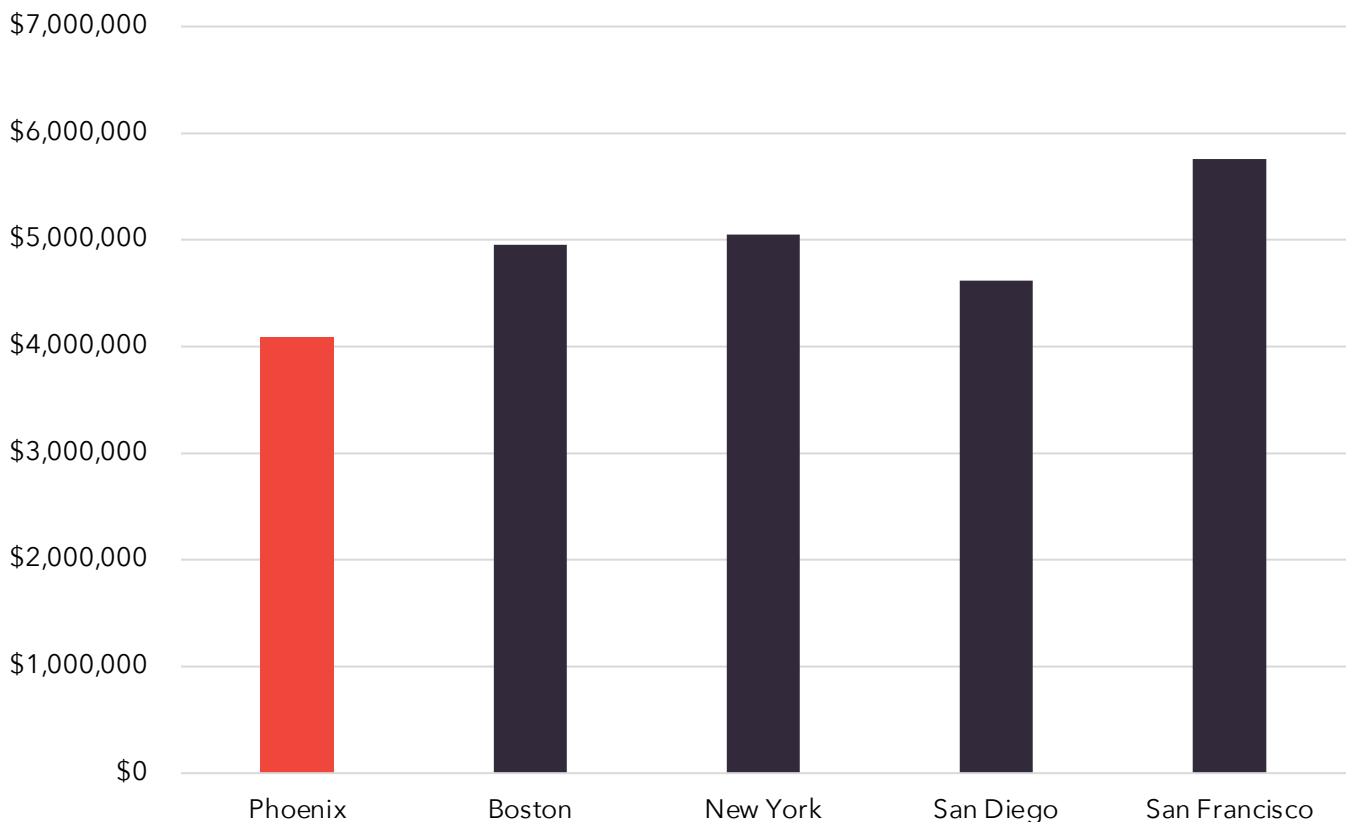
Occupations	Employment
Customer Service Representative	25
Sales Rep, Technical and Scientific Products	10
Software Developers and Software Quality Assurance Analysts and Testers	5
Computer User Support Specialists	4
First-Line Supervisors of Non-Retail Sales Workers	2
First-Line Supervisors of Office and Admin Workers	2
Human Resources Specialists	1
Sales Managers	1

Operating Cost Analysis

Annual Operating Cost - Healthcare Back Office

Metro	Employee Payroll	Fringe and Mandated Benefits	Real Estate Payments	Property Tax	Total Operating Cost	Index
Phoenix	\$3,077,709	\$691,175	\$316,400	\$789	\$4,086,072	100.0%
Boston	\$3,752,156	\$850,753	\$311,700	\$36,825	\$4,951,434	121.2%
New York	\$3,855,066	\$874,044	\$320,900	\$0	\$5,050,010	123.6%
San Diego	\$3,405,633	\$774,762	\$420,000	\$17,490	\$4,617,885	113.0%
San Francisco	\$4,076,281	\$924,987	\$739,200	\$17,700	\$5,758,168	140.9%

Annual Operating Cost by Region



Source: Applied Economics Metrocomp Tool, April 2022

Notes:

1. There is no personal property tax in New York.
2. The leasing term includes real property tax.

Operating Cost Analysis

Healthcare and Biomedical Research Operation

The Annual Business Operating Cost Analysis has been prepared using the following parameters as an estimate for healthcare and biomedical operations in competitor markets. Component and custom analyses to match your company's operations can be provided upon request.

Assumptions

- \$5,000,000 personal property investment
- 15,000 square foot Suburban Class A, Lease
- Utilities (per month): Included in Lease
- 40 jobs (Bureau of Labor Statistics equivalent occupations)

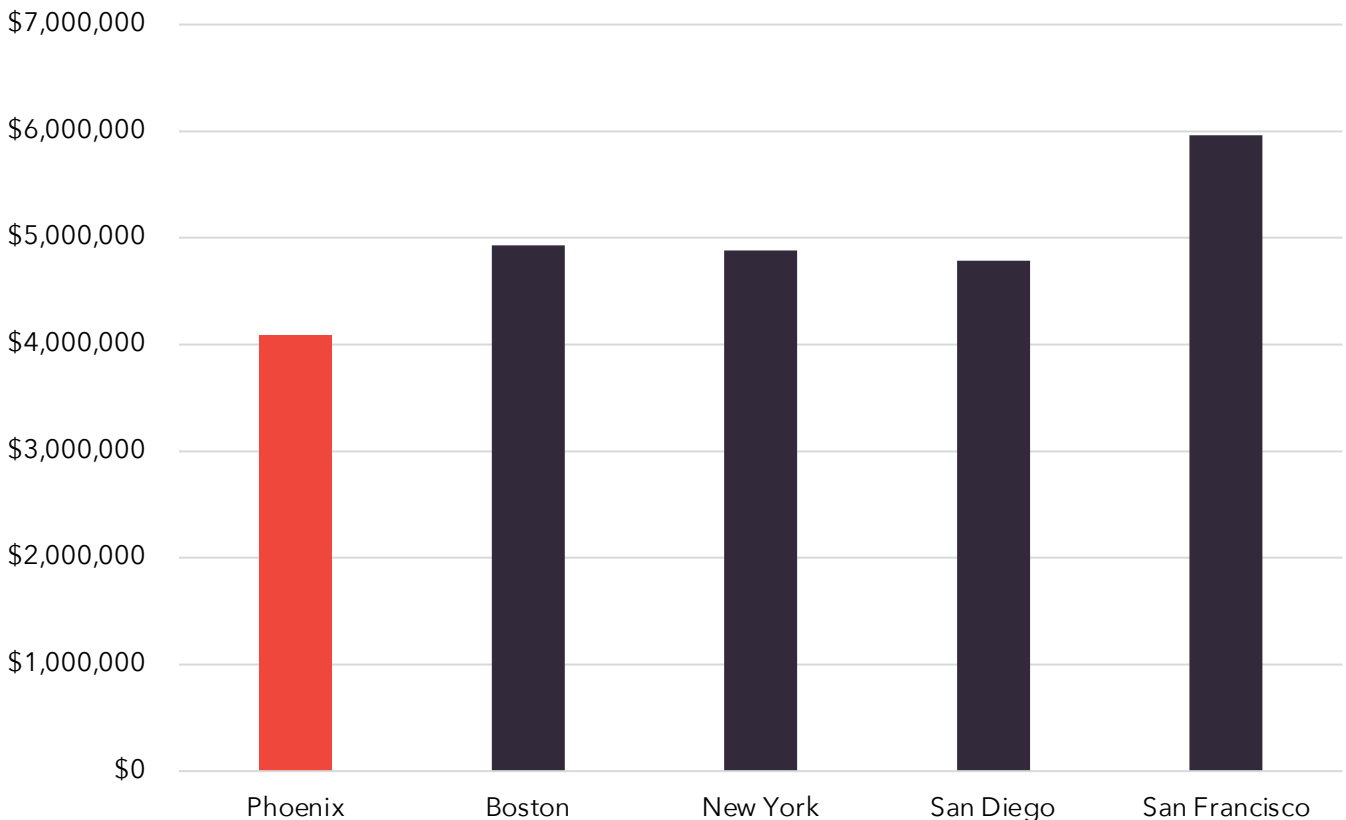
Occupations	Employment
Medical and Clinical Laboratory Technicians	15
Biomedical Engineers	10
Research Technicians	5
Sales Representative, Technical and Scientific Products	5
Chemists	2
Database Administrators	2
General and Operations Managers	1

Operating Cost Analysis

Annual Operating Cost - Research Facilities

Metro	Employee Payroll	Fringe and Mandated Benefits	Real Estate Payments	Property Tax	Total Operating Cost	Index
Phoenix	\$2,936,277	\$671,033	\$474,600	\$2,629	\$4,084,539	100.0%
Boston	\$3,516,204	\$824,102	\$467,550	\$122,750	\$4,930,606	120.7%
New York	\$3,554,595	\$844,667	\$481,350	\$0	\$4,880,612	119.5%
San Diego	\$3,313,579	\$786,339	\$630,000	\$58,300	\$4,788,218	117.2%
San Francisco	\$3,874,047	\$917,310	\$1,108,800	\$59,000	\$5,959,157	145.9%

Annual Operating Cost by Region



Source: Applied Economics Metrocomp Tool, April 2022

Notes:

1. There is no personal property tax in New York.
2. The leasing term includes real property tax.

Operating Cost Analysis

Healthcare and Biomedical Manufacturing Operation

The Annual Business Operating Cost Analysis has been prepared using the following parameters as an estimate for healthcare and biomedical operations in competitor markets. Component and custom analyses to match your company's operations can be provided upon request.

Assumptions

- \$25,000,000 personal property investment
- 250,000 square foot Industrial Manufacturing, Lease
- Utilities (per month):
 - Electric: 1,000KW/400,000KWh
 - Water: 50,000cf, 2 meter
 - Wastewater: 50,000cf, 2 meter
- 392 jobs (Bureau of Labor Statistics equivalent occupations)

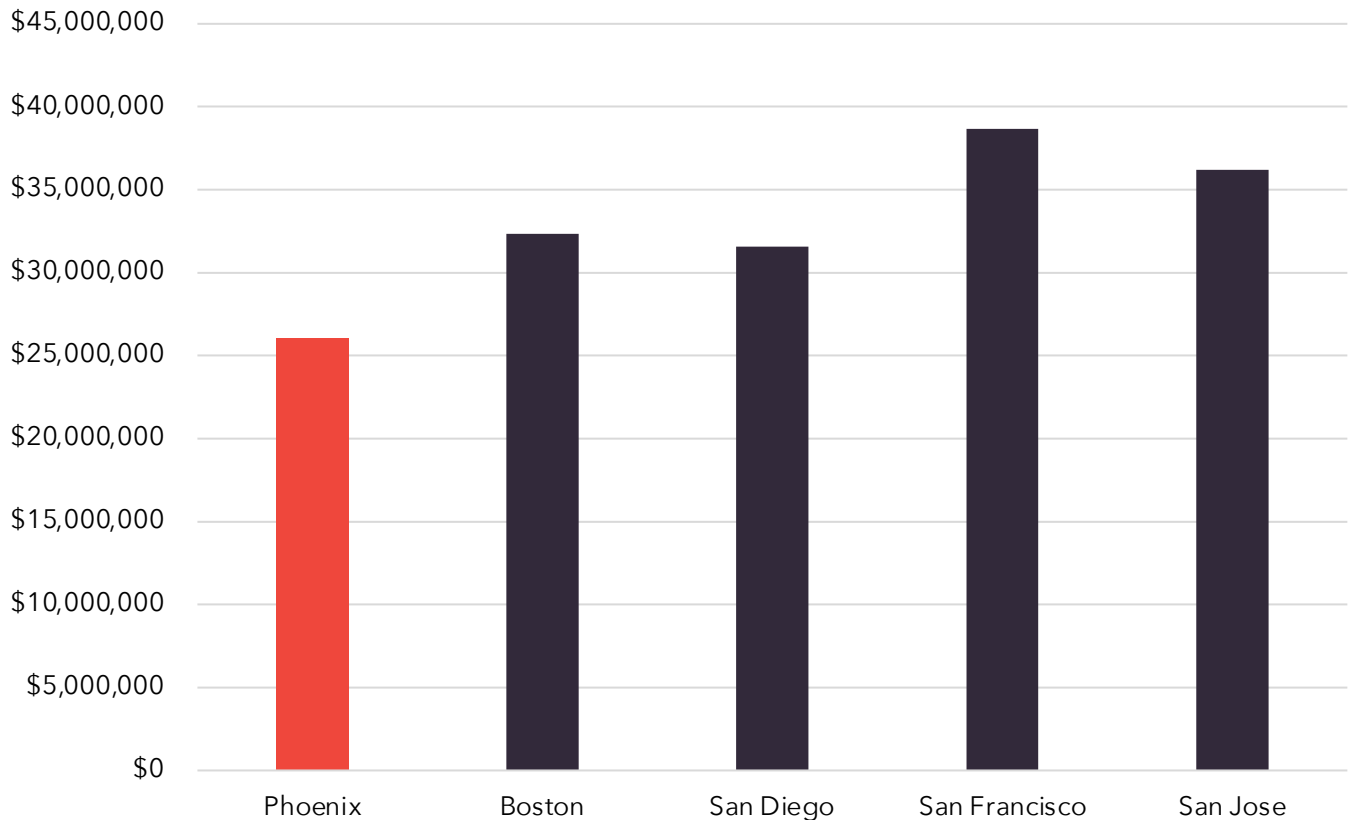
Occupations	Employment
Medical and Clinical Laboratory Technicians	212
Inspectors, Testers, Samplers, and Weighers	55
Laborers and Material Movers, Hand	51
Packers and Packagers, Hand	51
Shipping, Receiving, and Traffic Clerks	6
Biochemists and Biophysicists	5
General and Operations Managers	5
Biomedical Engineers	3
Logisticians	2
Industrial Production Managers	1
Human Resources Specialists	1

Operating Cost Analysis

Annual Operating Cost - Manufacturing Facilities

Metro	Employee Payroll	Fringe and Mandated Benefits	Utilities	Real Estate Payments	Property Tax	Total Operating Cost	Index
Phoenix	\$19,217,533	\$4,515,057	\$463,042	\$1,860,000	\$13,145	\$26,068,777	100.0%
Boston	\$22,896,709	\$5,572,782	\$1,092,809	\$2,157,500	\$613,750	\$32,333,551	124.0%
San Diego	\$21,639,428	\$5,478,186	\$1,124,054	\$3,030,000	\$291,500	\$31,563,168	121.1%
San Francisco	\$25,731,928	\$6,488,451	\$1,005,423	\$5,130,000	\$295,000	\$38,650,801	148.3%
San Jose	\$24,929,020	\$6,289,750	\$1,004,728	\$3,675,000	\$302,500	\$36,200,997	138.9%

Annual Operating Cost by Region



Taxes & Incentives

Arizona Tax Environment vs. Competitor Markets

Arizona has a very competitive tax and fringe/mandated benefits environment compared to other major healthcare and biomedical markets.

Metro	Sales Tax Rate	Corporate Income		Inventory Tax	Unemployment Insurance			Workers Comp. (Rate Per \$100 Payroll)
		Tax Rate	Basis		Rate (As % Of Payroll)	Wage Base	Max. Payment	
Phoenix	8.60%	4.90%	Net Income	No	2.00%	\$7,000	\$240	\$1.30
Boston	6.25%	8.00%	Net Income	Yes	2.42%	\$15,000	\$823	\$1.37
New York	8.88%	6.50%	Net Income	No	2.50%	\$11,600	\$504	\$3.08
San Diego	7.75%	8.84%	Net Income	No	3.40%	\$7,000	\$450	\$2.87
San Francisco	8.63%	8.84%	Net Income	No	3.40%	\$7,000	\$450	\$2.87

Source: Applied Economics Metrocomp Tool, April 2022



Statutory Incentives

Statutory Incentives

Even with the highly competitive tax environment in Greater Phoenix and Arizona, there are several tax incentives that can be utilized to mitigate operating costs. Some of the most relevant to the healthcare and biomedical industry are listed below. Please note that this is not a comprehensive list of all incentives available within the state of Arizona. Additionally, it should be noted that this document is only a guide for potential incentives. Actual incentives will depend on actual project parameters and varying program qualifications and requirements as determined by the Arizona Commerce Authority.

Quality Jobs Tax Credit

This program provides tax credits to employers creating a minimum number of net new quality jobs and making a minimum capital investment in Arizona. The Quality Jobs Tax Credit offers up to \$9,000 of Arizona income or premium tax credits over a three-year period for each net new quality job. The tax credit is equal to \$3,000 per qualified employment position, employed for each full taxable year of continuous employment for three years. If the allowable tax credit exceeds the income or premium tax liability, any unused amount may be carried forward for up to five consecutive taxable years. Employers must cover 65% of employee health insurance premium costs. Additional program qualifications are listed below.

\$9K

\$9,000 corporate income
tax credits per job
(\$3,000/employee/year)

10K

Capped at 10,000
jobs per year

65%

Employer must offer to pay at
least 65% of employee health
insurance premium

Urban

Min. New Jobs	County Median Wage	Maricopa	Min. Capex
25	100%	\$41,488	\$5,000,000
25	125%	\$51,860	\$2,000,000
25	150%	\$62,232	\$1,000,000
25	200%	\$82,976	\$500,000

Rural

Min. New Jobs	County Median Wage	Pinal	Min. Capex
5	100%	\$36,830	\$1,000,000
5	125%	\$46,038	\$500,000
5	150%	\$55,245	\$100,000

Statutory Incentives

Qualified Facility Tax Credit

- Targets headquarters or manufacturing facilities, including manufacturing-related research and development
- Offers refundable income tax credit equal to the lesser of:
 - 10% of the qualifying capital investment, or
 - \$20,000 per net new full-time employment position at the facility, or
 - \$30,000,000 per taxpayer
- Requires annual wages of greater than 125% of the state median wage for production occupations in urban areas (\$47,138); 100% in rural areas (\$37,710)
- At least 65% of benefits package covered by employer
- Minimum capital investment of \$250,000

Foreign Trade Zones (FTZ)

- Designated areas where imports can be stored without full customs formalities
- In Arizona, property is reclassified from Class 1 to Class 6, lowering assessment ratio from 17.5% to 5%
- Property tax savings of up to 71.4%

HB2822

This new legislation sets the full cash value of business and agricultural personal property initially classified during or after Tax Year 2022 to 2.5% of the property's acquisition cost. Properties that can benefit from the new legislation include shopping centers, golf courses, manufacturers, and other personal property devoted to commercial or industrial use that is not classified elsewhere, agricultural property, and personal property in a FTZ or MRZ.

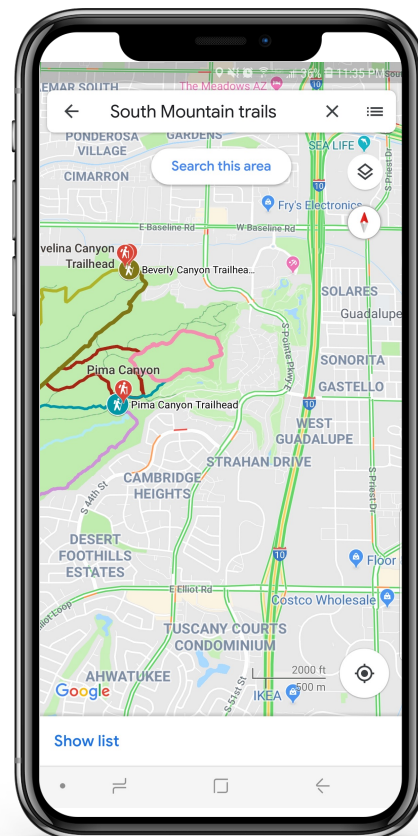


HEALTHCARE & BIOMEDICAL

Quality of Life

Parks & Recreation

Greater Phoenix is home to hundreds of parks and hundreds of miles of hiking, biking, and walking trails. The region is home to the largest municipal park in the United States, South Mountain Park/Preserve (SMP). SMP covers more than 16,000 acres. Other large parks in the region include the White Tank Mountain Regional Park, Camelback Mountain, Piestewa Peak, and the Superstition Mountains. Notable walking trails in the region include the canal system, Tempe Town Lake, the Greenbelt, and Papago Park.



Quality of Life

Cost of Living

Greater Phoenix is more affordable for companies and the people that make them successful.

Across all major buckets of expenses, Greater Phoenix is less expensive than all our peer markets.

Metro	Groceries	Utilities	Transportation	Health Care	Composite Index	Local Index
Phoenix	103.4	105.1	103.8	94.8	105.8	100.0%
Boston	118.3	126	104.3	118.8	148.6	140.5%
San Diego	113.2	120.1	131.2	108.3	146.3	138.3%
San Francisco	130.3	129.9	144	123.8	186.4	176.2%
New York City (Manhattan)	141.4	103.9	121.3	108.6	239.3	226.2%

Source: C2ER 2021 Q3 COLI

Housing

Greater Phoenix has an affordable housing market. It is significantly less expensive to own or rent in the Greater Phoenix area than in all or many peer markets.

Metro	Median Home Value	Index	Median Rent	Index
Phoenix	\$453,110	100.0%	\$1,921	100.0%
Boston	\$635,813	140.3%	\$2,725	141.9%
San Diego	\$902,655	199.2%	\$2,840	147.8%
San Francisco	\$1,461,773	322.6%	\$3,118	162.3%
New York City	\$590,839	130.4%	\$2,934	152.7%

Source: Zillow Home Value Index, March 2022; Zillow Rental Index, March 2022

Personal Income Tax

Greater Phoenix has the lowest personal income tax of those states that have a personal income tax across all income levels. With its affordable cost of living and low taxes rates, income goes further in Greater Phoenix.

State	\$50,000	\$150,000	\$270,000	\$500,000	\$1 Million or More
Arizona	2.98%*				
California	8.00%	9.30%	9.30%	11.30%	13.30%
Massachusetts	5.00%				
New York	5.85%	6.25%	6.85%	6.85%	9.65%

*2.55% for the first \$27,272 of income.

Source: Tax Foundation 2022.

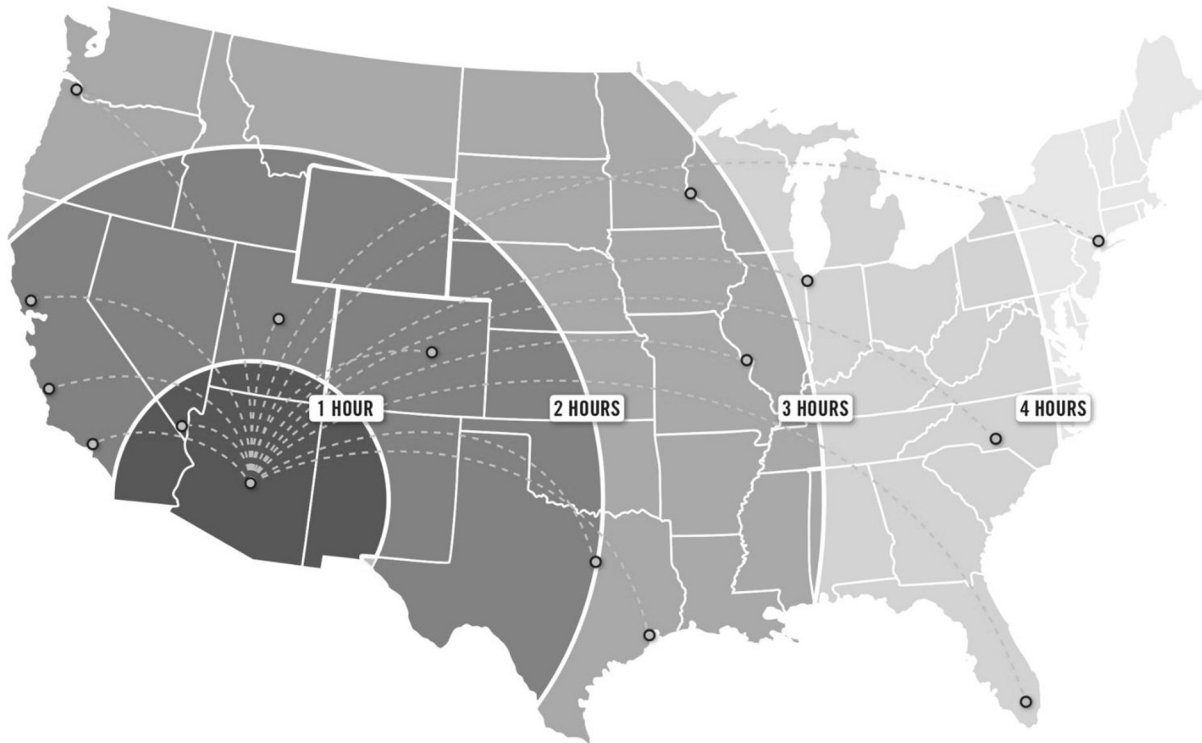
Notes: Tax rates are for single filers.

Key Infrastructure

Greater Phoenix Airport Access

Skybridge at Phoenix-Mesa Gateway Airport:

- An air logistics hub to ship high-value goods directly to consumers through a bonded facility incorporating Mexican and U.S. customs – will be the first of its kind in the interior U.S. for air freight activities.
- Ideally situated within the Southwestern U.S. to not only meet growing healthcare and medical demands in the Phoenix metropolitan area, but also to serve as a direct carrier to and from consumers in Mexico and across the nation.
- In addition, the proximity to ASU's Polytechnic Campus creates opportunities for partnerships to attract and retain workforce talent within the airport.



Phoenix Sky Harbor International Airport (PHX):

- 39 million passengers in 2021
- 408,285 landings and takeoffs in 2021
- Over 1,000 tons of cargo handled daily

Cargo Community at PHX:

- ABX
- American Airlines
- DHL
- FedEx
- South Air Cargo
- Southwest Airlines
- Swissport Cargo
- UPS
- West Air Cargo
- Worldwide Flight Services (WFS)

Key Infrastructure

Regional Rail Access

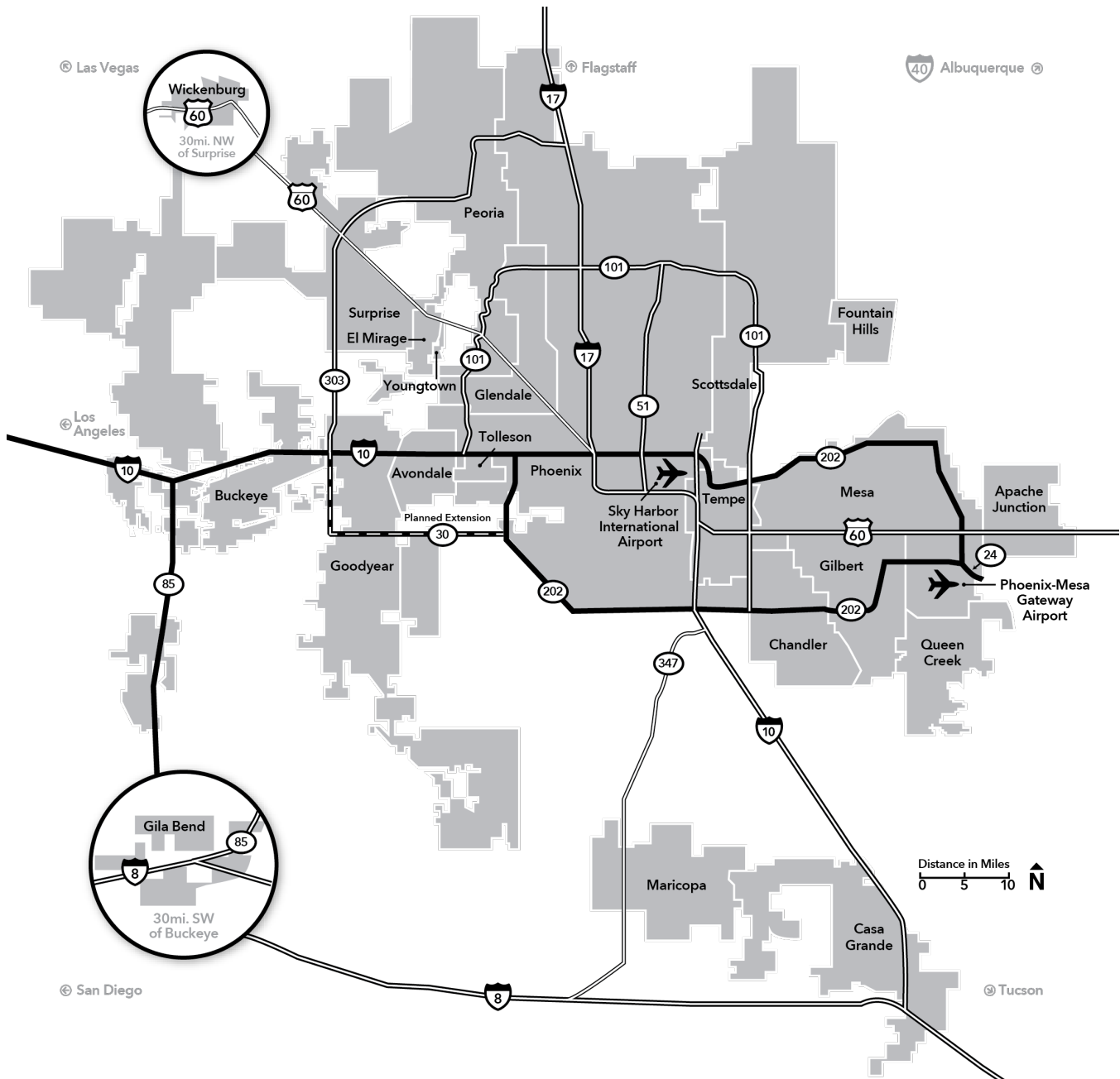
Greater Phoenix is served by two major railroads, Union Pacific and BNSF. The map below displays all major rail lines throughout the Southwest.



Key Infrastructure

Greater Phoenix Regional Highway Map

The map below displays existing and planned highway infrastructure in Greater Phoenix. The region's highways are well-planned and provide easy access to all the major submarkets in the region. In addition, proximity to Interstates 8 and 40 mean that access to California markets is seamless.



Rankings & Recognition

#1

Phoenix was ranked #1 by population growth from 2010 to 2020 among all US cities

#1

Arizona State University named America's Most Innovative Schools seven years in a row by U.S. News & World Report

#3

Sky Harbor International Airport ranked 3rd in the Wall Street Journal's "The Best of the Biggest Airports"

Top Tier

APS and SRP rank as top business service providers by J.D. Power and Associates for reliability

Top 10

In 2019, Arizona was ranked in the top 10 best states to start a business by WalletHub

Top 10

Greater Phoenix was ranked in the top 10 for low catastrophic and natural disaster risk in 2008

Top 20

In 2022, Scottsdale was listed in the top 20 happiest cities in the nation

Top 20

Arizona ranked in the top 20 states for doing business in 2021

Greater Phoenix Greater Together

People. Place. Technology.