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Regional Airline Association

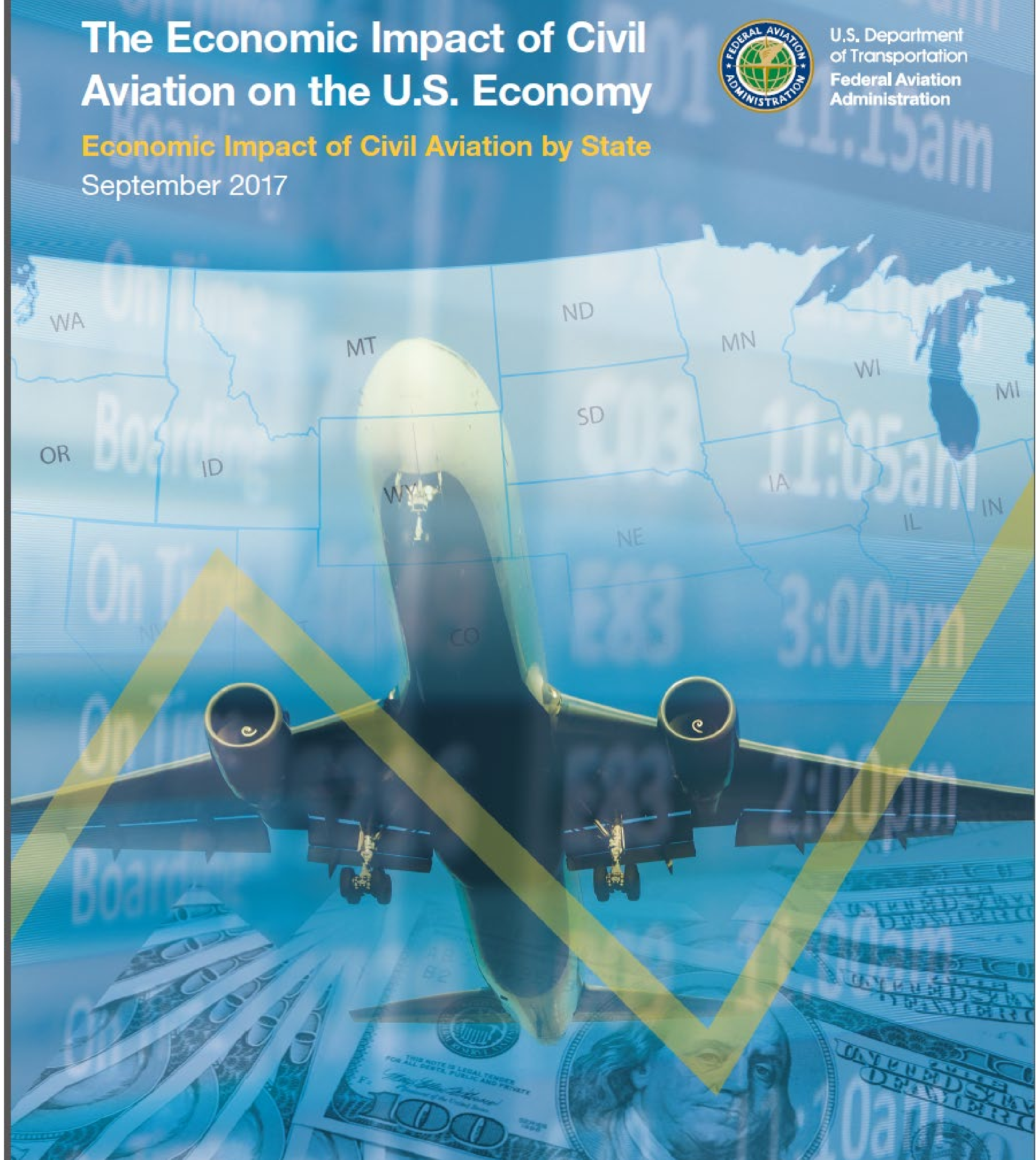
Pilot Supply & Air Service Update

May 2019

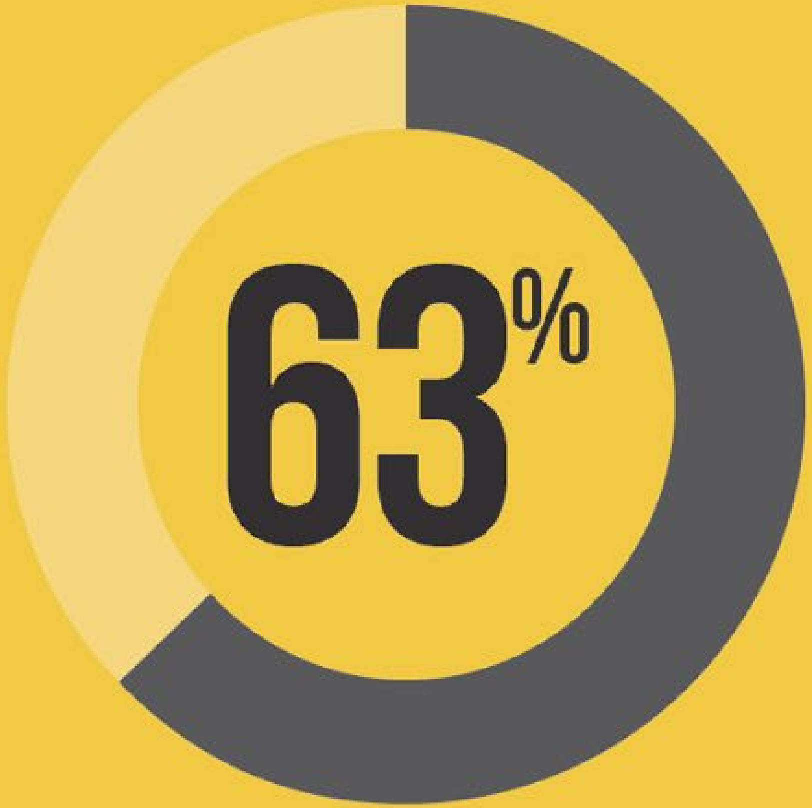
Economic Impact of Civil Aviation

- 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**.

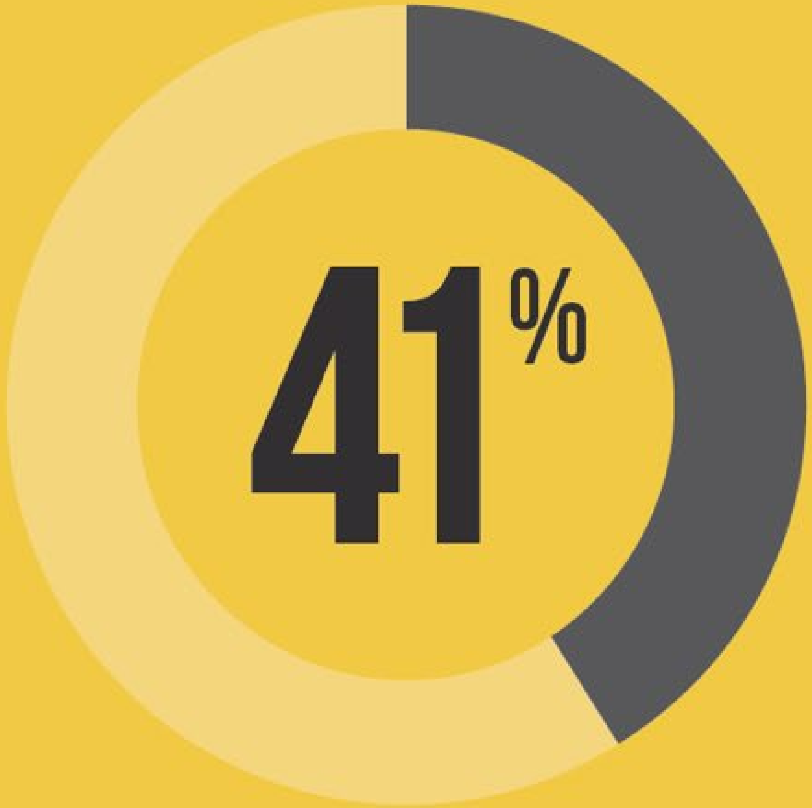
Source: U.S. DOT FAA *"The Economic Impact of Civil Aviation on the U.S. Economy"* September 2017



Regional Airlines are Critical Infrastructure



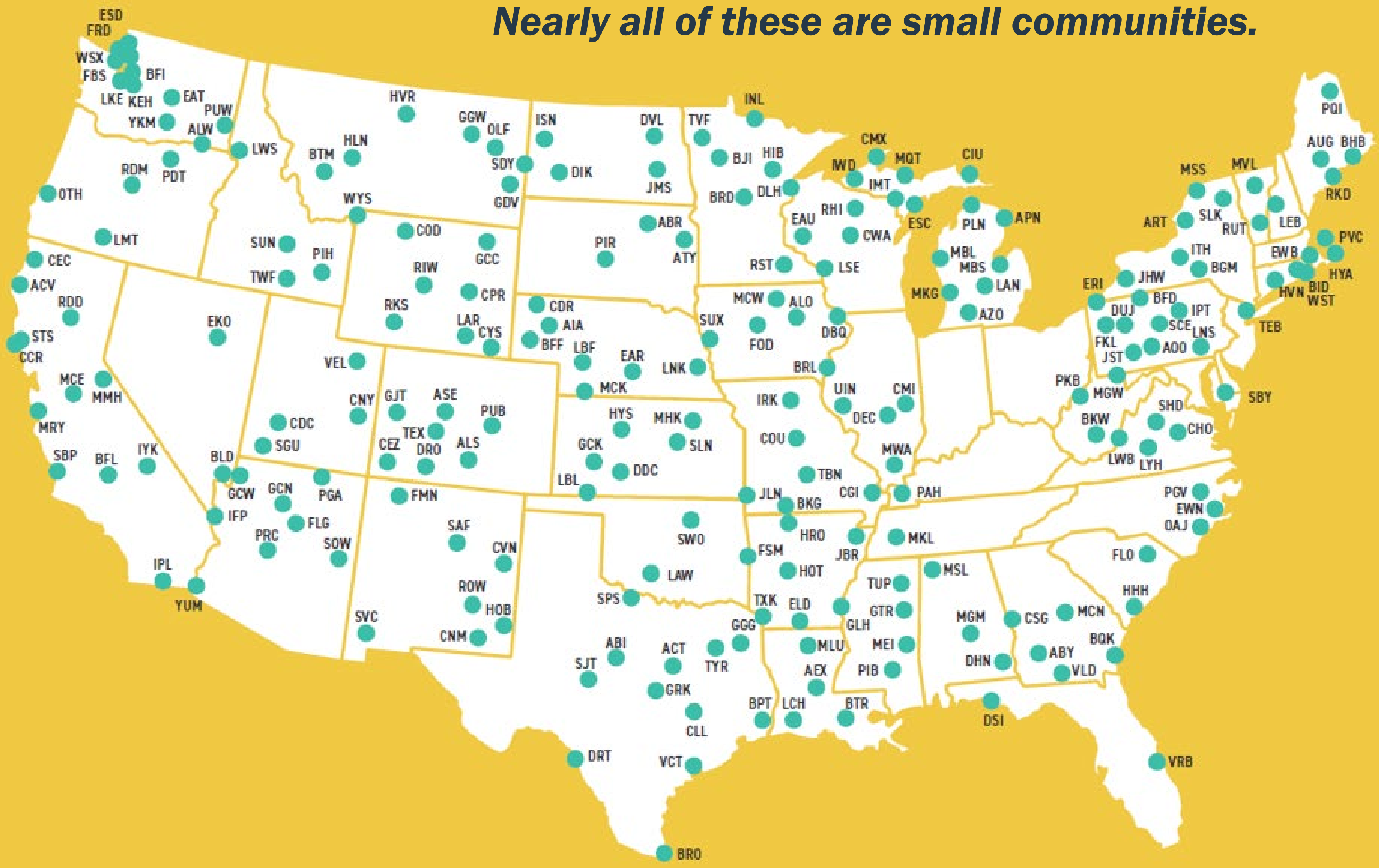
63% of U.S. airports with scheduled passenger air service get their **ONLY** source of air service from regional airlines.



41% of scheduled passenger departures were operated by U.S. regional airlines.

Regional Airlines Provide ONLY Source of Air Service at 217 Airports in Lower 48 States

Nearly all of these are small communities.



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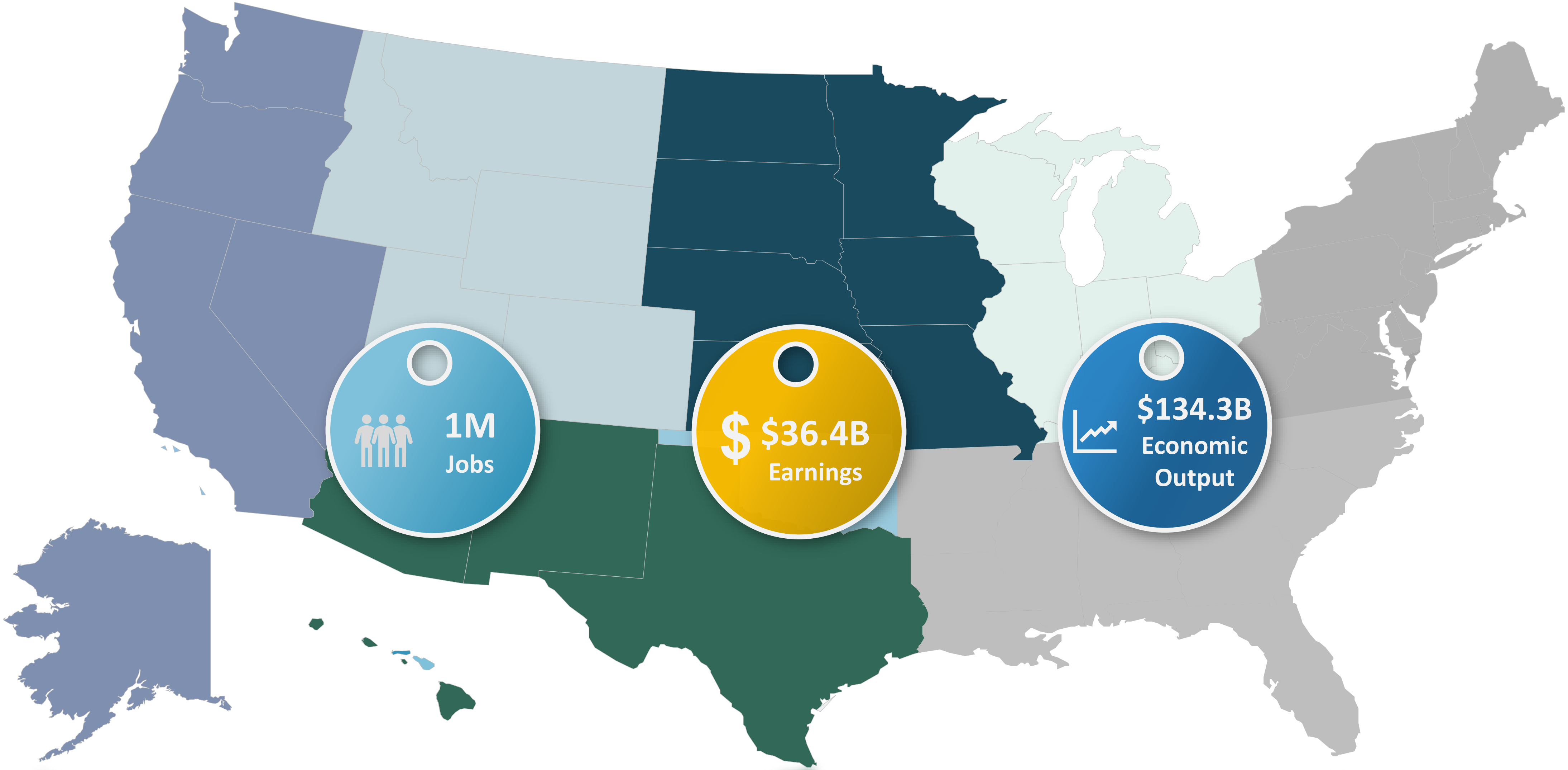
Civil Impact of Air Service to Regional Only Markets: $134B in US Economic Impact with over 1M Jobs in 2017



*Analysis did not account for economic development impacts, which would have likely doubled the measured impact.

Problem:

The United States is Facing a Severe Pilot Shortage

Pilot Demand is Growing as New Certificates are Shrinking

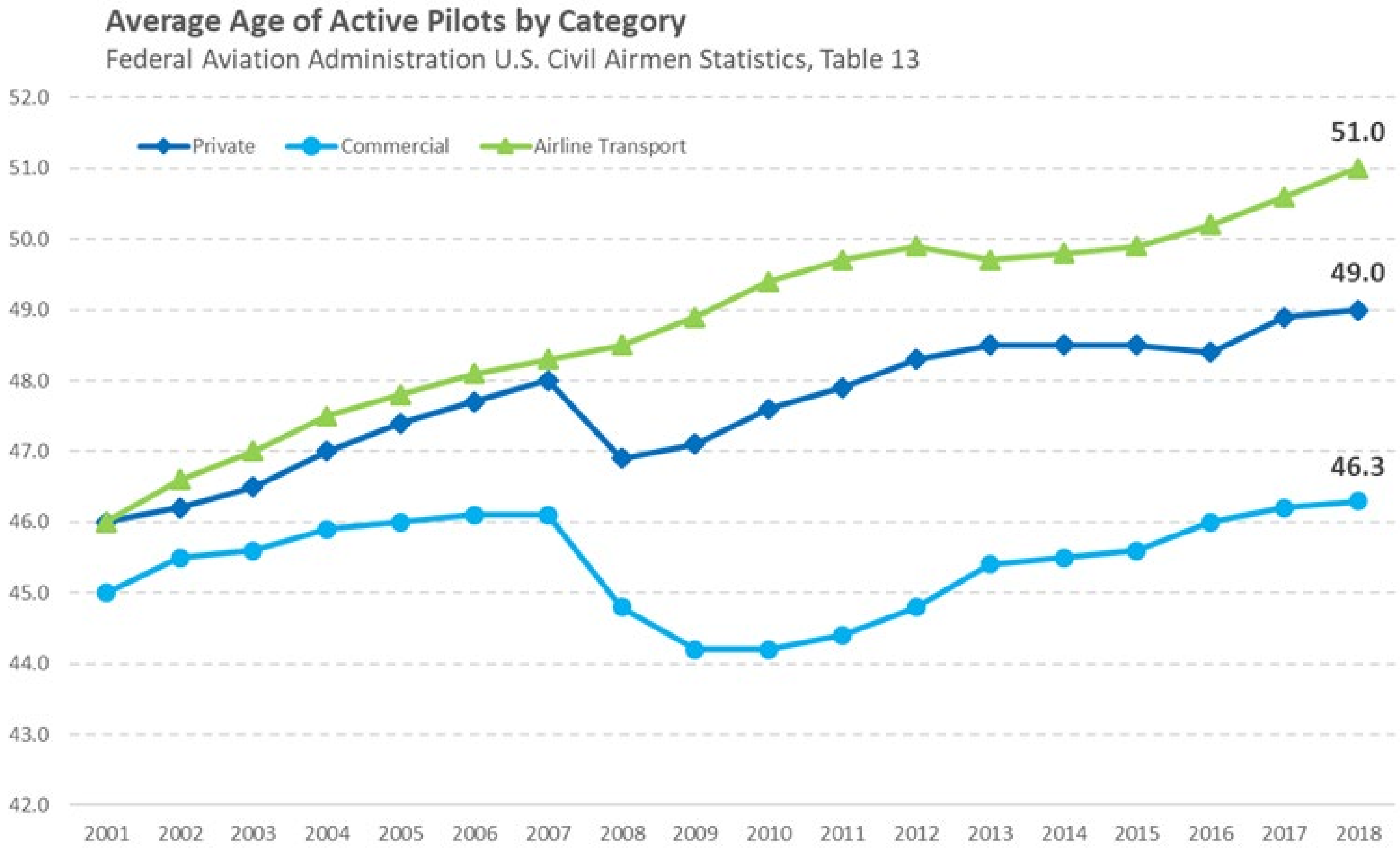
- **CAE 2018 Airline and Business Jet Pilot Demand Outlook** indicates 110,000 new airline pilots needed in the Americas and 270,000 new airline pilots needed globally by 2028.

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

- Nearly half of today's pilots face mandatory retirement within the next 15 years.

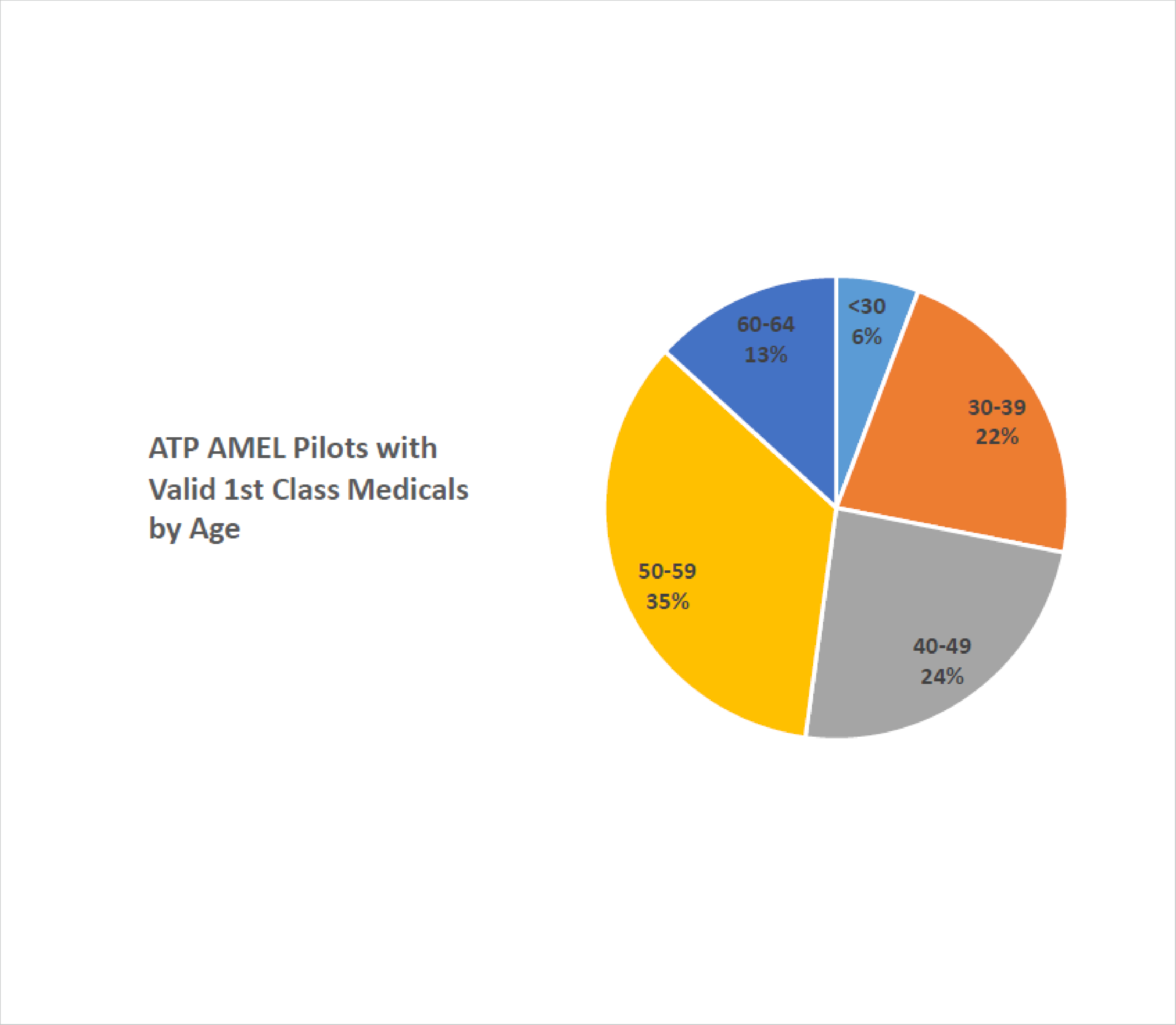
- "The number of private pilots holding active airmen certificates has decreased by 27 percent in the last ten years. The number of commercial pilots in the same period has decreased by 21 percent." *Dan Elwell, FAA Acting Administrator, September 13, 2018*

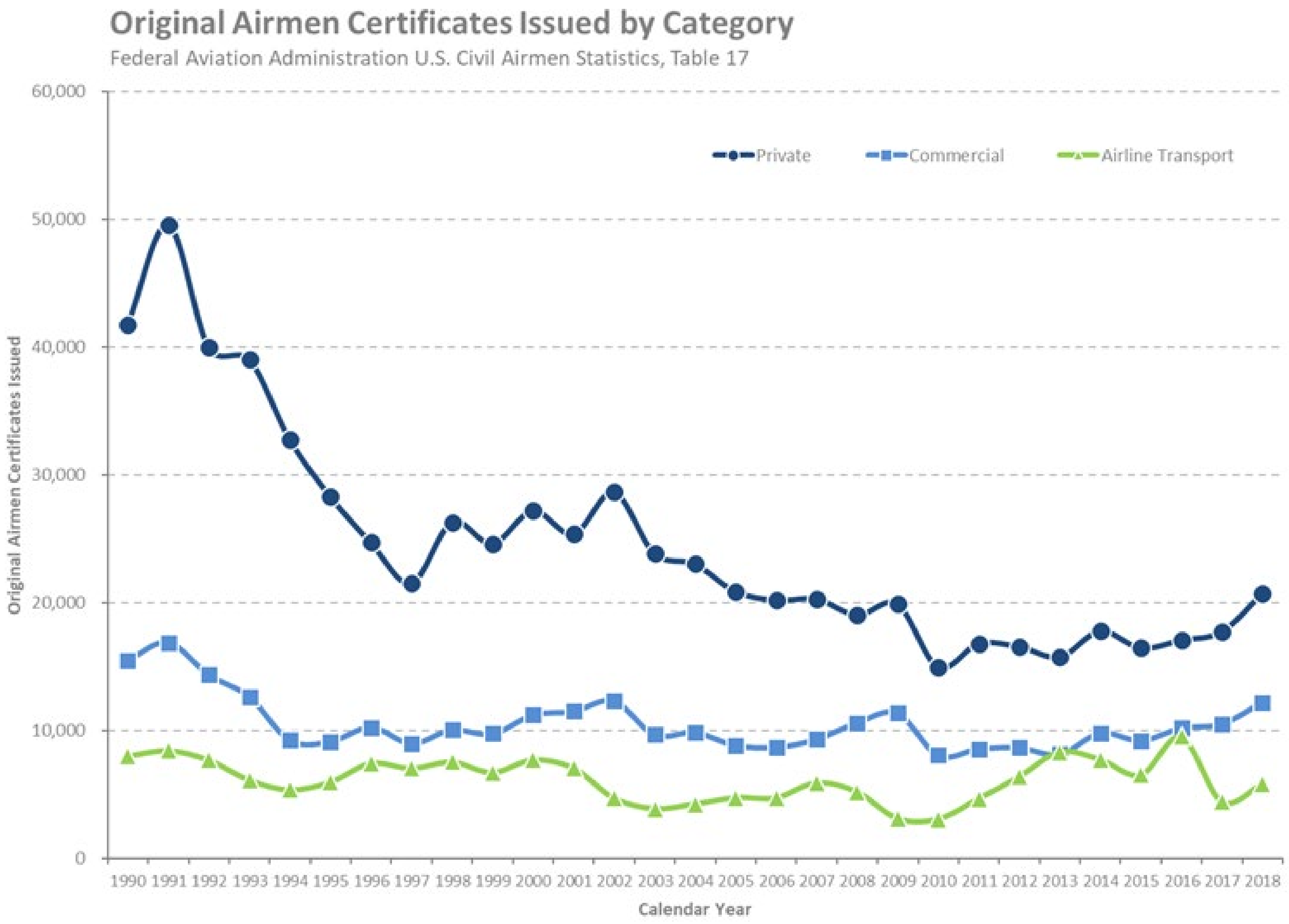
Aging Pilots in all Categories



Pilot Retirements

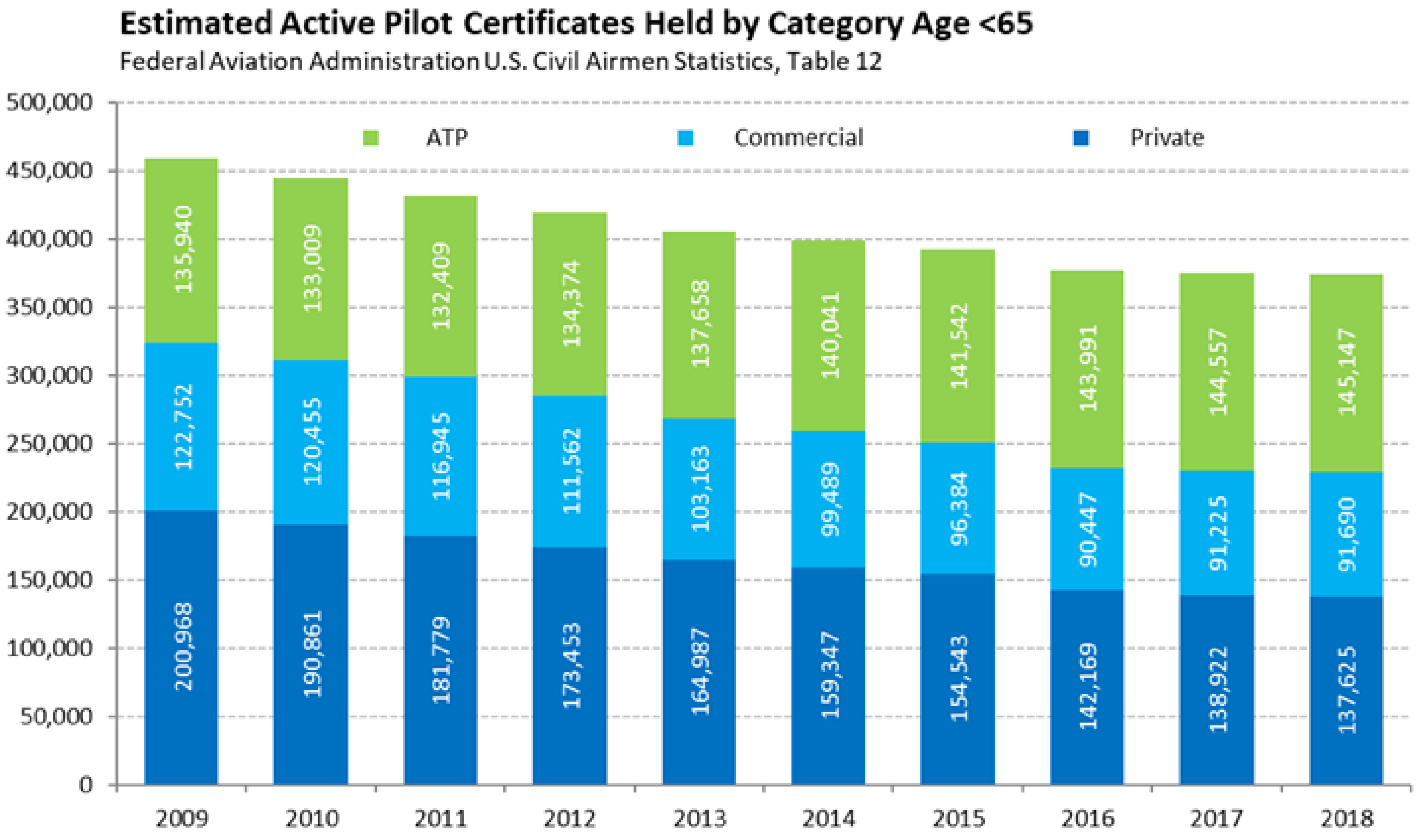
- 48% of ATP AMEL holders with valid 1st class medicals are 50+ years old (50,363)
- 13% of ATP AMEL holders with valid 1st class medicals are 60+ years old (13,900) reaching mandatory retirement within 5 years





FAA Original Airmen Certificates are Shrinking

Shrinking Hirable Pilot Pool

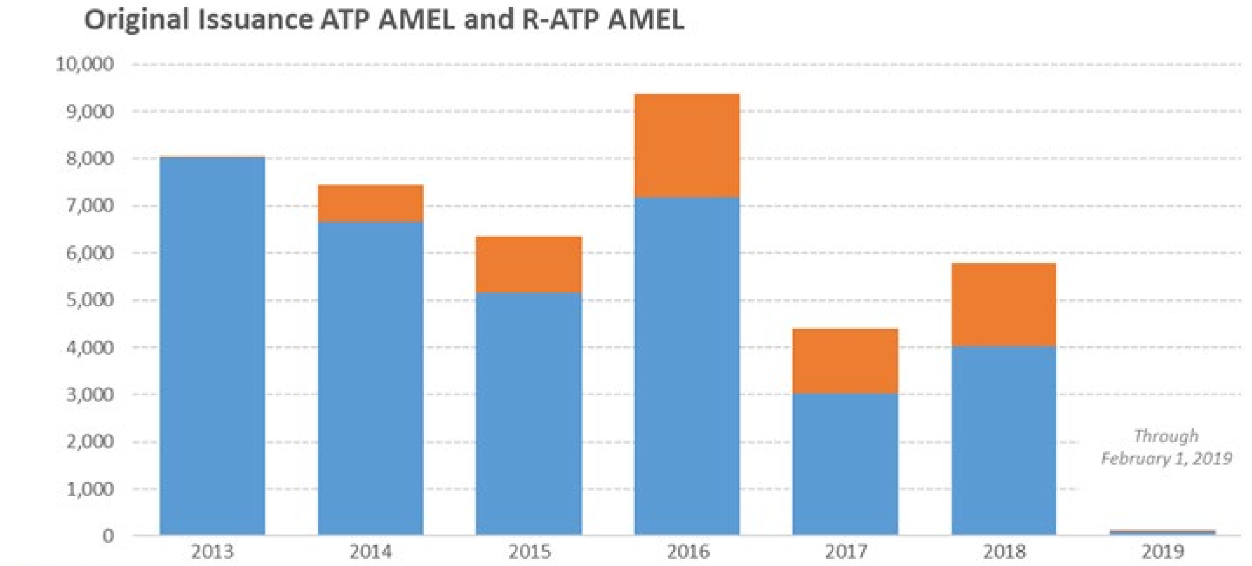


-18.5% since 2009 -1,014 per month -34 per day

New Pilots

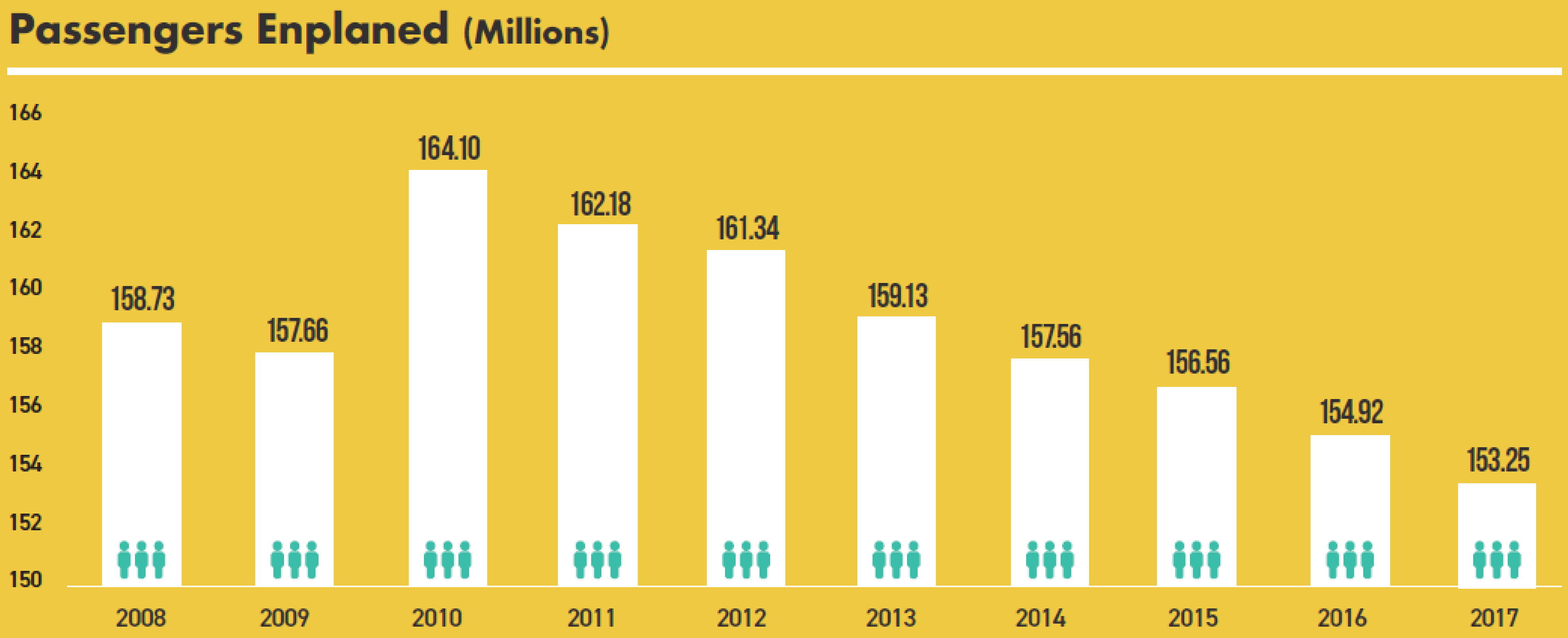
5,788 total original issuance ATP AMEL and R-ATP AMEL certificates in 2018 (13% lower than five-year average):

- 1,762 new commercial airline pilots came from structured training backgrounds
- 4,026 pilots following hours-based pathways



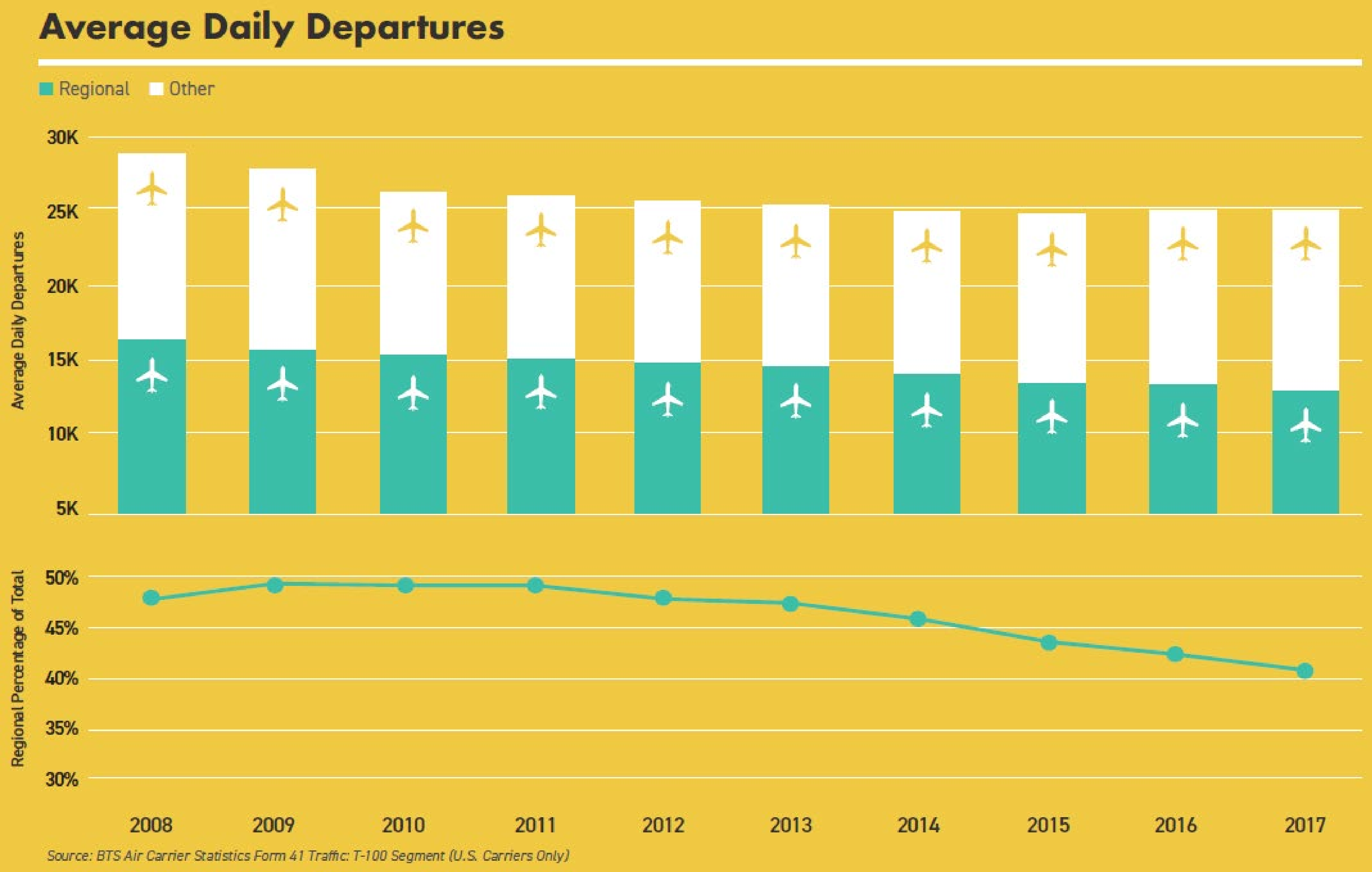
	2013	2014	2015	2016	2017	2018	2019
R-ATP AMEL	37	787	1,203	2,190	1,363	1,762	34
ATP-AMEL	8,029	6,658	5,146	7,197	3,027	4,026	93

Regional Airline Industry Contracted Under Pilot Shortage



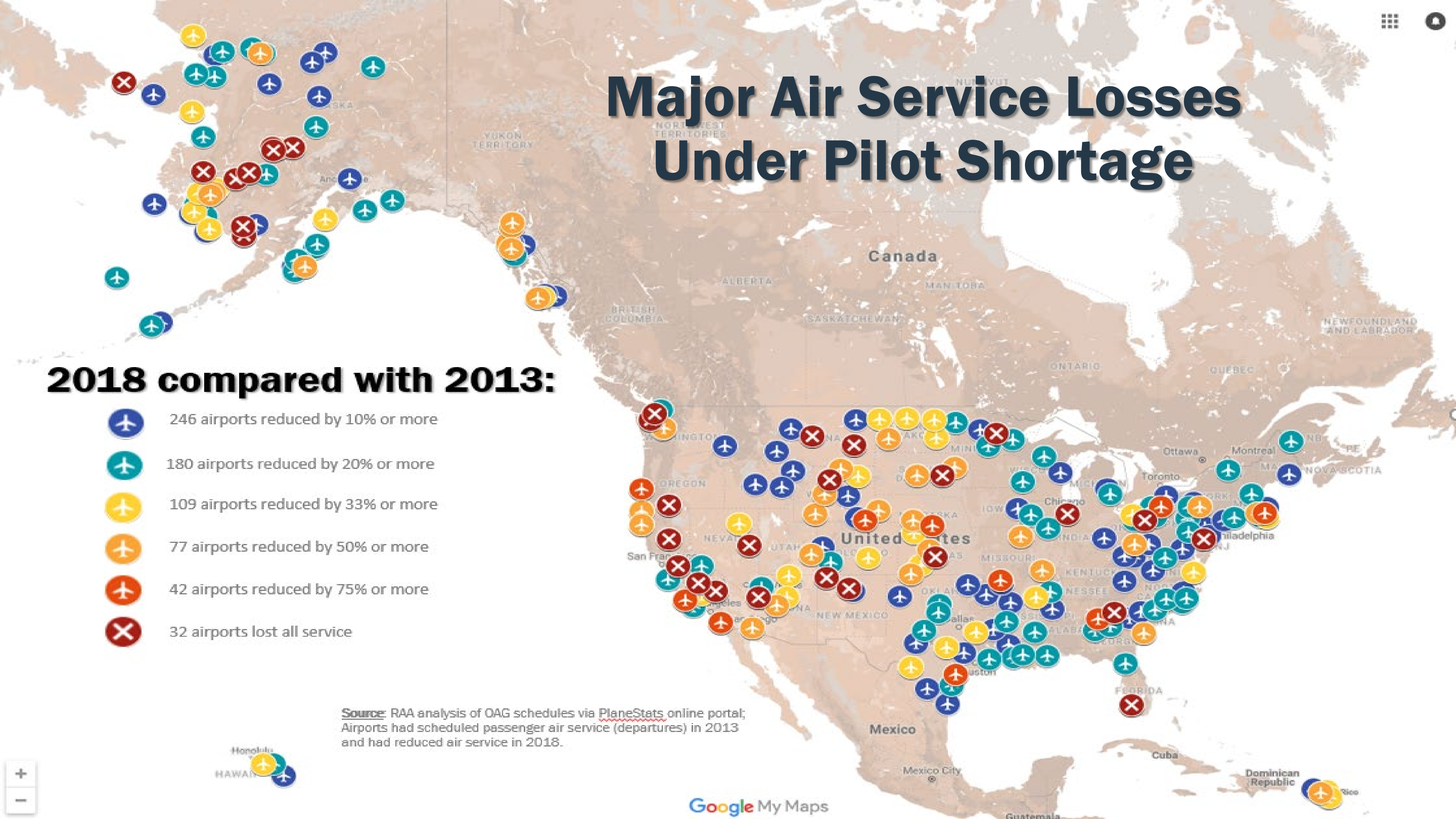
This took place even though the economy was expanding.

Reduced Departures Under Pilot Shortage



Communities typically gain air service during economic expansions.

Major Air Service Losses Under Pilot Shortage

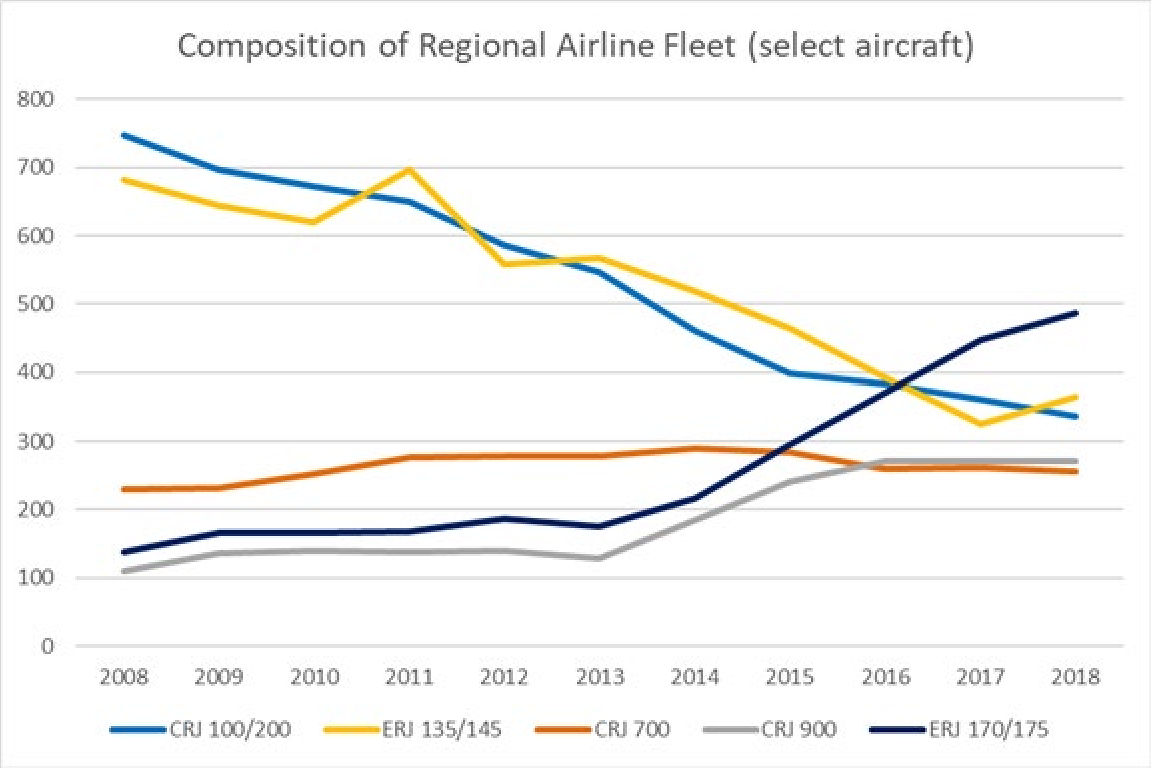


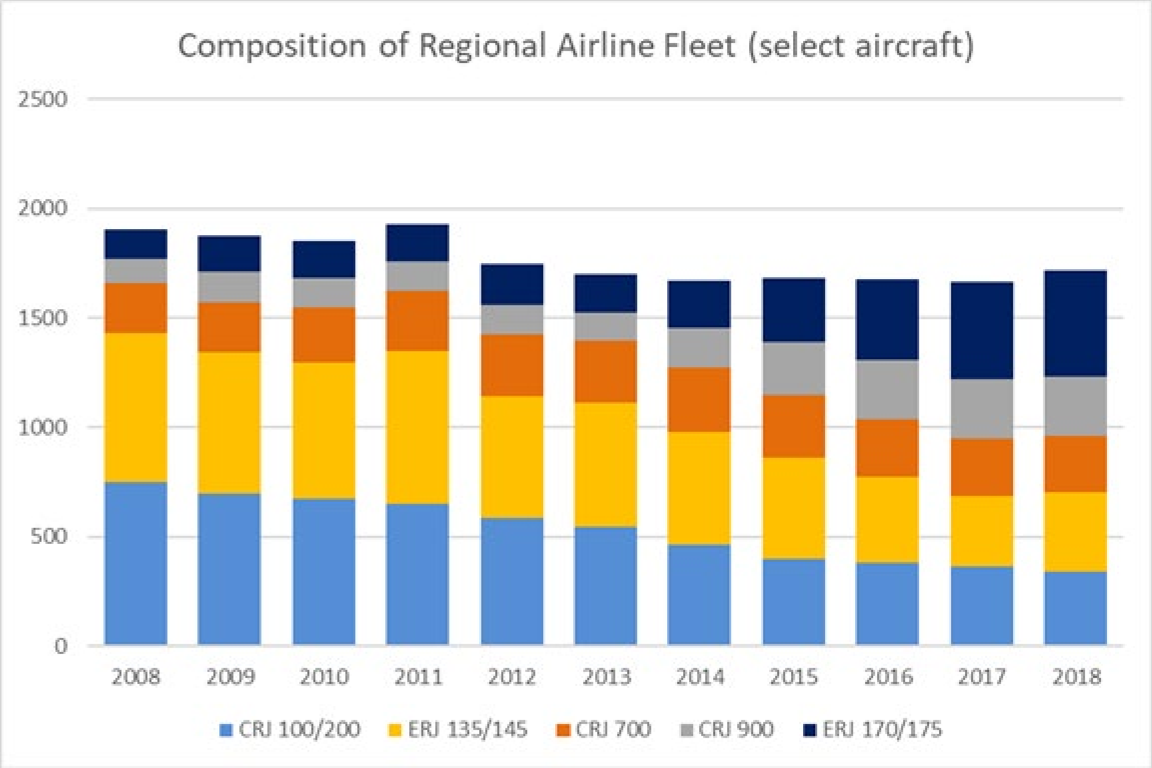
2018 compared with 2013:

- 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

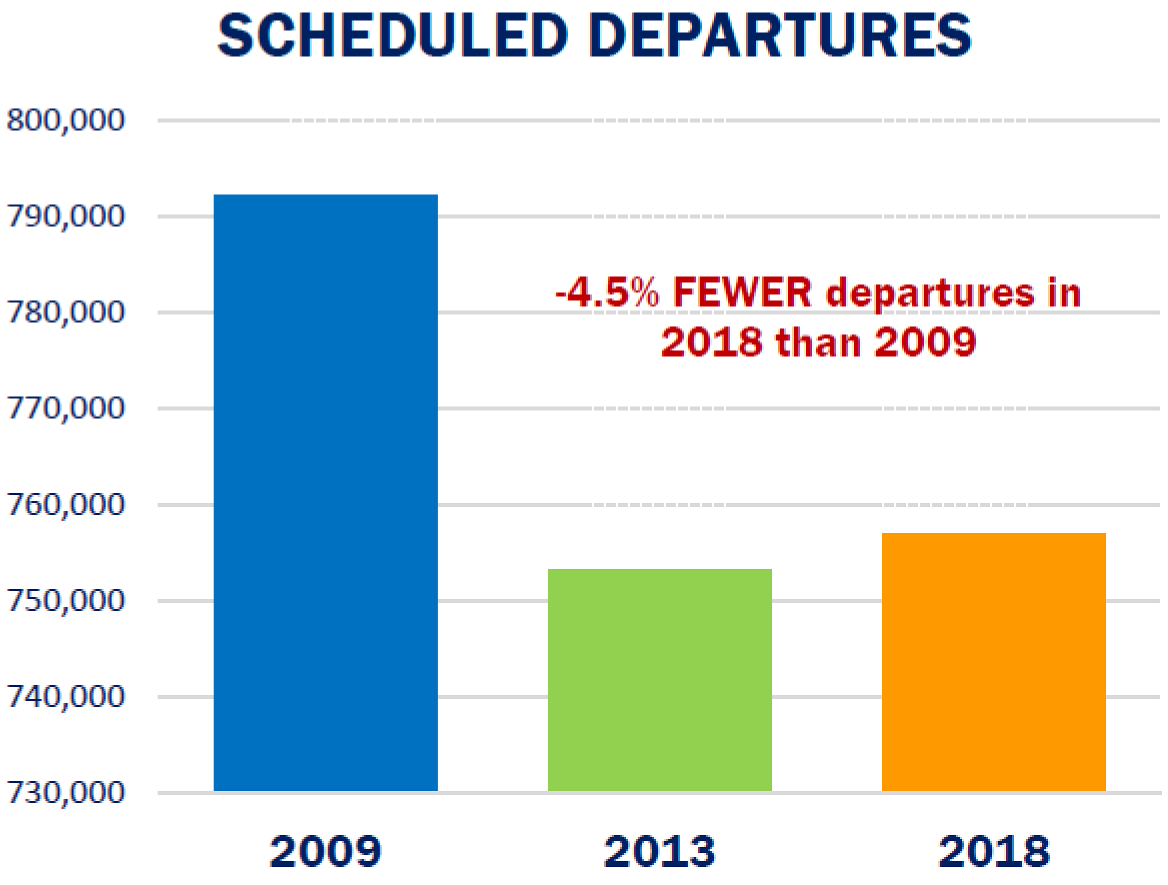
Source: RAA analysis of OAG schedules via PlaneStats online portal; Airports had scheduled passenger air service (departures) in 2013 and had reduced air service in 2018.

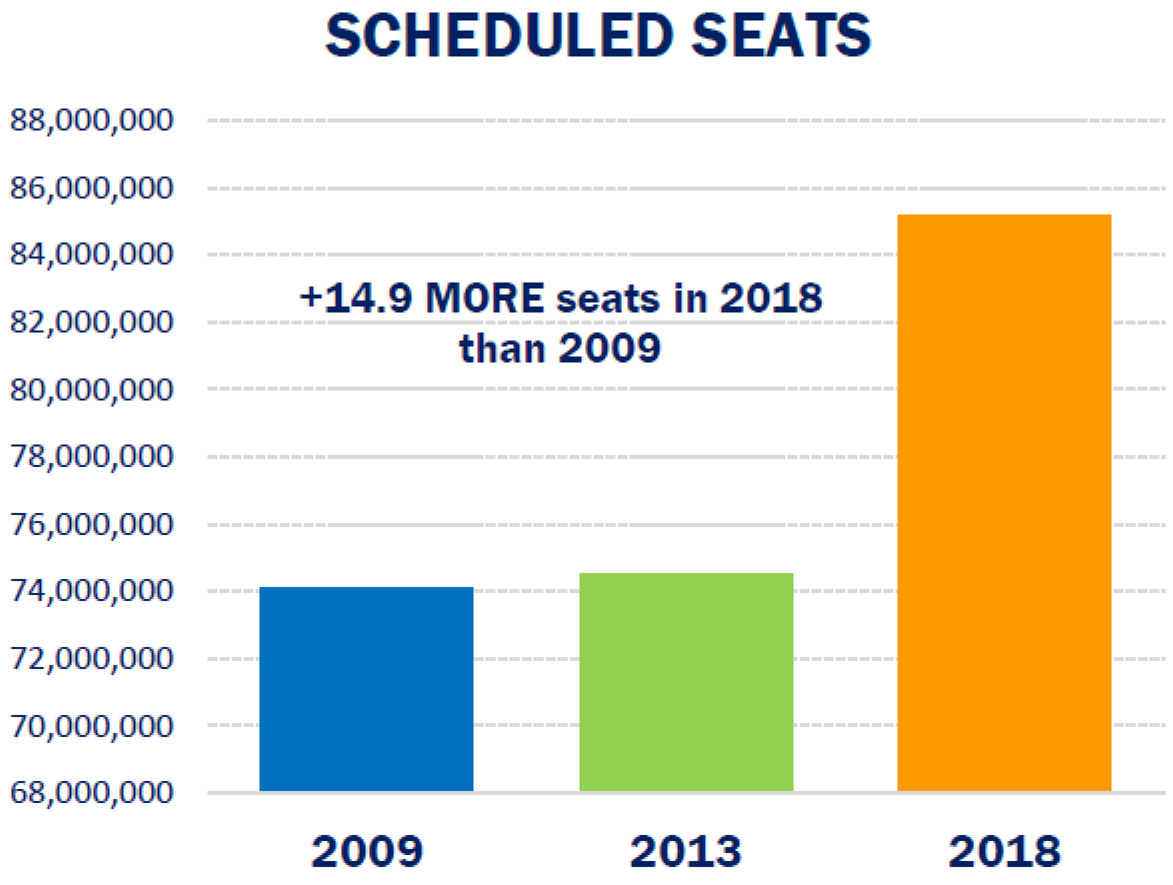
Some Airlines Used Larger Aircraft to Reduce Pilots Needed; Not all Communities Can Support Larger Aircraft





Departures Decreased even as Seats Increased





July Schedules (U.S. Carriers • Domestic operations)

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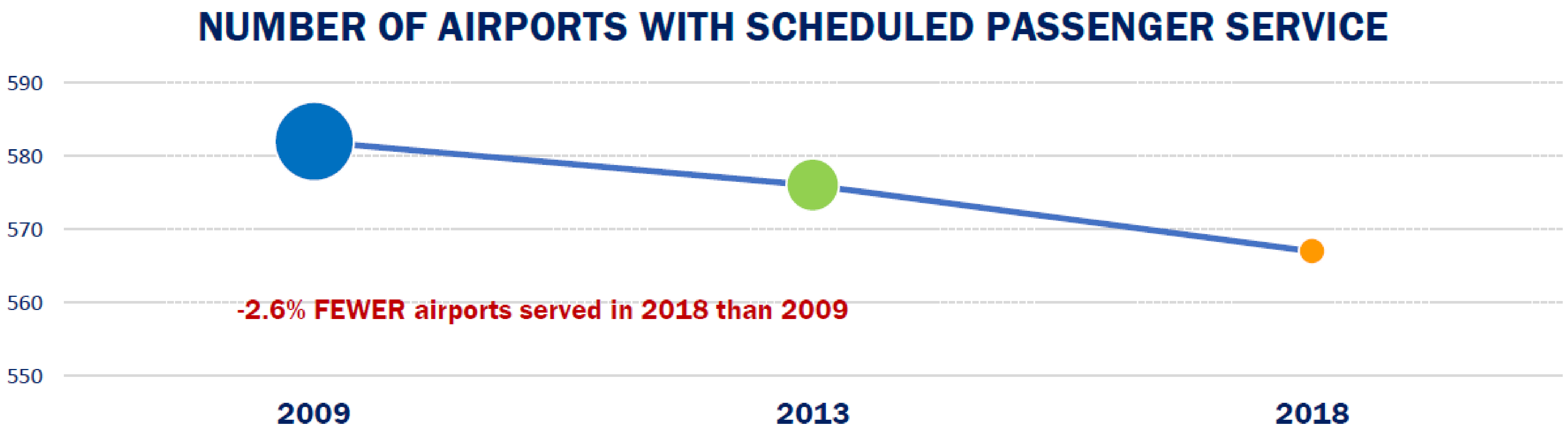
Departures Equal Connectivity

2018 vs. 2009

	Departures	Routes
Large	0.7%	7.0%
Medium	-4.7%	1.3%
Small	-13.9%	-10.3%
Nonhub	-15.1%	-2.8%
Nonprimary	-19.3%	-24.2%

July Schedules (U.S. Carriers • Domestic operations)

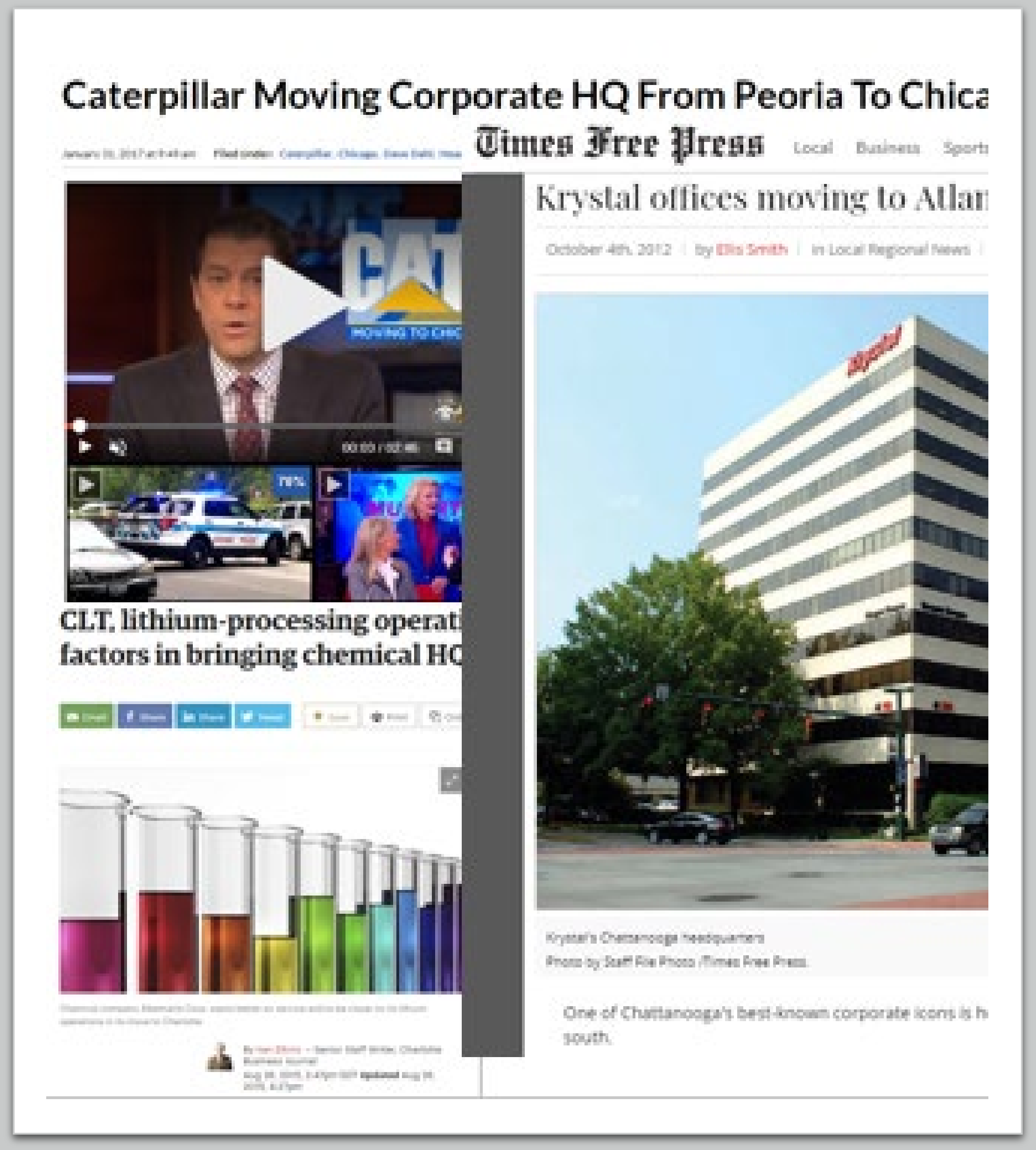
Some U.S. Airports lost all Air Service as Pilot Shortage Worsened



July 2018 Schedules (U.S. Carriers • Domestic operations)

Businesses Follow 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”
- “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

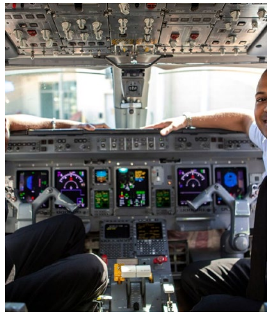


Solutions:

Working Together to Foster Safe and Effective Solutions

Market-based Solutions: 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.
- Significant salary investments, starting year one.
- Leadership development programs for women and people of color to create new role models.



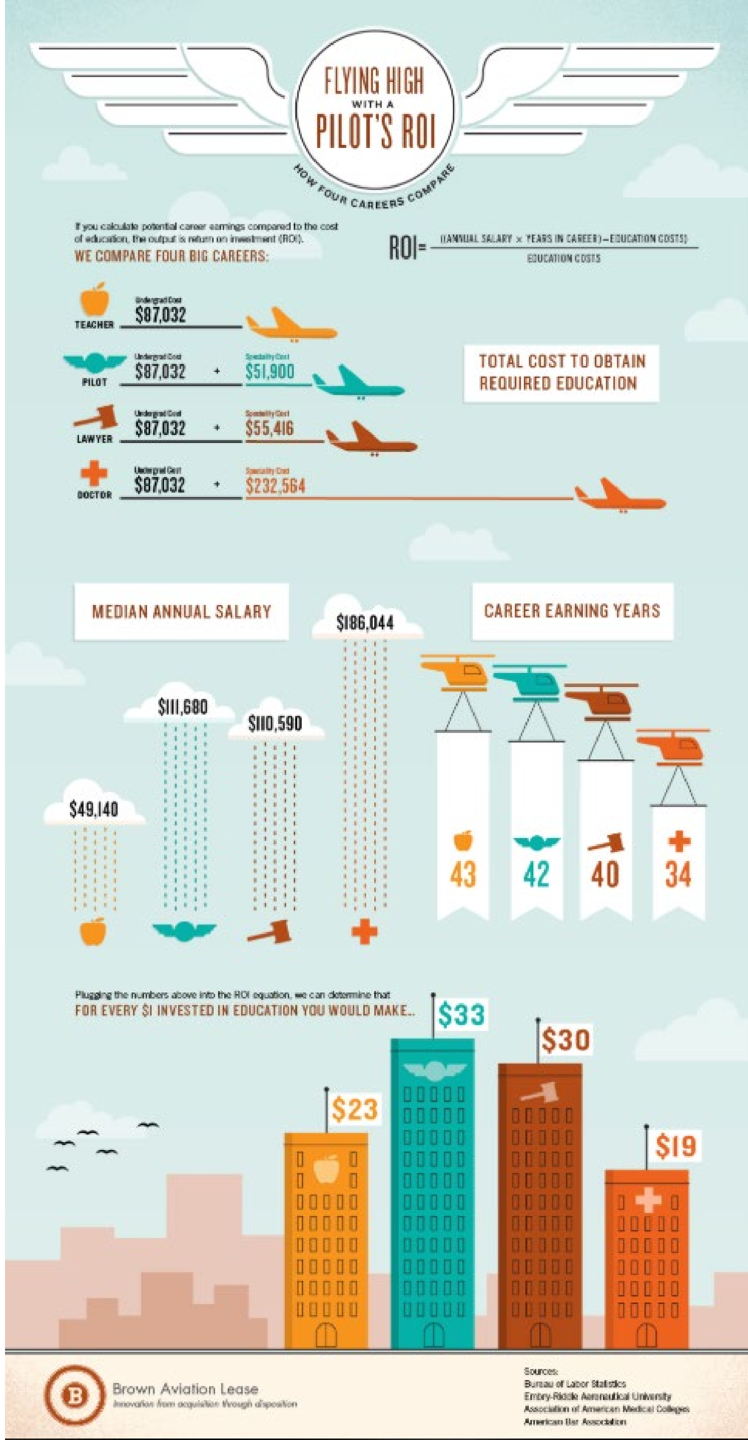
Pilot Compensation is High and Climbing

RAA MEMBER AIRLINES PAY **FIRST YEAR, FIRST OFFICERS** AN AVERAGE TOTAL COMPENSATION OF **$61,602**.

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)

Pilots enjoy higher ROI on their training dollar than other prestige roles like doctors and lawyers; however, programs to enable pilots with limited means to access training are inadequate.



Career Path Access is Key

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.

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Policy Solutions:
Financial Aid for Pilot Training & Education

- The price tag of a four-year flight training degree can exceed **$200,000**, 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 have lower costs, but are not eligible for any federal financial aid at all.
- Financial aid expansion for all types of pilot training, alongside expanded opportunities for pilot training, are critical components of a pilot shortage solution.

Pilot Source Study 2018

- 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

Shared Solutions:
Structured Training Qualification Pathways

- Federal regulations allow for two types of pathways to pilot qualification. One is primarily hours-based and results in 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.
- In 2018, just 1,762 new commercial airline pilots came from aviation degree program backgrounds, compared with 4,026 pilots following non-collegiate vocational pathways.

Military and Academic Institutions are currently approved as R-ATP Pathways

Shared Solutions:
Additional Structured Training Pathways:

- Airlines are building foundational structured training academies to help pilots achieve their dream of flight.
- These programs provide foundational training or bridge the gap between foundational training and pilot qualification. They provide additional training and support for pilots and improve post-hire training outcomes. FAA may allow these pathways to provide credit toward pilot qualification when they enhance safety.
- These programs incorporate rigorous screening, testing, academics, checks, audits and operational experience. They utilize high-fidelity flight simulators to ensure pilots are trained for critical scenarios they don’t typically encounter while building flight hours, like an engine fire, severe weather, passenger medical emergencies or icing on the wing.

Requested of Congress:

- 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 or other adjustments allowing flight schools to receive federal financial aid as other vocational training programs do.
- Create tax incentives for employer-based programs.
- Protect and streamline GI bill funding; ensure veterans can use GI benefits for flight training.
- Approve structured training pathways offered by certificated air carriers for credit toward pilot qualification when those programs enhance safety.
- Provide credit for scenario-based, modern training methods, such as high-fidelity flight simulators.

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For more information or to join the Pilot Career Access Coalition please contact media@raa.org.