

# Feasibility Study for Fort Lauderdale Aviation and Aerospace Training Program

## Highlights from Final Report

**INSTITUTIONAL  
RESEARCH**  
BROWARD COLLEGE®

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# Purpose of Study

The Center for Applied Research has performed a comprehensive study on establishing Fort Lauderdale as an Aviation and Aerospace Training Hub in alignment with the City Strategic Plan and to further its goals.

## **VISION**

In coordination with existing and new partners, the City of Fort Lauderdale, will become an aviation and aerospace training hub.

## **PROBLEM**

Training is the limiting factor for growth in the *aviation maintenance, repair, and overhaul (MRO)* industry in Broward County.

## **SOLUTION**

Develop comprehensive training program in coordination with partners to meet industry demand for skilled aviation technicians and accelerate growth of sector.

# Study Participants

## THE STUDY IS WELL-INFORMED BY THE INDUSTRY

### INDUSTRY GROUPS

- Greater Ft Lauderdale Alliance
- Beacon Council
- Greater Miami Aviation Association
- South Florida Aviation Maintenance Council
- South Florida Business Aviation Association
- South Florida Manufactures Association
- Career South Broward
- Space Coast EDC
- South Florida Defense Alliance
- + 5 other industry groups

### AVIATION COMPANIES

- Spirit Airlines
- Tropic Ocean Airways
- National Jet
- Heico
- GA Telesis
- Banyan Air Service
- Duncan Aviation
- GAMA Aviation
- Florida Jet Center
- + 114 other aviation companies

### EDUCATIONAL INSTITUTIONS

- Broward College
- Broward County Public Schools
- Broward County Technical Colleges
- Lynn University
- Everglades University
- Aviation Institution of Maintenance
- Florida Memorial University
- Flying Classroom
- Museum of Discovery
- Embry-Riddle Aeronautical University

# Aviation Landscape in Broward & Fort Lauderdale

## CURRENT JOB LANDSCAPE

- Broward County has over 27,000 jobs in the sector.
  - Close to 70% of the jobs required HS degree or equivalent
  - 90% are opportunity jobs
  - Average hourly earnings \$24

## JOB DEMAND

- In Broward county, there are currently 15,444 openings in the sector.
  - 46% of the openings are in the City of Fort Lauderdale
- 85 % are full time positions and require 0-3 years of professional experience.

## IMPORTANCE OF THE SECTOR

- Expected to increase by 35% in the next decade, adding 8,807 new jobs.
  - 20% of the total job projected for the county in the same time frame.
- City of Fort Lauderdale already has a major role in aviation and has 2 major airports:
  - FXE, owned and operated by the City, had total economic impact of \$2,091,276,00.
  - Fort Lauderdale-Hollywood International Airport – Prior to COVID-19 pandemic, the airport generated \$37.5 billion in economic activity annually and nearly 18,000 direct, local jobs.



### Current Training Needs

- Line service
- Maintenance helper
- Specialty
- Aircraft specific
- Soft skills

### Future Trends

- Electric propulsion
- VTOL
- UAS/UAV/AAM
- Tech modernization
- Additive manufacturing

### Challenges

- Cost of living
- Relocation cost
- GA vs Commercial
- Skill/worker shortage
- Aviation interest

# Why Focus on Aviation Maintenance?

**MANY JOBS IN THE INDUSTRY EITHER DON'T REQUIRE TRAINING, TRAINING IS CONDUCTED BY THE COMPANY, OR SUFFICIENT TRAINING CAPACITY ALREADY EXISTS**

- Flight Attendants + 1,792
  - Training internally by airline
  - \$24.36 Avg Hourly Wage
- Airline Pilot +727
  - 28 Flight Schools in South Florida
  - \$103.23 Avg Hourly Wage
- Aircraft Mechanic +521
  - **Only 2 Schools in Broward**
  - \$31.32 Avg Hourly Wage

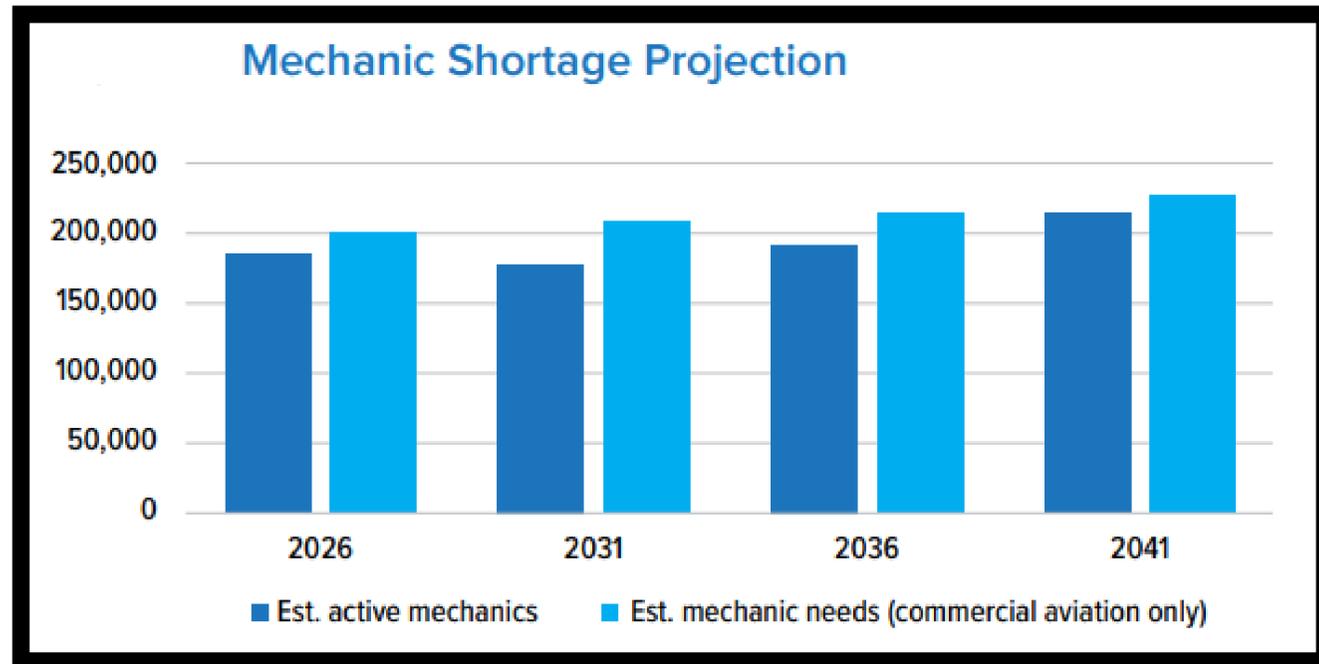
## **JOB POSTINGS**

- 217 current opening for at least one aircraft mechanic.
- Broward seeing 20.6% job growth for aircraft mechanics.

# Aviation Maintenance Training Needs

## AVIATION TECHNICIAN

LINE SERVICE | MAINTENANCE HELPER | SPECIALTY | AIRCRAFT SPECIFIC



- Aviation maintenance employers are experiencing significant workforce shortage in skilled labor.
- Aviation maintenance employers are unable to grow with workforce shortages.
- Opportunity for residents to gain training in high-skill and high-wage careers.
- Potential for new companies to relocate to Fort Lauderdale.
- Preemptively prepare for future workforce needs.

## AIRCRAFT MECHANICS ARE IN SHORT SUPPLY

- In 2020, the FAA issued **30 percent fewer** new mechanic certificates than in 2019.
- The average FAA mechanic is **53, 11 years older** than the average U.S. worker.
- Boeing reports the need for **626,000 additional aviation maintenance technicians, worldwide, in the next 20 years.**

**12,227**  
**Employees**  
Across South  
Florida Repair  
Stations



# Spectrum of Jobs In The Industry Provides Opportunity

01

## **NON-CERTIFIED AVIATION MECHANICS**

- Apprentices, helpers, assistants to Airframe & Powerplant (A&P) technicians
- High School and adult programs
- May articulate to college credit
- May use existing space in high schools, adult centers, or community centers

02

## **SPECIALIZED MECHANICS**

- Avionics, advanced materials, electric propulsion, system integration specialist
- Stand alone or scaffold training program
- May articulate to college credit
- May use existing space in high schools, adult centers, or community centers

03

## **FAA-CERTIFIED TECHNICIANS (A&P)**

- The only person that can work and sign-off on aviation repairs in the US
- Dual Enrollment and adult programs
- Multiple degree pathways exist
- Requires significant training facilities and infrastructure

# What is an FAA Airframe and Powerplant (A&P) Technician?

Federally certificated by the Federal Aviation Administration to work and sign-off on all US registered aircraft.

The only federally certified skilled technician available who is training in over 40 aviation technician skills that allows the technician to work on all aircraft systems, structure, and engines.

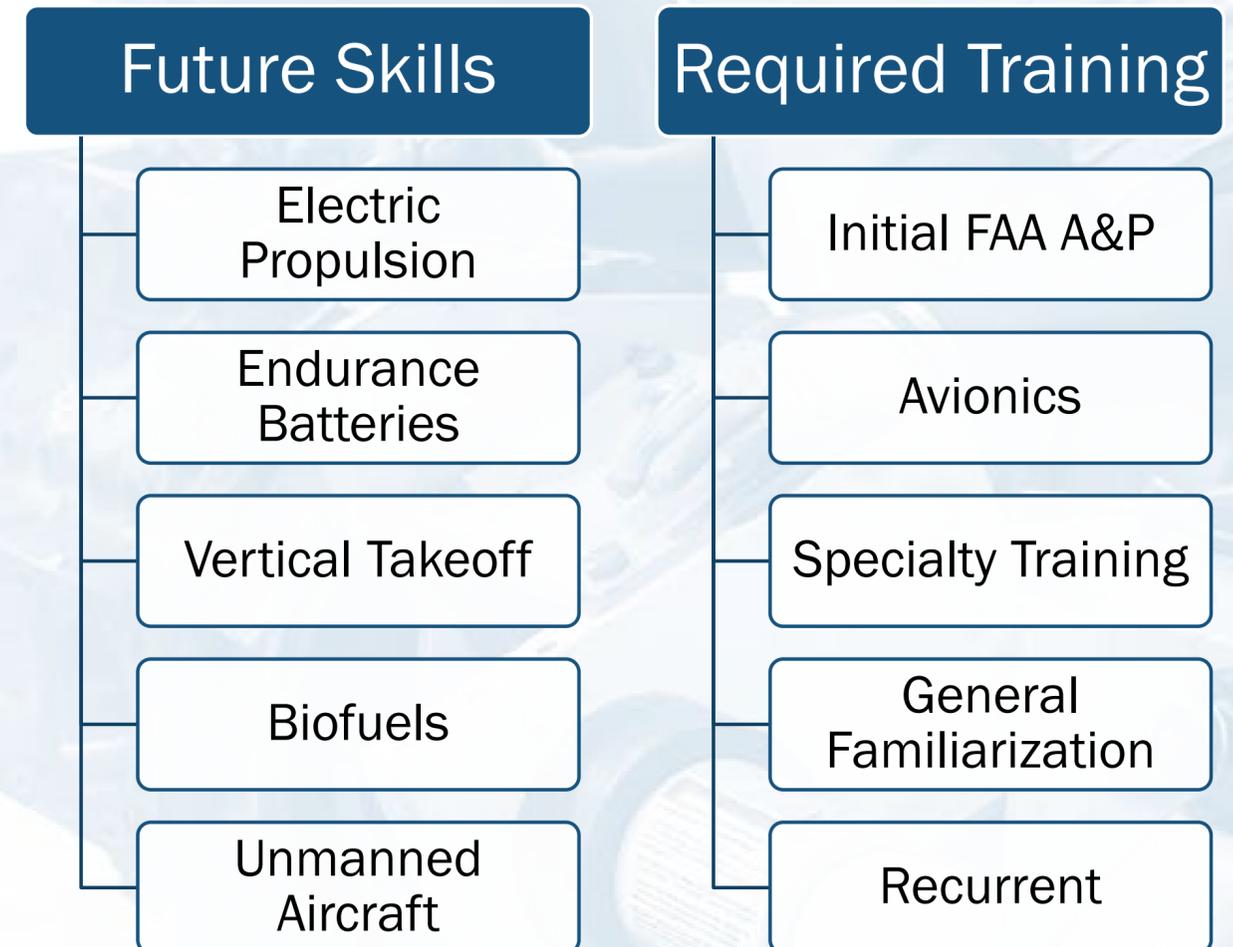
Skill set transcends aviation into multiple industries include power distribution, construction, manufacturing, automotive, marine, heavy machinery, etc.

## Current A&P Technical Training in Broward is Not Meeting Demand

- Only 1 FAA approved school in Broward (Broward College)
  - Average 84 graduates per year
  - 18- to 22-month program full-time
  - HS Dual Enrollment available – multiple degree pathways
  - 60 credits / 2,000 hours of instruction
- Requires significant resources to expand including land, infrastructure, facilities, equipment, and materials

## Preparing to Meet Future Skill Requirements

Aviation technology is advancing at a rapid pace. The “future” technician must be able to not only work on legacy aircraft but become skilled in “new” technologies. **No programs in South Florida are ready to meet these needs.**



# Impact of Shortage

## FAA CERTIFIED A&P TECHNICIANS ARE IN HIGH DEMAND

- 0 years work experience \$~25/hr
- 1-3 work years experience \$~30/hr
- 5-10 years work experience ~\$50/hr
- Wages are increasing due to lack on workforce and increase in cost of living

## RESULT OF LACK OF A&P TECHNICIANS

- Companies have not been able to expand, unable to take new work
- Companies have available facilities and ramp, but must remain vacant due to insufficient workforce

## TRAINED WORKFORCE SPURS COMPANY RELOCATION

- Determining factor for many companies looking to relocate
- Lack of available A&P technicians has increased the competition and cost for new hires

## NON AVIATION DEMAND FOR FAA CERTIFIED A&P TECHNICIANS IS STRONG

- Skillset of A&P technicians is in demand by numerous industries – manufacturing, electric, hydraulic, etc.
- NASCAR, Disney, NASA, SpaceX

# Simple and Bold Opportunities Exist

| PROGRAM   | DESCRIPTION  | IMPACT  |
|---|--|---|
| <p><b>Aviation Career Awareness</b></p>               | <p>Expand afterschool programming, in-school enrichment, FXE events. Targeted marketing for both students and industry on career opportunities in aviation.</p>          | <p><b>Career Exposure</b></p>                                     |
| <p><b>Short Term/Non-Certificate Training</b></p>     | <p>Short term training programs in schools, community and corporate settings for specialized skill development and to promote job readiness.</p>                         | <p><b>Skill Training/Stackable</b></p>                            |
| <p><b>Dual Enrollment/Technical</b></p>               | <p>Expand dual enrollment for high school students and adult technical education, leading to industry certificates and entry level jobs.</p>                             | <p><b>Industry Certificates</b></p>                               |
| <p><b>Satellite Part 147-Aviation Maintenance</b></p> | <p>FAA authorized aviation maintenance training program requiring work on actual aircraft and engines and leads to a FAA Airframe and Powerplant certification.</p>      | <p><b>FAA Certificates-Maintenance</b></p>                        |
| <p><b>Aviation Technical Training Center</b></p>      | <p>Aviation training facility offering a range of industry certificates, including but not exclusive to maintenance. Can be a stand-alone facility or part of a hub.</p> | <p><b>Range of Industry Certificates &amp; Skill Training</b></p> |

# Envisioning An Aviation Technical Training Center

A 2-3 acre, 3-story aviation-specific training center could accomplish a number of objectives:

- Serve as a primary training facility for all aviation maintenance jobs
- Act as a facility which spurs excitement in young people in aviation as a career field
- Be a hub of research for the implementation of future aviation maintenance technologies and serve as the intersection of other disciplines which impact aviation (Virtual- and Augmented-Reality, for example)



*Raisbeck  
Aviation High  
School, WA*



*Sterling Aviation  
High School, TX*

# Potential Roles for the City of Fort Lauderdale

Advocate for aviation education and commerce

Develop partnerships

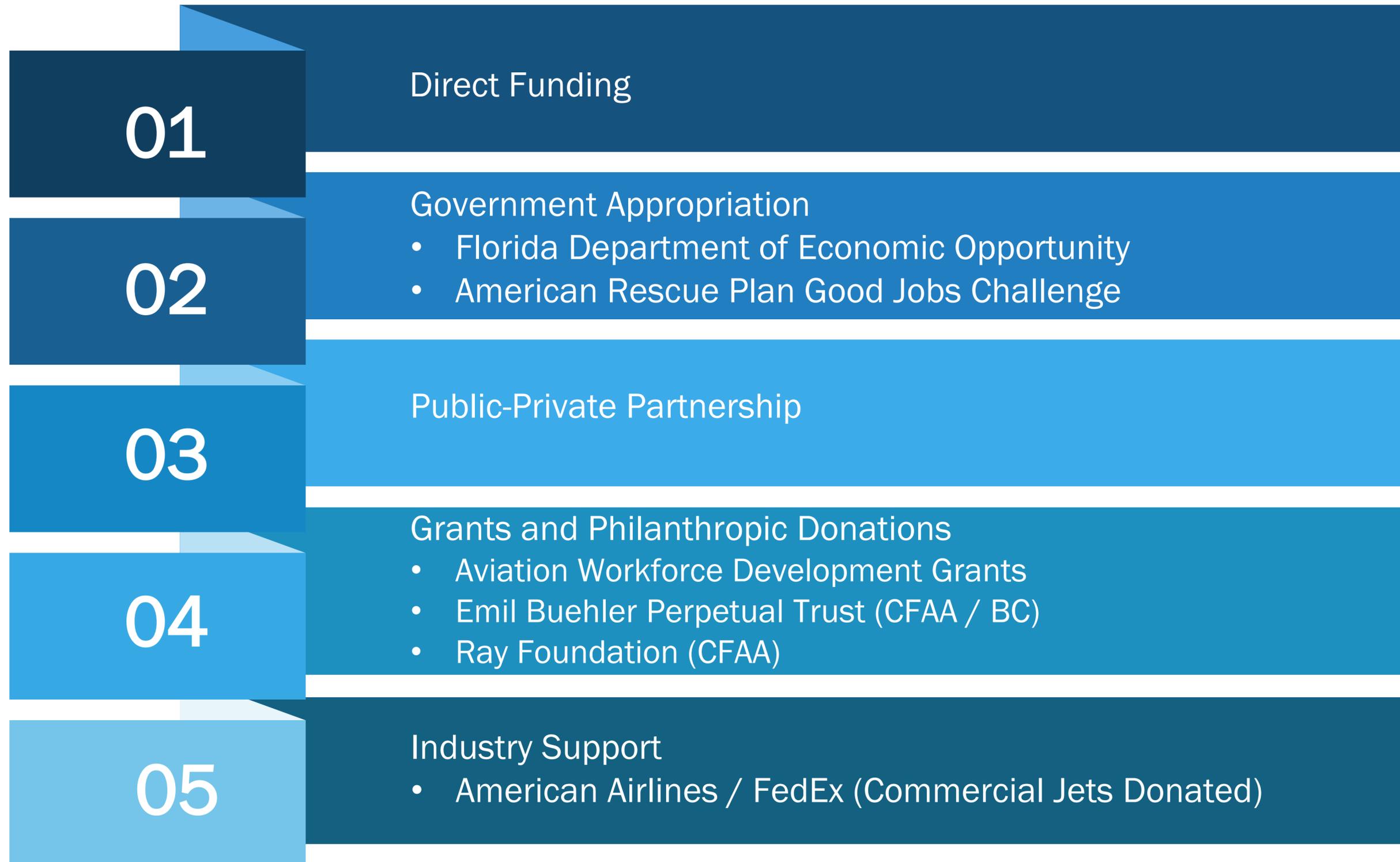
Launch marketing, exposure, and recognition campaign

Identify and secure of funding

Identify and secure resources and property

Provide direct assistance to programs (personnel, funds, location, facilities)

# Potential Funding Opportunities



# Next Steps

**1**

**Establish Commission  
Direction**

**2**

**Formally Launch  
Steering Committee**

**3**

**Solidify Partners**

**Finalize Program  
Design and Budget**

**4**

**Pursue Funding  
Opportunities**

**5**

**Contract  
Implementation**

**6**

THANK YOU!

**Questions?**

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