



SPACEPORT AMERICA BUSINESS PLAN

bringing the future to the present

2016-2020



SPACEPORTAMERICA®

SPACEPORT AMERICA: *the vision becomes reality*

What an incredible journey we are on. We are witnessing the dawn of space travel for humanity. The people of New Mexico took a leap of faith in 2007 and made an enormous investment in this bold new venture. At the time, there were few with the vision that New Mexicans had. Today, as we are propelled forward, many others are joining around the world—but we were among the first.



So what have we accomplished so far? In 2007, the New Mexico Legislature authorized \$225 million for the development of Spaceport America. To date, the total project cost is \$218.5 million—remarkably, under budget.

Spaceport America has been built from the ground up in the middle of nowhere— a beautiful nowhere, but a challenging area, nonetheless. Every bit of infrastructure, that would normally be available at the start of a construction project, had to be built—water, waste water systems, electricity, communications—even the road to get to the spaceport had to be constructed at the start of the project. A world-class LEED Gold “Gateway to Space” building, worthy of numerous architectural awards, has been built and Virgin Galactic is now a proud lessee. The Spaceport Operations Center, home to our staff and support contractors, has been built and is now occupied. An impressive 12,000 by 200 foot “spaceway” is complete, able to support horizontal space launches. Several vertical launch pads are complete including a 200 by 200 foot pad that is being used by our newest tenant, SpaceX.

Spaceport America is a remarkable place, and we are only witnessing the beginning of what it will become - a place where the spirit of innovation lives.

There have been 23 vertical launches to date at Spaceport America carrying a variety of payloads from NASA, the DoD, the FAA, private businesses, and students—the seed corn of the future.

The two largest and most respected companies in the commercial space industry are now tenants at Spaceport America; Virgin Galactic and SpaceX. In addition, we are actively recruiting others. Spaceport America is rapidly becoming the place where the magic happens!

Have we created jobs? You bet. Over 1400 New Mexicans have worked at Spaceport America. Many on the construction side but as we move into operations, the jobs will become more permanent.

Now that the majority of construction is behind us, we are increasingly focusing on economic development—building the support base that will enable the spaceport

and its customers to thrive—jobs that will also enable New Mexico to grow and thrive. Working in coordination with business leaders, spaceport customers, educators and economic development organizations, we will enable the infrastructure to be developed that will provide a firm foundation for the spaceport’s success and, even more importantly, result in jobs and economic prosperity for New Mexicans. Spaceport America is on its way to becoming self-sustaining and for the past four years has consistently generated at least 50% of its operating expenses.

Other spaceport projects remain. We are set to open the “Spaceport America Experience”—a fun and educational experience for our “terrestrial” space visitors. We are working with Doña Ana County and Sierra County to improve the county roads that make up the southern access to the spaceport. We are actively seeking more tenants, customers and sponsors. Will we ever be done? I hope not. A successful venture continues to evolve and continuously improve.

We are at the dawn of a new era. On behalf of the New Mexico Spaceport Authority, I would like to thank New Mexicans for their support and encouragement. Watch us grow, and more importantly, continue to help us grow— and be part of this New Space Age.

Christine Anderson
Chief Executive Officer
Spaceport America

DOING BUSINESS WITH SPACEPORT AMERICA

Spaceport America is on the customer's side: enabling low-cost access to space for people who want to change the world. Spaceport America is eminently flexible and tailored to meet the needs of customers' operations, without unnecessary and expensive overhead of workforce or facilities. Additionally as a commercial spaceport, it is designed to focus on fixed-price versus cost-plus services, while still maintaining appropriate safety as well as access to federal government-owned capabilities, such as our partners at U.S. Army White Sands Missile Range (WSMR). Aerospace customers themselves run the operations, true market forces govern prices, and bureaucratic red-tape is kept to a minimum. Southern New Mexico's geographic advantages can reduce program cost and schedule growth – thanks to clear airspace, good flying weather, low population density, high elevation, and low latitude. Finally, Spaceport America can provide a promotional platform and showroom like no other for entrepreneurs and other customers, should they be interested.

Attributes

- FAA Licensed Spaceport
- 18,000 acres
- 6,000 sq. miles of restricted airspace
- Low population density
- 12,000 ft. by 200 ft. runway
- 3 vertical launch complexes
- 24/7 security, fire, EMT
- 340+days of sunshine/ low humidity

STRATEGIC GOALS

There are three overarching goals that govern the direction of Spaceport America.

First and foremost, the primary strategic goal for Spaceport America is to deliver efficient and effective services to all customers.

Spaceport America unlocks the potential of space for everyone, in the manner that is most relevant to its customers. The advantage in having a purpose-built spaceport is that it can be customized to satisfy user requirements without being burdened by existing, obsolete infrastructure. Customers at Spaceport America can also buy services à la carte. The key to incentivizing customers while maintaining a viable business enterprise will be the ability to provide only what is needed in a lean and efficient manner. For aerospace customers, this means affordable, flexible, fast-turnaround capabilities and facilities. For visitors to the spaceport, this means providing a new, appealing, high quality, year-round and market based spaceport experience. While it is expected that the spaceport will result in significant job creation through its tenants and users, the spaceport itself will have a very lean internal overhead and staff. Every position will be essential and maximally efficient. In the early days the contractor labor force will be able to scale with the demand and

“surge” to support special activities of short duration, thereby avoiding unnecessary cost. Technology will be employed to the maximum extent possible to simplify and automate processes and minimize and mitigate cost and risk.

The second major strategic goal for Spaceport America is to drive local job creation and inject the economy with greater demand for goods, services and skilled workforce.

It is envisioned that Spaceport America will become a multi-tenant facility with many different customers paying lease and user fees, as well as a regional tourism destination, both of which will add to overall job creation. Each tenant at the spaceport will have its own requirements for facilities and support services, with impact spanning the gamut of trades and professions from construction to healthcare, and manufacturing to media production. Whereas these are commercial entities, it will naturally be in their best interest to hire locally wherever possible and use local vendors to leverage lower labor and transportation costs. Transient customers, such as event producers or seasonal aerospace users, will have many of the same requirements for local suppliers without the added community burden of permanent supporting infrastructure needs. For its part, Spaceport America will employ local residents and suppliers to the maximum extent possible.

A good analogy for the role of the spaceport in the economy is likening it to the role of an airport within modern day commerce. An airport is an efficient and effective transportation hub and an economic engine for the region. In this capacity, the airport serves as a gateway through which people, goods and services flow freely. Most important, the airport becomes a public stimulus of jobs, population growth and economic development. The economic return on most airports is not in terms of profit but rather in jobs and economic impact. Most airports generate enough revenue to self-sustain and grow. We believe commercial spaceports will have a similar business model.

The third major strategic goal is to inspire our guests, particularly the next generation.

In the 1960s, the technological inspiration and excitement was in space—going to the moon. People were united and inspired by this quest. Many of the youth focused their attention on Science, Technology, Engineering and Math (STEM) related education to become active members of the quest. This in turn put the United States in a globally preeminent position in innovation and technological advancement, not just in space but in many sectors. Unfortunately, we have lost that preeminence. Now through the next space age, we have the opportunity to get it back. Through our Spaceport America Experience our goal is to contribute to inspiring our guests and the next generation. We have developed an exciting interactive and engaging tour for people of all ages. It is hoped the end result may boost interest in STEM related education and turn out many more scientists, engineers and mathematicians for the United States of America.

BUSINESS SECTORS

Spaceport America business sectors include both aerospace and non-aerospace. Just like commercial airports, revenue diversification is critical to successful operation. Each spaceport will be different in their diversified portfolio taking advantage of its inherent strengths. The following is a representative list of Spaceport America's business sectors.

AEROSPACE SECTORS

Spaceport America appreciates that most aerospace customers demand quality service at an affordable price. Spaceport America tries to strike the right balance of service with capability that scales without tremendous overhead. We provide the services that our customers need in an à la carte fashion. Spaceport America's most attractive value-adding features are its protected airspace, privacy, security, FAA-licensure, and the Spaceport America brand.

Space Launch

The commercial space market has continued to attract increasing amounts of investment which is enabling the next generation of vehicle developers to seek permanent operating venues. Spaceport America is one of only nine FAA-licensed commercial launch site operators in the United States, and one of only three that can support both horizontally and vertically launched spacecraft at the time of this writing. Critically, our remote location and clear airspace corridor to space are perfectly suited to routine space access. Already home to two of the most recognized leaders in both horizontal and vertical spaceflight, Virgin Galactic and SpaceX, Spaceport America will continue to serve on the leading edge of commercial spaceflight – our *raison d'être* – as we broaden our scope further within the industry. Using our specialized airfield and three vertical launch complexes, Spaceport America plans to support and recruit space flights from both existing and new tenants and customers in the coming years. With foresight, these same infrastructure and associated environmental approvals have been developed to accommodate all manner of space launch activities, including new horizontal and vertical launch and return concepts, near-space high altitude balloons, air-launched satellite systems, government-sponsored spaceflight, and even more exotic requirements for laser- and gun-launch vehicles. In anticipation of the needs of these future customers, Spaceport America has relationships with third-party developers able to address build-to-suit requirements. Spaceport America foresees rapid increase in suborbital spaceflight activities beginning in 2017, and projects that New Mexico will be the point of embarkation for more annual non-test spaceflights than any other state by 2020.

Objectives:

- Add at least two new space launch customers between 2016-2020
- Formalize affiliate developer relationships to finance large build-to-suit projects in 2016

Space Launch Testing

Reusable space vehicles represent the dream of many to reimagine space travel in the image of air travel. Flying to space and returning to the point of launch intact promises many benefits in terms of lower refurbishment cost and turnaround time between flights, as well as a completely reusable first stage launch vehicle. However, reaching reusable space launch capability is difficult, challenging and currently very expensive, and for every successful flight, there will have been innumerable tests behind-the-scenes to troubleshoot issues and improve performance. Every rocket motor, aeroshell, and automated landing algorithm needs to be field-tested, and the best outdoor research and development (R&D), testing and evaluation (T&E) venues all allow customers the freedom of rapid iteration on new ideas. Spaceport America prides itself on being able to schedule a flight test exercise with a brand new customer in just a few weeks – and only a matter of days for ground-testing. And with our partners at two of the nation’s premier aerospace test and evaluation centers, WSMR and NASA’s White Sands Test Facility (WSTF), just next door, we have extensive reach back into their depth of test and evaluation capabilities, on a cost-effective à la carte basis. For customers seeking to test leading edge technology on their own terms, we have 18,000 open acres and can facilitate a build-to-suit arrangement to meet a customer’s specific needs. In fact, due to growing development in the primary vertical launch area, Spaceport America now plans in 2016 to develop another flexible remote testing locale on property.

Objectives:

- Complete Spaceport America’s fourth Vertical Launch Complex in 2016
- Add at least two space launch testing customers between 2016-2020

Unmanned Aerial Systems (UAS) Testing

Southern New Mexico and its wide open skies have extensive heritage in development of unmanned aerial vehicles thanks to the pioneering work done at the Physical Science Lab at New Mexico State University (NMSU) in creating the country’s first UAS Flight Test Center (FTC). At Spaceport America UAS operators can test within a 6,000 sq. mile area that is specially pre-cleared for the purpose. Even better by existing within WSMR airspace and by leveraging the same infrastructure as horizontal space launch users, Spaceport America can serve as an ideal flight venue for drones and other unmanned systems while broadening the industry opportunity in New Mexico. Having already received serious inquiries from some of the many unmanned systems manufacturers worldwide, Spaceport America is investing in this

new complementary segment of aerospace with specific accommodations for fueling and communications, and leveraging existing regional expertise to develop the business.

Objectives:

- Add at least two UAS customers between 2016-2020
- Make specific infrastructure upgrades to support UAS customers in 2016

Satellite Ground Stations / Teleports

Satellite ground stations are the critical link between ground and space in modern satellite communications. Using sophisticated antennas and high-frequency radio signals, Ground Stations send and receive commands and other data to and from satellites 24/7. Since the rate of new satellite launches is accelerating worldwide, largely in part due to growing interest in smaller form-factor spacecraft such as nanosatellites (which can be launched to space dozens at a time), the need for high-capacity satellite tracking, telemetry and control is similarly increasing. As a result, new ground stations are being built, and new market opportunity exists for Spaceport America. The primary customer would be satellite communications companies, and satellite fleet operators who will develop antenna farms, also known as Teleports, to communicate with space vehicles in low-earth or geostationary orbit. Since Teleports do not have to be on the flight line, they can be located in more plentiful real estate in Spaceport America's horizontal launch area, where we are designing a Ground Station master plan for development. The site more than meets the Ground Stations' typically stringent requirements for infrastructure, but more importantly, it provides stable, dry weather, southern latitude, minimal electromagnetic interference, and extremely low horizons in all directions. By connecting satellites to Spaceport America's robust terrestrial fiber network, these stations will enable all sorts of space-based technology that improves our daily lives, including weather forecasting, agricultural monitoring, satellite television and navigation.

Objectives:

- Secure one Ground Station tenant commitment in 2016, and five more by 2020
- Complete associated environmental work in 2016

MARKETING STRATEGY: AEROSPACE

- Market segmentation, business development and direct sales
- Exhibit and speak at major aerospace industry events to provide thought leadership
- Update our integrated marketing communication mix – product positioning and content via PR, print, digital and social media channels
- Develop strategic affiliate relationships to broaden potential customer reach

- Develop refined, pricing strategy to attract first-time customers and reduce barriers to entry
- Gather regular market intelligence and build credibility among new industry entrants and those entering commercial aerospace pipeline

NON-AEROSPACE SECTORS

Spaceport America's goal is to develop and manage a diverse portfolio of non-aerospace revenue streams in parallel with our aerospace core business activities. Non-aerospace sectors at the spaceport leverage the potential of the Spaceport America brand and commercial spaceflight. As well, they take advantage of the beauty of the iconic futuristic structures in a unique, historical and beautiful part of the United States. Sectors include Tourism, Space Venue for Special Events, Sponsorship Opportunities, Merchandise and Virtual Education. By 2020, Spaceport America plans to derive at least 30% of overall revenue from non-aerospace sources.

Tourism

The current Spaceport America tour is attracting approximately 3,000 visitors per year. The new expanded Spaceport America Experience is expected to attract thousands more the first year and grow exponentially each year with the onset of commercial flight activities. The tour begins in the nearby town of Truth or Consequences in the historic downtown hot springs district in a unique 1936 adobe building that has been fitted-out with educational and fun space related exhibits. The Spaceport America shuttle bus departs from there for a 45 minute guided journey to the Spaceport America site. Guests will be entertained on the bus by several original videos showcasing the history of the region from the Paleo-Indians; the trading route from Mexico to Santa Fe in the 1500's; the Atchison, Topeka and Santa Fe railway in the 1800's; and the beginning of the first space age with pioneers like Goddard and von Braun. Guests will then experience the Gateway Gallery in the award winning Virgin Galactic Gateway to Space building. The Gallery has interactive kiosks, a G-Shock simulator, original videos and much more. Guests are then treated to a tour of the Spaceport Operations Center, a ride down the 12,000 ft spaceway (runway) and a photo-stop outside the Gateway to Space building.

Objectives:

- Open the Spaceport America Experience to visitors in mid-2015
- Host 61,000 annual visitors by 2017
- Host over 100,000 annual visitors by 2020

The Ultimate Space Venue for Special Events

Spaceport America offers scenic backdrops for product advertising and marketing unlike anywhere else on earth. Location scouts are taking notice. Automotive clients particularly enjoy the 12,000 ft spaceway on which to showcase their products in action. National and global trends in health and fitness have led to massive interest in running and biking activities worldwide. The most profitable events are in triathlon and long-distance relay sectors. The business model would entail partnering with a race director who would execute the logistics, marketing and operation of the event in exchange for a net royalty fee. Private fly-ins, luxury weddings, corporate meetings and retreats, product launches, astronomy events, aviation enthusiasts events, concerts and festivals, and space-related conferences are all key target revenue generating markets. The business model includes a short-term use license along with desired support services and brand and trademark association.

Objectives:

- Host 10 major revenue and brand awareness generating events in 2016
- Recruit race director/organization in 2015 for first race in 2016

Sponsorship Opportunities

The Spaceport America brand is rapidly becoming synonymous with leading-edge innovation, exploration, pushing the boundaries of human potential and the democratization of space. Global brand leaders across numerous categories see benefit in associating their brand with that of Spaceport America. Sectors such as the information technology, automotive, motorcycle, aviation, energy, food and beverage, watch, fashion, media, sport and many other brand categories which strive to inspire their stakeholders and remain on the leading-edge within their respective industry are choosing to associate their brand with that of Spaceport America. Sponsorship packages for rights to use in advertising, limited editions, product placement campaigns and as a venue for strategic get-a-ways and product launches are on offer.

Objectives:

- Acquire one revenue-generating sponsor by early 2016
- Acquire two additional sponsors by end of 2016
- Acquire two more sponsors by 2017

Merchandise

The Spaceport America on-line merchandise shop launched successfully in November 2014. We are now expanding our merchandise portfolio and launching a Spaceport America Amazon® shop to make it even easier for Spaceport America fans to purchase merchandise and engage with our brand. Additionally, we are working with a global brand licensee specialist to find partners around the world who want to localize Spaceport America merchandise and extend our brand reach even further. Spaceport America branded merchandise is also available at the Spaceport America Experience visitor center.

Objectives:

- Expand merchandise portfolio throughout 2015
- Expand distribution channels via Amazon, social media and global partners in 2016
- Grow merchandise revenue generation by 300% between 2015 and 2016

Virtual Education

Virtual Education is growing exponentially. The target audience is Spaceport America.com website visitors interested in professional development and specifically tailored high quality space related educational courses. Spaceport America will partner with authors to license and distribute the content online under the Spaceport America brand.

Objectives:

- Develop first educational partnership in 2015
- Engage at least five New Mexico schools in regular distance education programs by 2018

MARKETING STRATEGY: NON-AEROSPACE

- Expand diversification of business sectors
- Market segmentation, business development and direct sales
- Engage with New Mexico tourism organizations and tour operators from 70 countries
- Launch the Spaceport America Space Venue brand globally targeting event producers, large corporations, location scouts, commercial film and photographers
- Engage potential private sector brand partners and sponsors
- Launch a Spaceport America membership to engage space enthusiasts around the world
- Expand global distribution channels for Spaceport America branded merchandise
- Launch the Spaceport America Virtual Education brand globally
- Roll-out an integrated marketing communication mix – product positioning and content via PR, print, digital, advertising and social media channels for all non-aerospace revenue streams

EDUCATIONAL OUTREACH

Educational Outreach is unlike the other business sectors in that it is not a revenue-generating sector. The goal is to provide opportunities to support education in an inspiring and fun venue at Spaceport America. The goal is to make science and mathematics entertaining while educating. We will be working closely with public school districts throughout New Mexico to create projects that take advantage of having a commercial spaceport virtually in their backyard! We have already started some activities that are listed below and will continue to add to this list as our educational partners develop other programs that we can support. We perform these at cost with no profit margin.

Virtual Classroom

This program is ongoing with public schools in Sierra and Doña Ana Counties. Spaceport personnel who are sometimes joined by other spaceport tenants conduct a real time on line video class and virtual tour of the spaceport. It is a real dialogue between spaceport crew and students and is both fun and educational. So far this has been a big hit.

Lesson Plans Tied To Spaceport America Gateway Gallery Games

We have developed lesson plans that are on our website. These lesson plans are tied to kiosk games in the Gateway Gallery on site at Spaceport America. The goal is that students can learn in the classroom and then follow up with a field trip to the spaceport. One class has already done this during a Preview of the Gateway Gallery. We expect others will follow suit once the Gallery is open in June 2015.

Student Launches

Spaceport America has supported numerous student launches. Most involve student built payloads that fly on a rocket and that are then recovered and the effects on the payload are studied. We have also supported the launch of a rocket that was built by the students in a University class. This is a great way to get students really immersed in space activities and lets students see firsthand the power of science and mathematics in action.

Student Events/Field Trips

We have had several student field trips at the spaceport. Some have featured model rocket competitions. Our Spaceport America crew is on hand to interact with the students. We usually include a spaceport tour and interaction with the firefighters and state of the art firefighting equipment. Who wouldn't enjoy that? These are fun events that are both educational and inspirational.

Challenger Center Support

Las Cruces Public School District will be opening a Challenger Learning Center in the fall 2015. We will be working closely with them to integrate Spaceport America into the program. The Challenger Center for Space Science is a non-profit educational organization headquartered in Washington DC. Founded in 1986 by the families of the astronauts who died in the Space Shuttle Challenger disaster on January 28, 1986, Challenger Learning Centers allow students to become astronauts and engineers to solve real-world problems.

SPACEPORT AMERICA RETURN ON INVESTMENT (ROI)

The state of New Mexico has made a significant capital investment in the emerging commercial space industry. Expectations are high for the ROI. A snapshot of that return in New Mexico for the period from July 1, 2014 to June 30, 2015 (the New Mexico fiscal year) reveals that this investment was well founded. In FY 2015 the ROI to the statewide economy was approximately \$9.5 million for the recurring \$460,000 the state invests each year in operating costs. The ROI is expected to grow as the spaceport moves into full operations with more tenants, customers and visitors.

| FY15 Investment | | Return on Investment(ROI)/Economic Stimulus | |
|-------------------------------|------------------|---|--------------------------|
| State of NM Annual Investment | \$463,000 | Spaceport Funding for STEM-education | \$1,900,000 ¹ |
| | | Taxes Paid on Operations | \$160,000 |
| | | Taxes Paid on Construction | \$70,000 ² |
| | | Taxes Paid on SA Events | \$6,000 ³ |
| | | Direct Spend by SA Events | \$43,000 ⁴ |
| | | Direct Spend by Tourism | \$177,000 ⁵ |
| | | Direct Spend by Tenants | \$1,000,000 ⁶ |
| | | Taxes Paid by Tenants | \$70,000 ⁷ |
| | | Local Space Conference Economic Impact | \$1,293,000 ⁸ |
| | | SA Employment Direct Impact | \$861,000 |
| | | SA Employment Indirect Impact | \$258,000 ⁹ |
| | | SA Contractor Employment Direct | \$900,000 |
| | | SA Contractor Employment Indirect | \$270,000 ⁹ |
| | | SA Tenant Employment Direct | \$1,960,000 |
| | | SA Tenant Employment Indirect | \$588,000 ⁹ |
| Total | \$463,000 | Total | \$9,556,000 |

¹ Per NM Tax & Revenue Statistics

² Assumes \$1M annual construction spend

³ Based on 4 year average of \$85K per year in event spending

⁴ Assumes 0.5X multiplier of onsite spending spent

⁵ Assumes 3000 visitors in 2015

⁶ Assumes \$1M average offsite local spend per year

⁷ Based on Direct Spend

⁸ Per NM Space Grant Consortium

⁹ Assumes 0.3X multiplier of local salary impact

Roughly \$10 billion has been invested in the top 100 privately held space companies in the last decade. The pace is quickening as these companies mature and others are entering the market. Will this industry blossom overnight? No! Space is really, really hard. But it is not a matter of “if” but a matter of “when”. New Mexico is in a leadership position. We need to stay the course.

SUMMARY

Since ground breaking in 2009, we have built a commercial spaceport from the ground up in a remote location. Basically we have built a small self-contained city! During that time we have supported 23 vertical launches and have signed up two tenants and several repeat launch customers. We have also supported 14 revenue-generating events.

Everything that we know how to do on Earth needs to be re-tested in space. Everything from communication and navigation to understanding human physiology and how to produce sustainable resources is highly dependent on our ability to leverage space. In the early days of aviation, people questioned our need to fly. They said, “If man were meant to fly, he would have wings.” They said “Why would someone want to look at the Earth from the air?” We now know that aviation has made the world a smaller more connected and efficient place. We believe that commercial space travel will follow a similar path of connecting and improving the quality of life for humanity. When you have a market size in the billions, the upside is limitless!

We are moving full speed ahead to sign up more customers, greet more guests and create more jobs for New Mexico. We are grateful for the support the State has given us. We look forward to repaying this incredible generosity and belief in the future by creating jobs and putting New Mexico on the map as a place where innovation thrives.

Please join us in this incredible journey. We are just beginning.