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.
- Commercial airline operations enabled $310.0 billion of visitor expenditures on goods and services.
- Civil aircraft manufacturing continues to be the top net exporter in the U.S. with a positive trade balance of $59.9 billion.

Source: U.S. DOT FAA “The Economic Impact of Civil Aviation on the U.S. Economy” September 2017
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

619 U.S. Airports with Regional Service in 2017

409 U.S. Airports with ONLY Regional Service in 2017
U.S. Airports Served Exclusively by Regional Airlines

217 airports in lower 48 states based on 2017 schedules
RAA Members Generate 59,000 Direct Jobs

- 10,000 support staff
- 1,000 flight control
- 8,000 mechanics
- 5,000 customer service
- 15,000 flight attendants
- 20,000 pilots
Regional Airline Industry is Contracting Under a Growing Pilot Shortage
FAA Civil Airmen Data Shows Shrinking Pilot Pool
Shrinking Hirable Pilot Pool

Estimated Active Pilot Certificates Held by Category Ages 20-59
Federal Aviation Administration U.S. Civil Airmen Statistics, Table 12

-20.6% since 2009
-992 per month
-33 per day
Declining Original Airmen Certificates

Original Airmen Certificates Issued by Category
Federal Aviation Administration U.S. Civil Airmen Statistics, Table 17
Aging Pilots in all Categories

Average Age of Active Pilots by Category
Federal Aviation Administration U.S. Civil Airmen Statistics, Table 13
• 51,053 (48%) ATP AMEL pilots with current 1st Class Medicals are 50 years old or older and will reach mandatory retirement age within the next 15 years.

• 13,673 of these pilots are 60-64 years old and will reach mandatory retirement age within the next 5 years.
If ME ATP issuances continue at 488 per month for the rest of the year, the total will reach 5,860 for 2018 -- more than 2017, but still 38% less than 2016.

<table>
<thead>
<tr>
<th>Year</th>
<th>ATP AMEL</th>
<th>R-ATP AMEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>8029</td>
<td>37</td>
</tr>
<tr>
<td>2014</td>
<td>6658</td>
<td>787</td>
</tr>
<tr>
<td>2015</td>
<td>5146</td>
<td>1203</td>
</tr>
<tr>
<td>2016</td>
<td>7197</td>
<td>2190</td>
</tr>
<tr>
<td>2017</td>
<td>3027</td>
<td>1363</td>
</tr>
<tr>
<td>2018</td>
<td>3115</td>
<td>1356</td>
</tr>
</tbody>
</table>

Jan-Sep 2018
Forecast Pilot Supply & Demand

• UND U.S. Airline Pilot Supply Forecast (2016) predicts cumulative pilot shortage of 14,000 by 2026.

• CAE Airline Pilot Demand Outlook (2017) indicates 85,000 new airline pilots needed, by 2027, including 62,000 new captains; cites large number of retirements as significant challenge.

• Boeing Pilot Outlook (2018) projects worldwide growth in pilot demand, with 206,000 pilots needed in North America by 2038.

• Since 2008, the number of private pilots decreased by 27% and the number of commercial pilots decreased by 21%.
Major Airlines Expected to Hire Equivalent of Regional Airline Workforce between 2016 and 2020

Source: University of North Dakota Pilot Supply Forecast 2016
Pilot Shortage = Parked Aircraft

10: Number of pilots needed to Crew 1 Regional Aircraft.

400: Number of aircraft parked with shortage of 4,000 pilots.

1,400: Number of aircraft parked with shortage of 14,000 pilots.

2,018: Total number of RAA member operated aircraft today.
Regional Airline Industry Contraction

Passengers Enplaned (Millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>Enplaned (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>158.73</td>
</tr>
<tr>
<td>2009</td>
<td>157.66</td>
</tr>
<tr>
<td>2010</td>
<td>164.10</td>
</tr>
<tr>
<td>2011</td>
<td>162.18</td>
</tr>
<tr>
<td>2012</td>
<td>161.34</td>
</tr>
<tr>
<td>2013</td>
<td>159.13</td>
</tr>
<tr>
<td>2014</td>
<td>157.56</td>
</tr>
<tr>
<td>2015</td>
<td>156.56</td>
</tr>
<tr>
<td>2016</td>
<td>154.92</td>
</tr>
<tr>
<td>2017</td>
<td>153.25</td>
</tr>
</tbody>
</table>
Industry Contraction Means Fewer Departures

Average Daily Departures

- Regional
- Other

Average Daily Departures

Regional Percentage of Total

Source: BTS Air Carrier Statistics Form 41 Traffic T-109 Segment (U.S. Carriers Only)
Fewer Departures Means Air Service Reductions and Losses

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 PlaneStats online portal; Airports had scheduled passenger air service (departures) in 2013 and had reduced air service in 2018.
Air Service is More than Just Seats

**SCHEDULED DEPARTURES**

-4.5% FEWER departures in 2018 than 2009

<table>
<thead>
<tr>
<th>Year</th>
<th>Departures</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>790,000</td>
</tr>
<tr>
<td>2013</td>
<td>750,000</td>
</tr>
<tr>
<td>2018</td>
<td>730,000</td>
</tr>
</tbody>
</table>

**SCHEDULED SEATS**

+14.9 MORE seats in 2018 than 2009

<table>
<thead>
<tr>
<th>Year</th>
<th>Seats</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>88,000,000</td>
</tr>
<tr>
<td>2013</td>
<td>74,000,000</td>
</tr>
<tr>
<td>2018</td>
<td>86,000,000</td>
</tr>
</tbody>
</table>

July Schedules (U.S. Carriers • Domestic operations)
Departures (not Seats) Equate to Connectivity

**2018 vs. 2009**

<table>
<thead>
<tr>
<th>Category</th>
<th>Departures</th>
<th>Seats</th>
<th>Routes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large</td>
<td>0.7%</td>
<td>15.7%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Medium</td>
<td>-4.7%</td>
<td>16.0%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Small</td>
<td>-13.9%</td>
<td>9.7%</td>
<td>-10.3%</td>
</tr>
<tr>
<td>Nonhub Nonprimary</td>
<td>-19.3%</td>
<td>14.0%</td>
<td>-2.8%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-6.1%</td>
<td>-24.2%</td>
</tr>
</tbody>
</table>

July Schedules (U.S. Carriers • Domestic operations)
Communities Need Access to Hubs

-2.6% FEWER airports served in 2018 than 2009

July Schedules (U.S. Carriers • Domestic operations)
Businesses Need Reliable Air Service

“Locating our headquarters closer to a global transportation hub, such as Chicago, means we can meet with our global customers, dealers and employees more easily and frequently.” -- Caterpillar CEO Jim Umpleby [https://tinyurl.com/y84527yx]

“Krystal CEO Doug Pendergast, who took over shortly after the company was sold to an Atlanta-based investment group in March, said moving the headquarters to Atlanta will put Krystal executives closer to more restaurants and improve air service to its units.”
[https://tinyurl.com/y8u3rsfc]

“Albemarle Corp. has been in Baton Rouge, La., for seven years and has decided to move its headquarters to Charlotte. One big draw for the Queen City was the better airline service at Charlotte Douglas International Airport, Louisiana officials say.” [https://tinyurl.com/y8u3rsfc]

“New York's air service also makes it easier to travel to the 25 states where Charter operates…and not have to have two transfers on the flight.” - Charter spokeswoman Anita Lamont. [https://tinyurl.com/ya2e7len]

“Omaha’s relatively slim pickings for direct flights to major cities — and no international flights — can be a big detriment when it comes to selling the city” - Tracey Hyatt Bosman, managing director at Biggins Lacy Shapiro & Co.

“Agriculture giant Archer Daniels Midland cited air service as one of the benefits of moving its headquarters last year to Chicago from Decatur, Illinois. [https://tinyurl.com/yckqwa2l]
Regional Airlines are Investing in Pilots

• Collegiate and training institution partnerships focused on career opportunities; preferred hiring agreements.

• Internship, cadet, and leadership development programs.

• Academy style training programs, using flight schools to train pilots.

• Flow and guaranteed interview programs with major airlines to support career stability.

• Tuition reimbursement agreements.

• Significant salary investments, starting year one.
Pilot Compensation is High and Climbing

RAA MEMBER AIRLINES PAY FIRST YEAR, FIRST OFFICERS AN AVERAGE TOTAL COMPENSATION OF $59,098.

THE BUREAU OF LABOR AND STATISTICS (BLS) REPORTED 2017 MEDIAN ANNUAL WAGE FOR ALL U.S. OCCUPATIONS AT ALL LEVELS WAS $37,040.

MEDIAN COMPENSATION FOR COMMERCIAL AIRLINE PILOTS IN 2017 WAS $137,330. (17% INCREASE FROM 2015)
Career Path Inaccessibility
Undermined Effectiveness of Market Response

• RAA member airline first year, First Officer average compensation rose more than 150 percent between 2014 and 2016 yet recruiting success declined over the same period.

• Pilot education and qualification costs are high and exceed caps on Federal student loans – potential pilots without access to private wealth lack access to the career regardless of entry level compensation.
Pilot Qualification Costs are High and Not Covered by Student Loans

• The price tag for a four-year flight training degree can reach $250,000, well above the federal financial aid cap.

• Pilots must pay out of pocket or secure private loans to cover required elements of foundational training that exceed the federal aid cap. These expenses can range from $50,000 - $100,000.

• Pilots who pursue training outside of a collegiate environment at a flight school are not eligible for any federal financial aid.

• Financial aid expansion for all types of pilot training, alongside expanded opportunities for pilot training, are critical components of a pilot shortage solution.
Training-Based Compliance Pathways

• Airlines propose additional investment in pilots by offering comprehensive structured training programs designed to help pilots achieve their required certifications. FAA could approve these programs when they *enhance safety*.

• Programs would support pilots by bridging the existing gap between pilot foundational training and qualification, providing *additional* structured training before a pilot is released to line flying.

• Training programs would be robust – incorporating rigorous screening, testing, academics, checks, audits, operational experience and more. Use of high-quality simulators will ensure pilots are trained for scenarios they don’t usually encounter when building flight hours, like an engine fire, passenger medical emergency or icing on the wing.
Requested of Policymakers: Pilot Workforce Actions

• Improve financial support for pilot training: expand federal student loan coverage, establish loan forgiveness programs, provide for student loan deferment while students complete qualification requirements, consider accreditation reforms to allow flight schools to receive federal financial aid, protect and streamline GI bill funding, and create tax incentives for employer-based programs.

• Encourage FAA to approve structured training pathways offered by certificated air carriers for credit toward pilot qualification when such programs enhance safety.

• Encourage FAA to evaluate new R-ATP pathways and provide credit for scenario-based, modern training methods, such as high-fidelity flight simulators.
For more information or to join the Pilot Career Access Coalition please contact media@raa.org.