

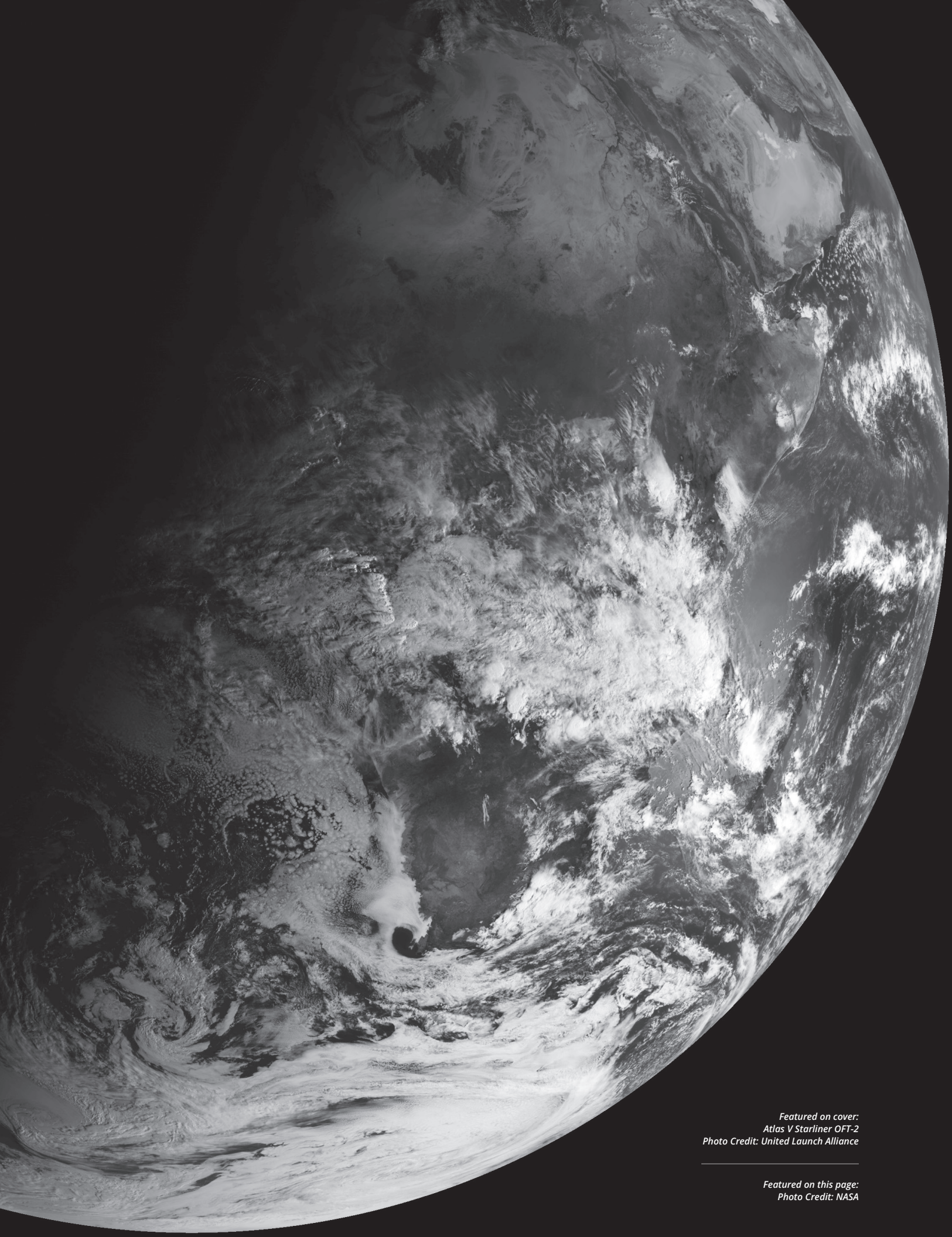


SPACE FLORIDA



2022 ANNUAL REPORT





ANNUAL REPORT 2022  
TABLE OF  
CONTENTS

Message from Space Florida Chair of the Board	5
Message from the President & Chief Executive Officer	6
Performance Year 2022 Annual Outcomes	8
Space Florida's Statewide Reach	10
Business Highlights	12
Florida Spaceports System	14
Government Relations & Community Involvement	16
Research, Innovation & Special Projects	18
Space Florida Leadership	24
James Kuzma Community Advocacy Award	25
2022 Florida Space Art Contest	26
Space Florida's Core Values	30

Featured on cover:  
Atlas V Starliner OFT-2  
Photo Credit: United Launch Alliance

Featured on this page:  
Photo Credit: NASA





*Artemis I mission launch as seen from the Space Florida Launch and Landing Facility. Photo taken by Jimmy Moffitt, Senior Director, Launch & Flight Operations, Space Florida.*

## MESSAGE FROM SPACE FLORIDA CHAIR OF THE BOARD

Dear Stakeholder:

It is a distinct honor to serve as the Chair of Space Florida's Board of Directors. Our success in aerospace is rooted in historic moments that reverberated throughout the globe and were made possible with Florida's longstanding investment and strategic vision. From the Apollo missions and shuttle launches to advanced manufacturing and cutting-edge research, Florida has made the choice to be firmly committed to its aerospace history and excited about its future.

Indeed, Florida is a leader when it comes to aerospace commerce, research, exploration, and national security, and I'm proud to work directly with Governor Ron DeSantis, Space Florida, and key stakeholders to create a culture that allows both the public and private sectors to thrive.

Because of our unique financial structure, Space Florida is where leading aerospace companies come to see their new ideas take off. We are the innovation connector bringing unrivaled experience, unmatched financial tools, and an unbeatable location to the aerospace industry. Over this past year, Florida has supported 39 launches, solidifying our preeminence as the launch capital of the world.

Florida's aerospace landscape continues to change and mature as we attract new companies, help established ones expand, and foster innovation in all related sectors. A prime example is the expansion of Space Florida's Launch and Landing Facility (former Shuttle Landing Facility). The facility already sees activity from the delivery of satellites and NASA's Orion spacecraft heatshield for Artemis. Even world records were set on the Launch and Landing Facility in automotive speed testing! With the utility corridor project underway, this new investment and development will bring necessary communications, utilities, and commercial space to fit the needs of aerospace companies looking for a home in Florida.

I would like to thank the Space Florida Board of Directors for its leadership. The commitment to make Florida's space industry the best in the business is key to our success. I would also like to express my appreciation to President and CEO, Frank DiBello, and the entire Space Florida team for the work they do. Florida has good reason to be enthusiastic about the future of aerospace, and I look forward to the many opportunities yet to come.

Sincerely,

Lieutenant Governor Jeanette Nuñez  
Chair, Space Florida



**LIEUTENANT  
GOVERNOR  
JEANETTE M. NUÑEZ,**  
CHAIR OF THE BOARD,  
STATE OF FLORIDA



# MESSAGE FROM THE PRESIDENT & CHIEF EXECUTIVE OFFICER

SPACE FLORIDA



**FRANK DIBELLO**  
PRESIDENT & CEO,  
SPACE FLORIDA

Florida's space/aerospace industry, one that has a storied legacy, has continued its unprecedented growth and transition from a government-led and focused industry, to a busy commercial market-driven one. Space Florida continues to make our state an unbeatable location for aerospace companies, by enabling new spaceport capabilities throughout the State and supporting industry growth statewide!

Our state Spaceport System saw tremendous demonstration of capability during FY2022, by supporting 39 U.S. launches, and continuing its march toward Florida becoming our planet's premiere transportation hub for space commerce and the gateway to space in the 21st century.

At the Cape, the evolution is unmistakable with launch activity taking place on facilities managed by all its government partners, the Kennedy Space Center, Space Force, and Space Florida. We've witnessed satellite and rocket manufacturing facilities rise, becoming neighbors to new industry partners. Historic launch complexes are continuing to respond to new state and industry investment, and we should see Florida's launch cadence grow to over 60 launches next year. New industry presence and flight activity at the Cecil and Titusville Spaceports will also add to the robustness of Florida's Space future!

Our goals over the next 10 years are to continue Florida's leadership in making the statewide spaceport system the most diverse and capable space transportation and operations center in the world.

There is no doubt that our state is leading the way in space exploration and development. We have an unbeatable location, unrivaled experience, and unmatched financial tools that allow new business ideas to take off. Space Florida, Governor Ron DeSantis, and our board chair Lt. Governor Jeanette Nuñez, have worked hard and will continue to invest in Florida's space future, offering the marketplace the best infrastructure, workforce, and business operating climate that ensures continued growth of our industry all while making Florida the global leader in the future space economy, both here on the ground and in space.

Florida is poised to dominate the new era of aerospace and space commerce for the benefit of all Floridians!

A handwritten signature in cursive script that reads "Francis D. Dibello".

**FRANK DIBELLO**

*President & CEO, Space Florida*



*SpaceX's Falcon 9  
Photo credit: John Kraus*



PERFORMANCE YEAR 2022

# ANNUAL OUTCOMES

In PY2022, Space Florida recruited, retained, and expanded 15 space and aerospace-related companies and nearly 6,000 jobs.

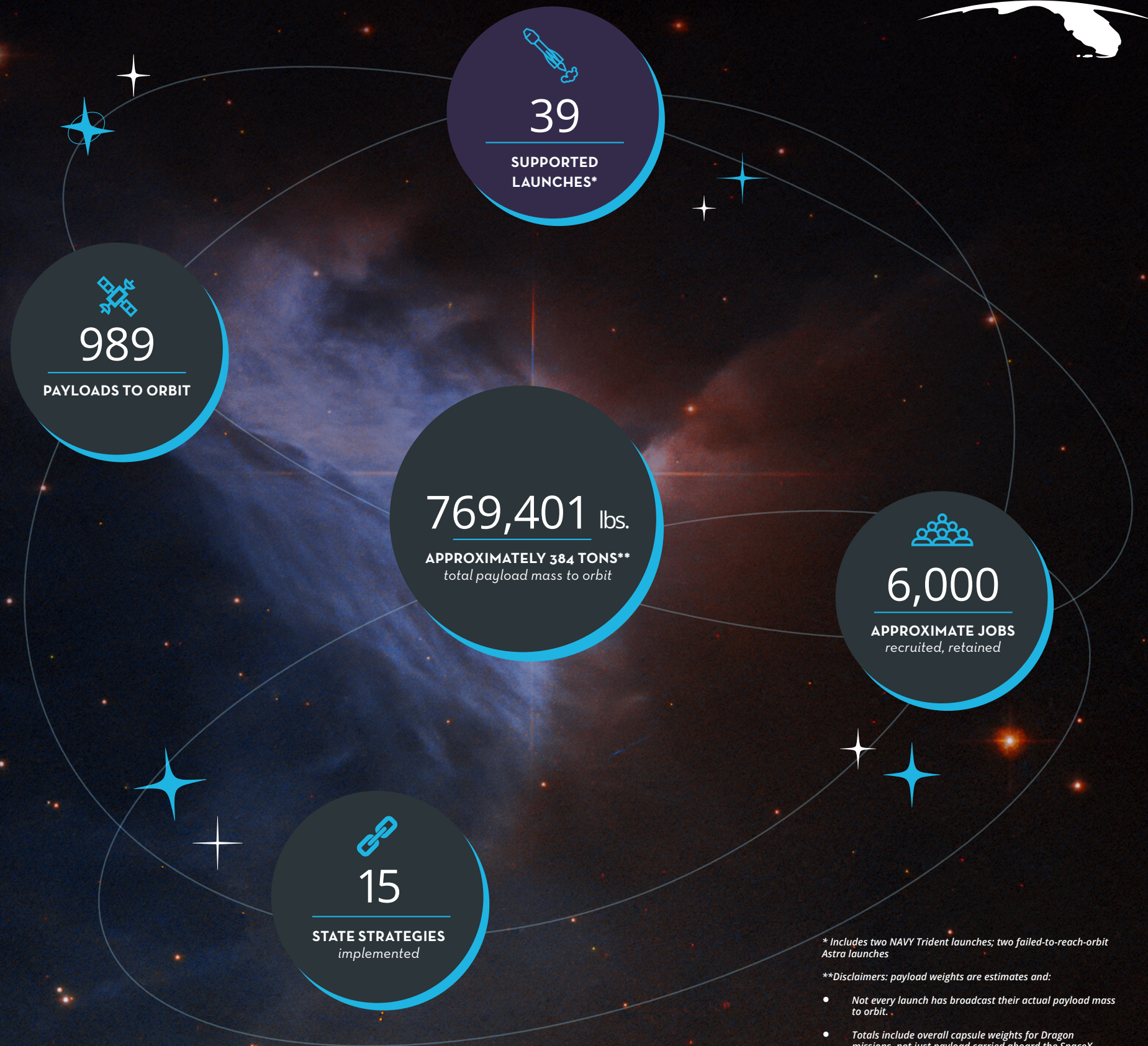
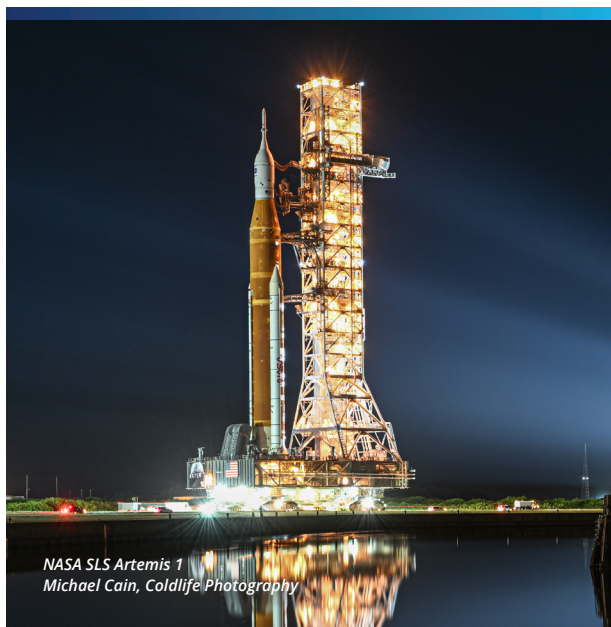
Space Florida implemented 15 strategies in the Florida Strategic Plan for Economic Development while providing \$4.3 million in funding for 30 research projects, partnerships, and grants.

These efforts give Florida the leverage and leadership needed to continue the aerospace industry's growth. Our trained workforce, incentives, and infrastructure attract and expand aerospace and high-tech companies.

As of July 1, 2022, Space Florida's Corporate Development and Capital Programs' pipeline had 85 total projects within Space Florida's three stages of project development. These projects had an estimated value of \$2.4 billion in capital investment.

Space Florida is where aerospace companies get everything they need to see their new ideas take off. We are the innovation connector bringing unrivaled experience, unmatched financial tools, and an unbeatable location to the aerospace industry.

The next page presents additional details about our top projects and outcomes for PY2022.



\* Includes two NAVY Trident launches; two failed-to-reach-orbit Astra launches

\*\*Disclaimers: payload weights are estimates and:

- Not every launch has broadcast their actual payload mass to orbit.
- Totals include overall capsule weights for Dragon missions, not just payload carried aboard the SpaceX multi-satellite.
- Transporter missions include the carrying fixtures and satellite deployer masses, etc.





Exploration Tower, Cape Canaveral



# STATEWIDE REACH

## CORPORATE DEVELOPMENT & CAPITAL PROGRAMS

As of July 1, 2022, Space Florida's Corporate Development and Capital Programs pipeline, which incorporates most projects around the state that are outside of the Spaceport Business Unit, had 85 total projects within three stages. They were verified as projects that met the requirements for utilization of the Space Florida toolkit.

- The 85 total projects within Space Florida's three stages of project development had an estimated value of \$2.4 billion in capital investment and are located in 26 Florida counties, six of which are designated rural areas of opportunity.
- The efforts of Space Florida to actively and regularly engage with state, regional, and local economic development organizations; chambers of commerce; airport and port authorities; and other organizations that work for the growth of industry in Florida have been central to broadening the pipeline statewide. Early engagement was critical to ensure bringing maximum benefit to the companies and meeting their project timelines.

Space Florida continued to seek regions in the state that historically have not had high-profile aerospace projects, but whose companies actively work in the aerospace supply chain to either manufacture parts and components or provide services. To guarantee the Florida aerospace sector's continued strength and growth, Space Florida, in partnership with local and state economic development groups, identified the companies that are in the supply chain and ensured they have access to the proper programs to either meet or grow to meet their clients' needs.

Space Florida participated in programs, conferences, and events with Enterprise Florida, Florida Economic Development Council, the Florida Chamber of Commerce, Florida Makes, CareerSource Florida, the Florida Venture Forum, and North Florida Rural Economic Partnership – just to name a few – to extend outreach across the state. These engagements allowed Space Florida to understand the potential aerospace growth and inform partners how and when they could engage Space Florida to use the toolkit.



### STARLINER LAUNCHES FROM CAPE CANAVERAL

A United Launch Alliance Atlas V rocket with Boeing's CST-100 Starliner spacecraft aboard launched from Space Launch Complex 41, in May 2022, at Cape Canaveral Space Force Station. Boeing's Orbital Flight Test-2 was Starliner's second uncrewed flight test and docked to the International Space Station as part of NASA's Commercial Crew Program.



# BUSINESS HIGHLIGHTS

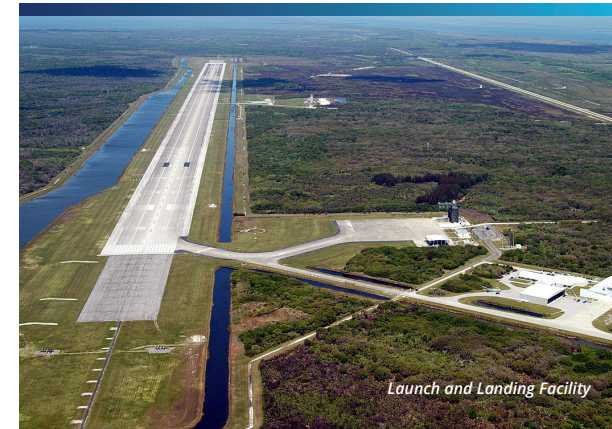
## ASTRA LAUNCH FROM SLC-46

Astra came to Cape Canaveral Space Force Station from Alaska to launch commercial payloads. Their second attempt at launch included two Tropics 3U CubeStats. Their mission is to Improve Life on Earth from Space® by creating a healthier and more connected planet.

*Astra Rocket launch vehicle (LV0008) during a static fire test at SLC-46 in Cape Canaveral, Florida on Saturday, January 22, 2022. Photo Credit: Astra/John Kraus*



# FLORIDA SPACEPORT SYSTEM



## SPACE FLORIDA BROKE GROUND ON LAUNCH AND LANDING FACILITY UTILITY CORRIDOR

Space Florida broke ground on phase one at the Launch and Landing Facility (LLF) East Area Development in July 2021. This marked the next big step in attracting more industry to Florida's Cape Canaveral Spaceport, which includes elements of NASA's Kennedy Space Center and the Cape Canaveral Space Force Station. This phase includes a critical component to future business operations: the utility corridor.

The more than one-mile-long utility corridor project will provide power, water, and communications service to large portions of property adjacent to the LLF, opening development opportunities for companies vying to join the Cape's growing commercial space ecosystem.

LLF East Area Development is a multi-phase, master-planned project that offers a unique capability for suborbital launch, unmanned aerial vehicles, and other aerospace-related businesses at home on the Cape. Designed to be a shovel-ready site available with the 'speed of the marketplace' for commercial aerospace, this new project at the LLF is the next step after the successful development of Exploration Park.

The first phase (Block 1) includes common use infrastructure to provide new roadway access to shovel-ready leasable areas, drainage, environmental mitigation, and utilities for more than 300 acres. The project will also include provisions to bring

commercial power infrastructure to the LLF. The new roadways improve circulation and critical emergency response to accommodate the growth.

To better facilitate and encourage the growth of commerce, Space Florida is constructing common-use infrastructure for the LLF to enable future projects, foster industrial growth, and attract private capital investment. The LLF has the potential to serve not only aerospace and aviation customers, but also those wanting to construct manufacturing and processing facilities and other support services for operations at the Cape. The East Area Development infrastructure will support a variety of developments, including both landside and airside parcels, which will allow customers to expedite the development process and construction of new facilities in these parcel areas. The airside parcels can uniquely support Horizontal Takeoff and Landing operations, suborbital, and specialized aviation-type tenants. The existing apron and taxiway in the Southfield area provide airfield access, which can also be extended via taxiway through the Midfield area. Similarly, the preparation of the landside parcels will allow customers to expedite the development of these areas, which are best suited to support manufacturing and processing facilities that require ready access to Kennedy Parkway and other support areas within Cape Canaveral Spaceport and Kennedy Space Center.

Construction is expected to be complete by 2025.

Space Florida's LLF is one of the longest runways in the world. The LLF and accompanying facilities are currently available for use by external customers and are operated and managed by Space Florida under a 30-year property agreement with NASA. The LLF, once known as the Shuttle Landing Facility, has a storied history and Space Florida is honored to improve, develop, and bring this area into the new age of Space.

### Companies who have utilized the LLF include:

- Starfighters
- Lockheed Martin
- United Launch Alliance
- SpaceX
- Airbus



# FLORIDA SPACEPORTS SYSTEM



## NEW TRAFFIC CONTROL TOWER OPENS

A new 126-foot air traffic control tower and mission control center officially opened at Cecil Air and Space Port in 2021. The mission control center was dedicated to astronaut Dr. Norman Thagard, a graduate of Paxon High School in Jacksonville.

The tower was built to accommodate growth at Cecil Airport. All existing buildings at the airport are leased and Boeing announced in December it would build a 362,000 square foot hangar on the east side of the airport's runway.

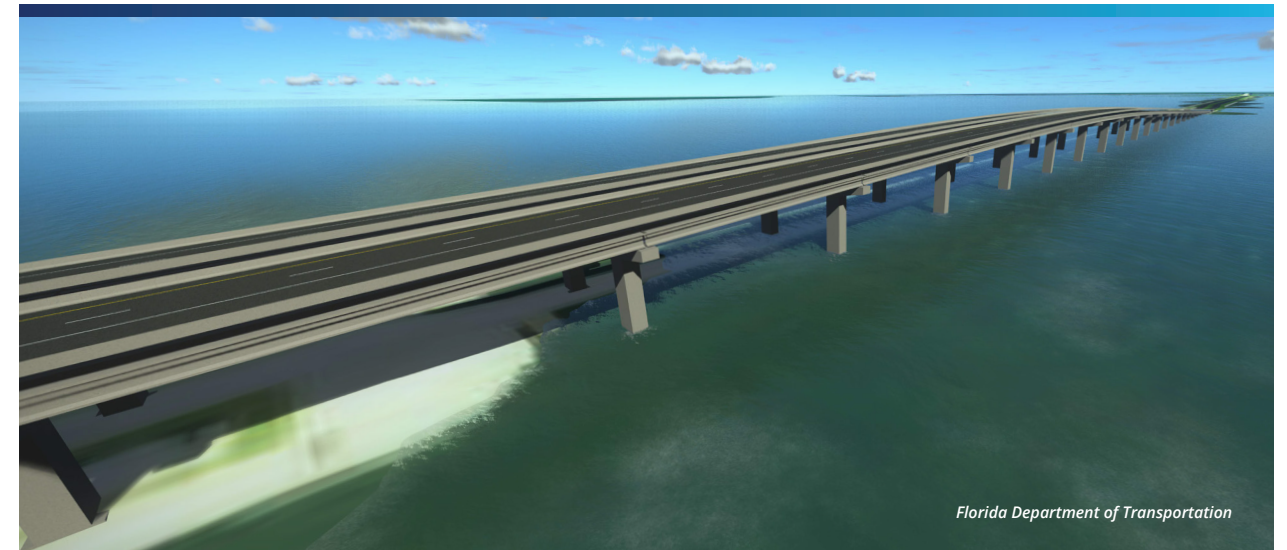
The mission control center is intended to support horizontal launch operations at the spaceport.

## INSPIRATION 4 LAUNCHES FROM FLORIDA

Space Florida applauds Inspiration4 and SpaceX on the success of its first all-private astronaut launch from Florida in September 2021! The Falcon 9 launch carried the crew of Jared Isaacman, Haley Arceneaux, Dr. Sian Proctor, and Chris Sembroski, and marked a new milestone for commercial space travel.



Inspiration4 / John Kraus



Florida Department of Transportation

## FLORIDA DEPARTMENT OF TRANSPORTATION BREAKS GROUND ON NASA CAUSEWAY BRIDGE

In December 2021, Lt. Governor Jeanette Nuñez, Space Florida's Board Chair; the Florida Department of Transportation (FDOT); Space Florida; and NASA hosted a groundbreaking ceremony for the new NASA Causeway Bridge, a \$126 million project that includes building two high-level fixed bridges over the Indian River, providing a new gateway to Kennedy Space Center and Cape Canaveral Space Force Station.

"Since taking office, our administration has prioritized investment in transportation infrastructure that will enhance access to Cape Canaveral and advance Florida's position as a leader in space," said Lt. Governor Nuñez. "This project is preparing Florida for growth, facilitating local commerce and ensuring economic vitality for continued launches on our space coast."

Florida's Space Coast, a worldwide hub of aerospace innovation, space exploration, and defense, is growing every day. The new NASA Causeway Bridge will serve as the launchpad for future growth in our aerospace industry, generate future investment, and ensure that America's mission in Space will continue.

The project is a demonstration of Florida's commitment to the space industry and helps further establish Brevard County as a destination to dream big.

A partnership among the local and federal agencies made this project possible. In 2019, the U.S. Department of Transportation awarded the project a \$90 million Infrastructure For Rebuilding America (INFRA) Grant.

*"This project marks a new era for Florida's Space Coast. Replacing the Indian River Bridge, which links Kennedy Space Center, Merritt Island, and Cape Canaveral to Titusville, will support the area's ever-increasing aerospace activity and robust launch cadence. Space Florida was pleased to have provided the enabling INFRA Grant, which will assure continued success at the nation's busiest spaceport."*

**-FRANK DIBELLO, PRESIDENT AND CEO, SPACE FLORIDA**

The existing NASA Causeway has twin 2,993-foot-long bascule bridges, originally built in 1964 by the U.S. Army Corps of Engineers. During the Apollo and Space Shuttle programs, the bridges were vital for transportation of space-bound payloads to the launch facilities.

That tradition will continue as the new 4,025-foot-long spans will be the key corridor for commercial spaceflights for SpaceX and Blue Origin.

Motorists could be driving on the new bridges by the end of 2025.





## GOVERNMENT RELATIONS & COMMUNITY INVOLVEMENT



### COUNTDOWN CLOCK INSTALLED AT CAPITAL

Space Day 2022 included a new feature this year with the unveiling of the new Space Florida Countdown Clock in the Capital. Space Florida and the Space Caucus unveiled the launch countdown clocks, which are placed on the 10th floor café and in the main cafeteria of the Florida Capitol building. These clocks will assure the legislators and visitors from across the state stay aware of the ever-increasing launch cadence in Florida.

### MANAGING TRAFFIC - ON LAND AND AT SEA

Errant aircraft and boats have caused launches to be scrubbed for decades. Space Florida is acting locally – while leading globally – to find solutions other spaceports will inevitably have to face.

With the rapidly increasing launch cadence at the world's busiest spaceport, neighboring the world's second busiest cruise port, the increased traffic means new challenges to solve. In January 2022, the cruise ship *The Harmony of the Seas* left Port Canaveral and wrongly proceeded into the maritime Hazard Zone established by the U.S. Coast Guard. The result was a halt to a SpaceX launch. Scrubs cost a lot of money for many stakeholders and avoidable ones demand action.

As the launch activity grows, it increases the impact on the heavy traffic corridors of commercial aviation traffic along Florida's east coast. As the commercial space industry establishes itself along with the interests of existing transportation systems, new solutions are required. Space Florida, at the request of the Space Force, convened a group of regional general aviation airports, commercial fishing and recreational boating interests, along with Port Canaveral to explore solutions for local traffic adjacent to an ever-busier spaceport. Progress has been made and we will continue to work with stakeholders to ensure positive outcomes. Those solutions will find application elsewhere across the country and the world as the space business expands. But here again, Florida is leading the way.



### SPACE FLORIDA SUPPORTS UNITED WAY

For more than 15 years, Space Florida has been a proud supporter of the United Way and partner agencies. Its 2021 Workplace Campaign raised more than \$37,000 for the many organizations in the region!

## RESEARCH, INNOVATION & SPECIAL PROJECTS

One of Space Florida's roles is to foster innovation and facilitate investment projects. Through strategic partnerships Space Florida carries out this mission in unique ways, engaging the business community and working with global partners to achieve bold goals. In Performance Year (PY) 2022, Space Florida continued its partnership with the Florida Venture Forum, Florida's largest statewide support organization for investors and entrepreneurs.

As of June 30, 2022 Space Florida-supported capital accelerator events over the last 8 years have attracted more than \$611 million in funding and investments for participating companies. This year, Space Florida and the Florida Venture Forum held two events that drew more than 40 presenting companies.

### 2021 FLORIDA EARLY STAGE CAPITAL CONFERENCE

In October 2021, Space Florida and the Florida Venture Forum announced Calculum, Inc., FLUIX LLC, and Oracle Heath, Inc., as the award winners at the 2021 Florida Early Stage Capital Conference.

#### Winning Organizations:

- Grand Prize: Calculum Inc. - \$40,000 Award
- First Runner-Up: FLUIX LLC - \$30,000 Award
- Second Runner-Up: Oracle Health, Inc. - \$20,000 Award

### ABOUT THE WINNERS

**Calculum, Inc., Miami**, helps organizations unlock millions in working capital and generate free cash flow by optimizing payment terms. In short, Calculum helps companies get paid earlier and pay invoices later. The company's platform allows organizations to compare themselves with competitors.

**FLUIX LLC, Orlando**, the company's patent pending multi-inlet liquid cooler eliminates overheating and allows workstation manufacturers to increase processing speeds by up to 25%. In turn this allows compute intensive firms (AEC) to increase productivity.

**Oracle Health, Inc., Safety Harbor**, is developing a tiny insertable cardiac device with remote monitoring capabilities to monitor long term cardiac disease, known as Heart Failure, a \$21 billion problem.

Additionally, Abilitare (University of Florida) and Eucovent (University of South Florida) were the two

winners in the Twelfth Annual Statewide Collegiate Startup Competition. Each received \$5,000.

The event marks the 14th year the Florida Venture Forum has hosted the Florida Early Stage Capital Conference. A committee of active Florida venture capital investors selected the 24 presenting companies from a pool of more than 150 applicants. Seven colleges and universities were chosen to participate in this year's Statewide Collegiate Startup Competition. To date, Space Florida-supported capital accelerators have attracted more than \$611 million in funding and investments for participating companies.

Programming featured a Fireside Chat with Doug Schaedler of Forum alumni Homee, conducted by Kathy Chiu of Deepwork Capital. Mark Volchek of Las Olas Venture Capital, Yasmine Morrison of Florida Funders, and Tom Cardy of New World Angels participated in an investor panel.

#### Highlights by the Numbers:

- 24 companies were selected to present from more than 150 applications
- \$100,000 Accelerating Innovation Awards given to five companies
- 7 university presenters
- 260 registered attendees



Members of the Space Florida and Florida Venture Forum support teams featured with Chair of the Selection Committee, Mr. Ben Patz (center back).



# RESEARCH, INNOVATION & SPECIAL PROJECTS

## 2022 EMERGINGTECH SHOWCASE INNOVATION & TECH FORUM



In May 2022, Space Florida and the Florida Venture Forum, Florida's largest statewide support organization for investors and entrepreneurs, announced the award winners at the 2022 EmergingTech Showcase, held May 20 in Lake Nona.

This live event hosted nearly 200 attendees. Third place winner, Brick Street Farms, took \$10,000 of Space Florida's Accelerating Innovation Award. Second place winner Helicon received \$20,000. First runner-up Kalogon received \$30,000 and the Grand Prize Winner, Hardee Nutritional, received \$40,000.

A committee of active Florida venture capital investors selected the 17 presenting companies. Space Florida provided the Innovation Award totaling \$100,000. To date, Space Florida-supported capital accelerators have attracted more than \$611 million in funding and investments for participating companies.



“Space Florida congratulates all of the participating companies and the four winners of EmergingTech Showcase. The success of these capital accelerator events continues to support the development of disruptive startup technologies, while elevating Florida's profile in the venture capital arena.”

-FRANK DIBELLO, PRESIDENT AND CEO, SPACE FLORIDA

### ABOUT THE WINNERS

**Kalogon, Melbourne**, has tested and proven their market-ready solution to pressure injuries – Smart Seating. Their smart cushions dynamically adjust the pressure distribution of the user and intelligently change their algorithms to suit the needs of the patient. Their product allows for easy software customization to offload locations of concern and has been designed to prevent pressure injuries and help heal existing injuries.

**Hardee Nutritional, Lake Delton, Wisconsin**, will grow and extract value-added ingredients from two types of algae in Hardee County FL, specifically: Haematococcus pluvialis (aka Hp), a source of natural astaxanthin and its co-product defatted algal meal; and Spirulina, known for its complete protein content and as a source of natural blue food colorings. These algae/products have been validated in the marketplace and represent more than \$1 billion in annual global sales.

**Helicon, Orlando**, makes the most advanced propellant in the world. They are working with more than 70% of the rocket industry to increase rocket performance by 20-40%. The Department of Defense endorsed them and has place to scale up production 100X.

**Brick Street Farms, St. Petersburg**, utilizes patent pending environmentally forward technologies to service both a direct-to-consumer market and a business-to-business wholesale market. It created the technology and the vertical farm containers to grow 16-20 acres of crops on 1/3-acre urban settings using its own farm containers – bringing mass food production to the point of consumption.

### ISRAEL INNOVATION AUTHORITY - NINTH ROUND FUNDING

In June 2022, Space Florida and the Israel Innovation Authority, an independent, publicly funded agency created to address the needs of the local and international innovation ecosystems, announced the ninth-round winners of industrial research and development funding tied to the Space Florida-Israel Innovation Partnership Program. For this Call for Projects, teams of for-profit companies in Florida and Israel submitted 11 qualified joint proposals. Space Florida and the Israel Innovation Authority selected five teams for this ninth round of awards.

In 2013, Florida and Israel established a \$2 million recurring joint fund to support research, development, and commercialization of aerospace and technology projects that benefit both Israel and Florida.

“This partnership between Florida and Israel is key for our aerospace industries,” said Lt. Governor Jeanette Nuñez. “This collaboration helps to ensure a bright future and I look forward to seeing the results from this year's winning companies.”

“Our long-lasting collaboration with Space-Florida on space-related technologies yielded great success stories and projects that will truly make a difference in the aerospace sector. With an annual joint investment of \$2 million, we strongly believe that the success of this collaboration between companies from both Israel and Florida, leveraging disruptive innovations and projects, will further strengthen the ties between the two states and economies. We are excited to note that this time the winning teams feature products and solutions that expand the envelope and scope of aerospace innovations, venturing to provide solutions to new space challenges and needs and implementing cutting edge technologies such as quantum computing. We wish the winning companies much success and look forward to seeing the success of their innovative products.”

-DROR BIN, ISRAEL INNOVATION AUTHORITY CEO

### THE WINNERS WERE:

**KBR Wyle Services (Titusville) and Purammon (Israel)** will collaborate to develop a new class of wastewater management system based on electrochemistry rather than current chemical/biological technologies.

**LightPath Technologies (Orlando) and QuantLR (Israel)** will join forces to develop ground-to-satellite, ground-to-air, and satellite-to-satellite free space optical communication channels, which will be used for generation of quantum encryption keys, in a highly secure way.

**Redwire Space (Jacksonville) and StemRad (Israel)** created a joint project entitled “Recycling of On-Orbit Plastic Waste into Personal Radiation Protection using Additive Manufacturing.” The companies will partner for the development of personal radiation shielding through on-orbit additive manufacturing.

**Censy's Technologies (Daytona Beach) and MobiliComm (Israel)** will improve the state of the art for remote systems communications for extended Beyond Visual Line Of Sight & Unmanned Aerial Systems or (BVLOS UAS) operations and make it a cost-effective solution. Novel construction of advanced technologies will enable a highly integrated multi-redundant simultaneous communications system.

**ETA Space (Rockledge) and Helios-Project (Israel)** will leverage each other's expertise in cryogenic and chemical engineering to develop an integrated Lunar oxygen production and liquefaction plant. The key deliverable of the project is a detailed design of a 10 metric ton per month pilot plant. The design goal is intended to test the integration of the two systems on a relevant scale for the lunar surface.

Space Florida and the Israel Innovation Authority provided each company its respective funding awards.



# RESEARCH, INNOVATION & SPECIAL PROJECTS

## FLORIDA SPACE GRANT CONSORTIUM

The Florida Space Grant Consortium and Space Florida annually and jointly fund the competitive Florida Space Research Program (FSRP), which supports the expansion and diversification of Florida's aerospace industry by addressing workforce development, including student research experience, and increasing statewide academic involvement in space research, technology development, engineering, education, and training programs that are consistent with the state's space industry priorities. For five years, the State of Florida and Space Florida have been significant contributors to the FSRP.

Four categories of the FSRP are Science Mission Directorate, Human Exploration and Operations, Space Technology, and Aeronautics.

In 2021-22, 14 space research and education grants were given under the FSRP – totaling \$323,616. This includes \$100,000 from Space Florida. Matching funds totaled \$190,186. The 2021-2022 FSRP awardees include five Florida universities: the University of Central Florida, University of Florida, Embry Riddle Aeronautical University, Eckerd College, and Florida Polytechnic University. Professionals from Kennedy Space Center, universities, and other NASA centers independently evaluated 37 submitted proposals. Faculty supported 23 students from the 14 projects. Twelve of the students are undergraduates, and 11 are graduate students. Nine women and five under-represented minorities were among the winners.

## STEPHEN HAWKING'S DREAM TAKES FLIGHT

Space Florida partnered with the University of Central Florida (UCF) to rename UCF's Center for Microgravity in honor of the late, world-renowned theoretical physicist Stephen W. Hawking.

The Stephen W. Hawking Center for Microgravity Research and Education (The Hawking Center) is a joint venture of Space Florida and UCF that conducts and facilitates research in microgravity sciences. The Center makes use of parabolic airplane flights, drop towers, suborbital rocket

flights, and orbital flights. The Center's educational activities include providing hands-on training and experience to college and university undergraduate and graduate students in the design, fabrication, and operation of space experiments.

UCF's Board of Trustees and the Space Florida Board of Directors approved the collaboration.

The establishment of the Center fulfills Professor Hawking's aspiration to support microgravity space research in the United States. His enthusiasm was generated years ago by a zero-gravity flight at the Cape sponsored by Space Florida, which connected him with UCF.

"Space Florida is excited to see this goal of Professor Hawking now become the opportunity he envisioned here in Florida," said Frank DiBello, President and CEO, Space Florida, who received a letter from Professor Hawking that provided permission to use his name. "His brief experience in weightlessness triggered that extraordinary imagination to recognize new possibilities. UCF is well positioned to further that dream."



Mr. Robert Hawking visits physics professor Joshua Colwell in December 2019.



## INDIE GALACTIC SPACE JAM RETURNS

In September 2021, after a year hiatus, programmers, animators, modelers, sound effect pros, gamers, designers and interested non-gamers gathered at the Orlando Science Center for the annual Indie Galactic Space Jam.

The event, hosted with prize money sponsorship from Space Florida, serves as a vehicle for research and development, innovation, and networking between the game, space, and simulation industries. Subject matter experts from the space and tech community stopped by throughout the weekend to provide guidance. The event drew more than 100 participants and saw more than 40 pitches for new games, focused

on outer space, Mars, rockets, STEM education, and space exploration. The participants voted on their favorite ideas and 14 teams were formed.

Each group had less than 48 hours to take their game from idea to playable rapid prototype. The developers worked tirelessly on Saturday, and again the following day.

On Sunday evening, teams submitted 24 games and finalist teams prepared to present. Space Florida awarded \$5,000 in prize money to the top teams.



# RESEARCH, INNOVATION & SPECIAL PROJECTS

## 10 YEARS OF GROWTH AND PROGRESS

Ten years ago, the Florida Space Coast was in transition. NASA retired the venerable space shuttle fleet and shuttles Discovery, Endeavour, and Atlantis left their Kennedy Space Center Orbiter Processing Facilities for the final time. Today, these shuttles have embarked on a new mission to inform, educate, and inspire new generations of people from around the world. While the close of this chapter was significant, it opened up opportunity for Space Florida to expand its impact, create new opportunities in the commercial aerospace industry, and turn the page to today's revitalized space industry and economy. Today, Space Florida operates the Launch and Landing Facility (LLF), formerly the Shuttle Landing Facility, transforming it to a hub for the commercial aerospace industry that also supports public and military operations.

The Space Coast is thriving once again. Kennedy Space Center transformed into a multi-user spaceport. Aerospace industry moved here, hired experienced talent, and brought in the next generation of skilled engineers and technicians. Shuttle launch pads have been transformed and shuttered pads are being renovated to carry new vehicles into space.

The former Shuttle Landing Facility is now operated by Space Florida as the LLF, one of the world's longest runways. This historic facility transformed for today's commercial aerospace industry underscores the commitment Florida leaders such as Governor Ron DeSantis and Lt. Governor Jeanette Nuñez have made to being on the bleeding edge of innovation, ushering in the future of aerospace and creating an environment where challenges are turned into successes.

The partnerships that Space Florida forged have paid huge dividends and continue to accelerate growth at KSC, Cape Canaveral Space Force Station and throughout the Space Coast communities.

Here on the Space Coast, the end of the shuttle era was the launch pad for new beginnings for NASA, industry, and the community.

“We turned the page on a remarkable era and began the next chapter in our nation's extraordinary story of exploration. As we move forward, we stand on the shoulders of these astronauts and the thousands of people who supported them on the ground – as well as those who cheered their triumphs and mourned their tragedies.”

-CHARLES BOLDEN, FORMER NASA ADMINISTRATOR



ULA Atlas 5 / Ryan Clapper





Space shuttle Discovery, mounted atop a NASA 747 Shuttle Carrier Aircraft (SCA), flies over the Washington skyline as seen from a NASA T-38 aircraft, Tuesday, April 17, 2012. Discovery, the first orbiter retired from NASA's shuttle fleet, completed 39 missions, spent 365 days in space, orbited the Earth 5,830 times, and traveled 148,221,675 miles. NASA transferred Discovery to the National Air and Space Museum to begin its new mission to commemorate past achievements in space and to educate and inspire future generations of explorers. Photo Credit: NASA/Robert Markowitz








SPACE FLORIDA LEADERSHIP  
BOARD OF DIRECTORS


- 


**LIEUTENANT GOVERNOR  
JEANETTE NUÑEZ,**  
Space Florida Board Chair, *State of Florida*
- 


**SONYA DEEN-HARTLEY**  
Vice President of Government Relations,  
*JM Family Enterprises, Inc.*
- 


**DANNY GAEKWAD**  
Founder/CEO,  
*NDS USA*
- 


**MORI HOSSEINI**  
Chairman & CEO,  
*ICI Homes*
- 


**SCOTT ROSS**  
Partner,  
*Capital City Consulting*
- 

**KATHERINE SAN PEDRO**  
Partner,  
*Ballard Partners, Inc*
- 

**ANTHONY BARBAR,**  
President & CEO,  
*Barbar & Associates*
- 

**JASON CLEMENT**  
CEO & Founder,  
*The Sports Facilities Companies*
- 

**RODNEY CRUISE**  
Sr. Vice President & COO,  
*Embry-Riddle Aeronautical University*
- 

**BELINDA KEISER**  
Vice Chancellor of Community  
Relations and Student Advancement,  
*Keiser University*
- 

**CHRISTOPHER NOCCO**  
Sheriff,  
*Pasco County Sheriff's Office*

Thank you to all the Space Florida Board of Directors and Executive staff both past and present. Their hard work has made a major difference in the development and expansion of the commercial aerospace industry in Florida.

- 

**BRIAN PHILLIPPI**  
President,  
*Trademark Metals Recycling*
- 

**JONATHAN SATTER**  
COO & Managing Director,  
*White Wolf Capital Group*

EXECUTIVE STAFF

- 

**FRANK DIBELLO**  
President &  
Chief Executive Officer
- 

**HOWARD HAUG**  
Executive Vice President,  
Treasurer & Chief Investment Officer
- 

**DENISE SWANSON**  
Executive Vice President, Chief Financial  
Officer & Corporate Administration Officer
- 

**TODD ROMBERGER**  
Senior Vice President,  
Spaceports Business Unit
- 

**RONALD LAU**  
Senior Vice President,  
Corporate Development &  
Capital Programs
- 

**DALE KETCHAM**  
Vice President,  
Government & Community Relations
- 

**TONY GANNON**  
Vice President,  
Research & Innovation
- 

**MIKE MILLER**  
Vice President,  
External Affairs and Workforce Integration
- 

**ANNA ALEXOPOULOS FARRAR**  
Vice President,  
Corporate Communications

JAMES KUZMA COMMUNITY  
ADVOCACY AWARD



When James Kuzma passed away on February 5, 2021, the region lost a friend, colleague, and mentor who poured himself into the Space Florida mission and vision.

To honor his memory, the Commercial Space Federation (CSF) created the James Kuzma Community Advocacy Award to recognize the outstanding contributions to the commercial space industry through advocacy and community building.

“The CSF awards recognize the accomplishments and commitments by individuals and companies that have contributed to the industry’s unprecedented growth and continued success,” said CSF President Karina Drees. “Their efforts have contributed to our collective commitment to democratize space for all.”

The inaugural recipients of the award are Clay Mowry (Voyager Space Holdings) and Tim Hughes (SpaceX).

“On behalf of Jim’s colleagues at Space Florida, we are honored that CSF recognized his many contributions to the space community and the legacy he leaves behind. We extend our sincerest congratulations to Clay and Tim.”

-JILLIANNE PIERCE, DIRECTOR OF FEDERAL GOVERNMENT RELATIONS  
AT SPACE FLORIDA



JAMES KUZMA  
1961 - 2021





## 2022 FLORIDA SPACE ART CONTEST

Lieutenant Governor Jeanette Nuñez announced the launch of the 2022 Florida Space Art Contest. With March being Youth Art Month, students were encouraged to create an art piece inspired by the theme Florida is the Place for Space: Celebrating Florida's Contributions to Space Travel and Exploration. Space Florida was a key sponsor for this year's contest.

Students were encouraged to create an art piece inspired by the theme **Florida is the Place for Space: Celebrating Florida's Contributions to Space Travel and Exploration**. Students in grades K-5 were invited to participate in the art contest. The Department of State's Division of Arts and Culture reviewed all artwork received and selected the top 60 entries. The Lieutenant Governor then selected the top ten and, eventually, the two grand prize winners.

“Space has long inspired the human imagination and we are excited to support the next generation of Florida artists develop their talents as they experience space as no others have before them. We are excited to support the Lieutenant Governor through this art contest.”

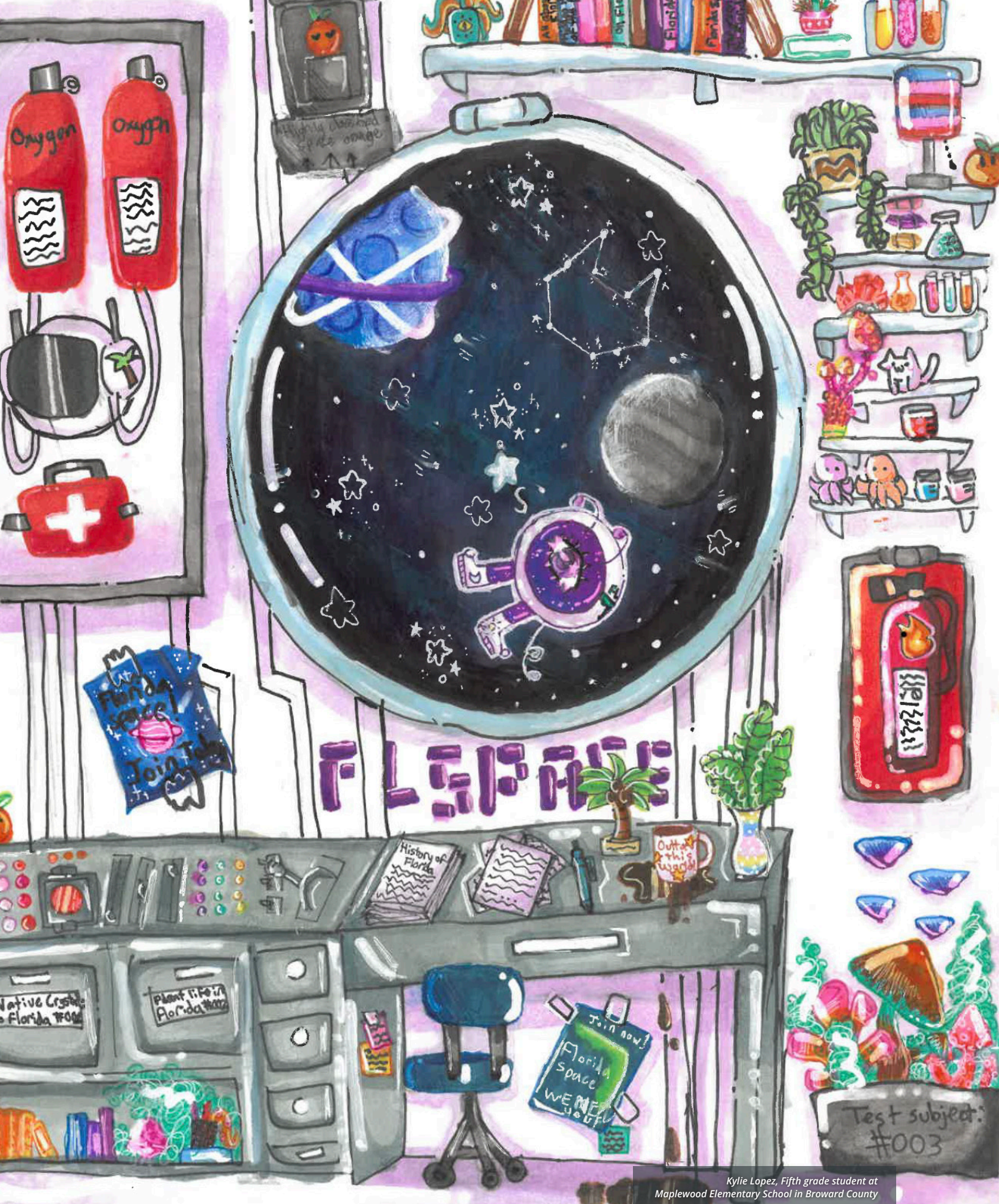
—FRANK DIBELLO, PRESIDENT AND CEO, SPACE FLORIDA

“I want to thank all of our K-5 students who participated in this contest,” Lieutenant Governor Nuñez said. “The response was fantastic, with over 2,500 students submitting an original work of art. The passion for space travel is alive and well in our creative Florida students.”



Jiacheng Yu, First grade student at Gator Run Elementary School in Broward County





Kylie Lopez, Fifth grade student at  
Maplewood Elementary School in Broward County

### THE TEN FINALISTS FOR THIS YEAR'S 2022 FLORIDA SPACE ART CONTEST WERE:

- Amelie Lopez a Tuesca, Kindergarten student at Dolphin Bay Elementary School in Broward County
- Heidi Wang, Kindergarten student at Joan Walker Elementary School in Seminole County
- Jiacheng Yu, First grade student at Gator Run Elementary School in Broward County
- Katherine Robidoux, Second grade student at Westside Elementary School in Brevard County
- Gabriele Priestman, Second grade student at Hollywood Central Elementary School in Broward County
- Ava Potvin, Third grade student at A.D. Henderson University School in Palm Beach County
- Paul Ladas, Fourth grade student at Palmer Catholic Academy in St. Johns County
- Ronak Arya, Fourth grade student at Somerset Academy South Campus in Broward County
- Moana Jean, Fifth grade student at Odyssey Preparatory Academy in Brevard County
- Kylie Lopez, Fifth grade student at Maplewood Elementary School in Broward County

All finalists and their teachers received two tickets to the Kennedy Space Center Visitor Complex.

### THE TWO GRAND PRIZE WINNERS FOR THIS YEAR'S 2022 SPACE ART CONTEST ARE:

- Jiacheng Yu, First grade student at Gator Run Elementary School in Broward County
- Kylie Lopez, Fifth grade student at Maplewood Elementary School in Broward County

Our two grand prize winners had their original art piece flown into space on a SpaceX mission.

*"I applaud our two grand prize winners. Their stellar works of art exemplify why Florida is the place for space. We are excited for students to enjoy their prize this summer, and we look forward to honoring all of the winners of the contest at a future event."*

- JEANETTE NUÑEZ, LIEUTENANT GOVERNOR

Thank you to our sponsors, and to SpaceX, Space Florida, Department of Education, and Department of State Division of Arts and Culture for their contributions to this contest.





# SPACE FLORIDA'S CORE VALUES

Space Florida's Core Values serve as guideposts for internal and external initiatives – helping the team build a stronger organization and a vibrant space economy.

The Core Values are unique to the organization while being both challenging and actionable. Our employees are the lifeblood of what we do and our Core Values are the foundation for our future that will be propelled forward by our talented team.

Leadership created the Core Values committee and charged them with continuing to further develop the core values and discover ways to put them into action.

The committee surveyed all employees, in groups and one-on-one, to better understand how the team would like to embrace and implement Space Florida's Core Values. The top value the team wanted to focus on is Collaboration, specifically how the team could improve communications with each other – and work together to reach the vision and mission of Space Florida.

As a response, the committee focused on ways to bring the Space Florida team together to increase understanding of the roles they fill.

The committee launched an internal monthly Core Values newsletter featuring advice on living the values, employee spotlights, and some humor for good measure.

To deepen the team's connection, the committee developed a Core Values Lunch and Learn series. At these monthly events employees share how their roles connect to the Core Values and how they use the Core Values to drive their work. Participants learn more about their colleagues and contributions to Space Florida – fostering deeper understanding, respect, appreciation, and connection.



**For 2023, the Core Values Committee anticipates growing their work and supporting activities that drive team member – and organizational – success.**



## SPACE FLORIDA IS PLEASED TO PRESENT ITS CORE VALUES



### WE PURSUE GROWTH

Driving expansion and diversification of our industry is central to all that we do. We are dedicated to improving the lives of our peers through personal and professional growth, while creating new opportunities that lift our communities.



### WE EMBRACE NEW THINKING

Innovation is integral to building upon Florida's rich aerospace heritage. New ideas paired with disciplined decision-making allow us to adapt, improve and lead in a rapidly changing world.



### WE CHAMPION COLLABORATION

By having shared purpose and vision with our teammates, clients and partners, we achieve more. Together, we are stronger by actively supporting a culture of trust and respect.



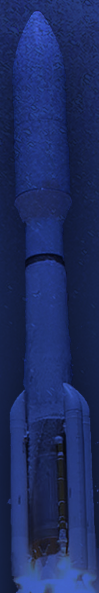
### WE STRIVE FOR EXCELLENCE

Through a commitment to professionalism, we produce lasting value for our customers and stakeholders. We take pride in our work and believe that how we treat one another is just as important as the quality of service we provide.



### WE ENCOURAGE BALANCE

Harmonizing work responsibilities with personal wellbeing boosts productivity and engagement. Balancing innovation and growth with heritage and environmental stewardship is crucial to our success and that of our customers, communities and industry.





**S P A C E F L O R I D A**



**SPACE FLORIDA**

505 Odyssey Way, Suite 300

Exploration Park, FL 32953

**321.730.5301 | [SPACEFLORIDA.gov](http://SPACEFLORIDA.gov)**