



SPACE FOUNDATION

2020 ANNUAL REPORT

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A Letter from Space Foundation CEO Thomas E. Zelibor

It is in times of adversity that we learn what we're made of, and 2020 was a great teacher. While the world hunkered down to endure the toughest public health crisis in a century, Space Foundation leaned into the challenge and amplified our efforts to serve as the steward and convener of the global space ecosystem. With an organization-wide digital transformation and the release of new programming and projects, Space Foundation launched fresh efforts to drive workforce development and economic opportunity, continued its leadership of informing and inspiring the global space community, and fostered new collaborations around the world.

This 2020 report covers some of the big steps we took to help keep the space ecosystem moving forward. We launched the Center for Innovation and Education to address the space ecosystem's workforce shortage, skills deficit, and space technology innovation gap. These are solvable challenges, and our Center is focused on helping every person find their place in the space ecosystem.

Space happens every day, and there is so much activity it can be hard to grasp the full, diverse picture of the space community's remarkable growth and success. To inform space stakeholders around the world and promote knowledge and opportunity, we launched Symposium 365. Building on our acclaimed annual Space Symposium, this new effort began delivering live and online programming to help the space ecosystem learn, connect and conduct business 365 days a year.

With this and other digital initiatives, Space Foundation is more prepared than ever to expand the international collaboration that will enrich the new space era. Indeed, space operations are inherently global. To drive opportunities and preserve the peaceful use of assets beyond our atmosphere, we must define humanity's future in space together. As a 501(c)(3) nonprofit organization, Space Foundation operates at the nexus of exploration and enterprise, education and innovation, and collaboration and opportunity. Our work in 2020 positioned us to continue thriving in this essential role, and we are excited to continue our mission of advocating for and supporting a future where there is space for all people and the benefits uplift the daily life of every person for decades to come.



Thomas E. Zelibor

Space for All in Education and Innovation

Reaching humanity’s full potential in space and the benefits it can deliver for life on Earth requires a diversity of skilled talent. More than just physicists and astronauts, the global space ecosystem needs laborers and data analysts, teachers and policy leaders, and entrepreneurs and experts in science, technology, engineering and mathematics (STEM). In short, in space, everyone is welcome and everyone is needed. In 2020, Space Foundation helped advance this reality through our Center for Innovation and Education, Discovery Center in Colorado Springs, virtual and in-person events, Teacher Liaisons supporting educators around the world, and more.

Center for Innovation and Education

In 2020, Space Foundation launched our Center for Innovation and Education, a platform for workforce development and economic opportunity. Supporting students, teachers, entrepreneurs and professionals in the global space ecosystem, the Center serves current and future space workers by instilling a passion for lifelong learning, starting in the classroom and spanning an individual’s entire career. By bringing together materials, lesson plans, knowledgeable speakers, and space leaders, as well as a host of other programming, the Center is the vehicle for addressing space workforce shortages and uplifting generations of people. It does so by fueling:

- » Awareness of space impact and economic opportunity.
- » Access to jobs, careers and business ventures.
- » Training for lifelong learning of sustainable skills.
- » Connections to a network of people, businesses and resources.
- » Mentorship for young leaders to become next-generation role models.

Center for Innovation and Education is made possible by the contributions from corporate members, partners, sponsors and grantors, and Space Foundation uses these generous assets to build today’s professional workforce and a strong pipeline for the future.



Bringing Space Into the Community

In January 2020, Space Foundation brought its Space in the Community program to six Prince George’s County public schools in Maryland, thanks to funding from L3Harris Technologies. Space in the Community is designed to spark in students an enduring interest in space-related subject matter and career pathways. Recognizing public health priorities, in November, the program was moved into a virtual format, keeping students and teachers safe while also reaching a wider audience.



Steady Support With Helping Hands

As the COVID-19 pandemic forced learning to become a remote exercise, Space Foundation launched a new virtual learning program, Auxilia, which offered a series of on-demand videos to help students, teachers and families with distance learning. With support from Lockheed Martin, Auxilia delivered grant writing offerings for teachers, hands-on space-themed activities for students, and resources for families using new technology. The series also presented virtual sessions of Space Foundation’s Audience With an Astronaut® program, which gives students an opportunity to hear from and engage with NASA astronauts.

Overcoming Adversity in Our Home State

With headquarters in Colorado Springs, Colorado, Space Foundation has a special dedication to supporting what is sometimes considered the space capital of the world. Space Foundation partnered with Colorado Lt. Governor Dianne Primavera to offer instructional webisodes for educators, providing e-learning tools, resources for virtual teaching, and cross-curricular lesson plans. And we also delivered the reSOLVE for Families series by partnering with mindSpark Learning, a Denver-based nonprofit offering industry-oriented professional learning for educators. The series provided information and guidance for families to support their students’ remote learning and uplift their social-emotional wellness. Thanks to our donors, all caregivers in Colorado had access to this innovative program at no cost, and Rocky Mountain PBS (a Space Foundation education product partner) provided the space and Earth science lessons on its statewide and regional platform.

Meanwhile, at Space Foundation’s Discovery Center in Colorado Springs, we offered health-conscious, in-person visits and programs and expanded virtual programs for students and families around the world. In October, Discovery Center offered an engaging exhibition to support robotics education by working with the U.S. Drone Soccer league, allowing visitors to use quadcopters to compete in a game of drone soccer. And Discovery Center’s Homeschool Day program was redesigned and expanded into a virtual and in-person Home Study Program, providing lessons and activities to foster success in meeting K-12 required science standards.



Canadian Student



Mexican Student



U.S. Student

Dreaming Through Art

Sparking an interest in space is not just about lessons and activities — it is also about giving students an opportunity to explore their creativity and dreams. Space Foundation announced the winners of the 10th Annual International Student Art Contest, co-sponsored by Earth Observing System. More than 5,500 students from 29 U.S. states and 58 countries submitted original artwork on the theme, “How Exploring Space Improves Life on Earth,” to expand awareness of the implications of space innovation beyond exploration to benefit the daily lives of people throughout the world.

Empowering the Educators

In support of the educators who are teaching and inspiring tomorrow’s space entrepreneurs, innovators, and explorers, Space Foundation offered the Third Annual Dr. Rochelle Abrams Space Across the Curriculum Profession Development sessions in 2020. Presented virtually, participants gained new tools and resources to help enhance their classroom curriculum.

Fueled by our focus on developing engaging curricula, we launched an initiative to create multi-grade, year-round space-inspired lesson plans to help students learn about and consider career opportunities throughout the space ecosystem. The forthcoming 850 lessons will be made available to schools and communities around the world, opening the door for young people to explore technical and non-technical roles in the space industry, from STEM research to entrepreneurship.

Our Teacher Liaison program continued to deliver knowledge and training for select teachers who, in turn, help their colleagues use space as a means to foster an interest in STEM subjects. Today, there are 281 Space Foundation Teacher Liaisons in nine countries, 40 U.S. states and territories, as well as Washington, D.C. Through the program, Space Foundation supported the Ethiopian Space Science Society with June events for a solar eclipse, and a Space in Africa discussion is leading to future work with Teacher Liaisons and other space organizations throughout Africa. Similar programs are underway in the UAE and Asia regions.

Also in 2020, Space Foundation established a memorandum of understanding with the Center for the Advancement of Science in Space (CASIS), the manager of the International Space Station (ISS) U.S. National Laboratory. Going forward, the agreement unites the Teacher Liaison program and the CASIS Space Station Ambassador Program to reach more than 1,000 educators worldwide, giving them access to the science conducted on the ISS alongside resources, tools and curricula to bring space into the classroom.



Insights and Opportunities for the Global Space Ecosystem

Space activities thrive on data and knowledge. Space Foundation’s 2020 programs and content shared essential insights and up-to-date awareness of fast-changing space and related industries. Due to the pandemic and the need to avoid large gatherings, we did not present our acclaimed annual Space Symposium. However, in every challenge is an opportunity, and we accelerated our digital transformation to continue supporting space agencies, enterprises and professionals throughout the global space ecosystem.



Introducing Symposium 365

Space happens every day, and to help space stakeholders keep abreast of the changing landscape (and skyscape), Space Foundation launched Symposium 365. The new venture is the premier source for media and events in the global space ecosystem, offering authoritative news and information and venues for networking and conducting business — including the world-renowned Space Symposium, Symposium 365 Digital Platform and The Space Report — for commercial, government and education sectors.

Subscribers of Symposium 365 Digital Platform receive access to exclusive content, including:

- » Industry-leading presentations on the latest developments in space policy, exploration and commerce, delivered by prominent space leaders in government and industry.
- » Expert panels with audience Q&A on the space ecosystem’s most pressing priorities and challenges.
- » Exclusive mission briefings with the innovators and explorers driving space endeavors.
- » Space economy analysis with leading economists and experts explaining the findings in Space Foundation’s “The Space Report” quarterly issues.
- » International participation promoting engagements between stakeholders in established and emerging space programs and enterprises.

Offered year-round going forward, Symposium 365 is the conduit for knowledge and collaboration that leads up to and flows out of the annual Space Symposium held in Colorado Springs.

A Trusted Resource for Understanding The Global Space Ecosystem

"The Space Report" is the authoritative guide to global space activity, offering more than a decade of data, resources and information. With quarterly issues and continuously updated datasets and analysis available via The Space Report Online, our subscribers from around the world access comprehensive information about the global space ecosystem, government policies and priorities, and the evolving trends in the space workforce and education. Looking back on 2020, even while public health concerns hampered many parts of the global economy, the space industry flew forward with another record-breaking year of growth, prosperity and innovation.



The Mission Goes On...Virtually

Space Foundation's acclaimed Space4U podcast offered more of its fascinating non-technical conversations with space professionals from all sectors. Inviting listeners to consider their own role in the global space ecosystem, Space4U surpassed 50,000 downloads. Another digital series, "Space Foundation Presents," co-sponsored by Boeing, offered revealing discussions with space leaders about current missions. In July, a live webinar with NASA and Jet Propulsion Laboratory leaders gave updates and insights into the Mars Perseverance Mission. Alongside these programs, Space Foundation also offered

"Ready to Fight: How the Space Industry Is Leading the Charge to Combat COVID-19," a webinar co-hosted with the CompTIA Space Enterprise Council; and "The Great Conjunction: So Much More Than a 'Christmas Star,'" a video explaining the Saturn-Jupiter conjunction that occurs just once every 20 years.



Partnership With the Public Sector

Collaboration across the civil, national security, and commercial space sectors is essential for growth and success in the space ecosystem. In 2020, Space Foundation participated in a new podcast series, Space Policy Pod, presented with the American Institute of Aeronautics and Astronautics (AIAA), the MITRE Corporation and the U.S. Chamber of Commerce. Each episode featured a discussion with key policymakers to examine the implications from events and ideas affecting space operations, exploration and other potential developments.

Space Foundation also worked with public sector organizations to build space awareness within government and industry. To learn about the newest U.S. military branch, the U.S. Space Force, Space Foundation offered "America's Space Force: Building the Future Today," a webinar featuring Air Force Secretary Barbara Barrett and the Space Force's first chief of operations, Gen. John Raymond. And with the American Astronomical Society, Space Foundation hosted a congressional briefing on the challenges and solutions in building the science, technology, engineering, art and mathematics (STEAM) workforce, co-sponsored by the Congressional CTE & STEAM Caucuses.

Before public health concerns prompted suspension of in-person events, on March 10, Space Foundation participated in the 2020 Colorado Aerospace Day at the state capitol building. Joined by members of Colorado's aerospace industry, the event was an opportunity to connect with lawmakers, colleagues and students to discuss the growth and opportunity for the Colorado space workforce and businesses.



Finding Unity Through Space

In celebration of World Space Week, Space Foundation presented a series of events on the theme of "Space Unites." Offered virtually and in-person, videos, speeches and webinars explored Space Foundation programs for families, students, young professionals and all people with an interest in space. As a part of the events, Space Foundation welcomed the newest members of the Space Technology Hall of Fame®. The 2020 inductees included:

- » Apollo 70 Cardiac Care Monitoring System. Designed for real-time monitoring of astronaut vital signs while in orbit, inventors at Spacelabs Healthcare adapted the system for commercial use in hospitals to track patient health and recovery.
- » Audio Conference Bridge Technology. Compunetix developed a digital voice switching technology for NASA and created a commercial version that is used by almost all major conference call providers.
- » Traveling-Wave Tube Amplifiers (TWTAs). L3 works with NASA to advance TWTAs to amplify radio frequency signals for increased speeds and capabilities in space exploration missions, and in the marketplace, the technology improves mobile voice and data services as well as broadband internet service.

Bridging Relationships Around the World

With 85 countries operating in space and thousands of enterprises participating in the space ecosystem and supply chain, the global space community is in a new era of innovation. To support and grow the collaboration, Space Foundation operates worldwide to foster relationships and spur opportunity. From our Teacher Liaisons and virtual programs to Symposium 365 and international agreements, Space Foundation serves as the global steward and convener of the world's space community.

Championing an Emerging Space Leader

In 2020, Space Foundation formed an agreement with Abu Dhabi-based Krypto Labs, an integrated innovation hub fostering startups to encourage and enable space entrepreneurship. Space Foundation also connected with the Abu Dhabi Art Society to foster inclusivity between cultural organizations and signed an MOU with UAE's Al Suwaidi Private Office & Group to explore educational content and career development opportunities for students and families in the UAE.



Supporting Missions That Matter

Success in space takes mentorship and expert advice, and Space Foundation is honored to participate in the critical missions of organizations contributing to the global space ecosystem. Space Foundation CEO Thomas Zelibor continued to serve on the National Cybersecurity Center board of directors. Meanwhile, Space Foundation COO Shelli Brunswick was selected as one of 35 women from around the world to join the United Nations Office for Outer



Space Affairs Space4Women Mentor Network, and was named Diversity and Inclusion Role Model of the Year by WomenTech Network — programs which promote gender equality and empowerment in the space community. She was also elected to the Manufacturer's Edge board of directors and the Colorado Springs Chamber of Commerce and Economic Development Corporation board.

Awarding Space Leaders

Every year, Space Foundation presents awards to recognize notable people and organizations shaping and advancing space use and exploration and share those dividends on Earth. In 2020, Space Foundation was proud to issue the following awards:

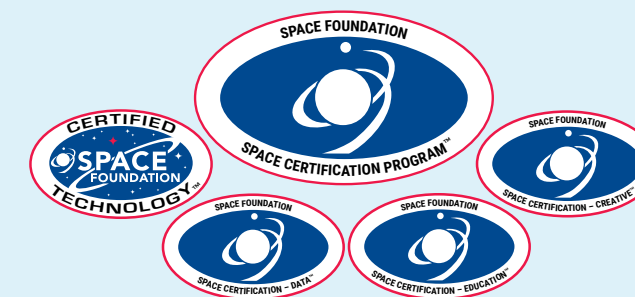


- » Lifetime Space Achievement Award to Eugene F. Kranz, the NASA flight director and manager who directed the Gemini and Apollo programs, including Apollo 11. He gained historic distinction for his steady leadership directing the Mission Control team that helped save NASA astronauts during the Apollo 13 mission.
- » John L. "Jack" Swigert, Jr., Award for Space Exploration to the NASA JPL InSight-Mars Cube One mission team for the first deep space use of a miniature, modular spacecraft.
- » Alan Shepard Technology in Education Award to Kaci Heins, the director of Space Center University at Space Center Houston.
- » Douglas S. Morro Public Outreach Award to the Smithsonian Institution's National Air and Space Museum.
- » 2020 Space Achievement Award to the International Space Station Partners, including the Canadian Space Agency, the European Space Agency, the Japan Aerospace Exploration Agency, NASA and Roscosmos.
- » Colorado Space Heroes Hall of Fame inductees were George H. Born, Ph.D., Kevin P. Chilton and Thomas Marsh. The award is presented to outstanding individuals who have made contributions in the space arena that span a decade or more.

The Benefits of Space, on Earth

Space Foundation administers the Space Certification™ Program to help the public appreciate how space exploration benefits life on Earth while also granting organizations a "seal of approval" that is valuable to their enterprise and products. Space Foundation was proud to announce four new program partners in 2020:

- » Keystone Compliance, which offers vibration and shock testing for most military and commercial standards and assists manufacturers in achieving aerospace, military and commercial compliance certifications.
- » Liberty BioSecurity, a life sciences company that offers an additive that demonstrates significant UV shielding properties.
- » Highmount Co., Ltd., a Japanese company creating products for outdoor and daily life, with a mission to promote the importance of outdoor culture and exploration.
- » Ill4m, Inc., an anti-bullying resource focused on gaming, giving and apparel that offers "The Adventures of Sunkmania Galaxy (SMG)" comic book series.



A Nonprofit That Yields Space Ecosystem Dividends

Your Generosity Creates Impact

From the stars we all share to the technology that brings us closer, space is the common thread. Space connects us all. Collectively, our donors come together like stars in the sky to form constellations of impact and change.

Each one has a story behind their inspiration, and when connected to one another, it creates something bigger than our individual selves. Together, we advocate for innovation and better life on Earth.

Thank you for your vital and bright contributions to Space Foundation in many different ways and all year long, but more importantly, for providing the fuel for us to launch higher and farther to change more lives.

What Inspired Your Gift Today?

My son, who is 12, chose your organization and wishes to send you this message about why he picked you: 1. I couldn't donate to NASA 2. I couldn't donate to SpaceX or Boeing 3. I was in the 'space donating' mood. 4. I have accumulated about 260 dollars in my charity bank savings account.

ROGER, COLORADO

For my family that is separated by land miles but shares the skies and **all the wonders of the cosmos.**"

POLLY, ARIZONA

The importance of STEM education of young people as the future participants and astronauts of our space programs and **the importance of humanity having a multi-planetary existence.**

JIM, NEBRASKA

In honor of my husband Albert, a lifetime physics teacher. He loved reading and teaching about the universe. Space for him was the greatest mystery of them all. He taught us so much and we miss him dearly. His family.

RISA, NEW YORK

Christmas present for **our 90-year-old aunt who still takes astronomy classes!**

MARY, OREGON

My nephew Elijah loves space. As he continues to get older, he loves to explore things and how they work.

Each year for the holiday, my nieces and nephews choose a cause that I donate to on their behalf. Elijah has chosen the Space Foundation!

MARIANNE, NEW YORK

We participated in the International Student Art Contest, and **we were inspired to see artwork from kids all over the world.** We would like to support this cause.

SETH, MASSACHUSETTS

My father's love of space, science and children. **He inspires me to always ask questions and think big,** and nothing fills me with more love than seeing him light up about these things. On his behalf, I want to keep that dream alive for others.

LAURA, CALIFORNIA

After reading an article about GPS and how it could have prevented the KAL 007 tragedy, I decided to help encourage young people to enter the field of space technology. Thank you.

KURT, NEW YORK

Image: See "Dreaming Through Art" on Page 6

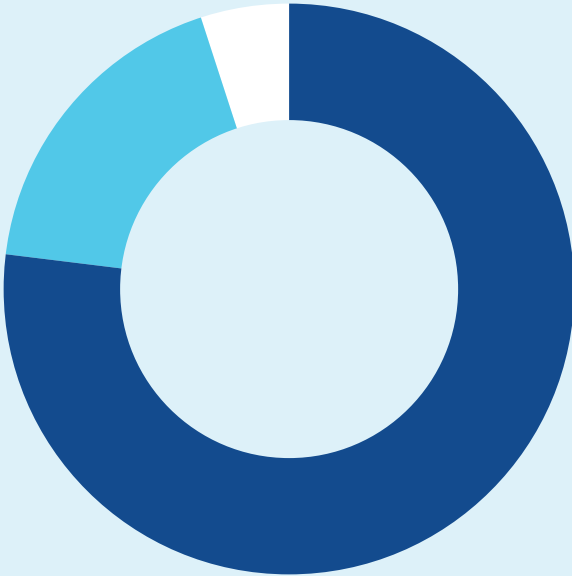
2020 Financials at a Glance

As a 501(c)(3), Space Foundation preserves a sustainable balance between earned program income, contributions and grants, and other investments. Our annual expenses are focused exclusively on our mission to be the preeminent advocate and gateway for trusted information, lifelong education, and seamless collaboration for all people and organizations engaging in space exploration and space-inspired industries that define the global space ecosystem.

Total Net Assets: -\$6,795,390

Revenue — \$4,948,342

- Contributions and grants \$3,816,192
- Earned program income \$873,516
- Investment and other \$258,634



Expenses — \$10,844,336

- Program \$4,772,997
- Management and operations . . \$5,705,597
- Fundraising \$365,742





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