

# **MARKET REPORT**

AEROSPACE IN GREATER ALBUQUERQUE, NEW MEXICO







# **TABLE OF CONTENTS**

- **1 STATE LEVEL ASSETS**
- **2 INDUSTRY CLUSTER PRESENCE**
- **3 OCCUPATIONAL PRESENCE AND WAGES**
- **4 TALENT DEVELOPMENT**
- **5 OPERATIONAL COST COMPARISON**
- **6 BUSINESS RESOURCES**



# **MARKET LANDSCAPE**

New Mexico has long been at the forefront of innovation with a unique set of intellectual capital assets. These assets, along with high concentrations of relevant talent, one of-a-kind testing facilities, and a world-class manufacturing climate have put the state at the leading edge of the rapidly growing space industry.

Capturing the largest share of aerospace employment in the state of New Mexico, aerospace industries *thrive* in Greater Albuquerque.

### Air Force Research Laboratory (AFRL)

Located in Albuquerque, New Mexico, the Air Force Research Laboratory (AFRL) is a scientific research organization dedicated to leading the nation's discovery, development, and integration of war-fighting technologies for air, space and cyberspace. With a combined budget of over \$384 million, the two directorates support space research development at Kirtland AFB in New Mexico.

**The Space Vehicles Directorate** is the U.S. Air Force's Center of Excellence for space technology research and development. Its mission is to develop and transition high pay-off space technologies to provide the military with space-based capabilities

**The Directed Energy Directorate** transitions technologies in four core technical competencies: laser systems, high-power electromagnetics, weapons modeling and simulation, and directed energy and electro-optics for space superiority.

### The Space and Missiles Center

The Space and Missiles Center is the development center of the Air Force Space Command and has its Advanced Systems and Development Directorate at Kirtland AFB in New Mexico. SMC is responsible for the Global Positioning System (GPS), military satellite communications, defense meteorological satellites, space launch and range systems, satellite control networks, space-based infrared systems and space situational awareness capabilities.

# Kirtland AFB Kirtland AFRL Sandia Kirtland AFRL Spaceport America White Sands Missile Range Hollomann AFB NM State University Pysical Science Lab

Greater Albuquerque MSA

3 Air Force Bases

3 National Labs

Aerospace Testing
Facilities with access
to Restricted Airspace

### Space Rapid Capabilities Office (RCO)

The Space Rapid Capabilities Office (RCO) is located at Kirtland AFB in New Mexico and seeks to quickly develop and produce prototypes. The mission of the Space RCO is to (1) to contribute to the development of low–cost rapid reaction payloads, busses, launch, and launch control capabilities in order to fulfill joint military operational requirements for on-demand space support and reconstitution; (2) to coordinate the execution of space rapid capabilities across the DOD with respect to planning, acquisition, and operations; and (3) to rapidly develop and field new classified space capabilities.

### **Sandia National Laboratories**

Located in Albuquerque, N.M., Sandia National Laboratories is a major driver for innovation within the region and the state. Aligned to space technologies, the Space Mission program delivers sensing solutions to address a wide range of complex, national security issues in space. In addition, Surveillance and Reconnaissance (S&R) designs, tests, and integrates cutting-edge technology to demonstrate, field, and support high-impact S&R systems for the end-user.

### Los Alamos National Laboratory

Los Alamos National Laboratory applies world-changing science and technology to current and emerging national and global security challenges. Today, the Intelligence and Space Research Division continues the laboratory's legacy of ensuring our nation's security, discovering the processes that govern space environments, studying the composition of planetary bodies, and capturing the most distant, most powerful cosmic explosions.

# **SPACEPORT AMERICA**

Spaceport America is a world-class facility providing unique and compelling advantages for testing and commercial operations. The facility is located in Southern New Mexico, is adjacent to the U.S. Army White Sands Missile Range (WSMR) and has already attracted some of the most respected companies in the space industry, including Virgin Galactic, its anchor tenant.

# **Restricted Airspace**

Spaceport America provides access to both the National Airspace System (NAS) and 6,000 square miles of restricted airspace from surface to unlimited. This unique environment creates a quiet zone with minimal commercial aviation traffic that reinforces privacy and allows the safe testing of new designs with fewer regulatory delays.

# **Flexible Services**

Streamlined policies and exemplary partnerships with U.S. Army White Sands Missile Range and other organizations allow for unique abilities to source equipment, materials and capabilities on an á la carte basis at preferred rates.

# **Communications**

Spaceport America facilities are connected by high-speed fiber optic cable and remote areas of the campus can be connected using a point-to-point air fiber backhaul. Because of the proximity to White Sands Missile Range, spaceport personnel can facilitate access to radio frequencies typically reserved for Department of Defense applications when required for specific missions.

## **Perfect Climate**

The warm and stable climate in southern New Mexico is ideal for aerospace operations, with an annual average of 340 days of flyable skies and less than 10 inches of precipitation. High elevation and low humidity reduce corrosion and permit year-round outdoor work. Current winds aloft are forecast with on-site SODAR and radiosonde capabilities.

# **Privacy & Security**

Because of the remote location, there is minimal public exposure and protection for proprietary technology. Conduct operations safely and securely, and release information on your terms—or not at all. Meanwhile, armed security force, EMT-qualified firefighters, and IT Security team are available 24/7.

# **Unmanned Aerial Systems Testing**

For unmanned aerial systems (UAS) customers, Spaceport America will facilitate a streamlined path toward experimental or type certification and/or COA through a special partnership with nearby New Mexico State University Physical Science Laboratory UAS Flight Test Center. By flying initially in restricted airspace, customers can reduce the risk of flight tests on new and unproven designs.

Source: Spaceport America

# COSMIC TRAIL 2 INDUSTRY CLUSTER PRESENCE

METRO AREA	2021 Jobs	2021 Location Quotient			
Tucson, AZ	18,145	3.16			
Albuquerque, NM	16,061	2.77			
Tulsa, OK	14,467	2.21			
Dallas, TX	85,118	1.50			
Phoenix, AZ	10,812	1.14			
Oklahoma City, OK	38,096	1.14			
Houston, TX	49,295	1.07			
San Antonio, TX	11,125	0.70			
Austin, TX	8,871	0.51			
McAllen, TX	2,049	0.43			
El Paso, TX	1,654	0.40			
Soutwestern Peer Total	255,695				
United States	2,243,037				

Note: city names reflect metro areas

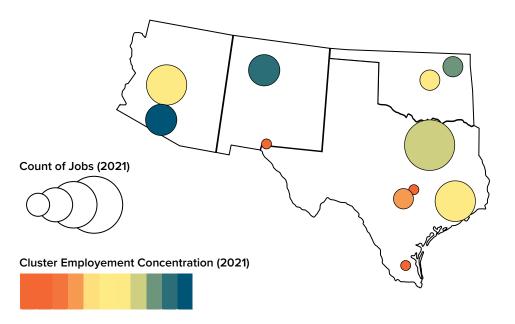
Source: Lightcast Q2 2022 with Author Calculations

In Greater Albuquerque, aerospace cluster industries employ 16,000 and is nearly 3x more concentrated regionally than within the Nation. These industries have enjoyed comfortable expansions thanks to the unique assets anchored within the region. In fact, growth within cluster industries increased by 12.3 percent (1,758 jobs) from 2016 to 2021, outpacing the national growth rate of 5.2 percent.

Contributing over \$2 billion to regional GDP, job growth within these industries continue to position Greater Albuquerque as a location of choice, with density of qualified skills and occupational presence.

Shown below, with access to strong federal and private sector assets, Greater Albuquerque holds the second highest location quotient for metropolitan areas in the Southwest with populations of more than 500,000.

# 2021 Job Counts and Concentration



1Location Quotient: Location quotients (LQ) are a useful way of quantifying how concentrated a particular industry, cluster, or occupation is in a region as compared to a larger geographic area. An LQ of 1 is equally concentrated within both areas. An LQ of 1.5 indicates that the smaller geographic region is 50% more concentrated regionally, and an LQ of 2 indicates the geographic region is twice as concentrated regionally.

# **MAJOR EMPLOYERS**



### **Industry Presence and Assets**

- Aerospace Component Manufacturing
- Computer Systems Design and Programming
- Electrical Equipment Manufacturing
- Engineering Services
- Innovation Space
- Kirtland Airforce Base
- Research and Development
- Sandia National Labs
- Sandia Science and Technology Park

EMPLOYER	Emp. Estimate
Kirtland Air Force Base	33,000
Sandia National Labs	14,000
Blue Halo	300
SolAero Technologies Corp	230
Eclipse Aerospace	200
BAE Systems	180
Aerospace Corp	180
Fiore Industries, Inc.	160
Boeing	130
AeroParts Manufacturing	100



# **INVESTING IN ALBUQUERQUE**

In 2021, BlueHalo, an integrated national security and technology company, chose the Greater Albuquerque region for a new, 200,000 square foot state-of-the-art campus to facilitate BlueHalo's acceleration into production and its long-term commitment to investing in New Mexico and creating high-wage manufacturing jobs.



We are excited about the selection of our new franchise technology campus in Albuquerque. This site represents BlueHalo's long-term commitment to New Mexico and will not only enhance the company's ability to support current and future programs at Kirtland Air Force Base but will also serve as one of the major hubs across the BlueHalo Labs national infrastructure designed to fuel future innovations to solve some of the most complex technology problems and transition those to full production.



Jonathan Moneymaker Chief Executive Officer, BlueHalo

# **INDUSTRY CLUSTER**

With 16,000 people employed in 2021, the aerospace industry cluster within the Albuquerque MSA maintains a significant regional presence. Shown below, sub-industries that complement this presence are highlighted. As shown, these industries hold a notable footprint within the region and have experienced significant growth over the past five years. Most recently, the mix of industries shown below have experienced 12.5 percent job growth 2016-2021.

The table below highlights the employment levels for 6-digit NAICS industries alongside 5-year job growth scenarios within the Albuquerque MSA.

Description	2016	2017	2018	2019	2020	2021	5-year Job Growth (%)	2021 GRP
Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)	11,553	11,949	12,528	13,498	13,966	14,082	21.9%	\$2,190,000,000
Industrial Machinery and Equipment Merchant Wholesalers	407	366	394	406	374	368	-9.6%	\$63,745,843
Other Support Activities for Air Transportation	354	372	413	440	316	333	-5.9%	\$40,774,678
Fabricated Structural Metal Manufacturing	133	174	179	190	185	187	40.4%	\$18,898,391
Ornamental and Architectural Metal Work Manufacturing	123	129	153	151	157	156	26.0%	\$11,217,082
Industrial Supplies Merchant Wholesalers	178	176	187	215	161	153	-13.6%	\$27,124,294
Aircraft Engine and Engine Parts Manufacturing	109	50	99	99	119	149	36.2%	\$36,424,686
Other Aircraft Parts and Auxiliary Equipment Manufacturing	109	152	153	166	166	133	22.2%	\$13,508,961
Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing	719	549	502	387	224	132	-81.6%	\$35,318,097
Aircraft Manufacturing	360	297	186	120	100	108	-70.1%	\$30,759,258
Top Employment Industries	14,045	14,214	14,795	15,673	15,768	15,800	12.5%	\$2,467,771,290
Total, All industries	14,303	14,529	\$15,133	15,997	16,051	16,061	12.3%	
Top Employment Industries as a share of Total Employment, All Aerospace Cluster Industries	98.2%	97.8%	97.8%	98.0%	98.2%	98.4%		



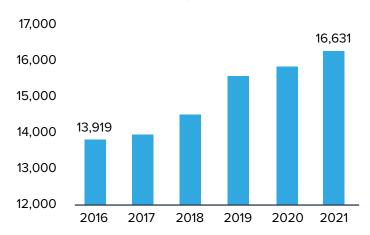
# GREATER ALBUQUERQUE IS A HOTSPOT FOR SKILLED TALENT that supports aerospace research, development and manufacturing for aerospace, electronics and semiconductors.

# **FIVE-YEAR GROWTH OVERVIEW**

In Greater Albuquerque, innovation anchors opportunity and drives growth within aerospace industry sectors.

Shown below, the region's mix of specialized talent which supports a variety of aerospace operations has expanded 19.5 percent over the last five-years. Historical growth within these occupations has deepened Greater Albuquerque's concentrations of relevant talent. Shown below, select occupations are well above national averages for employment concentration.

# Job Growth, 2016-2021



# **Job Concentration**

**Aerospace Engineers** 



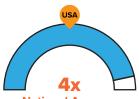
### **National Average**

The national average for an area this size is 155 employees, while there are 482 here. Industrial Engineering Technicians



# **National Average**

The national average for an area this size is 163 employees, while there are 608 here. Computer and Information Research Scientists



## **National Average**

The national average for an area this size is 86 employees, while there are 360 here.

# **OCCUPATIONAL PRESENCE**



18%

Growth in Engineering Talent



**22**%

Growth in Computer and Technical Talent



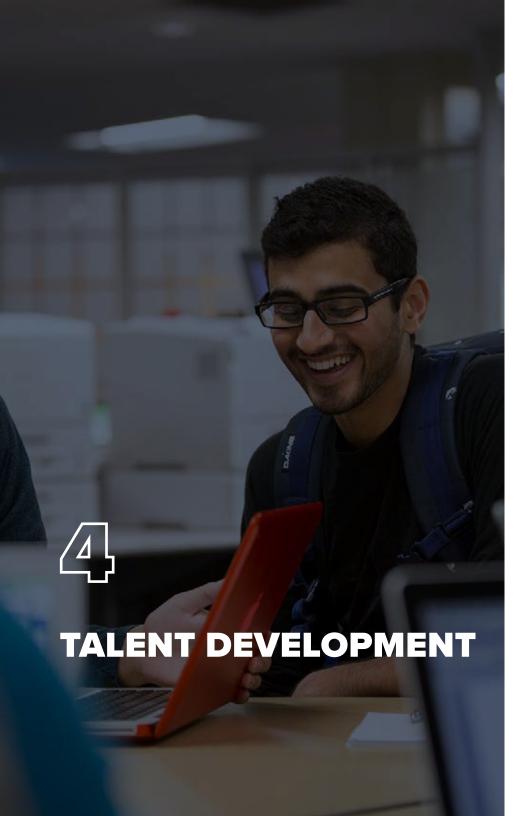
**Production Talent** 

Occupation Description	2016	2017	2018	2019	2020	2021	5-Year Job Growth	2021 LQ	Avg. Hourly Earnings
Skilled Engineering Talent									
Aerospace Engineers	426	407	400	405	441	482	13.1%	3.1	\$63.25
Computer Hardware Engineers	1,339	1,280	1,189	1,276	1,132	1,003	-25.1%	4.99	\$55.55
Electrical Engineers	1,157	1,128	1,124	1,133	1,192	1,267	9.5%	2.61	\$56.64
Industrial Engineers	332	352	382	415	408	478	44.2%	0.62	\$53.57
Materials Engineers	232	253	259	272	254	226	-2.7%	3.99	\$69.97
Mechanical Engineers	903	955	1,057	1,168	1,235	1,327	46.9%	1.82	\$59.67
Engineers, All Other	883	961	1,042	1,199	1,264	1,450	64.2%	3.57	\$60.32
Cohort Total	5,271	5,336	5,452	5,868	5,926	6,231	18.2%		
Skilled Computer and Technical Talent									
Computer and Information Systems Managers	523	512	514	549	596	630	20.6%	0.5	\$62.00
Information Security Analysts	334	402	442	537	622	758	126.8%	1.82	\$57.11
Computer and Information Research Scientists	285	266	300	338	340	360	26.4%	4.16	\$59.17
Computer Network Architects	289	288	287	258	262	244	-15.6%	0.55	\$48.61
Computer Programmers	448	437	495	527	520	447	-0.2%	1.13	\$37.35
Software Developers	1,265	1,224	1,298	1,379	1,441	1,489	17.7%	0.41	\$53.46
Software Quality Assurance Analysts and Testers	419	406	422	431	437	443	5.7%	0.88	\$55.12
Cohort Total	3,562	3,535	3,758	4,019	4,217	4,371	22.7%		
Skilled Production Talent									
Aerospace Engineering and Operations Technologists and Technicians	81	100	91	101	107	137	70.2%	4.4	\$28.28
Electrical and Electronic Engineering Technologists and Technicians	762	712	640	600	531	503	-34.1%	1.89	\$36.55
Electro-Mechanical and Mechatronics Technologists and Technicians	27	34	48	70	127	222	718.4%	7.35	\$34.49
Industrial Engineering Technologists and Technicians	351	360	356	382	413	608	73.3%	3.73	\$35.92
Mechanical Engineering Technologists and Technicians	94	92	88	99	110	119	26.7%	1.13	\$38.74
Calibration Technologists and Technicians	59	65	68	71	74	65	9.0%	2.95	\$23.78
Engineering Technologists and Technicians, Except Drafters, All Other	850	875	970	1,078	1,208	1,145	34.8%	5.87	\$38.97
Aircraft Mechanics and Service Technicians	276	278	259	284	262	268	-3.1%	0.8	\$30.74
Avionics Technicians	20	19	17	16	21	19	-5.8%	0.36	\$29.21
Cohort Total	2,520	2,534	2,538	2,700	2,852	3,085	22.4%		
Primary Production and Maintenance									
Sheet Metal Workers	352	368	364	383	354	289	-18.0%	0.91	\$27.90
Industrial Machinery Mechanics	559	585	598	644	701	697	24.9%	0.71	\$24.47
Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	23	40	46	69	107	146	543.8%	1.65	\$35.24
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	234	210	261	294	345	497	112.1%	0.68	\$18.23
Engine and Other Machine Assemblers	13	11	9	13	16	8	-38.3%	0.06	\$19.79
Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	54	50	45	42	44	46	-14.8%	0.25	\$15.22
Machinists	327	319	320	349	313	301	-8.0%	0.35	\$22.31
Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	176	182	202	231	213	145	-17.2%	0.41	\$13.58
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	28	25	23	23	26	6	-77.9%	0.07	\$18.59
Inspectors, Testers, Sorters, Samplers, and Weighers	601	647	675	728	658	646	7.3%	0.45	\$23.23
Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	198	196	215	236	189	163	-17.9%	0.43	\$20.68
Cohort Total	2,565	2,633	2,757	3,015	2,966	2,944	14.8%		
Regional Total, All Cohorts	13,919	14,038	14,505	15,602	15,961	16,631	19.5%		

# **COMPARATIVE OCCUPATIONAL PRESENCE**

Occupation Description	Albuquerque, NM	Tucson, AZ	Dallas, TX	Phoenix, AZ	Oklahoma City, OK	Houston, TX	San Antonio, TX	Los Angeles, CA	Colorado Springs, CO	San Diego, CA
Computer Hardware Engineers	1,339	167	1,363	944	183	548	119	3,347	870	2,413
Software Developers	1,265	4,009	32,840	17,669	2,694	14,174	4,013	41,093	5,056	14,780
Electrical Engineers	1,157	1,433	4,095	2,997	500	4,022	885	7,821	354	2,844
Mechanical Engineers	903	1,403	5,684	2,688	851	7,626	960	8,789	308	2,993
Engineers, All Other	883	339	2,553	1,091	823	2,869	613	6,093	384	1,867
Engineering Technologists and Technicians, Except Drafters, All Other	850	185	1,507	1,074	443	2,081	509	2,595	89	1,464
Electrical and Electronic Engineering Technologists and Technicians	762	339	3,512	2,240	787	4,092	823	5,784	239	3,119
Inspectors, Testers, Sorters, Samplers, and Weighers	601	857	13,951	5,631	1,489	15,394	2,375	22,607	427	4,720
Industrial Machinery Mechanics	559	335	5,156	2,140	1,357	11,460	1,715	7,517	395	1,936
Computer and Information Systems Managers	523	690	7,413	5,321	1,488	5,150	1,149	14,816	630	4,306
Computer Programmers	448	534	8,517	3,335	667	4,336	892	9,872	315	3,328
Aerospace Engineers	426	207	3,168	1,631	720	2,607	231	4,789	221	1,598
Software Quality Assurance Analysts and Testers	419	189	5,939	1,452	811	2,359	797	6,178	707	2,815
Sheet Metal Workers	352	523	3,429	2,297	2,450	2,619	1,115	3,954	310	1,605
Industrial Engineering Technologists and Technicians	351	114	1,644	1,329	464	1,429	233	1,270	205	558
Information Security Analysts	334	206	3,582	2,152	340	1,399	704	2,276	671	757
Industrial Engineers	332	919	5,808	2,994	504	4,374	1,072	8,861	333	3,070
Machinists	327	749	5,571	3,239	1,177	9,559	999	15,883	373	3,701
Computer Network Architects	289	187	6,031	2,710	346	2,474	981	4,964	604	1,672
Computer and Information Research Scientists	285	53	566	102	328	182	143	977	58	935
Aircraft Mechanics and Service Technicians	276	1,105	8,120	3,293	2,353	3,375	1,548	5,063	261	1,634
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	234	506	9,433	3,400	875	5,524	799	13,060	486	3,962
Materials Engineers	232	104	632	710	111	780	160	1,009	57	294
Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	198	158	3,584	1,632	757	3,784	1,017	5,248	164	1,067
Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	176	136	3,191	1,096	576	2,907	460	2,258	137	277
Mechanical Engineering Technologists and Technicians	94	137	1,043	727	220	1,568	179	1,620	37	461
Aerospace Engineering and Operations Technologists and Technicians	81	27	542	659	34	133	113	606	28	657
Calibration Technologists and Technicians	59	18	200	105	47	502	56	181	12	59
Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	54	46	921	758	157	1,364	109	3,868	72	433
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	28	27	606	330	90	647	237	1,503	64	163
Electro-Mechanical and Mechatronics Technologists and Technicians	27	25	481	274	25	381	50	802	5	122
Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	23	13	2,007	663	45	112	393	1,314	57	1,138
Avionics Technicians	20	196	1,468	252	336	249	109	604	25	226
Engine and Other Machine Assemblers	13	5	386	165	228	638	92	613	57	127
Total	13,919	15,940	154,945	77,099	24,273	120,719	25,650	217,235	14,014	71,098

Note: City names reflect metro areas

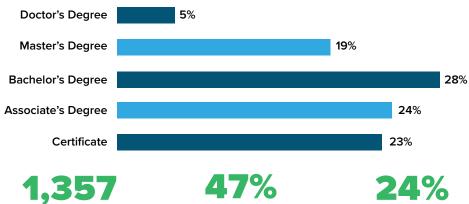




Helping to fuel the region's specialization in aerospace, secondary-education pipelines provide a direct connection to employment for the future workforce.

Within the State of New Mexico, 2,400 students graduate within programs closely linked to aerospace industries, 46 percent coming from the institutions within Greater Albuquerque.

# **Graduate Output (2020)**



Total Completions

Completions 2 years

Completions 2 years or less **Advanced Degrees** 

Program Output	Emp. Completions 2020
Engineering	456
Computer and Information Sciences	290
Mechanic and Repair Technologies	188
Mathematics and Statistics	135
Precision Production	122
Physical Sciences	124
Engineering Technologies	41
Regional Total	1,357



# **Workforce Profile**

Skilled Computer and Technical Talent	
Software Developers and Software Quality Assurance Analysts	15
Computer Programmers	10
Computer Network Support Specialists	10
Computer Systems Analysts	10
Database Administrators	5
Information Security Analysts	5
Computer Network Architects	5

Office and Administrative Management							
Information Systems Managers	5						
Project Administrators	5						
General Operations Managers	2						
Sales Representative	2						
Bookkeeping, Accounting, and Auditing Clerks	2						
Accountants and Auditors	2						
Human Resource Specialists	2						
Total Workforce	80						

# **INVESTMENT PROFILE**

**Center for Aerospace Tech and Computer Systems Design** 

The following investment profile has been prepared based on a hypothetical production facility, reflective of the following requirements.

**Building Type:** Class A Office **Building Sq. Ft.:** 20,000

Status: Lease

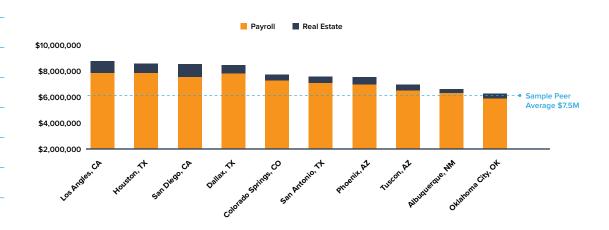
**Payroll Costs** 

Real Estate Costs

12.5%

Less than Peer Average 47.3%

Less than Peer Average



	ABQ	TUCSON	DALLAS	PHOENIX	OKLAHOMA CITY	HOUSTON	SAN ANTONIO	LOS ANGELES	COLORADO SPRINGS	SAN DIEGO
Payroll	\$6,535,942	\$6,717,734	\$8,104,346	\$7,213,856	\$6,205,722	\$8,143,762	\$7,328,547	\$8,158,634	\$7,518,098	\$7,864,189
Real Estate	\$350,000	\$498,200	\$650,200	\$606,400	\$404,000	\$759,600	\$556,600	\$980, 00	\$519,000	\$988,800
Total	\$6,885,942	\$7,215,934	\$8,754,546	\$7,820,256	\$6,609,722	\$8,903,362	\$7,885,147	\$9,138,834	\$8,037,098	\$8,862,989
% Savings	0.0%	4.8%	27.1%	13.6%	-4.0%	29.3%	14.5%	32.7%	16.7%	28.7%

Source: Lightcast Q2 2022 with Author Calculations, Q4 National Real Estate Market Reports

Note: The above chart only includes costs associated with labor and real estate. It does not include costs factors for property taxes, employee benefits, or transportation costs. As such figures should not be interpreted as total annual operating cost. Labor costs are a function of median hourly earnings for each occupation and assumes 2,080 hours/year.





**52**%



**Total Aerospace Completions** 

**Certificate Completions** 

**Associate's Degree Completions** 

As the largest community college in the state of New Mexico, Central New Mexico Community College (CNM) is ranked #1 among peers for associate degree and certificates for Hispanics and Native Americans. With innovative programs like its CNM Ingenuity program, CNM offers accelerated approaches to education and job training in key workforce areas, as well as wrap-around support for entrepreneurs and cooperative ventures that foster economic development and job creation in the region.

# **PROGRAM SPOTLIGHT**

Unmanned Aircraft Systems (UAS)

Within the Advanced Technology Center at CNM, the Unmanned aircraft systems (UAS) program gives students direct access to industry standards.

This program introduces the fundamentals of UAS safety and regulation and emphasizes the use of UAS for high-precision measurement and mapping and other applications including construction management, surveying, marketing and others.

**ADVANCED TECHNOLOGY CENTER** 

80,000

square feet
state-of-the-art laboratory and classroom
space.





**Total Aerospace Completions** 



**54%** 

Bachelor's Degree
Completions



Master's Degrees +
Completions

The University of New Mexico is a comprehensive, Carnegie designated Research 1 University and offers a degree in aerospace engineering which prepares students to be leaders in research, design, construction and analysis of aircraft, satellites, manned and unmanned space and aerial vehicles, and the systems they incorporate.

# INNOVATION



COSMIAC is an innovative research center at The University of New Mexico (UNM) in Albuquerque, NM. COSMIAC serves as a Tier-2 Research Center at the School of Engineering offering 15,000 square feet of innovation research space including a cleanroom and laboratories.

COSMIAC promotes innovation, including collaborative efforts with government, business and academic institutions on grant and contract proposals. Some of COSMIAC's customers include the US Air Force, NASA, Leidos, Northrop Grumman and SAIC.

# **COSMIAC:** Key Areas of Specialization

- Agile Manufacturing
- C-UAS
- Embedded and Reconfigurable Systems
- RF Systems/Propagation
- Small Satellite Development
- Space Radiation Effects Mitigation
- Virtual Reality and Augmented Reality



# **BUSINESS RESOURCES**

### THE HIGH WAGE JOB TAX CREDIT

A taxpayer who is an eligible employer may apply for and receive a tax credit for each new high-wage economic-base job. The credit amount equals 8.5% of the wages and benefits paid for each new economic-base job created, up to \$12,750 per job.

### **TECHNOLOGY JOBS AND R&D TAX CREDIT**

Employers conducting qualified research at a qualified facility and making qualified expenditures of no more than \$5 million in New Mexico is eligible to claim the basic technology jobs and research and development tax credit of 5 percent against the taxpayer's compensating tax, withholding tax or gross receipts tax, excluding local option gross receipts tax. The tax credit will double to 10 percent for expenditures in facilities located in rural New Mexico.

### MANUFACTURING INVESTMENT TAX CREDIT

New Mexico tax law provides for a credit equal to 5 percent of the value of qualified equipment and other property used directly and exclusively in a manufacturing operation. The credit can be applied against compensating tax, gross receipts tax and withholding tax. Gross receipts tax acts very much like a sales tax; the Albuquerque rate is 7.750 percent

# LOCAL ECONOMIC DEVELOPMENT ACT (LEDA)

The Local Economic Development Act allows the state and local governments to offer limited, discretionary financial participation in qualified economic development projects. These funds are targeted toward private sector, economic—base businesses, that can demonstrate additional funding is needed to close a competitive cost gap. LEDA discretionary funds can only be used for reimbursement of eligible expenditures tied to land, building(s) and/or infrastructure. LEDA funds cannot be used for equipment or working capital.

# **INDUSTRIAL REVENUE BOND (IRB)**

New Mexico's property taxes are among the lowest in the nation for both real and personal property. Property taxes can be further abated using an Industrial Revenue Bond (IRB).

# JOB TRAINING INCENTIVE PROGRAM (JTIP)

The New Mexico Job Training Incentive Program is a highly flexible state program that provides on—the—job training. Customized training may be provided by post—secondary educational institutions, company trainers, or outside trainers.

# TARGETED BUSINESS RESOURCES

### AIRCRAFT MANUFACTURING AND MAINTENANCE SERVICES TAX DEDUCTION

Receipts of an aircraft manufacturer or affiliate from selling aircraft or aircraft parts; services performed on aircraft or aircraft components; and aircraft flight support, pilot training or maintenance training services, may be deducted from gross receipts. In addition, receipts from selling aircraft parts or maintenance services for aircraft parts, may be deducted from gross receipts.

# SPACE GROSS RECEIPTS TAX DEDUCTION

In New Mexico, businesses may deduct receipts from launching, operating, and recovering space vehicles or payloads; preparing a payload; and operating a spaceport. Additionally, receipts from the provision of research, development, testing and evaluation services for the U.S. Air Force operationally responsive space program may be deducted from gross receipts.

## DIRECTED ENERGY SYSTEMS GROSS RECEIPTS TAX DEDUCTION

Contractors, other than a national laboratory, that provide qualified research and development services for directed energy and satellite-related inputs to the United States department of defense, may deduct their receipts derived from such inputs and services. This deduction only applies to contracts with the department of defense entered on or after January 1, 2016

### COMMERCIAL OR MILITARY AIRCRAFT TAX DEDUCTION

Deductions on receipts from the sale of or the maintaining, refurbishing, remodeling or otherwise modifying a commercial or military carrier over 10,000 lbs. gross landing weight.

### MILITARY ACQUISITION PROGRAM TAX DEDUCITON

Receipts from transformational acquisition programs performing research and development, testing, and evaluation at New Mexico major range and test facility bases pursuant to contracts entered into with the U. S. Department of Defense may be deducted from gross receipts.

# APPENDIX A COMPARATIVE OCCUPATIONAL WAGE ANALYSIS

Occupation Description	Albuquerque, NM	Tucson, AZ	Dallas, TX	Phoenix, AZ	Oklahoma City, OK	Houston, TX	San Antonio, TX	Los Angeles, CA	Colorado Springs, CO	San Diego, CA
Materials Engineers	\$72.00	\$38.42	\$49.14	\$48.90	\$41.60	\$60.72	\$39.55	\$48.22	Insf. Data	\$47.22
Aerospace Engineers	\$63.20	\$47.62	\$49.00	\$73.03	\$52.01	\$66.28	\$47.93	\$62.67	\$60.98	\$54.67
Engineers, All Other	\$60.95	\$59.14	\$49.13	\$47.64	\$45.97	\$52.76	\$47.65	\$49.09	\$58.52	\$49.09
Computer and Information Research Scientists	\$60.93	\$42.51	\$70.77	\$99.99	\$39.99	\$69.96	\$57.99	\$65.76	\$47.61	\$64.45
Computer and Information Systems Managers	\$60.44	\$58.44	\$76.53	\$72.98	\$57.97	\$76.74	\$63.37	\$78.89	\$74.67	\$79.49
Electrical Engineers	\$57.95	\$46.68	\$48.55	\$46.65	\$46.72	\$49.17	\$45.34	\$59.15	\$46.18	\$52.36
Mechanical Engineers	\$57.90	\$46.68	\$47.84	\$47.53	\$39.94	\$60.49	\$45.78	\$48.44	\$44.82	\$48.88
Information Security Analysts	\$57.67	\$47.27	\$49.36	\$49.29	\$38.11	\$49.05	\$47.29	\$57.43	\$47.92	\$49.33
Software Quality Assurance Analysts and Testers	\$57.50	\$37.89	\$46.90	\$38.45	\$23.77	\$47.62	\$38.40	\$47.76	\$44.93	\$47.84
Computer Hardware Engineers	\$56.65	\$47.84	\$59.02	\$61.33	\$60.90	\$62.23	\$55.97	\$65.58	\$61.79	\$79.32
Software Developers	\$49.21	\$47.47	\$57.48	\$49.58	\$46.18	\$49.57	\$48.39	\$61.40	\$50.16	\$62.90
Industrial Engineers	\$48.97	\$46.68	\$47.78	\$47.76	\$42.64	\$48.09	\$45.43	\$48.48	\$47.62	\$47.91
Computer Network Architects	\$48.22	\$47.84	\$57.87	\$59.90	\$47.60	\$61.83	\$49.33	\$54.43	\$49.37	\$49.80
Mechanical Engineering Technologists and Technicians	\$37.96	\$29.78	\$25.76	\$28.58	\$23.51	\$29.24	\$27.74	\$34.98	\$27.82	\$29.02
Engineering Technologists and Technicians, Except Drafters, All Other	\$37.75	\$23.27	\$28.90	\$23.37	\$34.20	\$29.86	\$28.49	\$29.70	\$28.70	\$37.39
Industrial Engineering Technologists and Technicians	\$36.79	\$29.19	\$29.50	\$29.83	\$32.93	\$29.60	\$28.70	\$29.93	\$28.90	\$29.64
Electrical and Electronic Engineering Technologists and Technicians	\$36.56	\$29.78	\$29.87	\$31.83	\$36.78	\$35.60	\$34.35	\$30.77	\$29.21	\$31.97
Computer Programmers	\$36.23	\$46.57	\$38.85	\$37.89	\$38.15	\$44.96	\$36.89	\$49.32	\$45.03	\$59.99
Electro-Mechanical and Mechatronics Technologists and Technicians	\$34.80	\$33.29	\$29.98	\$36.39	\$21.60	\$29.19	\$31.69	\$29.07	\$35.72	\$28.52
Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	\$32.75	\$16.64	\$27.20	\$22.82	\$21.86	\$42.02	\$21.29	\$22.81	\$22.42	\$18.91
Aircraft Mechanics and Service Technicians	\$30.19	\$29.76	\$37.17	\$30.94	\$28.66	\$37.16	\$30.15	\$37.64	\$29.77	\$37.01
Aerospace Engineering and Operations Technologists and Technicians	\$29.98	Insf. Data	\$29.03	\$28.43	\$46.20	\$37.79	\$34.59	\$38.26	Insf. Data	\$38.38
Sheet Metal Workers	\$29.15	\$22.42	\$23.16	\$23.02	\$27.37	\$23.05	\$22.62	\$30.38	\$22.89	\$29.99
Avionics Technicians	\$24.19	\$29.76	\$34.92	\$29.19	\$28.67	\$46.92	\$30.38	\$37.80	\$27.56	\$37.24
Industrial Machinery Mechanics	\$22.82	\$23.65	\$25.54	\$28.88	\$24.49	\$29.23	\$26.84	\$29.57	\$29.02	\$29.18
Machinists	\$22.33	\$22.69	\$22.74	\$23.46	\$23.22	\$23.06	\$22.94	\$22.87	\$21.64	\$23.16
Inspectors, Testers, Sorters, Samplers, and Weighers	\$22.00	\$22.81	\$18.00	\$22.42	\$21.12	\$18.72	\$18.16	\$18.81	\$18.55	\$22.58
Engine and Other Machine Assemblers	Insf. Data	\$22.90	\$16.81	\$18.47	\$22.56	\$22.55	\$16.80	\$22.53	\$23.43	\$26.39
Calibration Technologists and Technicians	\$18.45	\$32.30	\$24.60	\$23.00	\$29.33	\$22.78	\$29.82	\$29.85	\$38.37	\$31.87
Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	\$18.12	\$18.05	\$20.83	\$18.05	\$18.15	\$19.54	\$22.69	\$18.60	\$22.07	\$22.92
Electrical, Electronic, and Electromechanical Assemblers, Except Coil Winders, Tapers, and Finishers	\$17.61	\$17.62	\$17.60	\$18.31	\$17.53	\$17.71	\$16.69	\$17.72	\$16.78	\$18.01
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	Insf. Data	\$20.98	\$18.51	\$22.21	\$18.77	\$22.20	\$18.00	\$18.60	\$18.27	\$22.04
Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	\$14.62	\$16.96	\$17.75	\$18.08	\$17.71	\$18.10	\$19.22	\$17.94	\$16.94	\$17.89
Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	\$13.21	\$16.61	\$16.54	\$18.03	\$17.44	\$17.50	\$14.15	\$18.71	\$24.19	\$22.95

Note: City names reflect metro areas

# APPENDIX B TALENT DEVELOPMENT

CIP Code	Program Description	2015	2016	2017	2018	2019	2020	5-year graduate growth
	Computer and Information Sciences							
11.01	Computer and Information Sciences, General	217	242	223	217	186	184	-15.2%
11.02	Computer Programming	13	5	7	4	20	12	-7.7%
11.07	Computer Science	1	0	5	4	10	24	2300.0%
11.08	Computer Software and Media Applications	5	2	1	3	4	1	-80.0%
11.1	Computer/Information Technology Administration and Management	116	61	85	44	80	70	-39.7%
	Cohort Total	352	310	321	272	300	291	-17.3%
	Engineering							
14.01	Engineering, General	65	54	87	84	67	84	29.2%
14.05	Biomedical/Medical Engineering	2	7	13	15	20	10	400.0%
14.07	Chemical Engineering	32	43	61	72	65	58	81.3%
14.08	Civil Engineering	54	61	66	67	68	66	22.2%
14.09	Computer Engineering	32	42	42	45	39	35	9.4%
14.1	Electrical, Electronics, and Communications Engineering	80	74	88	83	75	57	-28.8%
14.13	Engineering Science	10	14	13	14	20	11	10.0%
14.19	Mechanical Engineering	71	112	128	126	136	112	57.7%
14.23	Nuclear Engineering	28	26	17	23	26	23	-17.9%
	Cohort Total	374	433	515	529	516	456	21.9%
	Engineering/Engineering-related Technologies							
15.12	Computer Engineering Technologies/Technicians	4	3	4	2	9	3	-25.0%
15.13	Drafting/Design Engineering Technologies/Technicians	68	47	43	55	52	14	-79.4%
15.17	Energy Systems Technologies/Technicians	18	5	25	4	12	24	33.3%
	Cohort Total	90	55	72	61	73	41	-54.4%
27.01	Mathematics	44	43	60	68	125	121	175.0%
27.05	Statistics	19	21	18	23	16	14	-26.3%
	Cohort Total	63	64	78	91	141	135	114.3%
40.01	Physical Sciences, General	21	25	14	24	19	17	-19.0%
40.02	Astronomy and Astrophysics	10	3	13	4	7	5	-50.0%
40.05	Chemistry	83	49	50	52	50	42	-49.4%
40.08	Physics	62	55	34	59	61	49	-21.0%
40.1	Materials Sciences	10	12	14	16	14	11	10.0%
	Cohort Total	186	144	125	155	151	124	-33.3%
47.06	Vehicle Maintenance and Repair Technologies/Technicians	243	241	210	194	207	188	
	Cohort Total	243	241	210	194	207	188	-22.6%
48.05	Precision Metal Working	102	125	125	119	137	122	
	Cohort Total	102	125	125	119	137	122	19.6%
Regional	Total, All Programs	1,410	1,372	1,446	1,421	1,525	1,357	-3.8%
	3-year moving average			1,409	1,413	1,464	1,434	
Total Gra	duates, New Mexico	3,056	3,040	3,323	3,379	3,271	2,928	-4.2%
Percent G	Graduates coming from Greater ABQ Institution	46.1%	45.1%	43.5%	42.1%	46.6%	46.3%	



# **LEARN MORE**

# **Chad Matheson**

Senior Vice President cmatheson@abq.org

201 Third St. NW, Suite 1900 Albuquerque, NM 87102

(f) (D) (m) (0)

www.ABQ.org

