

# Developing an Aviation Education Ecosystem and How You Can Help

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# Agenda

## It's About Future Stability & Growth

- **Aviation/Aerospace is Promoting Careers All Wrong**
- **Promoting a government-industry-education aviation/aerospace ecosystem**
- **Thinking differently when linking kids' interests to aviation/aerospace**
- **Getting more young children interested in Aviation & Aerospace**
- **Resources**



# What's wrong with aviation/aerospace workforce development

## ➤ **Silos –**

- ✓ Every discipline has its own initiative – Business Aviation, Airlines, Aerospace, Manufacturing. That's to be expected. BUT
- ✓ No one is viewing promoting aviation & aerospace from the 35,000-foot level
- ✓ We are competing against each other rather than competing against other industries who have long engaged with the education ecosystem
- ✓ By staying in silos, our audience misses the big picture – attracting those who would never even thing aviation & aerospace

## ➤ **Only a few careers highlighted**

- ✓ Pilots
- ✓ AMTs
- ✓ ATC

# Where We Aren't

- **Schools – Hard to Access Pre-K to Career**
- **Guidance Counselors**
- **Guidance Counselor Software Programs**
- **National School Board Association**
- **State Workforce Development and Education Officials**
- **American School Counselors Association**
- **Girl/Boy Scouts, Girl and Boys Clubs**

# Aviation/Aerospace Must Be Strategic

- Delta Flight & Tech Ops (it was in Atlanta and Delta was a sponsor)
- University Aviation Association
- National Business Aircraft Association
- Universal Technical Institute
- ALPA
  
- No One From Aerospace

## What did they talk about?

- Pilots
- AMTs
- Business Aviation Careers
- Aviation Universities

# Aviation Careers



## The Sky is Unlimited

CAREERS IN AVIATION AND AEROSPACE



### SUSTAINABILITY

- Climate Analyst
- Chemist/Fuel Specialist
- Electric/Hybrid Engineer

### SPACE

- Astronaut
- Astronomer
- Engineer
- Meteorologist
- Physicist
- Researcher
- Robotics
- Safety

### REMOTE OPERATIONS

- Photographer/Filmmaker
- Pilot: Drone/UAV
- Robotics
- Surveyor/Inspector

### MILITARY

- Ground Support
- Maintenance
- Pilot: Drone/Fighter Aircraft/Helicopter/Test
- Scheduler
- Technician



### AIRPORT OPERATIONS

- Air Traffic Controller
- Fire and Rescue
- Flight Briefer
- Flight Instructor
- Manager
- Meteorologist
- Ramp Agent
- Wildlife Management

### AEROSPACE DESIGN AND MANUFACTURING

- Aircraft Sales and Finance
- Avionics Technician
- Engineer
- Interior Designer
- Pilot: Test
- Public Relations/Marketing

### GENERAL AVIATION AIRPORT

- Aerobatics
- Balloonist
- Emergency Medical Technicians (EMT) Professional
- Fixed Base Operator (FBO) Professional
- Flight Examiner
- Instructor
- Pilot: Sport/Recreational/Private/Commercial

# This ad is from Business Aviation Insider for Students

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**For Aviation Jobs, the Sky Is Just the Beginning!**

As a student, you have plenty of options for your career path – including the outstanding diversity of roles, aircraft and missions found within the business aviation industry. Here are just a few of the exciting job opportunities in business aviation.

The diagram shows a central business jet airplane with lines connecting it to 14 different career roles, each represented by a circular icon with a person's head and shoulders:

- FLIGHT ATTENDANT
- SCHEDULER/DISPATCHER
- BUSINESS MANAGEMENT
- PILOT
- MAINTENANCE TECHNICIAN
- LAWYER
- DRONE OPERATOR
- CULINARY ARTS
- MEDICAL
- AIRPORT MANAGEMENT
- ENGINEER/DESIGNER
- MARKETING

**FAST FACTS ON AVIATION HIRING**

There will be a strong demand for business aviation professionals through 2039, including:

- 158,000** pilots
- 132,000** technicians
- 29,000** cabin crew members

SOURCE: 2018-2039 PILOT AND TECHNICIAN OUTLOOK

**168,000** workers are employed in jobs directly related to the operation and maintenance of business aircraft

BUSINESS AVIATION INSIDER FOR STUDENTS |

# Our Competition

Architects

Ophthalmologists

Dentists / Orthodontists

Construction Trades

Material Handling & Supply Chain

Trucking & Logistics

North American Building Trades Unions

RV & Auto Repair

Maritime

Fire Fighting

Survey/Geospatial Careers

Health Care

Forestry

Banking

Energy

Cybersecurity

All Military Branches

Gemological Institute of America

Skilled Careers Coalition includes most of the skills we want, and it is interested in including aviation.

<https://skilledcareers.org/>

# Fascinated by Aviation

- Most Guidance Counselors never thought aviation or aerospace as a career.
- Do you have a website I can go to for more information?

Um, no, not yet.

- ✓ No one-stop-shop for aviation and aerospace careers.
- ✓ Even if it is out there, we don't make it easy. We force them to bounce all over the internet to get that information.

There are a ton of aviation/aerospace programs and information, but it is not packaged the way a kid, a parent, a teacher or a guidance counselor needs.

# Aviation/Aerospace Curricula

Most are for older kids

- AOPA Foundation High School STEM Curriculum & Choose Aerospace AMT Curriculum
- WAI/Embry Riddle launched its free online education
- EAA free online courses
- The Space Foundation
- CrewConcept Drone Lab

## Educational Challenges

- American Rocketry Competition
- Real World Design Challenge
- Drone Soccer Competitions – including repair & overhaul of drones
- Skills USA, Skilled Careers Coalition Skills Jam Hosts the National Leadership & Skills Championship.

## **Meeting Kids Where They Are Linking Their Interests to Aviation**

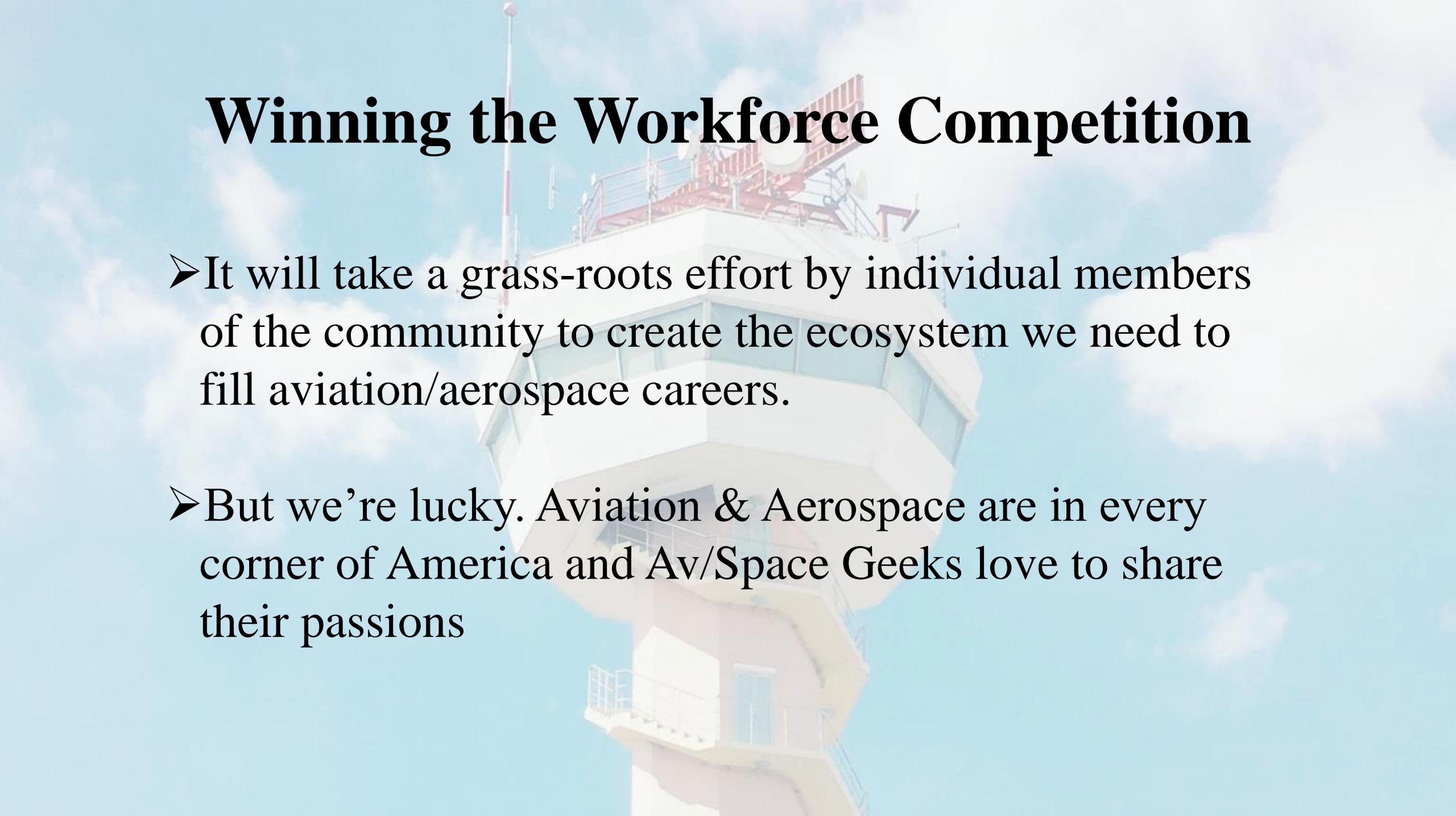
“Interested in gaming – there’s a place for you in aviation. It’s called simulator and we need simulator technicians and designers.”

Interested in Art? Airports and airlines have curators to decorate their terminals and lounges.

Interested in interior design? Some of the most creative design projects go into the interior of a business jet and they use fashion and auto design as their inspiration.

Want to be a doctor? Great You can be an aeromedical examiner too.

# Winning the Workforce Competition



- It will take a grass-roots effort by individual members of the community to create the ecosystem we need to fill aviation/aerospace careers.
- But we're lucky. Aviation & Aerospace are in every corner of America and Av/Space Geeks love to share their passions

# **How to develop aviation/aerospace education and/or promotion ecosystem**

## **A Single Industry Voice for Promotion of Aviation/Aerospace Careers**

- Working to Coordinate Aviation/Education Workforce Non-Profits
- Youth in Aviation Task Force
- New funding resources
- National Conference next February

**Bringing together Industry – Educators – Government Officials  
to solve the Workforce Problem from 35,000 Feet**

# Who's In Your Community?



- Person Power – Find Community Partners to help. This your AvGeek Tribe
- Chapters of WAI, EAA, CAP, AWAM, 99s, Whirly Girls, OBAP, NPGA, PAPA?
- Newspapers
- Airports & Aviation companies
- County Career & Technical Education Officials, elementary to high schools, guidance counselors
- Local, County, State Workforce Development Programs – They are already there, and they need partners
- Community Colleges
- Science/STEM Museums
- Aviation & Aerospace Companies
- Career & Tech Ed
- Girl/Boy Scouts & Clubs

# What's in My Community?

- Space Coast Women in Aviation Alliance
- **Experimental Aircraft Association**, Valkaria & Merritt Island Chapters
- **Civil Air Patrol**
- The Pink Team **First Robotics** Team on FL's Space Coast
- **FIRST Tech Challenge Team**
- 99<sup>th</sup> Squadron (Part of Tuskegee Airmen)
- **STARBASE Academy** -- National DOD STEM Education Program
- **Women in Defense** Space Coast Chapter
- **Women in Aviation International** FIT & Harbor City Chapters
- CareerSource Brevard, Florida Atlantic Workforce Alliance
- Brevard County **Career & Tech Ed**
- Aviation manufacturers, MROs, FBOs, Airports, Kennedy Space Center, NASA
- Aerospace & Defense Primes

# Events

- Girls/Kids in Aviation Day
- Kissimmee Airport Food Truck Fly-In
- Airport & Control Tower Tours – FAA has a regional liaison for you
- NOAA Tours
- Maintenance Bay Tours STS, AAR, Dassault
- Factory Tours – Embraer Executive Jets
- Career Fairs – Make sure the industry is represented
- Aviation Events – Sun ‘n’ Fun, EAA AirVenture, OK Aviation Day,

# Tools & Resources

## National Resources

### **WAI Career Brochure**

<https://www.wai.org/aviation-careers>

### **Resource for Aviation/Aerospace Education and Workforce Development**

<https://futureaviationaerospaceworkforce.com/resources-for-promotion-and-education-in-aviation-aerospace/>

### **Aviation/Aerospace Calendar of Events**

<https://futureaviationaerospaceworkforce.com/aviation-aerospace-calendar-of-events/>

# Resources Continued

**School Counselors Software programs** start kids exploring careers as young as Pre-K but there are currently only three careers to explore in these programs – pilots, AMTs and aerospace engineer. Nothing on manufacturing!

Florida uses Xello but there are others include Pathful, Major Clarity, SkillPointe & Skilled Career Coalition. We need to get our careers in these programs. Worktour makes day-in-the-life videos for different professions while Skilljam has a docuseries

# More Resources

## **Kids Publications**

- AviNation
- Let's Go Aerospace
- Videos for career exploration

## **Scholarships**

- University Aviation Association Scholarship Catalogue
- Velocity R Scholarship and Internship Databases



Alert your friends, co-workers, teachers, etc.... to scholarship & internship opportunities. Post it on LinkedIn, FB, IGram

# Join Us It's About the Future Workforce

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