Overarching Narrative
New Mexico Space Valley Coalition

The New Mexico Space Valley Coalition will create a transformational ecosystem leading to a more prosperous, equitable, resilient, and sustainable regional space industry through destination placemaking, growing a ready talent and labor market, accelerating industry leaders, and connecting industry to flexible capital and specialized resources that advance them from concept to product to sales.

1 Synopsis

Regional Growth Cluster. The New Mexico Space Valley Coalition is a holistic and inclusive cross-sector initiative focused on the regional growth cluster of the commercial, private-sector, "new space" industry. Space includes public and private actors involved in developing, providing, and using space-related products and services, including the manufacture and use of space infrastructure (ground stations, launch vehicles, satellites), space-enabled applications (navigation equipment, satellite phones, meteorological services), and affiliated scientific research. Because space is such a broad sector, growth will encompass many industries, including IT/cybersecurity, manufacturing, and engineering.

The Coalition's new space focus is designed to usher in the second space age. In 1957, when the first human-made satellite was launched, space exploration, military innovation, and communications were dominated by national space and defense agencies. In the new century, names like Apollo, Voyager, Hubble, and Genesis were joined by SpaceX, SpaceShip 2, and Blue Origin. Private companies answered the global demand for Internet, mobile, and other space-enabled technologies by launching satellites, providing components for national space projects, and building their own crewed rockets. Last year we saw the first civilians travel in suborbital rockets—including Richard Branson's Virgin Galactic, launched from Spaceport America in New Mexico. Private involvement strengthens the public sector space industry too. GPS and remote sensing have been critical to fighting the pandemic, used to measure social distancing, inform of exposure, and gauge supply chain health. The U.S. Space Force uses space assets 24/7 to assist in decision making during the Russian invasion of Ukraine. Space Valley Coalition focuses its resources on the new space economy, while pursuing the imperative of global readiness and competitiveness.

Coalition Members and Partners. ***The City of Albuquerque*** is the municipal government for the largest metro area in New Mexico, giving it considerable influence to improve the economies of minority-majority communities. ***Central New Mexico Community College (CNM)*** is the country's #1 ranked community college for the number of associate degrees and certificates for Hispanics, and #2 for Native Americans. ***CNM Ingenuity, Inc.*** is CNM's nonprofit economic development arm, creating accessible opportunities for working families, rural distance learners, low-income, and un- and under-employed individuals through return-to-workforce and upskilling programs. ***New Mexico Spaceport Authority*** operates the world's first purpose-built FAA-licensed commercial launch complex, Spaceport America, in rural South Central New Mexico. ***New Mexico Trade Alliance*** is a nonprofit that provides export assistance to New Mexico companies and develops initiatives that increase the state's global competitiveness and connectivity. ***NewSpace New Mexico,*** a nonprofit, accelerates space innovation by giving industry leaders access to equipment and testing, prototyping, advanced manufacturing, collaborative workspaces, and services that advance them from concept to product to sales.

Subawardees include ***(1) Higher Education:*** University of New Mexico, New Mexico Institute of Mining and Technology, New Mexico State University, Navajo Technical University; ***(2) Associations:*** New Mexico

Technology Council; and ***(3) Nonprofits:*** R4 Creating, Explora, STEMarts Lab, New Mexico Angels. In addition to the many strong supporters of the project, additional partners making commitments are:

- Industry Leaders: MTX, NewSpace Alliance (158 space stakeholder member network), Directed Energy Professional Society, Raytheon Intelligence & Space, Sierra Peaks, RS21, SolAero, Blue Halo
- Federal Agencies: Sandia National Laboratories, Los Alamos National Laboratory, Air Force Research Laboratory, U.S. Space Force, U.S. Air Force
- State Agencies: Governor Lujan Grisham, NM Department of Economic Development
- Private: 23 investment firms and groups (Space Valley Investor Network), Vida Mejor Capital ImPRonta, Cornerstone Consulting.

COMPONENT PROJECTS CONTRIBUTING TO THE SPACE INDUSTRY. The Coalition will advance the space industry as a national imperative for both economic resiliency and global competitiveness. It begins by setting New Mexico as the destination for international industry leadership with the construction of the ***Space Valley Center*** (Lead: City of Albuquerque). The Center will be the region's only innovation hub with both collaborative/programming space and meeting facilities tailored to both federal defense agencies' security needs and new space company needs —all in one building. On the ground floor, private space companies receive business mentorship, coaching, and back-office support via ***Q Station Expansion***; nearby, a software development factory hums with real-world training on IT projects (Lead: NM Trade Alliance). With ***Unite & Ignite Space***, innovators from small to large companies are developing and commercializing their products and solutions in a collaborative environment that provides comprehensive support, with access to equipment and testing facilities, incubator navigation and advisory services and direct connections to customer contracts (Lead: NewSpace NM). Upstairs, there are classrooms and labs teaching the ***Space Workforce of the Future*** (Lead: CNM). And on the third floor, industry has shell space to build out their regional operations.

The Space Valley is more than a Center; it's statewide with services and programming that will deliver regional and national impact. About two hours south, a ***Rocket Assembly Building*** will be used by private industry and university teams to test new small and medium vertical rocket technologies at one of the few spaceports to have both horizontal and vertical launch approval (Lead: NM Spaceport Authority). ***Unite & Ignite Space*** Co-Innovation Hubs in Crownpoint and Las Cruces will support Navajo Nation and Southern New Mexico entrepreneurs. When promising technologies are ready for commercialization, the ***Space Valley Venture Studio and Fund*** will nurture proofs of concept, make catalytic investments, and connect space entrepreneurs to venture capital in the Space Valley Investor Network (Lead: CNM Ingenuity). Statewide support systems for driving transformational economic impact continue with NewSpace Ignitor, enabling companies to go beyond R&D and cross the industry-acknowledged "valley of death" that too often prevents young companies from realizing their potential. Throughout their journeys, companies tap into more opportunity and knowledge by joining the NewSpace Alliance, where they have their voices heard and participate in national co-innovation workshops that culminate with reports (authored by participants U.S. Space Force, Defense Innovation Unit, and Air Force Research Laboratory) delivered to the Administration, National Space Council, and industry to advance progress for critical new space solutions.

The *who* is as important as the *what*. An equitable space ecosystem will not "just happen" because New Mexico is a culturally diverse state. Instead, each component project incorporates leadership from partners already successful in equitable education and economic outcomes, then gives them the resources to put their work in overdrive with the space industry. ***Q Station Expansion*** generates urban, rural, and tribal high school students' interest in STEM careers using virtual reality. ***Unite & Ignite Space*** engages industry in

Pathway to the Stars and becomes a backbone for students in grades 3–12 to see themselves as future engineers, developers, and scientists while advanced manufacturing takes place at Navajo Technical University. ***Space Workforce of the Future*** will include bootcamps, accelerators, immersives, and a Space Transfer Program via articulation agreements between CNM and NM's three Hispanic-serving research universities. Participant Supports ease entry into education and training while a Learner Educational Record maps their credentials straight into industry jobs.

Leading financial institutions estimate the global space economy to grow 123% (UBS), 165% (Morgan Stanley) or 551% (Bank of America/Merrill Lynch) over the next 20-25 years (2040-2045) up from $350B currently. New Mexico, with its unique mix of assets, is positioned to rethink the space industry to be more inclusive, engaging communities historically left out of this transformational ecosystem to build the future of the commercial space industry.

CEDS ALIGNMENT. The Space Valley Coalition aligns with the statewide CEDS plan and multiple regional CEDS. Aerospace is one of nine industries identified by State agencies as targets for growth, and one of five specifically targeted during the COVID-19 pandemic. Aerospace is also one of five focus areas for urban economic development in the Mid-Region CEDS. In the North Central Region CEDS, aerospace serves the Professional, Scientific, Technical, and Educational Services, with potential to also address inequity in the district's rural, tribal, and persistent poverty communities (compared to the relative wealth of Los Alamos and Santa Fe). The South Central Region CEDS urges developing Spaceport America's infrastructure for aerospace and to further develop the capabilities of New Mexico State University's (NMSU) Arrowhead Center, a Coalition partner that will operate Space Valley South.

The New Mexico Economic Development Department (NMEDD) also recently released a strategic plan that addresses strengths, opportunities, weaknesses, and threats to key state industries, including aerospace.[1] This report engaged over 100 public, private, and non-profit organizations in reimagining New Mexico's economic development approach as part of COVID-19 economic recovery planning. Aerospace is the number one priority, and the report describes how to better support the sector and employers. Aerospace is highlighted for its potential to diversify the State's economy while supporting high-growth, high-paying jobs and drawing on what is already a significant concentration of related resources. Now more than ever, New Mexico needs economic diversification away from fossil fuels and can meet the global imperative—especially given current geopolitical events—for a democracy to lead the second race to space.

EDA INVESTMENT PRIORITIES. The Space Valley Coalition meets EDA Investment Priorities of Equity, Recovery & Resilience, Workforce Development, Manufacturing, Technology- Based Economic Development, and Exports & Foreign Direct Investment. It prioritizes the target populations of Hispanic/Latino, and Black, Indigenous, and people of color (BIPOC), women, veterans and non-traditional students, rural, and economically disadvantaged communities; allocating resources to groups who are experts and from whom the Coalition must learn. The Space Valley will build economic diversification-focused resilience beyond New Mexico's reliance on oil and gas for state funds, enabling the state to weather economic shocks. Multiple Coalition members have workforce education and skills training activities within their projects that directly connect students and other target populations to industry leadership and to quality, high-paying jobs. Thanks to new equipment and a partnership with Navajo Technical University and the NM Manufacturing Extension Partnership, the Coalition is also advancing space company expansion, technology, and productivity in advanced manufacturing. Across the Coalition,

[1] NMEDD (2021, Oct). Empower and collaborate: New Mexico's economic path forward. http://eddstateplan.com/

the projects foster a space ecosystem that supports entrepreneurs and startups, commercialization of technologies coming out of our national labs, and creating technology-driven space companies. Finally, the Coalition has international contacts with both foreign companies and international classrooms.

COMPLEMENTARY INITIATIVES. The space industry in New Mexico is hustling and showing no signs of slowing down. Complementary initiatives include four strategic recommendations planned by NMEDD: (1) an Aerospace Industry Council that connects industry with higher education; (2) a matching fund for aerospace- related infrastructure development; (3) an annual Spaceport America Space Camp for startups to address emerging needs of the industry; and (4) an aerospace-focused online portal connecting students, industry, and researchers across the U.S. with opportunities in New Mexico. Planned infrastructure investments demonstrate commitment by State and industry leaders: leveraging an EDA investment, Spaceport America has scheduled $3.1M in capital improvements for a vertical launch rail and road improvements. Just outside Kirtland Air Force Base, a new private development will support commercial aerospace engagement that also supports federal defense, complementing the Coalition's commercial and innovation focus. The City of Albuquerque is investing in an 80-acre Aviation Center of Excellence (ACE) adjacent to the Sunport (Albuquerque's international airport). NewSpace NM leads a federally funded co-innovation hub that engages 150+ space stakeholders to access connections, resources, and customers. CNM Ingenuity runs a government-commercial interaction and collaboration accelerator called Hyperspace Challenge, which has engaged 61 small businesses and university teams in addressing needs of 13 different government agencies over the last four years; this space activity will run out of Space Valley Center. Nearby, CNM Ingenuity's FUSE Makerspace assists a variety of companies across New Mexico in early prototyping and just-in-time fabrication support. The space industry's momentum has been building for over two decades in New Mexico. An EDA investment will transform the new space industry and regional economy in less time, with better outcomes and equity at the center.

METRICS OF SUCCESS. The Mid-Region Council of Governments ran a REMI analysis for each component project and the Coalition as a whole. Anticipated metrics include: an increase in employment totaling nearly 2,500, $2.5B gross regional product, and a population increase of 3,000 within 10 years. Of the 500 participants in the Space Workforce of the Future program, at least 50% will represent our target populations and be connected to industry jobs with a 75–90% placement rate.

GENERAL TIMELINE. Construction projects are expected to take 2 years. In Year 3, programs begin to co-locate and reach synergies. Thus, the Space Valley Coalition is proposing a 48-month project.

2 DESCRIPTION OF GEOGRAPHICAL REGION(S) SERVED

PRIMARY SERVICE AREA. Services will take place in the counties of: Bernalillo 35-001, Colfax 35-007, Doña Ana 35-013, Los Alamos 35-028, McKinley 35-031, Mora 35-033, Rio Arriba 35-039, Sandoval 35-043, San Juan 35-045, San Miguel 35-047, Santa Fe 35-049, Sierra 35-051, Socorro 35-053, Taos 35-055, Torrance 35-057, and Valencia 35-061. Counties fall within all three of the state's Congressional Districts.

Space Valley offers a resilient, low-risk, and healthy location for space companies. New Mexico has one of the highest proportions of STEM professionals in the nation, a business-friendly environment including aerospace-specific credits, a reliable customer base, an ideal climate and geography for space-related testing and innovation, and a robust space ecosystem. Concentration of aerospace employees is 10 times the national average, with strong potential for future growth.[2] But the pandemic hit New Mexico hard.

[2] NMEDD (2021, Oct). Empower and collaborate: New Mexico's economic path forward. http://eddstateplan.com/

Economic distress in the region magnified systemic inequities faced by the state. New Mexico is a distressed region according to EDA's priorities based on 2020 Per Capita Personal Income of $46,338, versus $59,510 nationally, or 77.9% of the national average.[3] As a minority-majority and largely rural state, many communities have been disengaged from economic development, leading to long-term and growing inequities between socioeconomic classes. New Mexico's average unemployment is 5.5%, with 8.4% for Native Americans and 7.8% rural New Mexicans.[4] The state average percentage attaining an Associate Degree or higher is 36.8%, with only 21.1% for Native Americans and 26.2% for rural New Mexicans. Engaging tribal and rural communities in economic development is a key priority to improve equity.

COMMUNITIES SERVED, TARGET PARTICIPANTS, AND STAKEHOLDERS ENGAGED. An EDA investment will expand the Coalition's footprint to communities statewide and reach a broad range of stakeholders and participants. Unite & Ignite Space's Pathways to the Stars program will provide STEM inspiration for space-related technologies and careers as early as grade 3 through its statewide network of subawardees. Activities will include Girls into Tech, Teen Science Cafes, Meet a Scientist events, STEM Family Science Outreach, teacher STEM professional development, Science Fiesta, and an exhibit that will be experienced by thousands of low-income families on Family Science Nights. With a Unite & Ignite Space subaward, Spaceport America will maintain its educational focus on classroom visits to area middle schools and as a field trip site. Q Station Expansion will bring virtual/mixed reality installations and collaborative space-themed curricula to develop culturally diverse high school students' artistic, scientific, and humanistic literacy—empowering youth to be creative and informed citizens while seeing themselves in space careers. Such installations will be provided via paid apprenticeships to girls and women (ages 14–25).

An EDA investment in the Space Workforce of the Future will stack and lattice credit- and non-credit programs to help participants find a pathway to career success via CNM and Ingenuity programs, nationally recognized for their access and wraparound supports. Participants will matriculate into careers or advanced education at three universities offering space-related bachelor's, master's, and post-graduate programs. These holistic efforts will feed into an interconnected industry pathway that will enable companies with greater diversity to enter, grow, and thrive in the new space era. Comprehensive support will be provided from concept to product to sales through workforce initiatives, the Q-Station and Unite & Ignite Space Expansions, access to launch capabilities through Spaceport America's Rocket Assembly Building project and funding through Space Venture Studio and Fund. The rapidly growing New Space Alliance will also support at least 30 minority business enterprises and open the NewSpace Alliance to individuals engaged in the Coalition's efforts over the grant period.

Construction projects will be an economic boon to their locales. Space Valley Center is in an Opportunity Zone and Metropolitan Redevelopment Area. The rural Spaceport is also located within an Opportunity Zone, and its primary service area encompasses two Persistent Poverty Counties (Doña Ana and Sierra).

REGIONAL ASSETS. New Mexico has more than 100 ***private sector space companies*** in diverse space application areas such as satellite components, design and manufacturing, space launch, data analytics, and services. We also benefit from ***public sector space defense***. The Department of Defense (DoD) space budget is approximately $12B annually for unclassified systems. The three U.S. Air Force organizations at Kirtland Air Force Base (Air Force Research Laboratory, Space and Missiles Center Advanced Systems & Development Directorate, and Space Rapid Capabilities Office) promote space

[3] StatsAmerica (2020). Measuring distress. https://www.statsamerica.org/distress/
[4] Based on 2019 data in an NMEDD report

nationally and invest sizably in the national space industry sector with over $900M in annual funding and over 1,600 employees. The newly established SpaceWERX Innovation Office is housing its first hub at the current Q Station facility. The Spaceport's neighbor, the U.S. Army White Sands Missile Range, is the DoD's largest fully-instrumented, open air range and features nearly 3,200mi^2 of surface to unlimited restricted airspace that extends over five counties (Doña Ana, Otero, Socorro, Sierra, and Lincoln). It is a critical resource for missions, exercises, and tests; the nation's largest "no fly" zone makes it attractive for private and federal entities alike. New Mexico also hosts ***three Federal Laboratories***: Air Force Research Laboratory (DoD), Los Alamos National Laboratory (DoE), and Sandia National Laboratories (DoE). The state's major Air Force and Laboratory assets have over 21,000 staff. New Mexico's three ***Research Universities*** stand out in engineering and the sciences, resulting from a long history as homes to federal and private sector research institutions. All are Coalition subawardees and partners.

3 Detailed Overview of Private-Sector Engagement

Industry Involvement. See attached letters of commitment, which detail private sector engagement:

- Supporting the Coalition to be an industry leader, with commitment to create 250 high-wage jobs
- Engaging the growing NewSpace Alliance with 158 space stakeholders and 115 space companies
- Hosting events in the Space Valley Center
- Providing matching funds of a combined $22M in cash and in-kind that includes mentoring companies, access to equipment, marketing, strategic introductions, technical assessments, and more
- Sourcing software talent to expand the labor market
- Sponsoring government clearance to prepare early career professionals for employment
- Connecting participants eligible for employment, especially those who bring racial/ethnic and gender diversity, and other perspectives through the Pathways to the Stars
- Participating in the curriculum development process for industry needs
- Providing subject matter expertise into programming and in the classroom
- Reviewing Space Valley Venture-supported companies for follow-on investment and value-added connectivity within investor networks

In addition, the project is purpose-built to address and remove barriers preventing industry growth identified through a 2021 Air Force Research Lab-funded problem-framing study with cross-sector engagement conducted by NewSpace New Mexico with leaders in the NewSpace Alliance, industry, government, and academia. Key gaps identified that prevent space companies from entering, growing and thriving in the new space ecosystem include knowledge, resources, secure facilities, prototyping and demonstration, access to unique lab assets, and tailored guidance to workforce and customer contracts.

The Space Valley Coalition has also engaged the private sector in multiple planning sessions, especially for the construction projects of the Space Valley Center and the Rocket Assembly building at Spaceport America. Many of these industry leaders are federal contractors; the sensitive nature of their work and/or stage of their agreements with the Coalition, means details are currently confidential and employers are not at liberty to divulge their businesses or expansion plans.

The state's largest philanthropy partner, the W.K. Kellogg Foundation, has provided a letter of support for the Coalition's efforts and how these integrate with its grant and program-related investment goals: (1) expanding access to capital for women and entrepreneurs of color; (2) widening pathways to high-paying jobs in the rural areas of McKinley and San Juan Counties and on Tribal lands; (3) improving educational outcomes for vulnerable children; and (4) uplifting local leaders in these target locations to connect and

lead transformational change in the aerospace industry.

4 Detailed Plan for Regional Growth Cluster Sustainability

The U.S. is by far the global frontrunner in new space and space exploration. The Space Valley Coalition sees primary threats to the industry's sustainability coming not from other states, but from other nations. Strategic, deep investments are needed for the U.S. to maintain this lead and ensure our ongoing national security against other nations with space programs such as China and Russia.

New Mexico has the conditions to catalyze a transformation in the space industry and sustain it. As the long-time centerpiece of innovative public-sector R&D for aerospace and defense, our state is now also becoming known for new space via Spaceport America and technology commercialization coming out of the labs and research universities. Coalition efforts will further extend our leadership and sustainability by providing support across the company lifecycle beyond R&D through accelerated product development and connections to customer contracts that feed into regional growth. Build Back Better will help New Mexico build on assets from the first space age to grow a new space economy the way we want to see it thrive: with a talented, diverse workforce, and supporting space companies of all sizes.

In addition to our existing assets, New Mexico can sustain the industry given its attractiveness in aerospace; it ranks the 11th best state for its cost of doing business.[5] The other states with a high concentration of commercial space are much more expensive, making new ventures and experiments with technology transfer easier in New Mexico when it comes to feasibility. Within the space industry, New Mexico's strengths lie in satellites, remote sensing, data science, and launch—all new space growth areas with strong pathways for rural and historically underserved populations to enter.

The global space market is growing, expanding, and is expected to continue at a rapid pace with investors increasingly interested. According to Space Investment Quarterly, venture capital firms invested $46B into 429 space companies in 2021, accounting for 3% of total global venture capital flows. This beat the previous annual record year of $9.1B, set in 2020. Our newly formed Space Valley Investor Network has 23 investment groups signed on to leverage this energy and our competitive advantage in the industry.

As home to Spaceport America, New Mexico is also an early sustainer of the space industry given the projections that spaceports may someday be used as—and as busy as—airports. Similar to how the interstate highway system reduces manufacturing and distribution costs in the large domestic market, spaceports have promise make U.S. products more competitive in world markets, increase employment, and make the U.S. a lower cost economy. An EDA investment for the Rocket Assembly Building helps to build out the capacity of the Spaceport and the entire Coalition to respond to innovations in the industry.

Governing together to create transformation. The New Mexico Space Valley Coalition includes a section on governance in the attached Coalition Commitment Letter. Each Coalition member will supply a representative for the Board, to lead accountability, strategic coherence, decision making, and oversight in grant operations, stakeholder outreach and inclusion, and performance metrics. Governance charter plans include: 1) detailed composition and structure of the Board including terms of service, how roles are filled, and when the Board will consider new members, 2) decision making processes for various scenarios, 3) expectations of attendance, 4) schedule and type of reporting (likely an annual survey) required by Coalition members to monitor Coalition health, and 5) how meetings will be documented and facilitated. An

[5] https://www.cnbc.com/2021/07/13/top-states-for-business-new-mexico.html

early priority is to formalize diversity, equity, and inclusion in project leadership (e.g. disaggregating data).

5 Detailed Plan for Engaging Specific Organizations

The New Mexico Space Valley Center has two construction projects, the Space Valley Center in downtown Albuquerque and the Rocket Assembly Building at Spaceport America. Both construction projects will follow Davis-Bacon wage requirements, and neither applicant will enter into a contract with a contractor with a known history of poor labor practices. Both have robust procurement and hiring policies.

In accordance with City of Albuquerque procurement processes, Space Valley Center contractors will be subject to the New Mexico Subcontractors Fair Practice Act, the Public Works Apprentice and Training Act, and the Public Works Minimum Wage Act. The project will also be subject to City Ordinance O-21-80 which requires use of project labor agreements (pre-hire collective bargaining agreements with any relevant labor organizations) and adherence to New Mexico's "Little Davis-Bacon Act" in addition to the federal Davis-Bacon Act. The general contractor will also agree to follow City Affirmative Action, Equal Employment Opportunity, and Nondiscrimination policies and subcontractor requirements and is required to complete a gender pay equity form (with preference points available for those City-certified to have a 0% gap).

The Rocket Assembly Building will be subject to New Mexico Spaceport Authority's established procurement and hiring policies. Competitive bidding allows preferences for New Mexico-owned and veteran-owned businesses, with additional emphasis on minority- and women-owned businesses and contractors. The New Mexico Spaceport Authority abides by state labor standards, including the Subcontractor Fair Practices Act, and other protections.

6 Detailed Plan on Engaging Equitably

Shared Economic Benefits. The space industry is poised to equitably transform the sharing economy, much like the advent of the Internet and mobile computing did. The Space Valley Center's non-construction projects democratize access to space-based resources. The World Economic Forum states, "*For the next revolution in commerce, governance, and social interaction we need to look into the low Earth orbit. There, falling prices for communication and earth monitoring satellites, along with blockchain-enabled security, will make everything from broadband communication to crop monitoring available not just to technology elites, but to the most remote farm, village, or machine."*[6] A few of the shared economic benefits in the Coalition, from advances in innovations like satellites and more space-based sensing and connectivity services are:

- **Equity**: Low-cost universal broadband communications for previously underserved areas; new granular, decentralized markets for the rental, lending, and sharing of satellites
- **Climate change and safety**: Empowering local and community-based organizations to protect the earth or their local communities; more accessible, faster, and lower cost remote sensor data that can be used to for reducing pollution and crime
- **Accuracy**: Improved tracking of transit, weather, and traffic conditions; targeted humanitarian relief
- **Economics**: increase business efficiency; more accurate economic forecasting

The new space industry's explosive growth and pace of innovation can only be sustained if historically underrepresented individuals and perspectives are included. Leveraging our state's majority-minority status (including an 49% Hispanic/Latino and 11% American Indian population) to diversify the space industry and promote economic opportunity in underserved areas, each Space Valley Coalition member centers equity in its project. ***Space Valley Center*** is located in an Opportunity Zone and Metropolitan Redevelopment

[6] World Economic Forum (2017, March). A space-based sharing economy powered by nano-satellites. www.bit.ly/NanoSatellites

Area, and has planned community charrettes for local input. Local artists will adorn the Center with public art that celebrates the space industry in New Mexico, including cultural diversity such as Indigenous communities' connection to the land and the skies. The Center will be a physical manifestation of regional space identity at the intersection of science and culture, amplifying underserved New Mexicans' contributions to space (e.g., NASA used the Navajo language to name features on Mars, and hardy rural New Mexican chile has been grown in space). The ***Rocket Assembly Building*** at Spaceport America is in a rural area with demonstrated historical underservice, as evidenced by its primary service area in two Persistent Poverty Counties. It seeks to make space operations more accessible and efficient for small and mid-size companies, while benefiting its rural economic setting and reaching diverse students earlier to pique interest in space careers. ***Space Workforce of the Future*** has its research university subawardees committing to serving participants who are historically underrepresented in the STEM fields, including BIPOC populations, women, veterans, and low-income people; at least 50% of the 500 completers will be of these target populations. Additionally, higher education subawardees commit to using between 50–80% of their subawards directly for Participant Support costs, enabling access and barrier-free pathways to participation. ***Q Station Expansion*** is developing pipelines to a diverse IT field by subawarding STEMarts Lab to bring its virtual reality interplanetary experience to rural, tribal, and underserved communities and students access to 21st-century technologies and skills; this is intended to funnel them into the Space Valley Software Talent Factory that will prepare them for space or other STEM careers. The ***Unite & Ignite Space's*** proposed Pathways to the Stars program, intended to reach 100,000 students in grades 3 to 12 over four years, is estimated to engage approximately 42,695 Hispanic and Latino persons and 7,990 Native American persons. NewSpace Ignitor will lessen barriers to entry for minority-owned companies by aiding these businesses, assisting them with access to capital, equipment, and resources that they need to succeed. The NewSpace Alliance is committed to supporting at least 30 minority business enterprises. Finally, ***Space Valley Venture Studio*** will actively work to recruit BIPOC founders and attract capital from funds with DEI goals in their thesis, ensuring equity on both sides of the funding equation.

7 Detailed Plan on Expected Outcomes

The Space Valley Coalition brings forward an unparalleled, comprehensive approach to industry leadership, regional and economic impact, commercialization, and private investment, which will lead to well-paying jobs, economic growth, and global competitiveness that meets a national imperative.

Overall outcomes. (1) Placemaking: Space Valley infrastructure will be the new space and defense industries' go-to destination for the cluster, for companies to go from concept to incubation to testing to market while providing the national security needed to ensure the country's global readiness and competitiveness. **(2) Labor Market/Workforce**: Space Valley talent development makes accessible barrier-free pathways to training, seamless transfers among higher education institutions, connections to industry leadership, and innovations in learner education records for faster job placement. **(3) Industry/ Business Enterprise**: Space Valley industry leadership accelerates private growth and investment in the region via sustainability (providing exciting STEM engagement well before higher education and career pathways), durability (offering industry leaders easy access to lab, testing and navigation and advisory services), resiliency (mitigating barriers to fast-track employment especially as it relates to national security clearances), and feasibility (creating low-risk options for companies to scale). **(4) Capital**: Space Valley public policy and investors will accelerate commercial and government applications that enable the future of space, ensure access to quality deal flow and talent, leverage New Mexico space assets, and build disruptive technology that meets new space and defense industry needs.

OVERALL OUTPUTS. The Mid-Region Council of Governments ran a combined REMI model on the Space Valley Coalition's projects, which shows the following outputs on New Mexico's economy in the next ten years if awarded the Build Back Better EDA investment.

COMBINED REMI RUN	10 YEAR IMPACT ON NM
Increase in Employment	2,273
Cumulative Gross Regional Product (millions of 2022 $'s)	$2,426.9
Cumulative Increase in Wages and Salaries (millions of 2022 $'s)	$1,258.0
Cumulative Increase in Consumption Expenditures (millions of 2022 $'s)	$1,414.7
Increase in Population	3,042

8 OVERVIEW OF WORK CONDUCTED IN PHASE 1

The Space Valley Coalition has named a Regional Economic Competitiveness Officer who is leading the members in project development, program design, budgeting, and governance structure. The largest project, Space Valley Center, developed site characteristics, identified a shortlist of possible locations and selected a site, added the City of Albuquerque to the Coalition, engaged an architecture and design firm, developed facility needs, completed review of the site's Phase 1 environmental review, completed preliminary design and engineering plans and cost estimates, and engaged City departments in project planning. Spaceport America engaged an engineering firm to update existing plans and renderings and revisited its Environmental Impact Assessment to ensure compliance with EDA guidelines. Non-construction projects built out programs, identified experts to ensure equity, engaged partners, and identified match investors. Unite & Ignite Space engaged a company to run financial modeling for the NewSpace Ignitor incubator. The Coalition has completed a branding effort and launched a website.[7]

CHANGES TO CONCEPT PROPOSAL. There have been no changes to the central vision; other changes are:

- The City of Albuquerque became a Space Valley Coalition member, which was announced publicly,[8] and has committed to match the EDA investment with $15M for the Space Valley Center, along with an additional approximately $4M in land. The land is in an Opportunity Zone and Metropolitan Redevelopment Area, which opens other future avenues for investment.
- Match secured is $22,066,600. The Space Valley Coalition has a broad and diverse range of public and private agencies that have committed contributions. Each project brings its own 20% match:

COMPONENT PROJECT	STATE GOVERNMENT	LOCAL GOVERNMENT	INDUSTRY/PRIVATE
Space Valley Center		$15,000,000	
Rocket Assembly Building	$1,600,000		
Space Workforce	$1,000,000		
Q Station Expansion		$1,042,000	$999,600
Unite & Ignite Space	$1,565,000		$260,000
Space Valley Venture Studio & Fund			$600,000
TOTAL	**$4,165,000**	**$16,042,000**	**$1,859,600**

The New Mexico Space Valley Coalition will manage the EDA's Build Back Better investment with integrity and success for a more prosperous, equitable, resilient, and sustainable regional space industry.

[7] Spacevalley.org
[8] City of Albuquerque (2022, Feb). City of Albuquerque joins NM Space Valley statewide coalition. www./bit.ly/CABQSpaceValley