

NM Legislative Finance Committee

New Mexico Spaceport Authority

August 27, 2020

Outline

- Investigation Status
- Intro of Interim Executive Director
- Spaceports and Space Economy Review
- Spaceport Related Jobs
- Customer Activity Review
- Other Site Activities
- Site Improvements
- Capital Improvements
- FY21 Revenue

Scott McLaughlin

Interim Executive Director /
Director of Business Development



SPACEPORT AMERICA

The Space to Be...

INTERIM EXECUTIVE DIRECTOR, SCOTT McLAUGHLIN

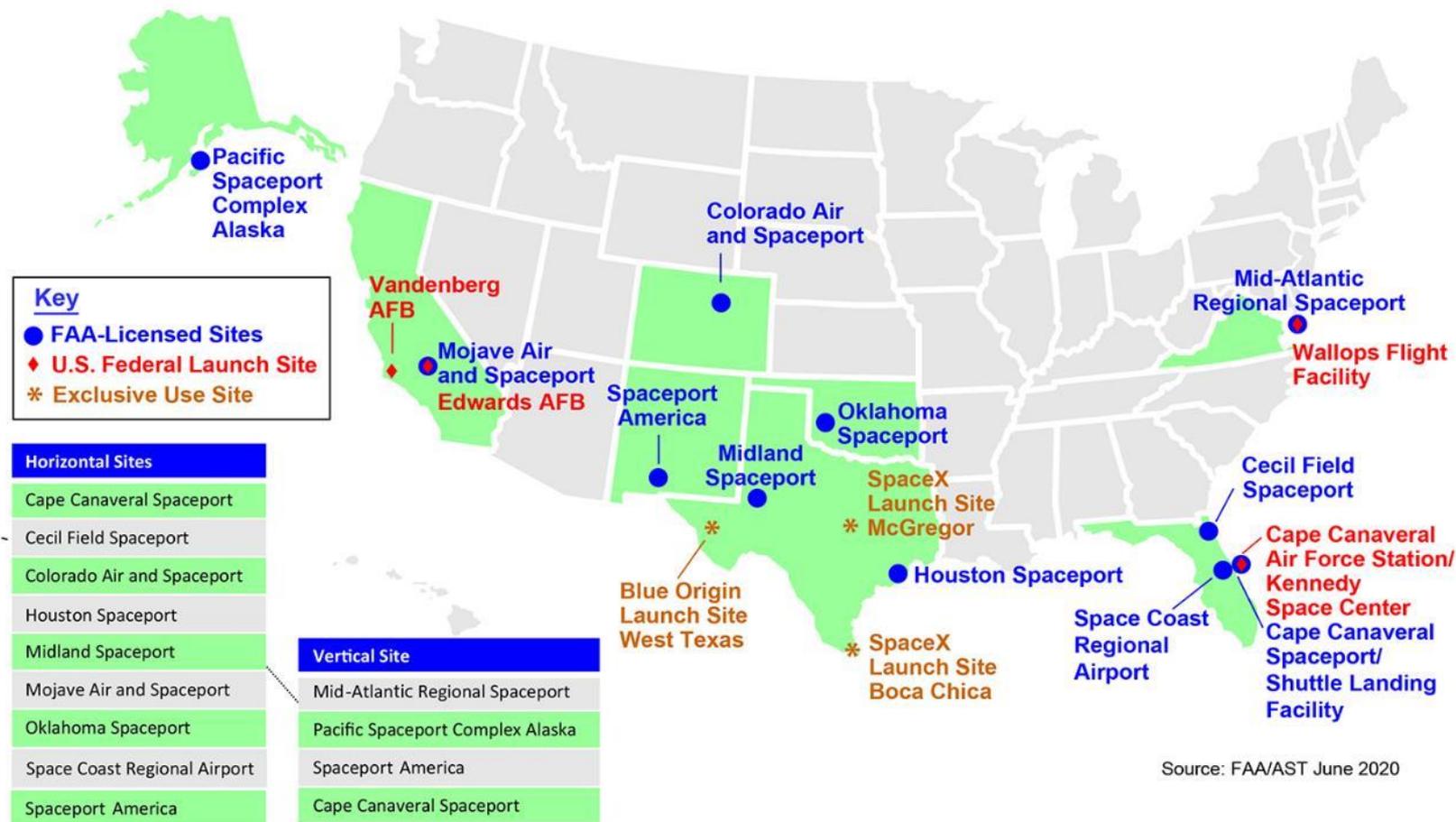


- Engineer and entrepreneur with significant experience in both government and private industry
- Third generation New Mexican, born in Albuquerque, raised in Las Cruces; graduate of New Mexico State University with B.S. in Electrical Engineering; most of the way thru an M.S. in Business Management
- Worked at White Sands Missile Range (WSMR), National Oceanographic and Atmospheric Administration (NOAA), brief stint at NASA, and several private companies
- Have performed executive management, research and development, engineering design, field work, production, sales and business development, proposal creation, papers, presentations, contract negotiation and management, project management, etc.
- Started new small business unit, growing business from home office, becoming part owner, and growing and running virtually all aspects of business
- Significant experience with test ranges, and activities around aerospace, aviation, and lighter-than-air systems; understand how to work with government agencies
- Have traveled extensively and worked with domestic and international customers
- Am a *Boomerang* – left NM, but came back after 25 years to be Home
- Thrilled to work at Spaceport America... and help NM define its *own* future



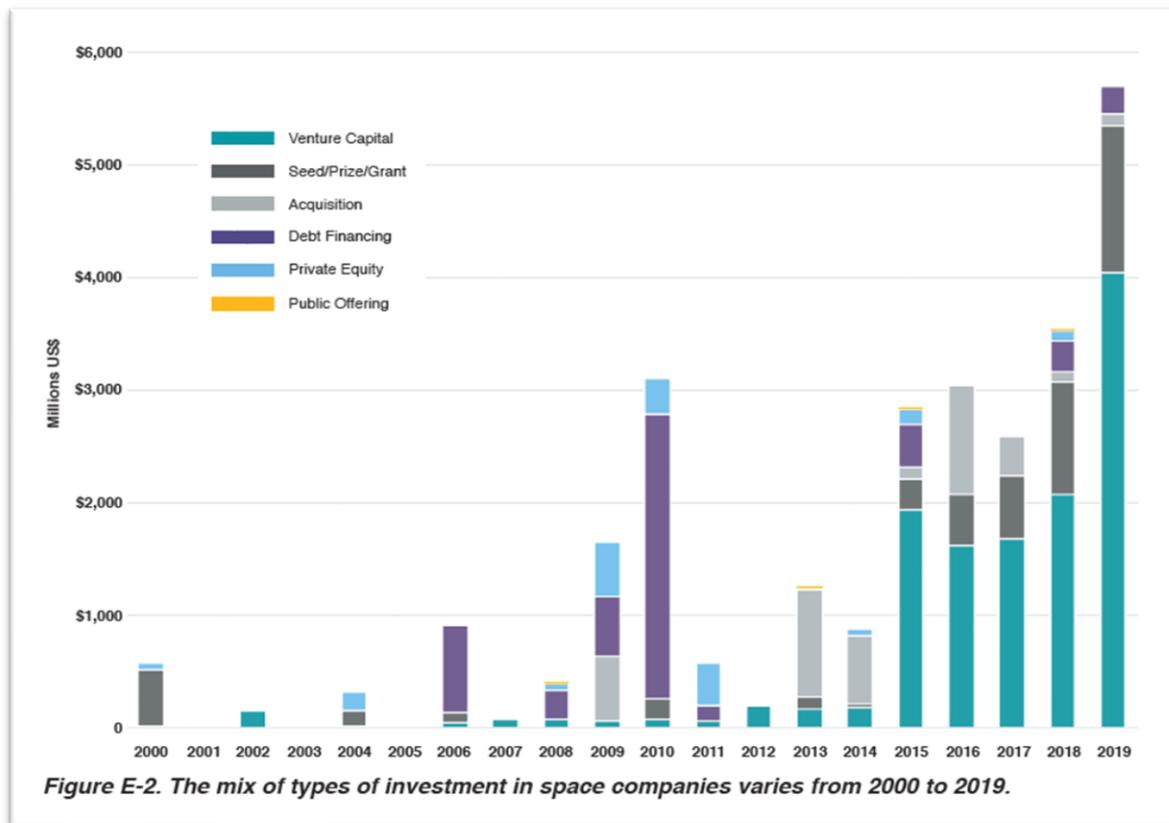
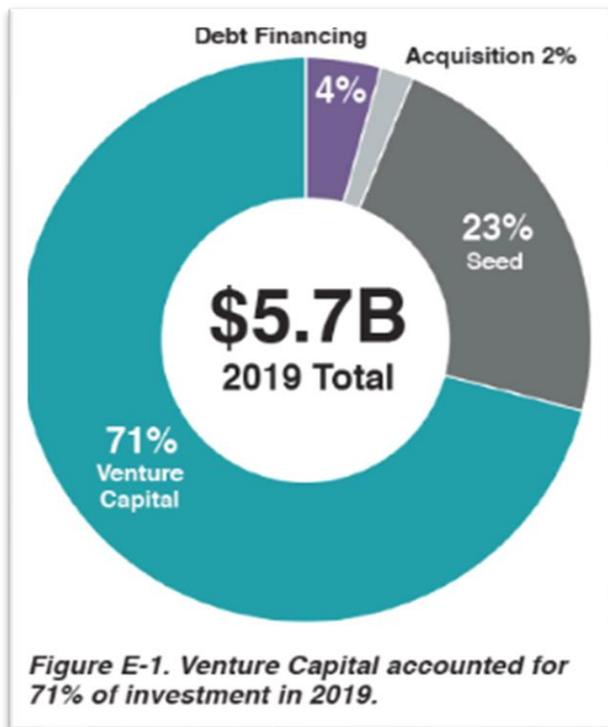
U.S. SPACEPORTS

There are 12 FAA licensed spaceports. Spaceport America has many **competitive advantages** including restricted air space, good weather, remote (sparsely populated) location, several Federal laboratories with related activities, partnership with White Sands Missile Range, and room for horizontal, vertical, and *alternative* space launch methods.



SPACE INVESTMENT CONTINUES TO INCREASE

“Start-up space ventures attracted \$5.7 billion in financing of all types during 2019, shattering the \$3.5 billion record set the previous year. This was largely driven by investors continuing to pour large amounts of capital into a handful of the industry’s largest companies.” Ref.: Bryce Start-Up Space 2020 (<https://brycetek.com/reports>)



Also: <https://www.cnbc.com/2020/07/30/space-economy-worth-over-420-billion-weathering-covid-crisis-report.html>

- ABOUT **260 PRIVATE EMPLOYER DIRECT JOBS*** CREATED DUE TO THE SPACEPORT
 - **Virgin Galactic** moved on site summer of 2019; about 200 employees (~70 hired locally), about \$9M spent by employees on local real estate; 75 local suppliers
 - **SpinLaunch** began construction summer of 2019, and expects to complete the site by late 2020, with about 30 full-time employees
 - **AeroVironment / HAPSMobile** constructed new site spring 2020 and made first flight in July; about 35 employees working on site
 - **UP Aerospace** leases are for building rocket motors and launch (periodically on site)
 - Working with **two more prospects** for permanent facilities on site for 2021
 - Expect to grow to over 300 direct jobs during 2021

**Direct jobs bring in “new money” and also create indirect and induced jobs. Aerospace related jobs pay significantly higher than mean wages in the area. Estimated total average private employer payroll is \$16M to \$20M.*

- **SPACESHIP TWO AND WHITEKNIGHT TWO**
 - Permanently located in the Gateway to Space Hangar



- **FLIGHTS**

- Many flights by *VMS Eve* (mother ship) aircraft
- Two glide flights of *VSS Unity* (spaceship)
- Rocket powered flight expected later this year
- Expect FAA to remove restrictions to allow carriage of *Space Flight Participants* in 2021 (and flight with Richard Branson)



Press release:

<https://tinyurl.com/y3sgf6tf>

- **SOLAR-POWERED HIGH-ALTITUDE PLATFORM-STATION (HAPS)**
 - Began conversation in late summer 2019, began construction in February 2020
 - Over \$8M in construction paid by customer for unmanned aerial vehicle (UAV) test site
 - Includes large hangar, offices, mission control, maintenance space
 - Airplane has 260' wingspan, 10 electric motors, and can fly to 80,000'
 - Eventually two will be on site; multi-year effort for FAA certification



Press release: <https://tinyurl.com/y49ksmuv>

AEROVIRONMENT NEW TEST SITE



About 35 people on site, with increase when flight operations – up to 100

- STATUS

- Continuing construction of 30-meter (world's largest) evacuated centrifuge
- This is suborbital, but technology will act as 1st stage for eventual larger orbital version
- Expect stable workforce (~30) and numerous tests a year
- 2021 should be a big year...



<https://www.wired.com/story/inside-spinlaunch-the-space-industrys-best-kept-secret/>

- UAV TEST FLIGHT

- Important test flight of High-Altitude Long-Endurance (HALE) to help secure further development and funding, partnered with NASA Ames



EMERGENCY PREPAREDNESS EXERCISE

- **CRISIS SIMULATION**

- Three-day exercise, which involved all spaceport personnel, local law enforcement, county partners, NM State Police, DHS, many volunteers; 14 agencies in total
- Instructors from (and paid for) by NCBRT/LSU (<https://www.ncbrt.lsu.edu/>)
- Prepares site personnel for larger events such as first powered VG flight and other events
- Excellent training for all, not just related to spaceport events



OTHER ACTIVITY IN LAST YEAR

- **VERTICAL LAUNCH ACTIVITY**
 - Several launch events including NM Tech, UP Aerospace, EXOS Aerospace, Boeing CST-100 (balloon), USC Rocket Propulsion Lab, Princeton, Operations Space, and other small aerospace companies
- **NON-AEROSPACE**
 - Several non-aerospace events bringing in important revenue and hotel stays, including Harpers Bazaar (photoshoot), Infiniti (new model year car reveal), Ad Astra movie DVD release, ECTA Racing (Note: only scheduled on non-interference basis for aerospace activity)





- New outreach effort... online videos on STEM topics
- Designed to be helpful during COVID-19

- Various STEM events on-site
- Visit to all local middle schools
- Fall 2019 Road trip to northern New Mexico
- Shifting to all virtual STEM outreach



Strato Journey- STEM+C
October 12-13, 2019

6 teams, 1 Goal:

Tow a student built, FAA approved experimental UAV, tethered to a weather balloon up to an altitude of 100,000 ft. Then release the UAV from the weather balloon and fly the UAV back for a landing at Spaceport America.

SITE IMPROVEMENTS

- Fuel farm upgrades
- Radio system (coordinating with DoIT)
- Runway painting
- Parking lots and road work
- General improvements in getting ready for ongoing commercial operations
- Working on refresh of T or C visitor center and visitor experience
- Ongoing updates to utilities, IT, buildings, roads



FUEL FARM IMPROVEMENTS

- NMSA ground and aviation fuel upgrade:
- Phase 1 Complete: Oct. 2019
- Phase 2: Fence line and Access Control installation:
- Completion Nov. 2020



- Unleaded
- Diesel
- Avgas
- Jet fuel

VG INVESTMENT UPGRADE FOR SUPPORT OF SFS GASSES

- Nitrous Oxide
- Oxygen

Spaceport America Cup

- SPACEPORT AMERICA CUP



- Could not hold in 2020 due to COVID
- Usually over 1500 college students from 17 different nations
- Fills up hotels in area for over a week
- Good marketing for New Mexico and Spaceport America



Spaceport America Cup Sponsors



Blast Off Sponsors



Awarding Sponsors



Apogee Sponsors

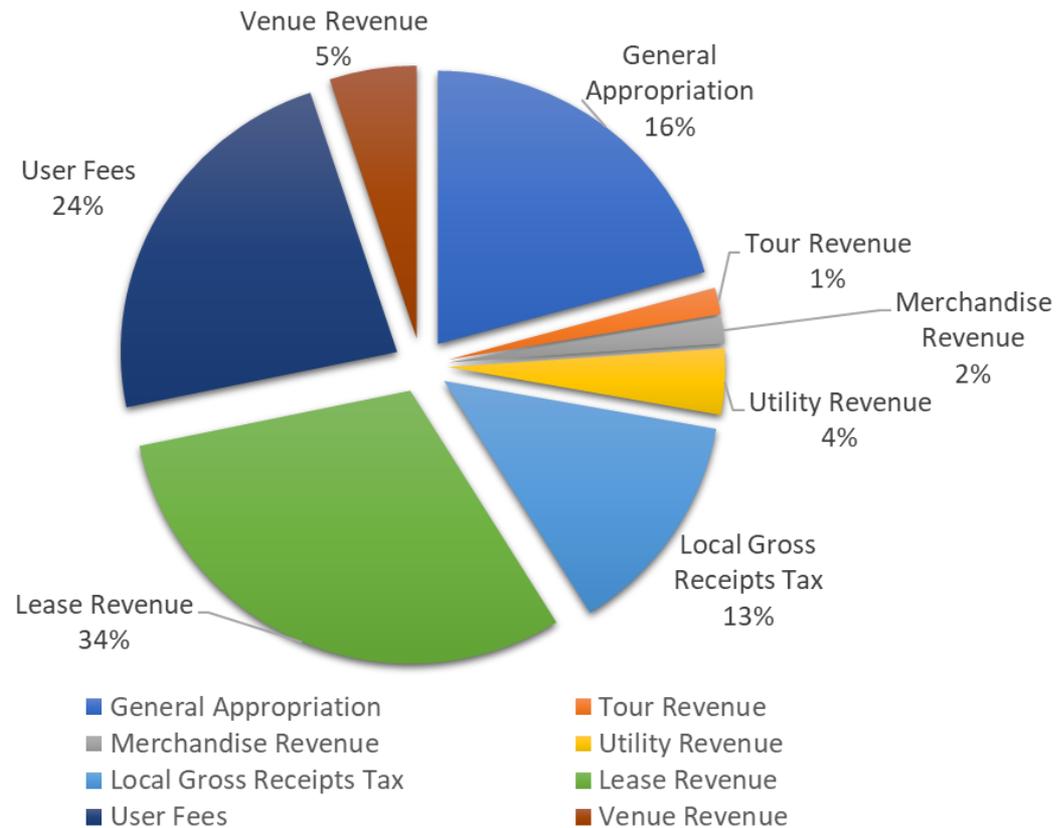


Introduces sponsors to NM and Spaceport America
Also large recruiting event for sponsors

- **MANY CANCELLATIONS AND POSTPONEMENTS**
 - Cancellation of SA Cup
 - Postponement of multiple vertical launches and other events scheduled this spring, summer, and fall (11 and counting)
 - Slowdown of various activities in order to help to prevent coronavirus spread (travel restrictions, working from home, etc.)
 - Many customers are also slowed in progress
 - All tourism visits to the site suspended
 - Many SA personnel working from home

FY21 REVENUES (APPROXIMATE)*

Source	Amount (\$1k)
General Approp.	2,649
Tour Revenue	200
Merchandise Revenue	200
Utility Revenue	500
Local GRT	1,700
Lease Revenue	3,908
User Fees	2,955
Venue Revenue	650
TOTAL	12,763



**Final FY21 and FY22 forecast will be released after CFO is hired.*

CAPITAL PROJECTS IMPROVEMENT PLAN FY21-FY25

- **CURRENTLY PAUSED...**
 - Due to open investigation, all CapEx projects are under review
 - Possible scope changes and reprioritization
 - IT equipment refresh (\$500k) was removed in Special Session
- **CAPITAL IMPROVEMENTS TASKS AND PROJECTS INCLUDE:**
 - Sidewalks, roads, parking lots
 - Security and safety improvements
 - Related environmental work (archeology, geotechnical/soils boring, etc.)
 - IT Center and Visitor Access Control Facility
 - Payload Processing Facility (Horizontal Launch Area)
 - Launch Rail and related site improvements (Vertical Launch Area)
 - General Purpose Hangar
 - Utility improvements and repairs (water, electricity, IT)
 - Future: Visitor Center, Taxiway, Rocket Motor Test Stands, Range Instrumentation, Warehouse/Maintenance building

SPACEPORT AMERICA

THE SPACE TO BE....

THANK YOU
FOR YOUR TIME

