



# PUBLIC MEETING #3

## SPACEPORT AMERICA MASTER PLAN

March 6, 2024 – Sierra County Offices, Truth or Consequences, NM



POPULOUS



# AGENDA

- Spaceport America Overview
  - NMSA Mission Statement
  - Recent Activities
  - Estimated Economic Impact
- Master Plan Project Overview
- Public Input (2 minutes each from sign up lists)
  - What is Spaceport America to You?
  - Is NMSA Fulfilling Its Mission?
  - What are Spaceport America's Strengths and Weaknesses?
  - What are Spaceport America's Opportunities and Threats?

# Spaceport America Overview

# NMSA Statutory Mission

*As stipulated in the New Mexico Spaceport Development Act of 2005, the New Mexico Spaceport Authority shall:*

- A. Encourage and foster development of the state and its cities and counties by **developing spaceport facilities** in New Mexico;
- B. Actively promote and assist public and private sector infrastructure development to attract new industries and businesses, thereby **creating new job opportunities** in the state;
- C. Create the statutory framework that will enable the state to **design, finance, construct, equip and operate spaceport facilities** necessary to ensure the timely, planned and efficient development of a southwest regional spaceport; and
- D. Promote educational involvement in spaceport activities and **education and training of the workforce** to develop the skills needed for spaceport operations.

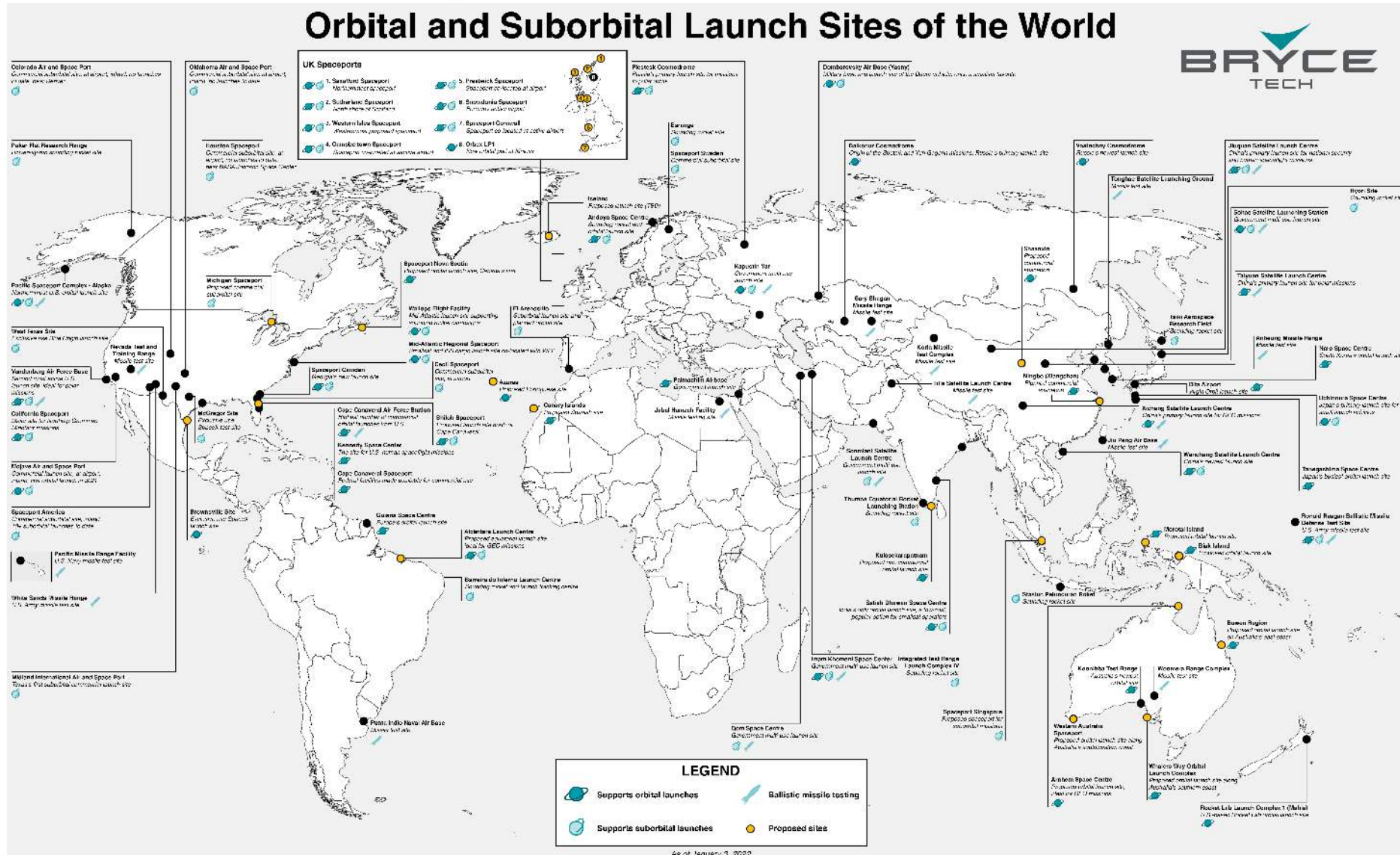
[2021-2022 at Spaceport America - YouTube](https://www.youtube.com/watch?v=qfH3FluAjhA)

<https://www.youtube.com/watch?v=qfH3FluAjhA>

[Aerial Tour of Spaceport America 2022 - YouTube](https://www.youtube.com/watch?v=qfH3FluAjhA)

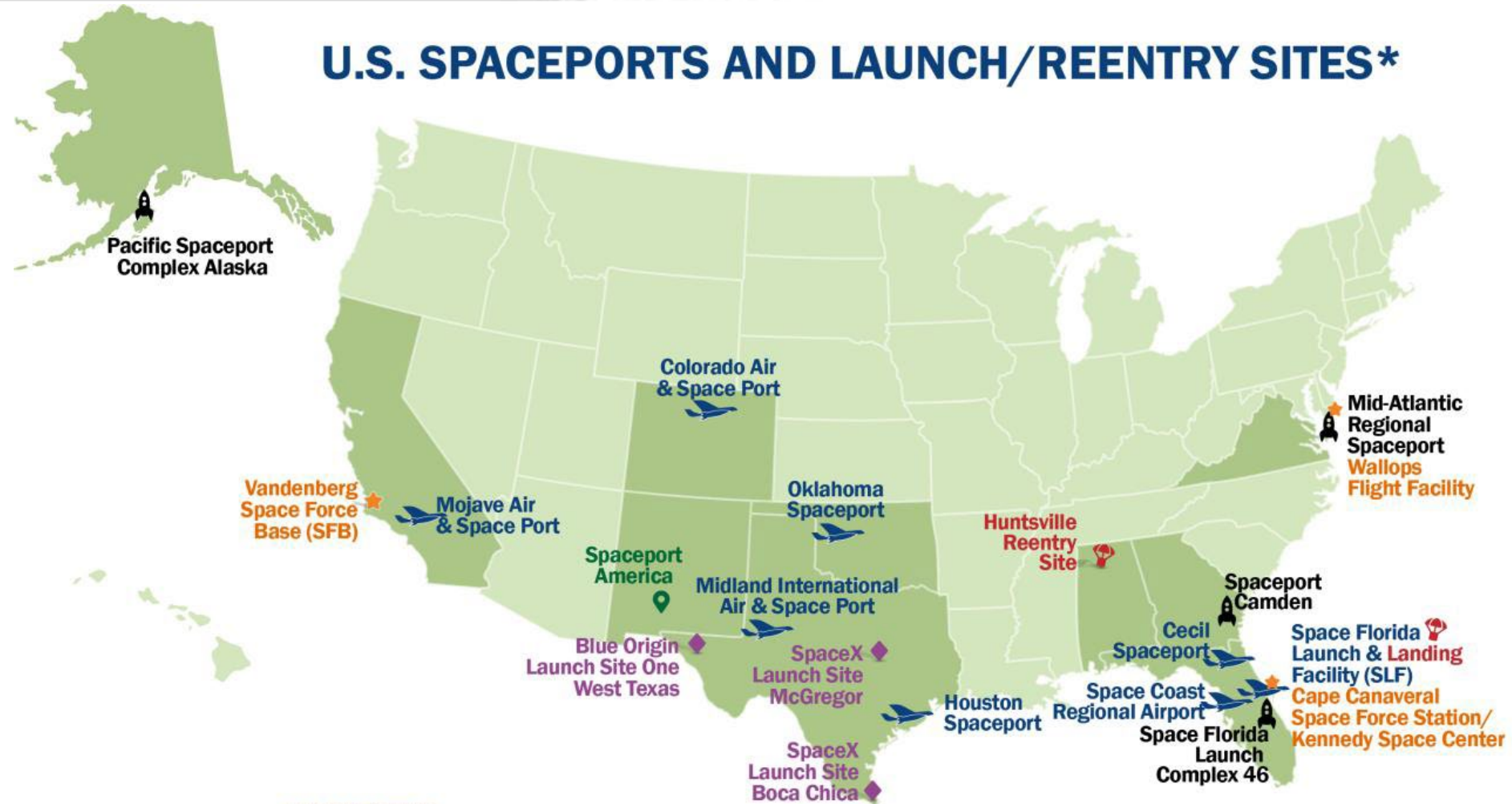
<https://www.youtube.com/watch?v=qfH3FluAjhA>

# Spaceports around the World



# U.S. Spaceports

## U.S. SPACEPORTS AND LAUNCH/REENTRY SITES\*



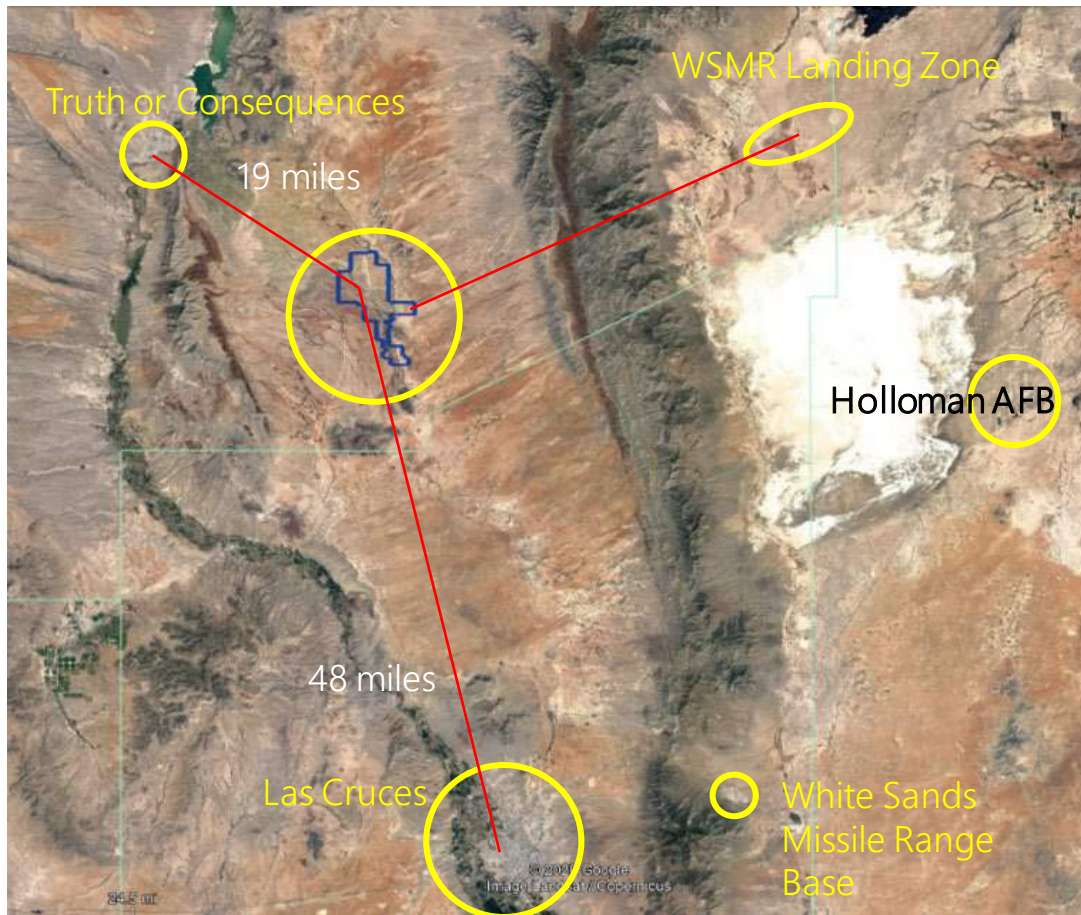
### MAP LEGEND

- States with Current Spaceports
- ✈ FAA-Licensed Horizontal Launch Site
- 🚀 FAA-Licensed Vertical Launch Site
- 📍 FAA-Licensed Horizontal and Vertical Launch Site
- 🚀 FAA-Licensed Reentry Site
- ★ U.S. Federal Site
- ◆ Exclusive Use Site (Non-FAA Licensed)

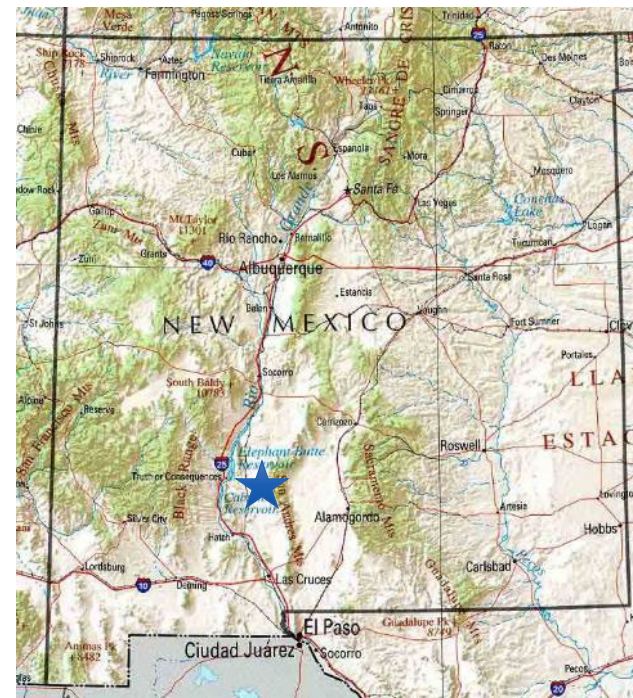
\* Locations licensed by the FAA or currently hosting FAA-licensed activity.

Source: FAA/AST September 2022

# SPACEPORT AMERICA NEW MEXICO LOCATION

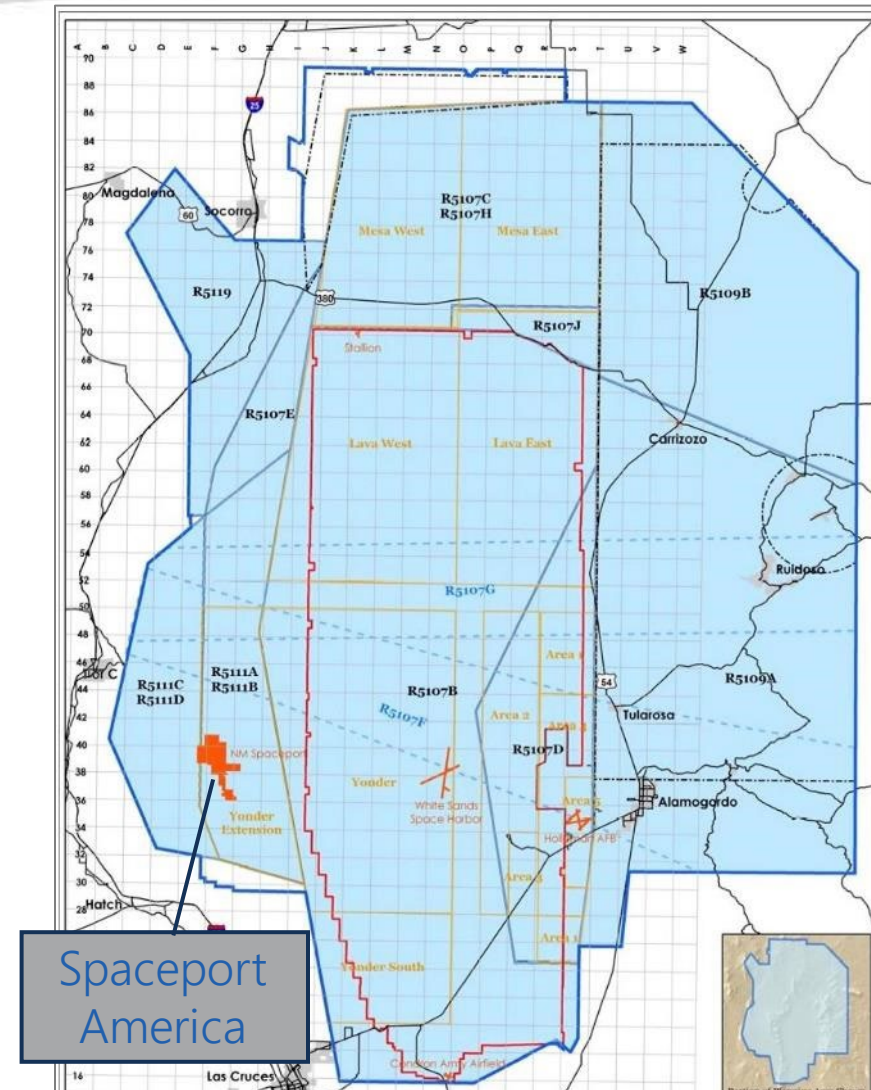


- Launch facilities across 18,000 acres in Sierra County, New Mexico
- Secure inland spaceport immediately adjacent to White Sands Missile Range (WSMR)
- DoD restricted airspace from surface at 4,600 feet to unlimited altitude
- Easy road access from I-25 and I-10
- No rerouting of air traffic for launches



# Spaceport America's Unique Benefits

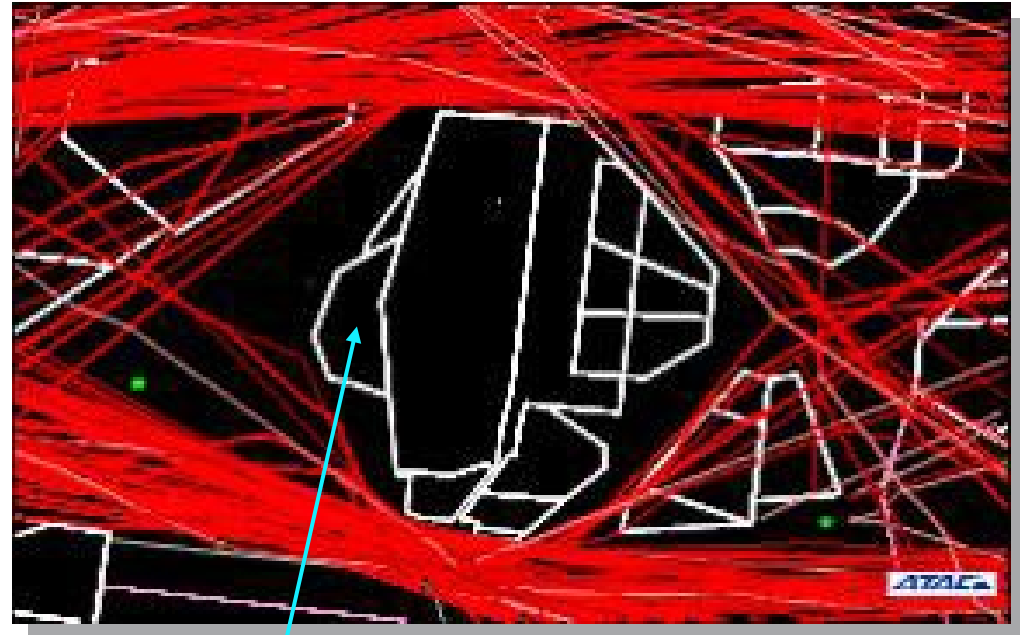
- Very good launch weather with 340+ days of sunshine
- High elevation (4,600 ft MSL) beneficial for launch
- No salt air corrosion
- Remote location with very low population density
- 24/7 security, Fire, and EMS protection
- Access to 6,000 sq mi of restricted airspace (R5111 and R5107), surface to unlimited
- Available assets from nearby White Sands Missile Range include Radar, Telemetry, Optics, and Meteorological Services





# Typical Airspace Flight Pattern

- This time lapse image of commercial air traffic shows how airlines must fly around WSMR airspace, including Spaceport America
- With WSMR's partnership, the airspace allows for considerable flexibility for different flight vehicles and usage
- Note that SpA customers must pay for scheduling of the airspace



Source: Flight Radar 24

Spaceport America

# Area Descriptions

## Horizontal Launch Area (HLA)

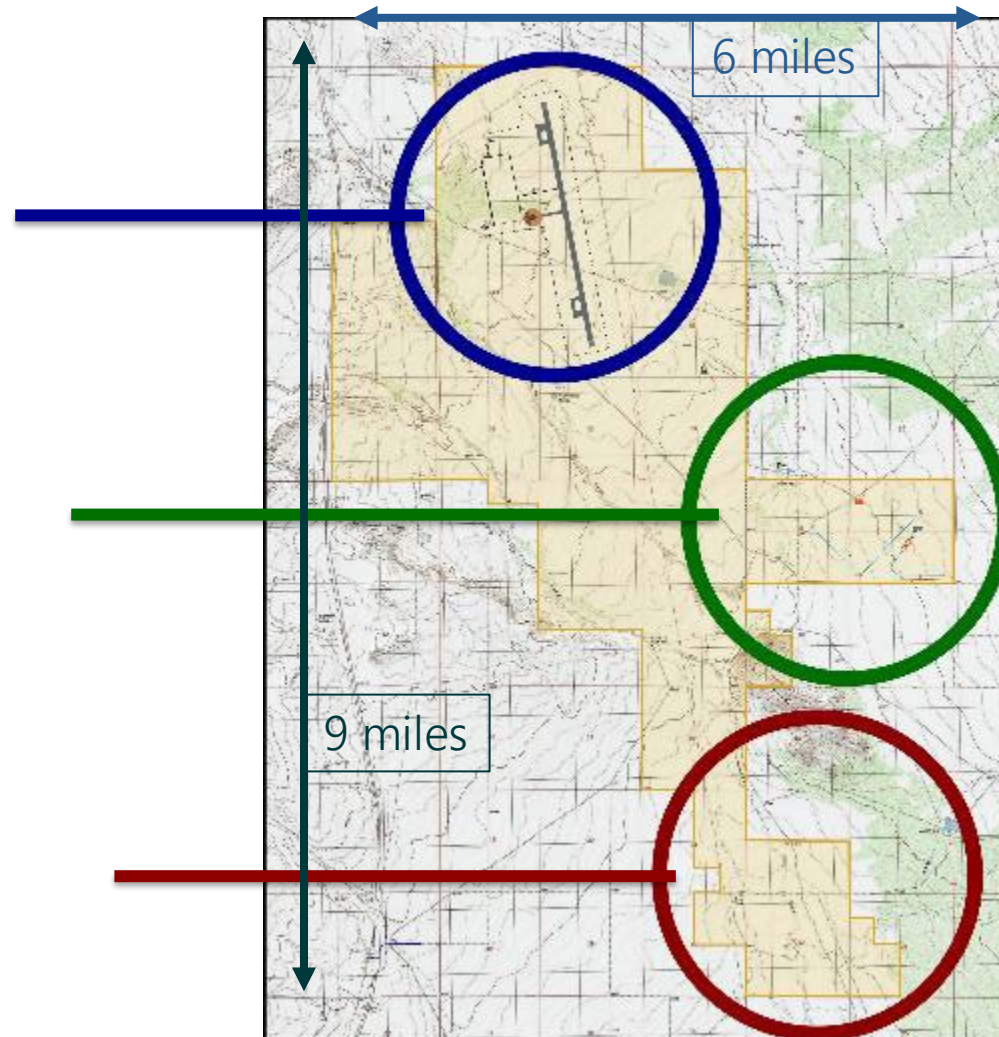
- 12,000-ft long, 200-ft wide runway
  - Horizontal and air launch operations
  - Space tourism
  - Conventional aircraft operations
  - Unmanned aircraft operations
  - High-altitude balloon operations
- Tenants: Virgin Galactic, HAPS Mobile

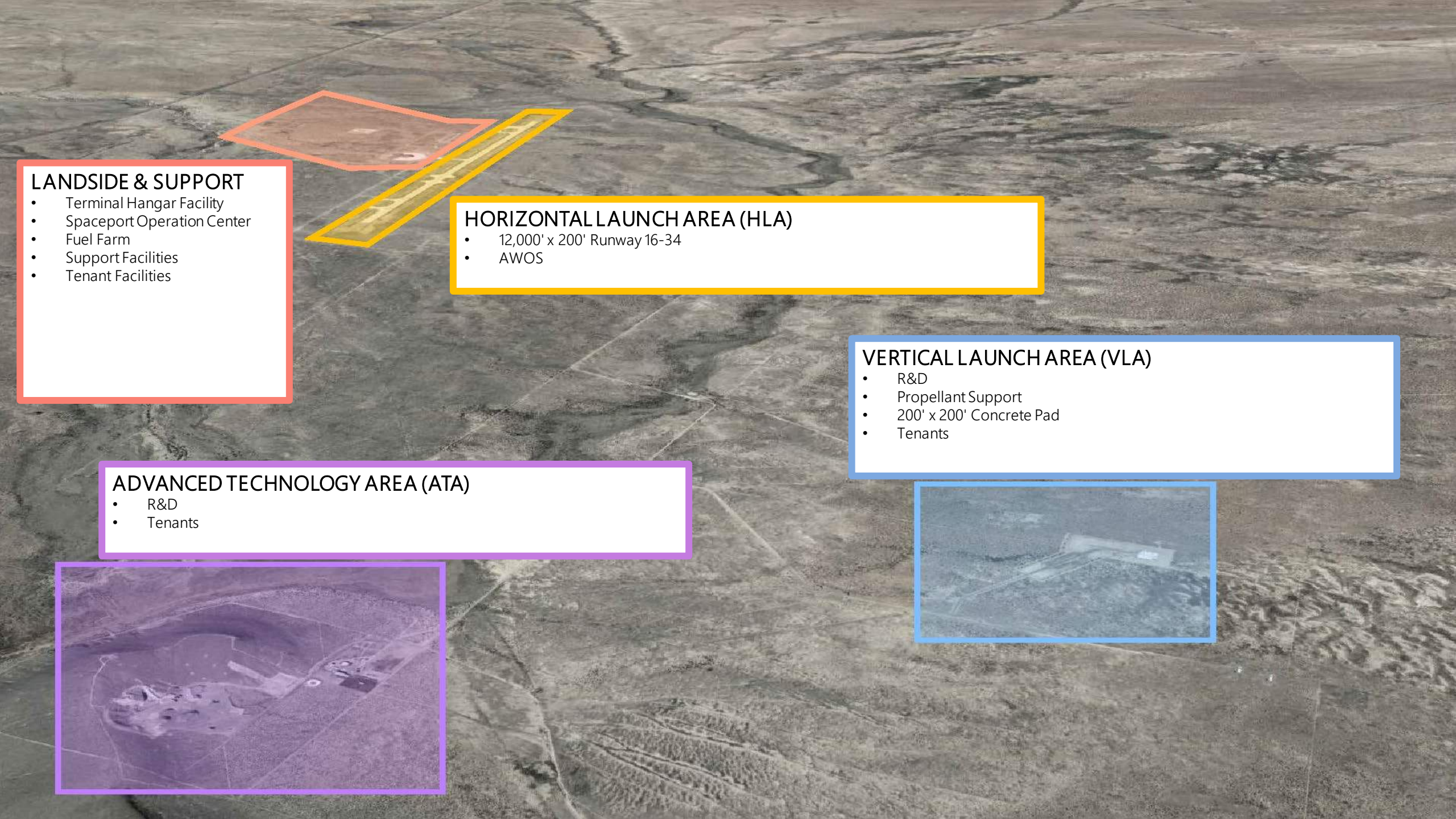
## Vertical Launch Area (VLA)

- Suborbital space research
  - Launch vehicle R&D
  - Solid, liquid, and hybrid propellant support
  - Rocket motor manufacturing and testing
  - Commercial and academic customer support
  - Launch from SA, land on WSMR
- Tenants: UP Aerospace, AeroVironment

## Advanced Technology Area (ATA)

- Emerging technology R&D
  - Isolated environment
- Tenant: SpinLaunch





## LANDSIDE & SUPPORT

- Terminal Hangar Facility
- Spaceport Operation Center
- Fuel Farm
- Support Facilities
- Tenant Facilities

## HORIZONTAL LAUNCH AREA (HLA)

- 12,000' x 200' Runway 16-34
- AWOS

## VERTICAL LAUNCH AREA (VLA)

- R&D
- Propellant Support
- 200' x 200' Concrete Pad
- Tenants

## ADVANCED TECHNOLOGY AREA (ATA)

- R&D
- Tenants



# Recent Spaceport Activities (Partial)

- Up Aerospace – 15 flights total; Recent Aug '21
  - NASA Flight Opps; rocket motors tests Nov/Dec 2022
- AeroVironment / HAPSMobile Site
  - Site build in 2020 and flights to 62k
- SpinLaunch, Facility Complete in 2021, Tests thru Oct 2022
  - Broke ground on research facility in 2019
- Spaceport America Cup // June 2022 and 2023
  - 1300-1500 student competitors, ~90 vertical launches/yr
- Virgin Galactic
  - Moved workforce to NM in 2019, 3 glide flights in 2020
  - Six flights to space 2023, more planned for 2024
- C6 Launch and Ursa Major
  - Liquid Engine Tests
- Swift Engineering (2021-2022)
  - Solar-powered USA, sponsored by NASA Ames
- USAF Thunderbirds, Jan 2022 / 2023 Winter Training Program
- Stratodynamics Atmospheric testing UAV



# Estimated Economic Impact (2022)



- Independent Study by NMSU's Center for Border Economic Development estimated
  - Direct economic output >\$138 Million (>10:1 private output for public investment)
  - Value added production >\$ 60 Million (~6:1 private output vs investment ratio)

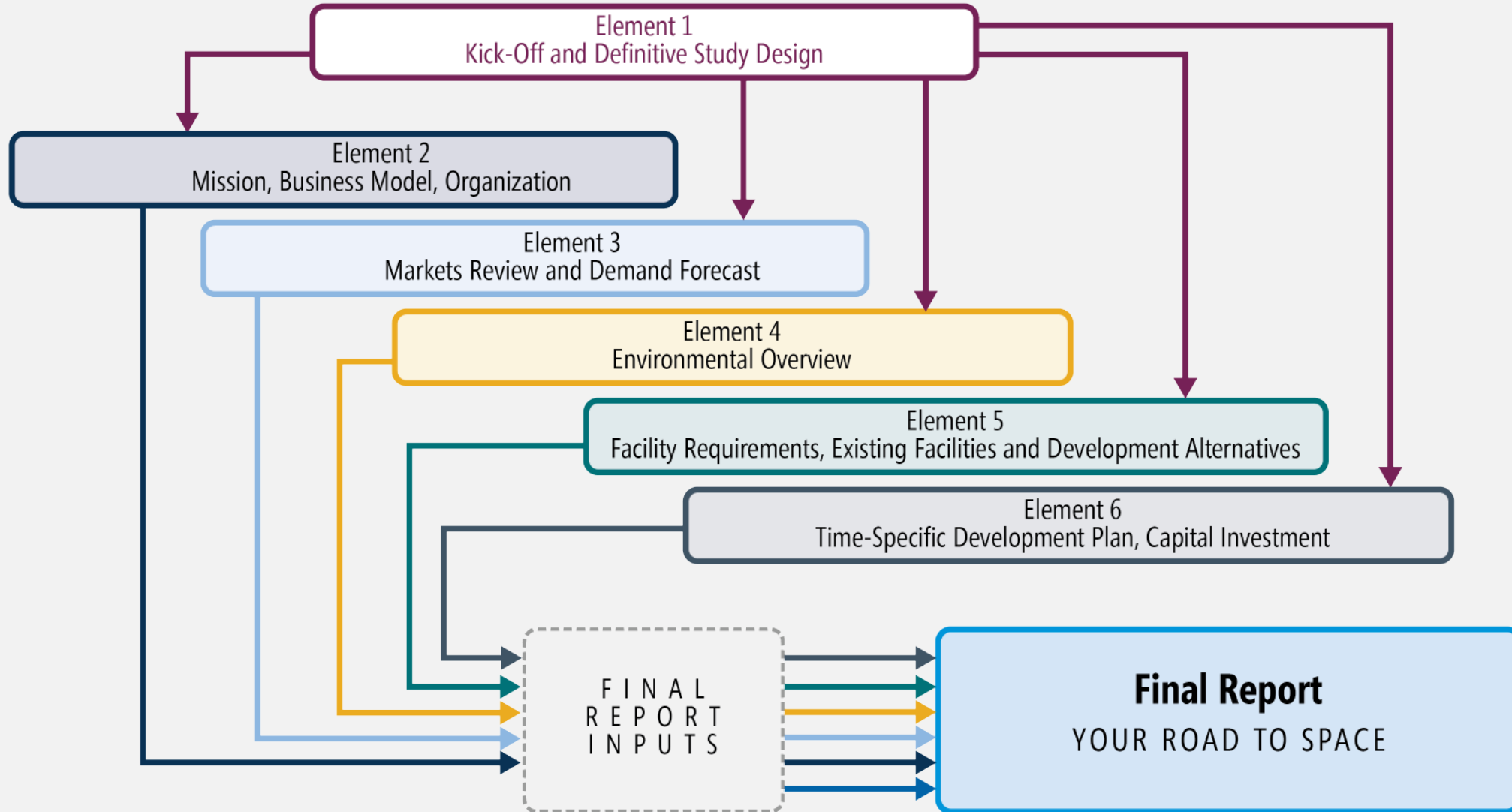
Impact	Spaceport Operations	Tenant Operations	Visitor Spending	Total Impact
Direct Jobs	19	501	29	549
Total Jobs	41	735	35	811
Economic Output	\$11,324,953	\$123,395,352	\$3,360,451	\$138,080,756
Value-Added Production	\$5,438,146	\$53,151,386	\$1,845,813	\$60,435,345
Labor Income	\$2,853,261	\$41,802,706	\$1,189,682	\$45,845,649
Total Taxes:	\$865,013	\$11,610,726	\$431,496	\$12,907,235
Federal	\$666,663	\$8,294,942	\$200,155	\$9,161,760
New Mexico	\$198,349	\$3,315,784	\$231,341	\$3,745,475

<https://newsroom.nmsu.edu/news/nmsu-study-delves-into-spaceport-america-s-strong-impact-on-nm-economy/>

<https://www.spaceportamerica.com/wp-content/uploads/2023/08/Economic-Impact-of-Spaceport-America-2022-Final.pdf>

# Master Plan Project Overview

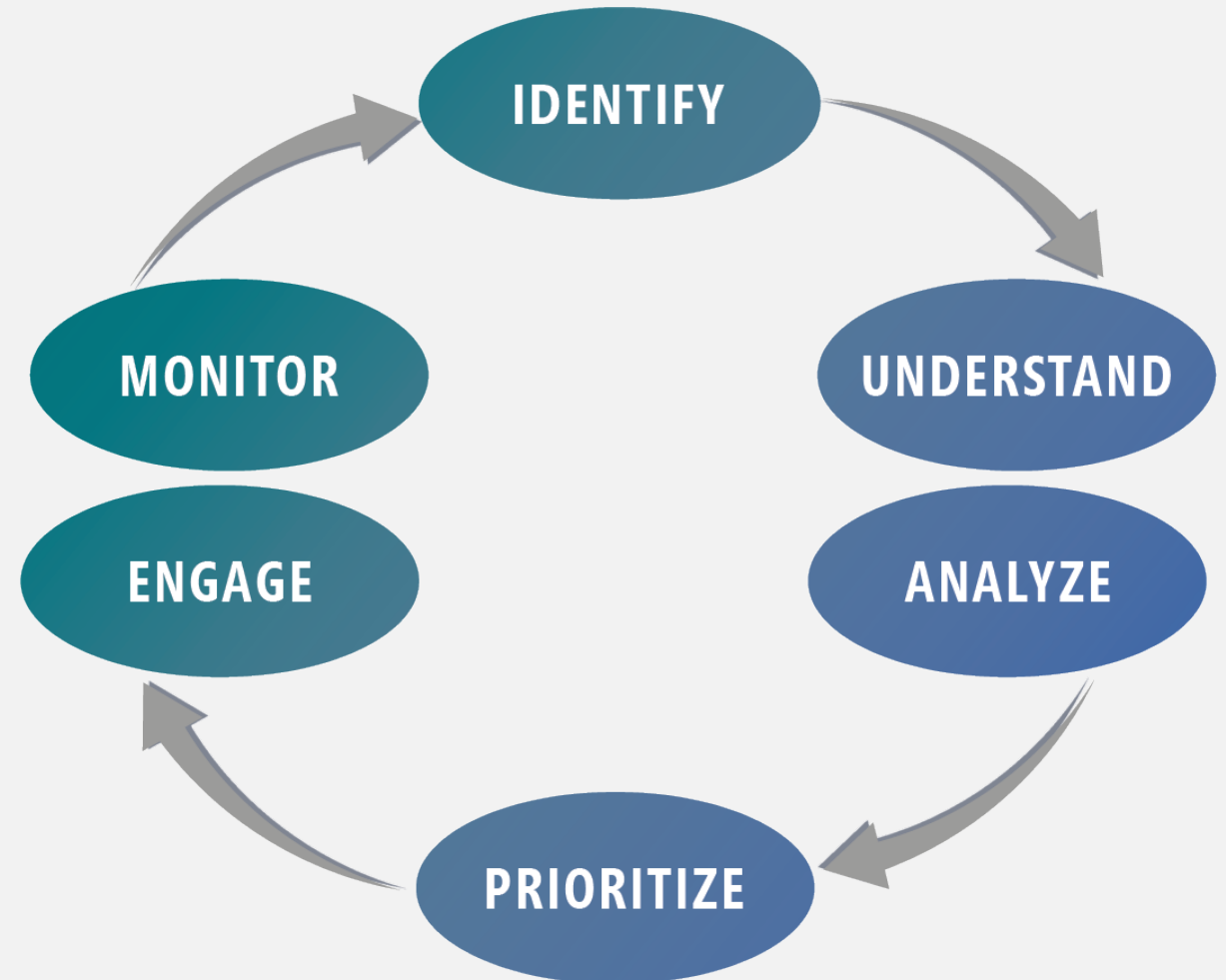
# OUR APPROACH



Comprehensive, Data-Driven, Participatory, Fully Integrated Process

# Keeping Stakeholders Engaged

- Who?
  - Team
  - Spaceport America, FAA, Tenants
  - Communities, State, USG and Tribes
- Engagement
  - Push, Pull, Interactive
  - Verbal/Written
  - Formal
    - *Presentations, Briefings, Brainstorming, Meetings (TAC/Public)*
    - *Progress Reports, Project Documents*
  - Informal
    - *Conversations, Ad hoc Discussions*
    - *Notes, Email, ...*



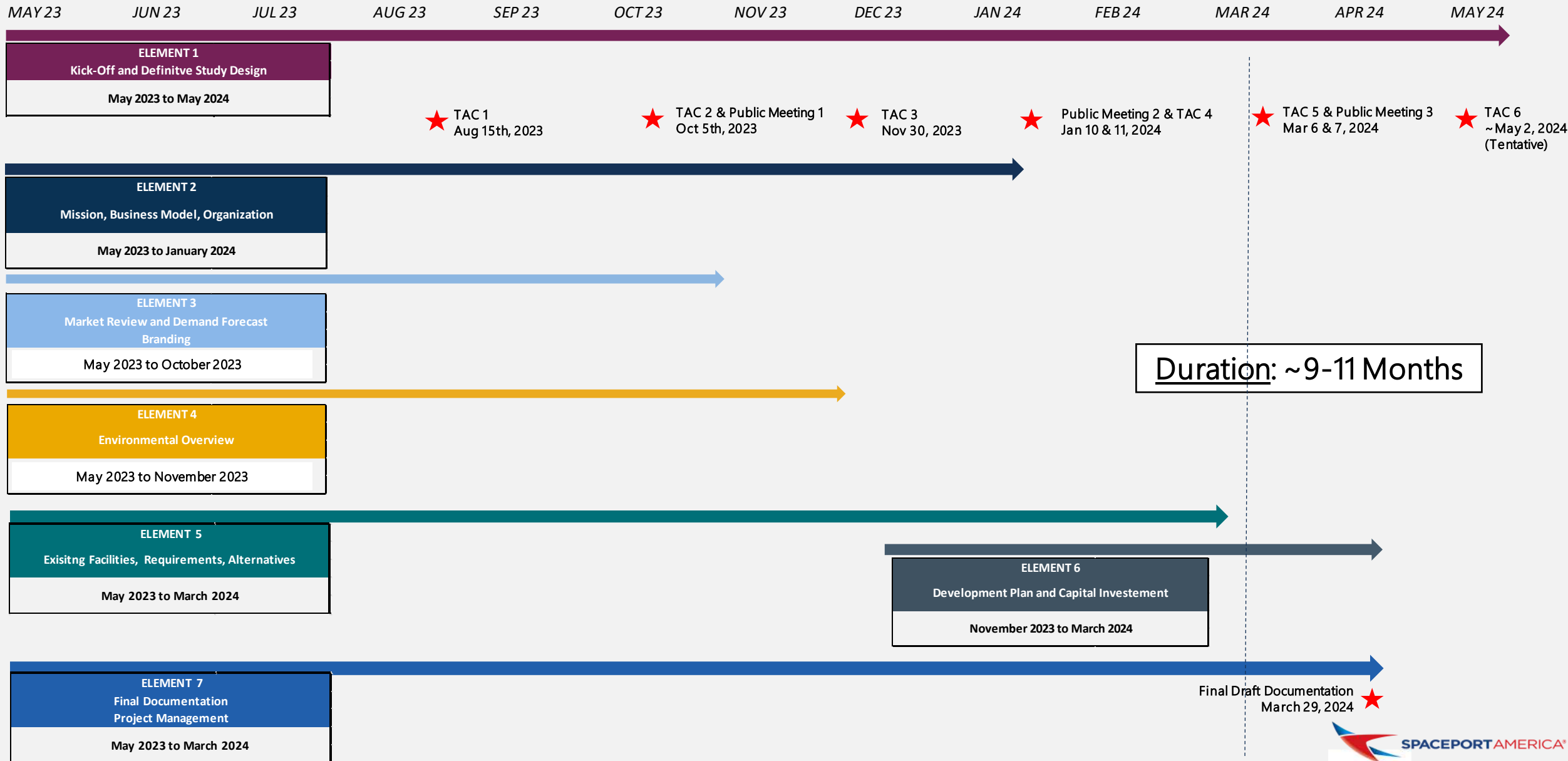


# Technical Advisory Committee

- Primary Spaceport Stakeholders
  - Senior leadership of the entities
- Up to 12 TAC members
  - 11 members selected
- Invited by RS&H with NMSA review
- Volunteer basis, no compensation
  - Expense reimbursement w/approval
- As an individual provide opinions on MP scope, outcomes & ad hoc inquiries
  - Opinions not official entity positions
- First three (3) TAC meetings completed
- Two (2) additional TAC meeting dates agreed upon thru May 2024

ENTITY
WSMR
Virgin Galactic
UP Aerospace
AeroVironment
Las Cruces, NM
TorC, NM
TorC CoC, NM
Dona Ana County, NM
Sierra County, NM
NMSU/NMSA
Prismatic

# SCHEDULE (approximate / subject to change)



Duration: ~9-11 Months

# Public Input

# TOPIC #1 – What is Spaceport America to You?

- Open Comments

# TOPIC #2 – NMSA Mission Fulfillment

- Open Comments

# TOPIC #3 – Spaceport America Strengths & Weaknesses?

- Open Comments

# TOPIC #4 – Spaceport America's Opportunities & Threats?

- Open Comments

A futuristic landscape with a rocket launch and people in spacesuits. The scene is set on a rocky, reddish-brown terrain. In the center, a rocket is launching upwards, leaving a bright blue and white trail. Two tall, dark, rectangular structures with a hexagonal pattern on their sides stand on either side of the launch. In the foreground, four people in spacesuits are looking towards the launch. The sky is a mix of dark blue and orange, suggesting a sunset or sunrise. The overall atmosphere is one of technological advancement and exploration.

THE FUTURE IS CLOSER  
THAN YOU THINK

**RS&H** | **POPULOUS**

zia  
engineering  
& environmental  
consultants, llc





# Support Slides

Aerial



# SWOT Analysis

(Sample Topics)

## STRENGTHS

- What does Spaceport America do well vs. customer opinions?
- What are Spaceport America's unique skills, capabilities, assets, brands, etc.?
- What does Spaceport America do better than competitors?
- Is Spaceport America financial position/ access to capital sufficient to complete/meet demand?

## WEAKNESSES

- What do Spaceport America complain about?
- Does Spaceport America effectively measure performance/progress?
- Do Spaceport America stakeholders feel we meet expectations?
- Are there current or future cash flow concerns to address?

### **SWOT Inputs**

RS&H Team, Agency Staff,  
Stakeholders,  
Interviews and Primary /  
Secondary Research

## OPPORTUNITIES

- What are target markets and growth areas?
- What unusual/unique customer "pain" points can we ease?
- Are there new or untapped funding sources to pursue?
- Is there new technology/processes to leverage for competitive advantage?

## THREATS

- What are competitors doing better; are there "replacement" sites/services?
- Are there new regulations, standards, and other federal, state, local rules to worry about
- Does Spaceport America have too much concentrated revenue exposure and effective risk mitigation strategies?

# Porter's Five Forces

