

“Space for you. Space for all.”

~Shelli Brunswick, COO, Space Foundation



SPACE FOUNDATION 

CENTER FOR INNOVATION AND EDUCATION

Driving Workforce Development and Economic Opportunity

What is Space Foundation?



*Advocating for Innovation.
Bettering Life on Earth.*

Space Foundation Initiatives

Center for Innovation and Education is a lifelong learning platform.

Symposium 365 is the premier source for media and events.

Global Alliance is a collaborative forum.



Connecting Space To Daily Life on Earth



Space-based inventions are integral to every facet of daily life

- Cell phones
- Athletic shoes
- Cordless tools

Space-based technology is responsible for improving lives

- Weather prediction
- Fire retardant clothing
- Breast cancer detection

Space-based innovation can help better life on Earth

- Earth observation
- Food and natural resources
- Medical cures

Technology Trends to Watch

1

DATA ANALYTICS

5

TELECOM

9

SATELLITE
SERVICE
& REPAIR

13

DEBRIS
MONITORING
& CLEAN UP

2

ENERGY &
ENERGY
STORAGE

6

MINIATURIZATION
of MATERIALS

10

CYBERSECURITY

11

ARTIFICIAL
INTELLIGENCE

3

BIOMETRICS
& HEALTH

7

TEXTILES &
ADVANCED
MANUFACTURING

11

UAV MARKET

13

VIRTUAL REALITY

4

CREATURE
COMFORTS

8

ENVIRONMENTAL
ASSESSMENT

12

ROBOTICS

?

Space Innovation Gap

Space Transfer and Space Insertion



For a full listing of available NASA patents and patent applications available for licensing, visit:

<http://technology.nasa.gov/patents>





The Space Economy Opportunities

\$400+ billion global market

\$1-3 trillion growth expected by 2040

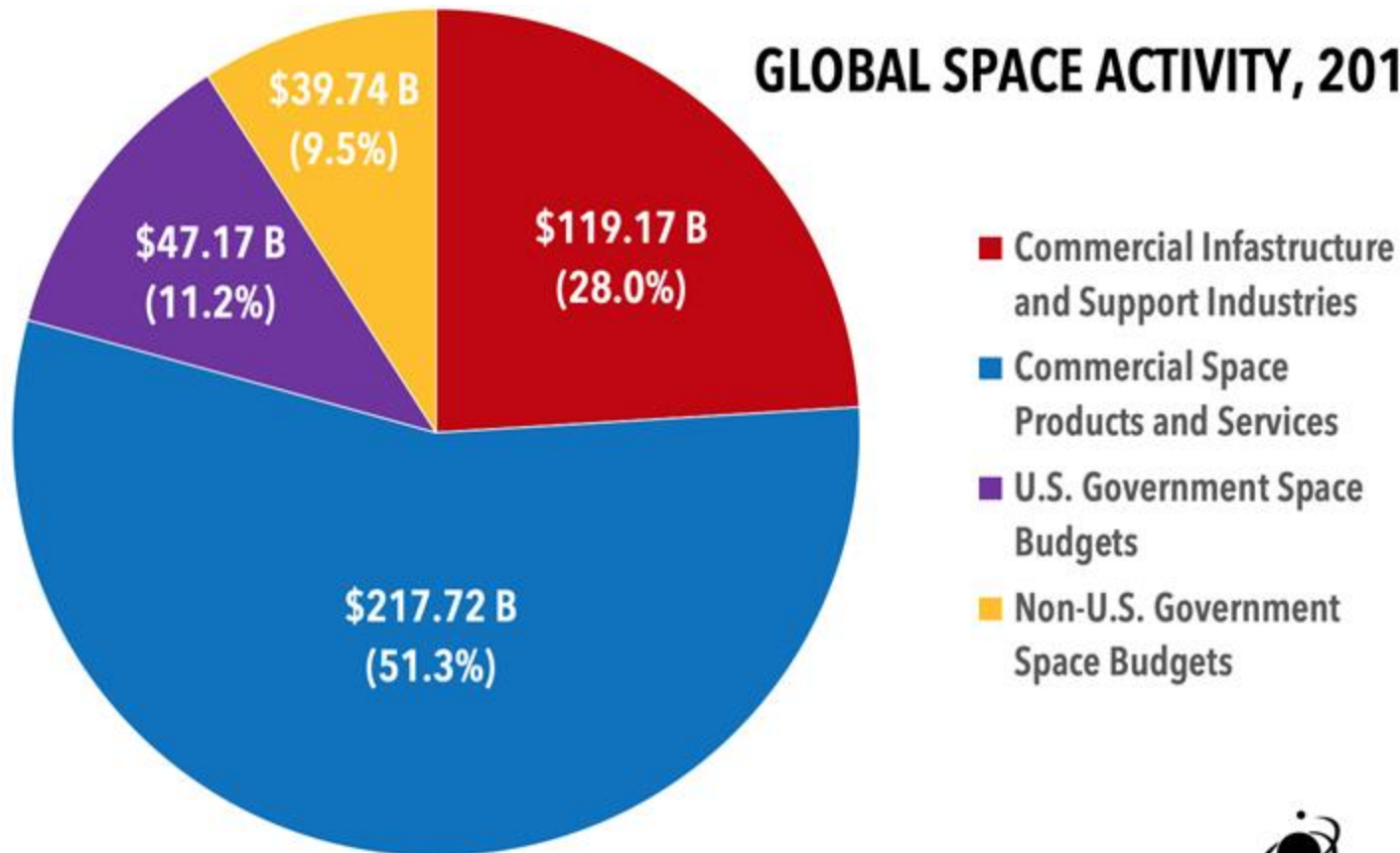
80+ nations operating in space

Commercial 80%, Government 20%

Median salaries 40% above income

The Space Report: Global Space Activity

GLOBAL SPACE ACTIVITY, 2019



Total: \$423.80 Billion



Connecting Space to You and Me

Everyone can find a place in the space ecosystem

- Non-STEM laborers, trade workers and artists
- Business entrepreneurs and administrators
- STEM professionals

Lifelong learning enables personal growth

- Early childhood immersive experiences
- Young adult training for careers
- Professional upskilling and reskilling

The space economy improves quality of life

- Minorities, women, vets, retirees
- Better health and productivity
- Increased earning potential





The Space Ecosystem Challenges

Workforce Shortage

- Open jobs exceed unemployed workers
- Retiring baby boomers are leaving gaps
- Underserved are untapped workforces

Skills Deficit

- Perceptions cannot be limited to astronauts
- Space must be integrated into core curriculum
- A culture for lifelong learning must be adopted

Innovation Gap

- NASA patents available for tech transfer
- Enterprises rely on suppliers for tech insertion
- Workforce diversity is a source of new ideas

Center for Innovation and Education



A lifelong learning platform

offering workforce development and
economic opportunity for

**students, teachers, entrepreneurs
and professionals**

in the global space ecosystem



Center for Innovation and Education

Who We Serve

Building Today's Workforce: professionals

- **Global space agencies** — workforce development initiatives
- **Governments** — policy education and advocacy
- **Space professionals** — corporate networking and mentoring programs
- **Small businesses** — custom-designed training
- **Entrepreneurs** — space commerce workshops
- **Young professionals** — leadership and mentoring programs

Building the Next Generation Workforce: students

- **Communities** — space-inspired STEM events
- **Teachers and educators** — professional development
- **Junior space entrepreneurs** — real world inspiration and mentoring
- **Students** — immersive live and online space-inspired experiences



Space Foundation

How We Deliver



- ❖ **Partnerships**
- ❖ **Sponsorships**
- ❖ **Grants**
- ❖ **Fundraising**
- ❖ **Donations**
- ❖ **Endowment**



Workforce Development Roadmap

Awareness

There is no better TIME to join the space ecosystem.

Access

The space ecosystem is accessible to ALL people.

Training

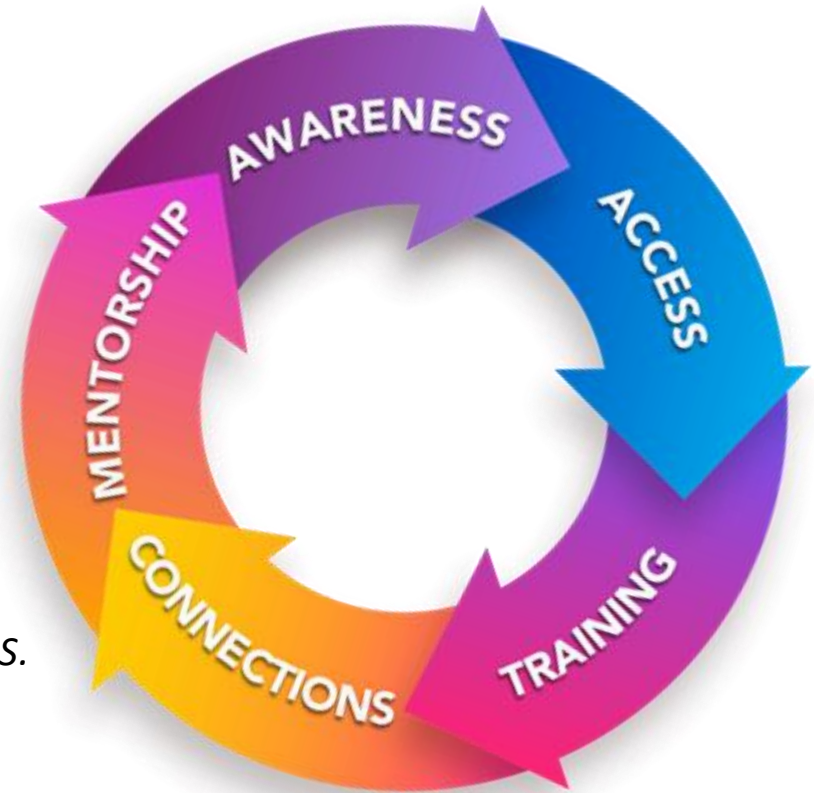
Adopt a culture of LIFELONG LEARNING for all ages.

Connections

"The future of the space ecosystem is PARTNERSHIPS.

Mentorship

The space ecosystem UNITES the planet and humanity.





-  Audiences
-  Outcomes
-  Programs
-  Space Economy Sectors

Space Commerce Entrepreneurship Program

Program: [Space Commerce Entrepreneurship Program](#)

Audience: Entrepreneurs, small businesses, inclusive of minority, women, veterans
Sponsor: U.S. Department of Commerce, Minority Business Development Agency
Purpose: Launching entrepreneurs and small businesses into the space industry
Outcome: Jobs, careers, and public private enterprise and government contracts

Workshops

- 275+ underserved entrepreneurs and small businesses have participated to date
- Workforce Development Roadmap: Awareness, Access, Training, Connections, Mentorship
- Collaborate with universities, incubators/accelerators, regional communities
- 18 scholarships to attend Space Symposium awarded to date

Online Webinar and Guest Speaker Series

- 15 free, self-driven, on-demand videos
- Space commerce expertise to grow a business
- Featured interviews with entrepreneurs



Success Story: Global Engineering Startup

Small Business Referred by Department of Commerce MBDA

- Commercial engineering company
- Heritage: Latino entrepreneurs
- Small business founded in 2018

Workforce Development Roadmap

- **Awareness:** Attended regional Space Commerce Entrepreneurship workshops
- **Access:** Learned about opportunities in space ecosystem
- **Training:** Gained strategy and skills for conducting business in the space sector
- **Connections:** Networked with 150+ enterprises at Space Symposium
- **Mentorship:** Business lifecycle guidance from space professionals

Startup Pivots Business Strategy to Gain Interest from Large Enterprises

- Pivot from targeting U.S. government to pursuing global commercial projects
- Pivot from selling parts and components to selling comprehensive solutions
- "Space Foundation helped us find our place in space."

Space-Inspired Curriculum and Teacher Development

Program: [Junior Space Entrepreneur Program](#)

Audience: 10-18-year-old students, teachers, school administrators, mentors
Partners: Lockheed Martin, NASA, Junior Achievement
Purpose: Prepare the next generation to contribute to the space industry
Outcome: Students inspired to pursue careers in the space sector

Winner of Fast Company Honorable Mention for 2020 World Changing Ideas Award

Professional Development for Educators

- Cultivating next-gen space contributors
- Integrating space-inspired curriculum
- Practicing immersive hands-on activities
- Learning about space commercialization
- Embracing 21st century, future-proof essential skills



Success Story: STEM School in Colorado

Pilot: Public Charter K-12 School

- 50 high school students
- Immersive week in space education, entrepreneurship and personal growth
- Supported by Lockheed Martin, NASA and Junior Achievement
- Goal: prepare students for studies and careers in the space ecosystem

Junior Space Entrepreneur Program: Mission to Mars Pilot

- **Awareness** of challenges in sending astronauts to Mars and returning safely
- **Access** to NASA tech transfer and insertion for space commercialization
- **Training** for STEM and non-STEM, building prototypes, business planning
- **Connections** to real world space practitioners and opportunities
- **Mentorship** for students by space pros on essential skills and pitching investors



Networking and Mentorship

United Nations Space4Women Network

- Webinars and mentorship programs inspire next-generation space leaders.

Space Generation Advisory Council (SGAC)

- A global network for students & young professionals.

Women in Aerospace (WIA)

- 2000+ members increase leadership capabilities and visibility.



WomenTech Network

- Global community promotes gender diversity and tech opportunities.

Tod'Aérs

- International network promotes sustainable space studies, research and development.

Women Global Gathering at Space Symposium

- Annual event features commercial and government leaders from 40+ countries.





SPACE FOUNDATION

SPACE
SYMPOSIUM



365

Stay Connected. Stay Informed. 365 Days a Year!

Join Us

JOIN THE WORKFORCE: find your place in the space ecosystem

www.spacefoundation.org/cie

PARTNER: collaborate, sponsor and fund programs

www.spacefoundation.org/join-us

DONATE: contribute to our mission

www.spacefoundation.org/donate

PARTICIPATE: connect with the space ecosystem 365 days a year

<https://www.spacefoundation.org/space-symposium-365>

CONNECT WITH SHELLI: network to success

<https://www.linkedin.com/in/shellibrunswick>

