Workforce and Diversity: Future Directions for AIAA

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National Academies
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AIAA
SHAPING THE FUTURE OF AEROSPACE

- Shaping the Future of Aerospace
- Investing in Tomorrow’s STEM Workforce
- Working Together: NAE + AIAA

Shaping a Bold Future Together

AIAA KEY ROLES

Connect People, Ideas, and Resources

Advance Career Journeys

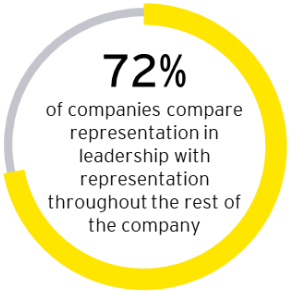
Build Technical Agility and Cohesion

Establish United Front to Solve Critical Issues

Aerospace and Defense Industry Demographics

2022 Aerospace and Defense (A&D) Workforce Survey Demographics

Overall Demographics	2022	2021	2020	2019	2018
% of Workforce Women	25.6%	24.8%	24.3%	23.8%	24%
% of Workforce Black or African American	10%	9.8%	5.9%	5.8%	6.8%
% of Workforce Hispanic or Latino	9.0%	8.7%	7.6%	6.8%	7.6%
% of Workforce Asian	9%	8.8%	11.1%	9%	10%
% of Workforce on Executive Payroll	0.7%	1.2%	1.4%	1.7%	1.3%
% of Executive Workforce Black or African American	5.7%	5.3%	4.8%	3.3%	4.1%
% of Executive Workforce Hispanic or Latino	4.8%	3.7%	3.9%	2.8%	3.3%
% of Executive Workforce Asian	6.4%	5.6%	N/A*	N/A*	N/A*



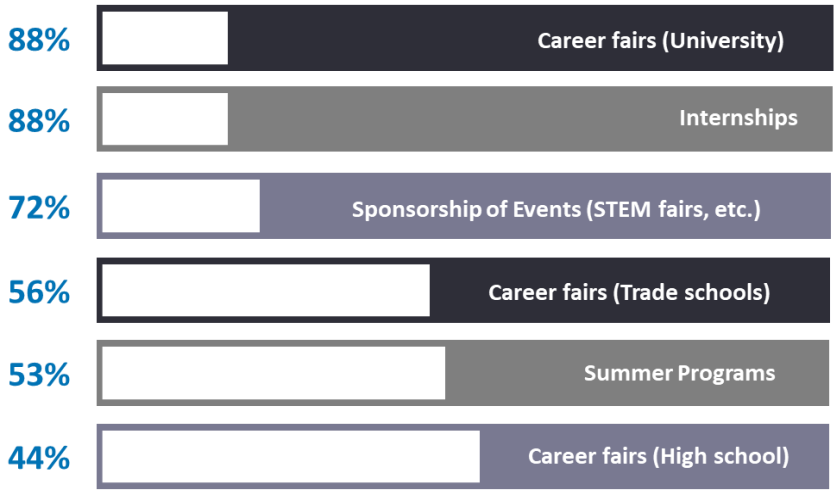
NOTE:
- ***2022 and 2021 results utilize the current survey methodology. Previous years utilized a separate methodology.***
- ***Gender demographic representation for "non-binary" classification was less than 1%***
- **** Previous survey partner did not collect this information***

2022 A&D Workforce Survey, September 2022, AIA + AIAA + EY

Engagement with STEM & Academia

Which of the following do you participate in?

How does your company get involved with schools?



2022 A&D Workforce Survey, September 2022, AIA + AIAA + EY

AIAA Today

AIAA MISSION:

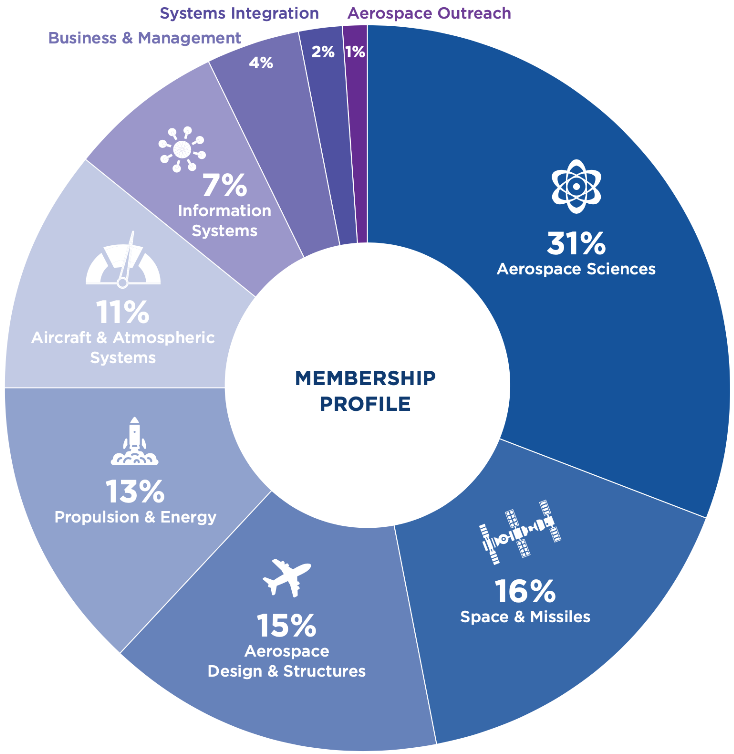
To help aerospace professionals and their organizations succeed

Nearly
30,000
Members

8,000+
Student Members
The Future Global Workforce

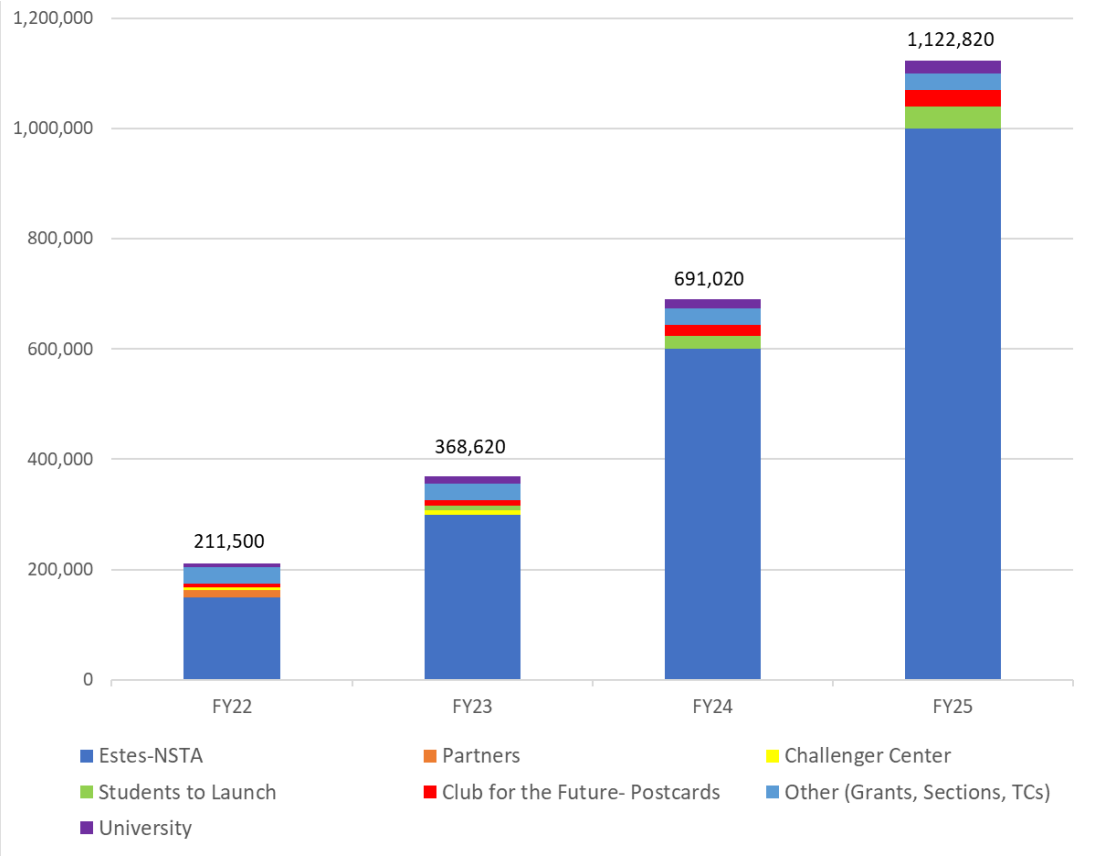
91
Countries

100+
Corporate Members



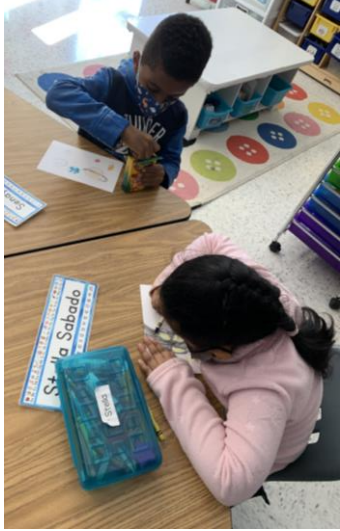
AIAA Career Arc

STEM Program Outreach



Reaching Educators and K-12 Students

CLUB FOR THE FUTURE



AIAA AWARDS GALA
Celebrating Our Stars

STUDENTS TO LAUNCH

Exploration Generation

FREE

- Rocketry-Themed Lesson Plans
- Curriculum Storylines
- Professional Learning

Sponsored by:

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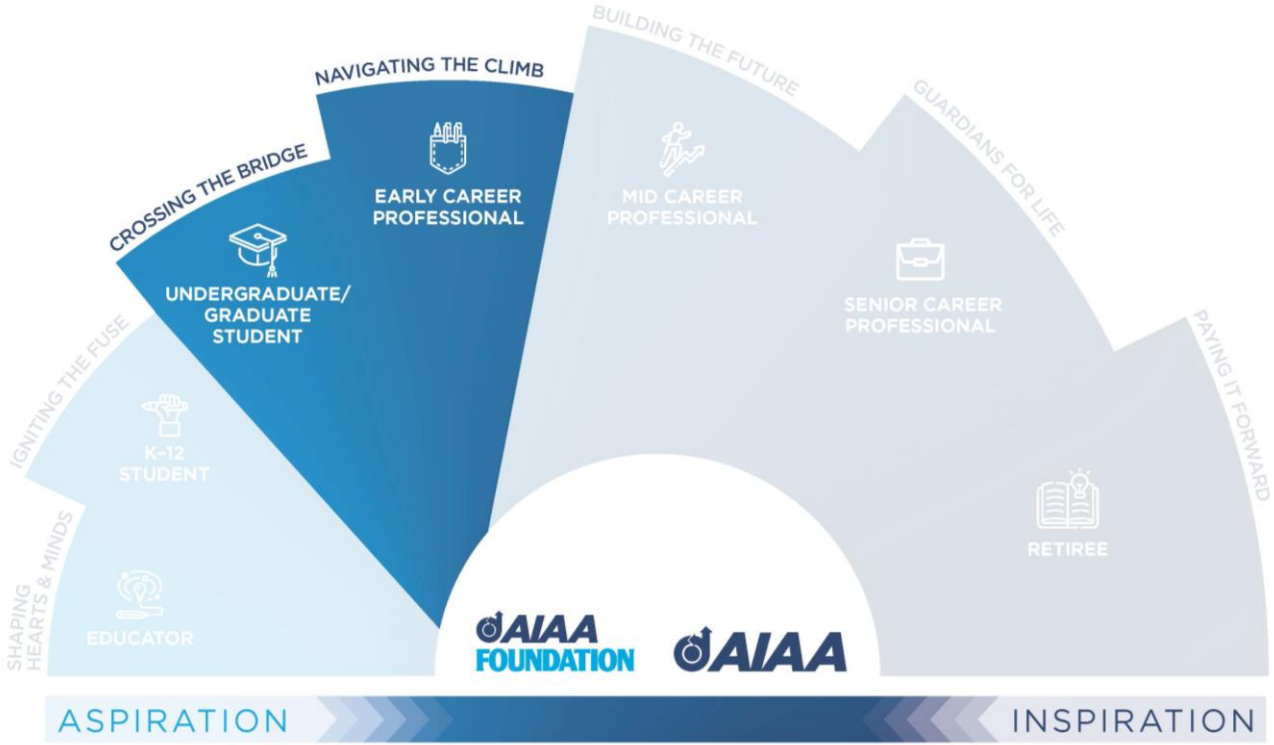
ESTES
education

nsta
National Science Teaching Association

Reaching University Students and Young Professionals



AIAA Diversity Scholars

DESIGN · BUILD · FLY

AIAA

Cessna Beechcraft BY TEXTRON AVIATION

Raytheon Technologies

AIAA FOUNDATION

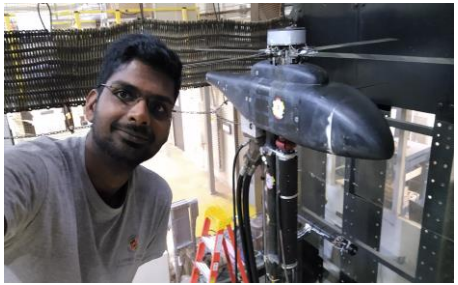
AeroVironment™

GENERAL ATOMICS AERONAUTICAL

MathWorks

SPIRIT AEROSYSTEMS

Annual Scholarships and Graduate Awards



“Recognition from such a prestigious organization is motivating and would push me further to continue my graduate research with full effort.”

Shashank Maurya
University of Maryland
Orville & Wilbur Wright Graduate Award Recipient

“Hungary has no translation for aerospace engineering, and I will most likely be the First Hungarian Female Aerospace Engineer. Opportunities as such allow me to continue this path and dream.”

Eszter Anna Varga
Virginia Tech
Leatrice Gregory Pendray Scholarship Recipient

“This recognition not only provides financial support but opens new career pathways in the aerospace defense industry through which I can pursue AI engineering for application in unmanned aerial vehicles and robotics.”

Julianna Schneider
MIT

AIAA Lockheed Martin Marillyn Hewson Scholarship High School recipient

“The AIAA Lockheed Martin Marillyn Hewson Scholarship will greatly enable me to pursue my dream of becoming an aerospace engineer and help develop the industry. I am profoundly grateful for all the support!”

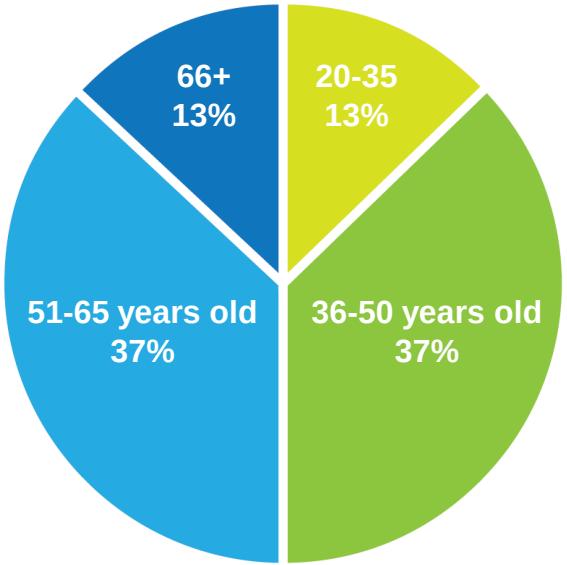
Penelope Nieves
University of Puerto Rico Mayaguez
AIAA Lockheed Martin Marillyn Hewson Scholarship University Recipient

National Space Council Announcement

Supporting Experienced Professionals

AIAA Professional Member Activities

Member Age Ranges Across
Technical Committees and Integration Outreach Committees



AIAA
SHAPING THE FUTURE OF AEROSPACE

Domain Key Topics

AERONAUTICS

System solutions applied by private industry, government programs to address commercial and policy customer needs

- **Carbon Emissions and Sustainability**
- **Advanced Air Mobility**
- **Certification**
- Hypersonics and Supersonics

R&D

Research performed by academic institutions, government laboratories, industry laboratories to be utilized by system solutions

- **Transformative System Engineering**
- **Autonomy / Artificial Intelligence / Machine Learning**
- Resilient and Assured Systems
- Advanced Manufacturing and Advanced Materials

SPACE

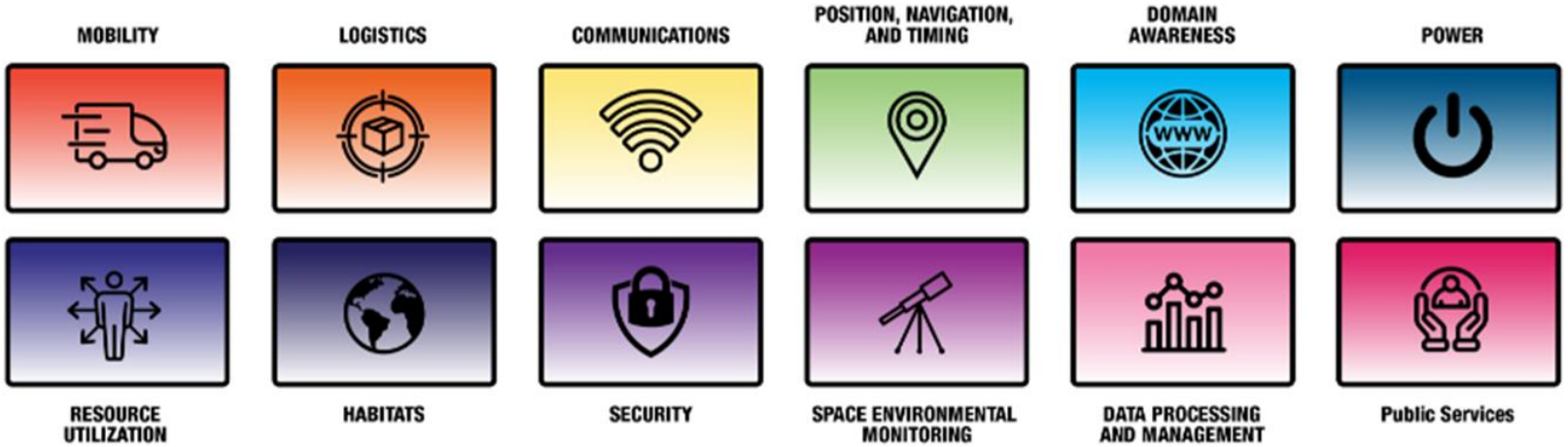
System solutions applied by private industry, government programs to address commercial and policy customer needs

- **Space Traffic Mgmt/Space Traffic Coordination**
- **Cislunar Propellant Depots**
- Space Sustainability
- Space Exploration
- Outpacing the Space Threat
- Competitive and Burgeoning Space Economy

PROBLEMS | ISSUES | PRIORITIES

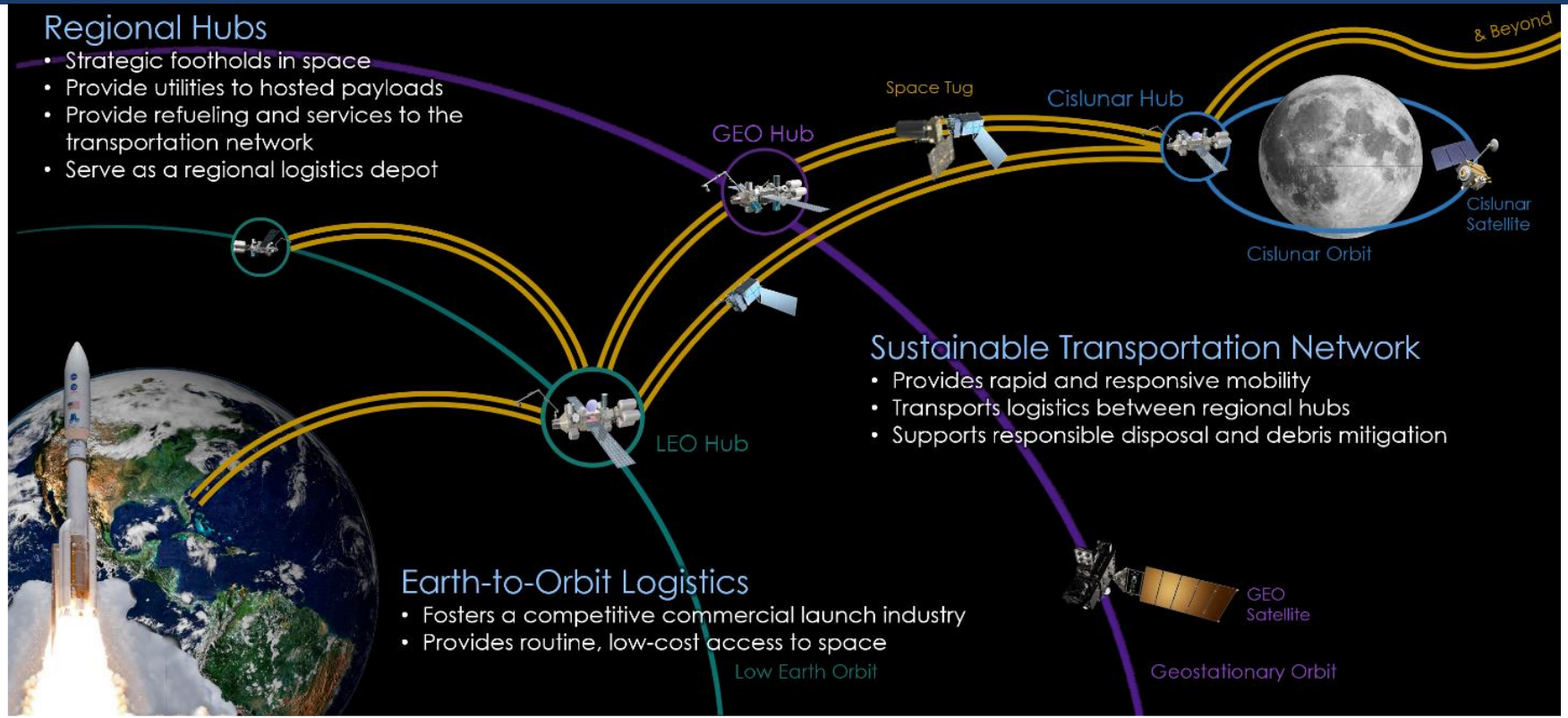
National Space Policy – *Guiding Light*

Extend human economic activity into deep space by establishing a permanent human presence on the Moon, and, in cooperation with private industry and international partners, develop infrastructure and services that will enable science-driven exploration, space resource utilization, and human missions to Mars. – National-Space-Policy.pdf



12 infrastructure/service layers for a sustainable cislunar ecosystem

Cislunar Enterprise–*Mobility Reference Architecture*



Notional diagram of the Space Superhighway concept

Source: ISAM Interagency Working Group

How can we work together toward a bold, visionary future?

NAE + AIAA

AMERICAN INSTITUTE OF
AERONAUTICS AND ASTRONAUTICS