US Economic Impact of Civil Aviation

• In 2014, civil aviation generated $1.6 trillion in economic activity and supported 10.6 million jobs, with $446.8 billion in earnings.

• Civil aviation accounted for 5.1% (846 billion) of the U.S. gross domestic product in 2014.
Regional Airlines are Critical Infrastructure

63% of U.S. airports with scheduled passenger air service get their ONLY source of air service from regional airlines.

41% of scheduled passenger departures were operated by U.S. regional airlines.
Regional Airlines are Critical Infrastructure

93% of the nation’s airports are served by regional airlines.

37% of the nation’s airports are served by major airlines.

Regional Airlines are Critical Infrastructure.
U.S. Airports Served Exclusively by Regional Airlines

214 airports in lower 48 states based on 2018 schedules
US Economic Impact of Civil Aviation at Regional-only Airports

570 small community airports, served exclusively or primarily by Regional Airlines, drive $134 Billion in U.S. economic activity each year, create 1 Million jobs and generate $36 Billion in wages and tax revenues for local communities.
57,024

Full-time equivalent employees are employed by the 10 largest U.S. Regional Airlines.
Global Pilot Demand

- CAE 2018 Airline and Business Jet Pilot Demand Outlook indicates 110,000 new airline pilots needed in the Americas and 270,000 new airline pilots needed globally by 2028.

- Boeing Pilot Outlook (2019) projects worldwide growth in pilot demand, with 212,000 pilots needed in North America by 2038.
ATP AMEL Pilots with Valid 1st Class Medicals by Age

Airmen Age Range (YEARS)

- <30: 5.5% (As of Dec 1, 2017), 6.2% (CURRENT AIRMEN)
- 30-39: 22.1% (As of Dec 1, 2017), 22.3% (CURRENT AIRMEN)
- 40-49: 24.8% (As of Dec 1, 2017), 23.9% (CURRENT AIRMEN)
- 50-59: 35.3% (As of Dec 1, 2017), 34.1% (CURRENT AIRMEN)
- 60-64: 12.3% (As of Dec 1, 2017), 13.4% (CURRENT AIRMEN)
ATP AMEL Pilots with Valid 1st Class Medicals by Age

- 51,762 qualified airmen will reach mandatory retirement age within 15 years.
- 14,616 qualified airmen will reach mandatory retirement within 5 years.
- US Regional airlines employ about 17,000 actively flying pilots.

Source: Data files distributed monthly by Carla Colwell, Functional Analyst, Airmen Certification Branch, Federal Aviation Administration
Industry Contraction Alongside Pilot Shortage
Some Airlines Used Larger Aircraft to Reduce Pilots Needed; Not all Communities Can Support Larger Aircraft
Departures Decreased even as Seats Increased

SCHEDULED DEPARTURES

-4.5% FEWER departures in 2018 than 2009

SCHEDULED SEATS

+14.9 MORE seats in 2018 than 2009

July Schedules (U.S. Carriers • Domestic operations)
Some U.S. Airports lost all Air Service as Pilot Shortage Worsened

-2.6% FEWER airports served in 2018 than 2009

July 2018 Schedules (U.S. Carriers • Domestic operations)
2018 compared with 2013:

- 246 airports reduced by 10% or more
- 180 airports reduced by 20% or more
- 109 airports reduced by 33% or more
- 77 airports reduced by 50% or more
- 42 airports reduced by 75% or more
- 32 airports lost all service

Source: RAA analysis of OAG schedules via PlanStats online portal; airports had scheduled passenger air service (departures) in 2013 and had reduced air service in 2018.
US Pilot Qualification Pathways

• As of 2013, US Federal regulations allow for two types of pathways to pilot qualification. One is primarily hours-based – 1,500 flight hours for an ATP certificate – and the other is a combination of structured training and flight hours and results in a R-ATP certificate.

• Empirical data consistently shows pilots following these structured training (R-ATP) pathways show higher proficiency after hire than pilots from hours-based pathways. This is because these pathways substitute rigorous structured training in place of self-directed flight hours.

Only Military and Degree Programs are currently approved as R-ATP Pathways
Foundational Training Matters

- The **Pilot Source Study 2018** is an update to a series of independent, peer-reviewed, academic studies on pilot training outcomes relative to various pilot backgrounds.
- The study connected pilot backgrounds with training performance outcomes, analyzing training completions, the need for extra training and the need for extra Initial Operating Experience (IOE) among pilots from various backgrounds.
  - Pilots in all study phases, including the 2018 update, performed worse in airline training than pilots performed prior to the 2013 rule change.
  - In 2018, 45% of new-hire pilots required extra training (up from 28% in 2015).
  - Shorter time between pilot graduation from foundational training and hire resulted in better pilot performance.
  - Pilots hired with R-ATP certificates (structured training-based qualification pathways) performed better than those with ATP certificates. (hours-based qualification pathways)
  - The top performing pilots were those pilots with fewer than 1500 hours.
  - Pilots with highest time (1500 – 3000 flight hours) required the most extra training.
Original Issuance ATP AMEL w/ Restricted Privileges

Source: Data files distributed monthly by Carla Colwell, Functional Analyst, Airmen Certification Branch, Federal Aviation Administration
# Original Issuance ATP AMEL and R-ATP AMEL

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<th>Year</th>
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Source: Data files distributed monthly by Carla Colwell, Functional Analyst, Airmen Certification Branch, Federal Aviation Administration
More High-Quality Structured Training R-ATP Pathways are Needed

• Airlines can invest in pilot career certainty by developing additional, airline-sponsored R-ATP pathways that supplement those in place today.

• RAA members developed Air Carrier Enhanced R-ATP pathway (ACE).

• Designed to bridge gap between pilot training and pilot qualification through additional structured training in the post-hire airline environment.

• ACE includes but is not limited to: screening, testing, selection, academics, training, checks, audits, and mentorship.

• ACE is qualitative, scenario-based, and highly structured, fostering a higher level of pilot proficiency and enhancing safety.

• ACE would be executed through an approved FAR Part 121 initial pilot training program.
Airlines are Investing in Pilots

- Collegiate and training institution partnerships focused on career opportunities.
- Internship and cadet programs.
- Academy style programs to train and support aspiring pilots.
- Flow and guaranteed interview programs with major airlines to support career stability.
- Tuition reimbursement agreements.
- Leadership development programs for women and minorities to create new role models.
- Significant salary investments, starting year one (average RAA member first year, FO compensation now exceeds $63,000)
Career Path Inaccessibility Hinders Resolution

Airline entry level first year, First Officer average compensation rose more than 150 percent between 2014 and 2016 – average starting compensation now exceeds $60,000.

At the same time, airlines are finding fewer qualified new hire pilot candidates than needed. Recruiting success has continued to decline.

Pilot education and training costs exceed Federal student loan caps – without access to private capital, pilots cannot afford to train.

Pilots who train outside of two and four year degree programs have no access to Federal financial aid; even though such funding is available for other vocational training.

Pilot career path inaccessibility is a key policy problem undermining the effectiveness of today’s market response.
Pilot Training is Expensive & Funding is Insufficient

$65,000 - $85,000

Local flight school

$125,000 - $200,000+

4-year college program with flight option

Available Student Loans for Independent Students:

Subsidized and Unsubsidized Aggregate Loan Limit for Independent Students is $57,500 for a four-year degree program and $20,000 for a two-year degree program.

No title IV funding exists at this time for non-degree aviation training.

Shortfall ranges from $65,000 to $100,000+
For those who can access financing, ROI for Pilot Training is high and climbing

RAA member airlines pay an average total First-year, First Officer compensation of $61,602

2018 median annual wage for all U.S. occupations at all levels was $38,640

2018 median wage for airline pilots, copilots, and flight engineers was $140,340
Solutions

• Improve financial support for pilot training: expand federal student loan coverage for all forms of structured foundational training

• Fund the grant program established by HR 302 for pilot education and the creation of curriculum designed to provide high school students with science, technology, engineering, math and aviation education.

• Approve additional structured training pathways toward pilot qualification when those pathways enhance safety

• Emphasize scenario-based, modern training methods, and use of high-fidelity flight simulators that offer meaningful pilot experience
Technician Shortage

• The **Aviation Technician Education Council** projects that the mechanic population will decrease by 5% in the next 15 years. 30% of the workforce is at or near retirement age.

• Forecasts by the U.S. government and Boeing project a need for thousands of additional mechanics in the next 10-20 years.
Technician Workforce Solutions

- Industry is expanding outreach to include those who have been historically underrepresented in the technician workforce.

- Field trips to MROs and maintenance bays are focused on children – at younger ages – instilling a sense of wonder about aviation.

- To create better stakeholder partnerships to recruit and train the next generation of technicians, Congress should fully fund ($10M) the Maintenance Technician Workforce Development Program.

- To ensure technicians are trained to work on today’s advanced commercial aircraft, FAA should issue a final rule modernizing Part 147 curriculum standards.