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Appendix I. Key Stakeholders in the Ecosystem Landscape in New Mexico

Air Force Research Laboratory (AFRL): AFRL is the primary scientific research and development center for the Department of the Air Force. It plays an integral role in leading the discovery, development, and integration of affordable warfighting technologies for our air, space, and cyberspace force. With a workforce of more than 11,500 across nine technological areas and 40 other operations across the globe, AFRL provides a diverse portfolio of science and technology ranging from fundamental to advanced research and technology development. AFRL-Kirtland develops and 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. AFRL-Kirtland includes the Space Vehicles Directorate.

In November 2022 AFRL began construction on the Facility for Radiation Tolerance Research on Electronics for Space and Strategic Systems (FORTRESS), a 6,200-square-foot facility located adjacent to the Space Vehicles Directorate Deployable Structures Laboratory. The facility is designed to enable AFRL researchers to investigate and develop solutions for trusted, high-performance electronic components with necessary space and strategic hardening to ensure the survivability of key U.S. Space Force and Air Force systems in harsh, natural and man-made environments.

Spaceport America: Virgin Galactic and other leading aerospace companies are conducting groundbreaking research at Spaceport America (SA), the world's first purpose-built commercial spaceport. SA, an FAA-licensed launch complex, spans 18,000 acres adjacent to the U.S. Army White Sands Missile Range, offering access to 6,000 square miles of restricted airspace and a prime environment for space pioneers. The complex features both vertical and horizontal launch areas, a 12,000-foot runway, an Automated Weather Observing System, 24/7 security, and on-site emergency fire and rescue services. These assets make SA an ideal hub for space innovation. In addition to launch operations, Spaceport America supports on-site space-related manufacturing, including solid motor production and testing, rocket structural fabrication and machining, payload design and testing, and advanced 3D printing of rocket and payload components. With Virgin Galactic leading the charge in commercial spaceflight, SA continues to be a key player in advancing aerospace technology and exploration.

Physical Science Lab (PSL) at New Mexico State University: PSL was founded in 1946 in response to the nation's space and rocket programs. PSL staff are primarily applied hardware and software experts with a variety of engineering, software, technologists, and scientists focused on user needs and have access to on-campus faculty. PSL is a world recognized leader in sub-orbital platforms, information modeling for predictive decision making, specialized intelligence, community support, Unmanned Aircraft Systems testing and integration, advanced NASA scientific exploration and experimentation, homeland security sensing and detection technologies, and advanced weapons and countermeasures development and testing. Computational thinking and problem solving are at the core of all of PSL's research and development efforts. These provide the foundation for field support and operations. As distinguished by its numerous scientific and technical contributions, loyal customers, expert staff and student employees, PSL continues to incorporate ongoing R&D and technical expertise into providing successful real world application solutions in the 21st century.

U.S. Army White Sands Missile Range and NASA's White Sands Test Facility: White Sands Missile Range (WSMR) is a self-contained facility that tests and evaluates potentially hazardous materials, spaceflight components, and rocket propulsion systems. The test site provides Army, Navy, Air Force, Department of Defense (DoD), and other customers with high quality services for experimentation, test, research, assessment, development, and training.

NewSpace Nexus: A nonprofit organization dedicated to accelerating the growth of the space industry, with a focus on fostering innovation, collaboration, and commercialization. Based in **New Mexico**, it serves as a key connector between government, industry, and academia, supporting emerging space companies and entrepreneurs. Through funding opportunities, business support programs, and strategic partnerships, **NewSpace Nexus** helps drive advancements in satellite technology, launch systems, and other space-related innovations. The organization also plays a role in workforce development, ensuring that the talent pipeline aligns with the evolving needs of the space sector.

Arrowhead Center at New Mexico State University (NMSU): Arrowhead Center offers a variety of programs geared toward helping innovators, entrepreneurs, and small businesses at any stage start and grow through its services, resources, expertise and connections. Thanks to its proximity to the Physical Science Lab, White Sands Missile Range, and Spaceport America, Arrowhead can easily partner with these entities to assist space companies reach their potential.

COSMIAC at University of New Mexico (UNM): COSMIAC is a research center within the University of New Mexico School of Engineering program that plays a role in promoting innovation through the reliable and responsible use of advanced technology in military and aerospace systems. COSMIAC has full-time faculty, staff, consultants, and undergraduate and graduate students working alongside partners include the US Air Force, Space Force, NASA, Leidos, and Northrop Grumman.

Professional Aerospace Contractors Association (PACA): The **Professional Aerospace Contractors Association (PACA) of New Mexico**, founded in 1984, fosters collaboration between the aerospace industry and government agencies. Recognized as a key forum for industry engagement, PACA's diverse membership includes professionals from large and small businesses, including minority, women-owned, and veteran-owned companies. A **501(c)(6) nonprofit**, PACA is non-partisan, volunteer-operated, and dedicates all residual funds to science programs and scholarships across New Mexico.

The New Mexico Space Valley Coalition: A cross-sector initiative fostering regional growth in the commercial "new space" industry. This sector spans public and private actors involved in space infrastructure, applications, and research, impacting fields like IT/cybersecurity, manufacturing, and engineering. Historically dominated by government agencies, space innovation has expanded with private companies like SpaceX, Blue Origin, and Virgin Galactic—the latter launching civilians from Spaceport America. Private-sector advancements in satellite technology, crewed rockets, and space-enabled applications continue to drive economic growth and global competitiveness. The Coalition's mission is to position New Mexico as a leader in this evolving industry, leveraging space assets for both commercial opportunities and national security applications.

Appendix II. NAIC category descriptions for the industry and subsectors.

1. **Professional, Scientific, and Technical Services (NAICS 54):** Umbrella category. This is a broad industry category that includes a wide range of knowledge-based services such as legal, accounting, engineering, scientific research, and consulting

2. **Scientific Research and Development (NAICS 5417)**: This is a subcategory within Professional, Scientific, and Technical Services that focuses specifically on research and experimental development in various scientific and technological fields. It includes businesses and organizations that conduct original research and apply scientific knowledge to create new technologies, processes, and products.

3. **Research and Development in the Physical, Engineering, and Life Sciences (NAICS 54171).** This is an even more specific subcategory within Scientific Research and Development Services that includes work done in laboratories, research institutes, universities, and private sector R&D divisions that drive innovation in space, defense, healthcare, and advanced manufacturing.

Appendix III. Notes from the Pathway to the Stars Advisory Council Summit, (October 2024), Arrowhead Center in Las Cruces, New Mexico

Q: What's focus areas are we missing for developing a talent pipeline in space and technology?

- A question about space related apprenticeships and pre apprenticeship programs. We need to connect with the local workforce connections offices and the state apprenticeship coordinator.
- Look at federal and space related jobs (Solaro/Rocket Labs/Cosmic)
- Do we have information on who uses the different funding sources for pre apprenticeships and apprenticeships?
- Where did your prior new hire come from?
- University gaps: Have they done a survey of their alumni asking them, "Were you prepared?" Do the faculty have any information?
- We need to tailor the survey to the smaller and mid-sized employers.
- What can we offer industry to help them engage more?
- How can we save them time and money?
- Make it easy to find and utilize for start-up community?

Q: What is your key area of interest in hiring

- Soft Skills
- Cyber security
- Software Developer
- Electric/Electromechanical
- Technical Writing
- Aviation Mechanics
- Hands On Prototyping Experience
- Construction
- Relevant Experience

Other Key Points of the Conversation

- Perception of the population being insufficient for talent
- Difficult to find how to get a job at these companies
- Lack of coordination between entities and lack of access or points of access
- Impossible to find startup opportunities for new graduates
- Lack of information

Appendix IV. Pathway to the Stars NM STEM Workforce Roundtable (January 30, 2025) at the NewSpace Nexus Launchpad in Albuquerque, NM - Summary of Conversation

Where are you finding the best talent now? (i.e. Other industries? Specific colleges or universities? CTE programs?)

Business/Industry

- Other companies and agencies doing space work in NM
- Other locations within the company
- Other employers (Sandia, AFNWC, AFOTEC)
- Other industries
- Our own interns
- Employee/partner referrals (X2)
- Other government entities
- Prior DOD/Military

Out-of-State

- Out-of-state recruiting company
- Out-of-state recruiting
- Utah State University feeds SDL
- Michigan Tech (mechanical engineers)
- Texas A&M
- Out-of-state

In- and Out-of-State

- University NanoSatellite Programs (X2)
- Educational Institutions with Aerospace Focus
- Educational Programs – but position dependent

In-State

- UNM – Hire young students/transition to full-time work
- NM Tech (X2)
- Some universities here: UNM, NMTech, mainly due to proximity to ABQ
- SMART Program (X2): NMSU, NM Tech, UNM

Job-Postings

- Online applications across the USA
- Job Postings

Other Comments

- Skills declining in NM degree programs, lowering standards
- The effect of the increase in minimum wage is driving down the desire of potential candidates to pursue more rigorous education
- Can we get stats on students who leave the state to pursue higher education in other states?
- Headhunters, Jazz HR, LinkedIn, Online systems
- Full-time recruiter
- Aerospace Corp recruitment video
- Onboarding interns and doing internal training
- Students need more project-based learning (hands-on)
- More alignment needed between research and development and application skills
- Talent is leaving the state
- Large number of international students in our institutions that don't stay
- Colleges are economically incentivized to produce degrees, but not necessarily at the quality needed
- Need to tailor college curriculum (knowledge, skills, and abilities)
- Small firms use state incentives like WIOA and JTP
- Bring in interns and train them in the business
- Hard to find middle career (10-15 yrs) and senior level talent
- CNM coding camp is a good program
- Opportunities dependent upon proximity for interns (NMSU)
- Evolving and less restrictive internal talent sourcing policies are better than centralized hiring
- Hiring directly after candidates receive a bachelor degree
- Developing talent via an internship and experience
- Education must be aligned to their economic aspirations
- Industry standard practical applications needed for education
- Need a narrative for talent recruitment

What strategies are you using to retain and/or upskill current employees?

<u>Internal Strategies</u>

- Flexibility/flex schedule (X5)
- Internal mentoring program (half-baked)
- Mentorships (X2) (becoming harder)
- Pair programming
- Social Engagement Team
- Cool varied projects
- Constant communication
- Approaching our own challenges like a client/project

- Recognition
- Structured team leads – technical and operational mentorship
- Leadership executive coaching
- Job satisfaction
- Developmental 1:1 with managers
- Conferences
- Training program
- Formal training/education
- Certifications
- Ability to change jobs
- Civilian Development Program: identifies "gaps," sends employee to obtain skill, degree, training in "gap" area and return to AFRL
- Rotations through different jobs/roles (we support a wide range of agencies)
- Cross training
- Internal "classes"/educational courses from lab experts
- Leadership opportunities and training
- Breakfast burritos

Financial Benefits

- Profit sharing bonus (selective)
- Paid training
- Tuition reimbursement
- Incentives ($$ & Development Opportunities)
- Opportunities to increase salary/promotions
- Cost of living increases
- Student loan repayment
- Continuing education opportunities
- Educational assistance
- Salary market analysis when needed
- Standard benefits (401K/Health/PTO)
- Defining pathways as part of professional development and performance management
- Degree award opportunity (paid for by the government)
- Offer free certificate education

Other Comments

- It's the little things like extras and perks
- Storytelling about the work
- Variety in their work
- Opportunities that are aligned to promotions
- There's a big pay difference between public sector jobs and what small businesses can offer
- Problem- focused and issue- focused interest in work will keep them engaged in deep problem solving
- Intangibles of the job (big picture, instill ownership, cast a vision)

What skills (technical and/or soft) are most important to your company? What skills are most lacking in candidates?

Technical Skills

- Security (X2) (cyber, physical, risk, personal) most lacking in candidates, high turnover due to chasing money
- Cyber threat hunting/pen testing
- Data science
- Data engineering
- Embedded systems engineering
- Linux
- Cloud
- Physics
- Engineering
- Project Management
- Technical
- RF Engineers (KSAs for RF)
- Engineering experience
- Mid-career system engineering and technical management

Employability "Soft" Skills

- Work alone (self-driven)
- Ability to work with a team
- People who can be trusted to be given a problem to solve (or take initiative) and maturity to ask for help when they needed
- Ability to work with teams and government partners
- Problem solving skills (X2)
- Leadership potential

- Attention to details
- Ability to learn the job (hard or easy)
- Teachability
- Self-starter
- People skills (sales perspective) with technical expertise
- Communication (X2)
- Curiosity
- Productivity
- Lacking accountability

Other Comments

- Remote doesn't always work; team building is better in person
- Working in a Microsoft Teams environment allows you to chat online
- Provide balance in working

Leaving here today, what's ONE thing you will do differently to address your hiring challenges/workforce needs?

Networking:

- Attend more of these types of meetings
- Networking/Network more aggressively
- Find more NM opportunities for college engagement (UNM, NMSU, NM Tech)
- Get together with groups outside of work
- It helps knowing more about the companies that are here

Retention:

- More team building for retainment
- Team moral
- More food

Recruiting:

- Take a few ideas for better recruiting
- SDL is strategically forming relationships with NM university principal investigators/deans/etc. to see how we can partner in the work SDL supports in NM. This is new! We will see how it goes.
- Have recruiters focus more on local schools (UNM/CNM) not totally on online portals

- Engage more aggressively with my corporate leadership (hiring is a problem all over – some ideas here might help)
- Pursue NM hiring incentives
- Use of department of labor statistics provided by Trevor – Degrees!
- Look into security incentives
- Connect to the Project Management International network

For your company and other space-related companies to succeed in NM, what is single most important action we should take to grow the talent pipeline?

Connections to Resources:

- Resources on how to develop partnerships for internship programs
- Provide resources to help convince people to move to NM
- Connect us to the potential supplies (people) & paths (pipelines) to us (hiring managers)

Awareness:

- Awareness of opportunity: Why NM? Why tech fields?
- List of opportunities for volunteering, funding, getting exposure for candidates
- Advocate with the NM Congressional Delegation to keep space jobs in NM

Other:

- Stronger/more strategic university curriculum
- Build mid-level position community

Appendix V. Industry Survey Responses – Detailed reporting

Note: Number in parentheses, (X) indicates multiple responses of the same answer.

Q: The jobs that are not STEM-related included:

- Project/Program Management (12)
- Business Development (4)
- Contracting (3)
- Accounting/finance
- Marketing
- Cost Analyst
- Lobbyist
- Sales Manager
- Human Resources (5)
- Financial/Accounting (4)
- Supply Chain (2)
- Administration
- Facilities
- Executive leadership
- Communications/PIO
- Security

Q: Below is a list of hard-to-fill job titles (alphabetically ordered):

- Aerospace Engineer
- Chief Scientist
- Cyber Analyst
- Data Engineers
- Data Signal Processing Engineer
- Engineering; Electrical and Chemical
- Field Programmable Gate Array Engineer
- Ground, Senior
- Managing Engineer (6)
- Member of the Technical Staff
- Optical Engineer
- Principal Digital Signal Processing Engineer
- Project Controls Manager
- Project Managers
- Radio Frequency Engineers (2)
- Senior Embedded Systems Engineer
- Senior Power Systems Engineer
- Senior Systems Engineers
- Site Operations
- Software Developer (4)
- System Engineer
- Technician
- C-suite
- Computer Vision Software Developer
- Data Analyst
- Digital and Artificial Intelligence
- Electrical Engineering
- Flight and Ground Software
- Gen AI Engineer
- Information Technology Security
- Manufacturing Operations
- Mid-Career Software Focused on Ground Support
- Principal Antenna Design Engineer
- Process Engineers
- Project Engineer
- Research &Development Managers
- Security Spec Information Technology
- Senior Nuclear Test Engineer
- Senior Program Manager
- Senior/Mechanical Engineer (3)
- Site/Facility Manager
- System Admin
- Systems Engineer (5)

Q: What do you believe is the biggest barrier to getting more students interested in space-related careers?

- Early Education in STEM
- Social Media
- Knowledge of Opportunities
- Air Force Research Lab is also a civilian organization
- Defining long-term opportunities
- Exposure for students to realize they can do it
- Early Science Education
- A lack of understanding of what the work is
- Knowledge of growing need
- The knowledge that space is the next big thing they should want to be a part of it
- Strong math and science education
- Understanding all the different fields require for a space company
- Awareness and Access
- Having a degree
- Awareness
- Lack of knowledge of opportunities
- Early education in STEM

Q: What do you believe is the biggest barrier industry currently faces:

- Perception of the population being insufficient for talent
- Difficult to find how to get a job at these companies
- Lack of coordination between entities and lack of access or points of access
- Impossible to find startup opportunities for new graduates
- Lack of information

Q: What technical skills are most needed in your company and hardest to find in a qualified candidate?

Computer Skills:

- Circuit Design
- Cloud Computing
- Cyber Penetration Testing
- Data Engineering
- Data Science Principles
- Linux
- Other Computer Languages
- Qualified Space Systems Hardware
- Systems Analysis
- Systems Design

Q: What technical skills are most needed in your company and hardest to find in a qualified candidate? (cont)

Engineering-Related:

- Embedded systems engineering
- Engineering experience and technical management
- Radio Frequency Engineers (Knowledge, Skills, Abilities for RF)

Others:

- Antenna Related Experience
- Construction and Technical Writing
- Cost Analysis
- Hands on Prototyping Experience
- Risk Assessment and Management
- Physics
- Project Management
- Security (2 answers) (cyber, physical, risk, personal

Q: What 'soft' skills are most needed in your company and hardest to find in a qualified candidate?

Behaviors:

- Professionalism
- Maturity
- Curiosity
- Motivation
- Trustworthy

Interpersonal Skills:

- Ability to work with a team
- Leadership potential
- People skills (sales perspective) with technical expertise
- Communication
- Ask for help when needed

Intrapersonal Skills:

- Self-starter/Ability to work independently
- Problem solving skills
- Attention to details
- Teachability
- Productivity
- Accountability
- Thinking Outside the Box

Q: Associate degrees, which make up 17% of respondents' minimum credentials included:

- Business/Finance (X3)
- Cloud Architecture
- Computer Science
- Cyber Security
- Data Marketing
- Electronics Technology (X2)
- Information Systems
- Manufacturing Science
- Mechanical Technology/Assembly (X2)
- Project Management
- Software Development

Q: Those who earn skill-based credentials do have opportunities for employment in the industry. Following are the credentials employers identified:

- Ansys
- CAD
- Cyber Security
- Data Science
- Electronics Certificate
- Food Service
- IPC Certification
- NASA Clean Room Technician
- NASA Soldering Technician
- Operation Management
- Project Management
- RF Engineering Experience
- Software Development (X6)
- Software Programming
- Systems Administration
- Thermal Desktop
- Wire Harness Technician

Q: Employers also identified jobs that those without a degree could access. These workers, once in the field, could take advantage of advancing their educational goals to achieve higher credentials, and therefore, increased income and promotional opportunities:

- Administrative Assistant (6)
- Assembly Technicians (2)
- Business
- Custodian
- Electronics Technician
- Engineering Tech
- Event Planner (3)
- Facilities Technician
- Finance
- Food Service
- Human Resources
- Information Technology
- Manufacturing Operator
- Mechanical Technician
- Purchasing Agent
- Quality Technician
- Research And Development Technician
- Site Operations/Maintenance (2)
- Student Supports
- Support Process Technician
- Technician
- UX/UI Designer
- Wire Harnessing Tech

Employers indicated a variety of sources for finding the best talent at this time:

Business/Industry

- Other companies and agencies doing space work in NM
- Other locations within the company
- Other employers (Sandia, AFNWC, AFOTEC)
- Other industries
- Our own interns
- Employee/partner referrals (X2)
- Other government entities
- Prior DOD/Military

Out-of-State

- Out-of-state recruiting company
- Out-of-state recruiting
- Utah State University (Space Dynamics Laboratory)
- Michigan Tech (mechanical engineers)
- Texas A&M

In- and Out-of-State

- University Nanosatellite Programs (X2)
- Educational Institutions with Aerospace Focus
- Educational Programs – but position dependent

In-State

- UNM – Hire young students/transition to full-time work
- NM Tech (X2)
- Some universities here: UNM, NM Tech, mainly due to proximity to ABQ
- SMART Program (X2): NMSU, NM Tech, UNM

Job-Postings

- National online posts
- Job Postings (Linked In, Jazz HR, etc.)

Q: Current retention practices include:

Internal Strategies

- Flexibility/flex schedule (X5)
- Mentorships (X5), including structured team leads (technical and operational mentorship), and pair programming
- Social Engagement Team
- Cool varied projects
- Constant communication
- Approaching our own challenges like a client/project
- Recognition
- Job satisfaction
- Developmental 1:1 with managers
- Conferences
- Ability to change jobs
- Rotations through different jobs/roles (we support a wide range of agencies)

Financial Benefits

- Profit sharing bonus (selective)
- Paid training
- Tuition reimbursement
- Financial incentives
- Opportunities to increase salary/promotions
- Cost of living increases
- Student loan repayment
- Educational assistance
- Salary market analysis when needed
- Standard benefits (401K/Health/PTO)
- Defining pathways as part of professional development and performance management
- Degree award opportunity (paid for by the government)
- Offer free certificate education

Employer reported strategies to grow employees

- Leadership executive coaching/training program
- Formal training/education
- Cross-training
- Internal “classes”/educational courses from lab experts
- Leadership opportunities and training
- Development opportunities
- Continuing education opportunities
- Certifications through the Civilian Development Program: identifies “gaps,” sends employee to obtain skill, degree, training in “gap” area and return to the Air Force Research Lab

Q: What is your key area of interest in hiring?

- Soft Skills
- Cyber security
- Software Developer
- Electric/Electromechanical
- Technical Writing
- Aviation Mechanics
- Hands On Prototyping Experience
- Construction
- Relevant Experience

Appendix VI. Employers who participated in the Industry Survey

- Aerospace Corporation
- Air Force Research Lab Space Vehicles Directorate
- Albuquerque Regional Economic Alliance
- BlackVe
- Blue Halo LLC
- Colucci Space Advisory
- Dash2 Lab
- Deloitte
- Freedom Space Technologies, Inc.
- IDEAS Engineering & Technology
- Kall Morris Inc (KMI)
- LoadPath/Redwire
- Rocket Lab
- Space Dynamics Laboratory
- Spaceport America
- Stellar Science

Appendix VII. Detailed Description of Methodology

Data Collection: The research study utilized a multi-phased approach that included data collection, program mapping, and evaluation based on STEM disciplines and geographic reach. The process began with a systematic review of publicly available information, including websites, reports, organizational materials, and social media platforms, to identify existing STEM education and career enrichment programs. Only programs with active funding and ongoing initiatives as of January 2025 were included in the analysis. Additionally, informal surveys were conducted with a subset of program administrators to gather deeper insights into program design and implementation, methods for student outreach, alignment with career readiness objectives, and metrics for tracking program success.

Program Mapping, Categorization, and Gap Identification: Each program identified through website and social media searches was systematically cataloged and classified using a standardized framework to support analysis. This structured approach ensured consistency in program evaluation and facilitated a clearer understanding of how STEM enrichment opportunities are distributed across different learner demographics, STEM disciplines, geographic reach, and industry engagement. The organic search method allowed for a better understanding on how the program was marketed to the public and created awareness by students across New Mexico's urban, rural, tribal and frontier regions. The classification criteria included:

1. **Target Age Group:** Programs were assessed based on the age ranges they serve:
   - K-12 Students:
     - Pre-K & Elementary (Ages 3-11, Grades Pre-K-5)
     - Middle School (ages 11-14, Grades 6-8)
     - High School (ages 14-18, Grades 9-12)
   - College and post-secondary Students (ages 18+)
   - Adults (ages 18+)
   - Educators (ages 18+)
2. **STEM Disciplines:** Programs were categorized based on the STEM disciplines they emphasize and their alignment with workforce needs in New Mexico:
   - General STEM, space, technology, robotics, coding, and computer sciences (CS), engineering, mathematics (math), and physics
3. **Type of Engagement:** Programs were categorized based on how they interact with students and the structure of their educational offerings:
   - K-12 Public Education (In-School Time): STEM curriculum integrated into school credit, including STEM magnet and charter schools, STEM-focused tracks, and Career and Technical Education (CTE) programs.
   - Out-of-School Time Programs: After-school clubs, summer camps, competitions, and career exploration workshops.

- Internships & Work-Based Learning (WBL): Hands-on learning experiences designed to build career readiness skills.
- Train-the-Trainer Programs: Initiatives aimed at equipping educators with the skills and knowledge to deliver effective STEM instruction.
- Higher Education Programs: College and university programs that support STEM education, career exploration, or professional development.
- Industry Partnerships: Collaborations with local STEM employers (public and private) that sponsor career exploration and workforce development initiatives.

4. **Geographic and Equitable Access:** Programs were analyzed based on their physical location, while evaluating disparities in STEM program availability across different demographic groups and the communities they serve:
   - Rural vs. Urban Access: Identifying underserved areas where students may lack STEM learning opportunities.
   - Tribal Community Reach: Assessing the level of engagement with Native American communities and culturally relevant STEM education.

Appendix VIII. Notable Programs

- **Explora**: a hands-on science education center based in Albuquerque, New Mexico. Explora offers over 200 interactive STEM exploration programs, reaching more than 70,000 people annually through on-site visits and specialized outreach programs. In addition to in-person engagement, Explora provides virtual learning opportunities, ensuring access to STEM education for K-12 students across the state.
- **STEM Outreach Center at New Mexico State University**: provides Out-of-School Time programs, professional learning programs, and a network and support for teachers, families, and caregivers. It supports over 6,500 K-12 students per year.
- **STEM Academy at Airforce Research Labs**: educational outreach initiative based at Kirtland Air Force Base, designed to engage students from 5th grade to postgraduates in STEM through practical, hands-on experiences and mentorship. The program offers a variety of activities that allow students to apply STEM concepts in real-world contexts, fostering a deeper understanding and appreciation for these fields. Additionally, the STEM Academy introduces participants to potential STEM careers available at Kirtland AFB, bridging the gap between academic learning and professional opportunities.
- **Indigitize**: a non-profit organization dedicated to creating, supporting, and advocating for computer science education tailored to Indigenous communities. Its mission is to engage 10,000 Indigenous students in culturally responsive computer science experiences by collaborating directly with schools, districts, and teachers. Indigitize partners with Native-serving school districts to facilitate computer science instruction through programs like SkoCode, pilots culturally relevant curricula, and provides resources for educators.