



Pilot Workforce and Training Update

February 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

The Economic Impact of Civil Aviation on the U.S. Economy



U.S. Department of Transportation
Federal Aviation Administration

Economic Impact of Civil Aviation by State

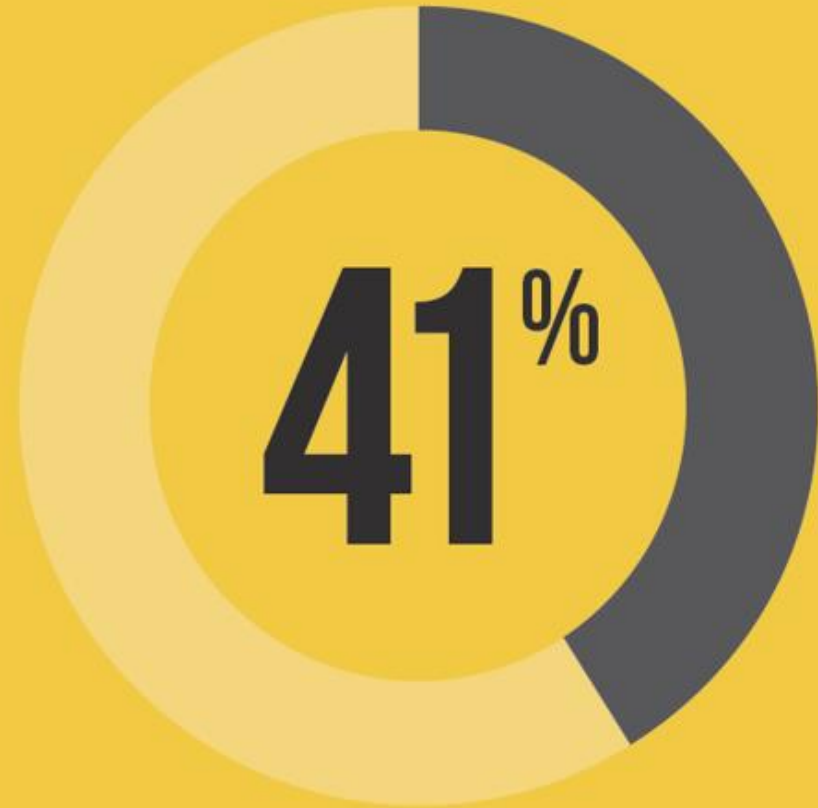
September 2017



Regional Airlines are Critical Infrastructure

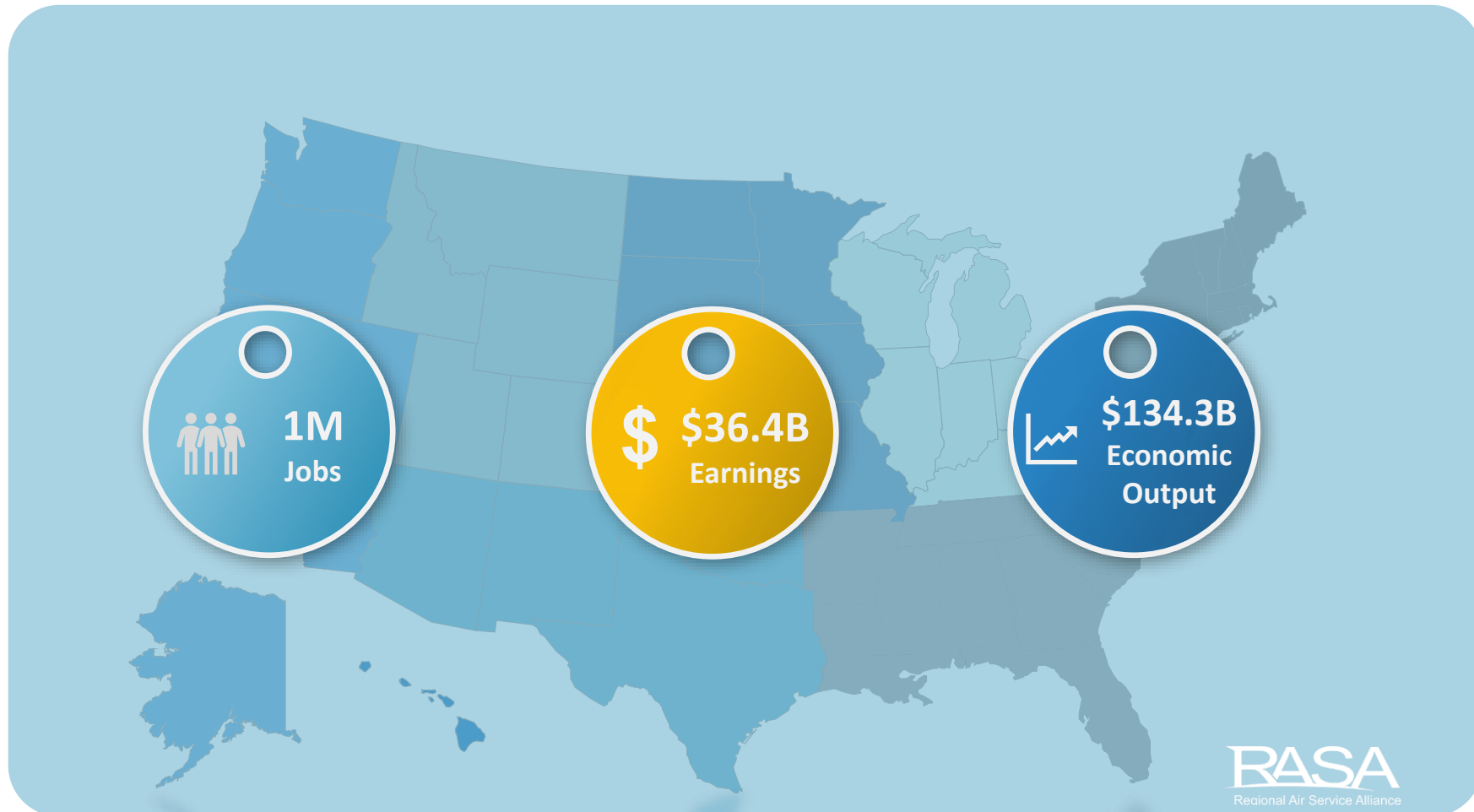


63% of U.S. airports with scheduled passenger air service get their **ONLY** source of air service from regional airlines.



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

Small Community Air Service drove \$134B in US Economic Impact; Supported over 1M Jobs in 2017



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

Air Service is Vital for Small Communities



**Link to the
global
economy**



**Creates direct
and indirect
jobs**



**Connects
local
businesses**



**Provides
access to
premium
health care**



**Brings visitors
and supports
tourism**

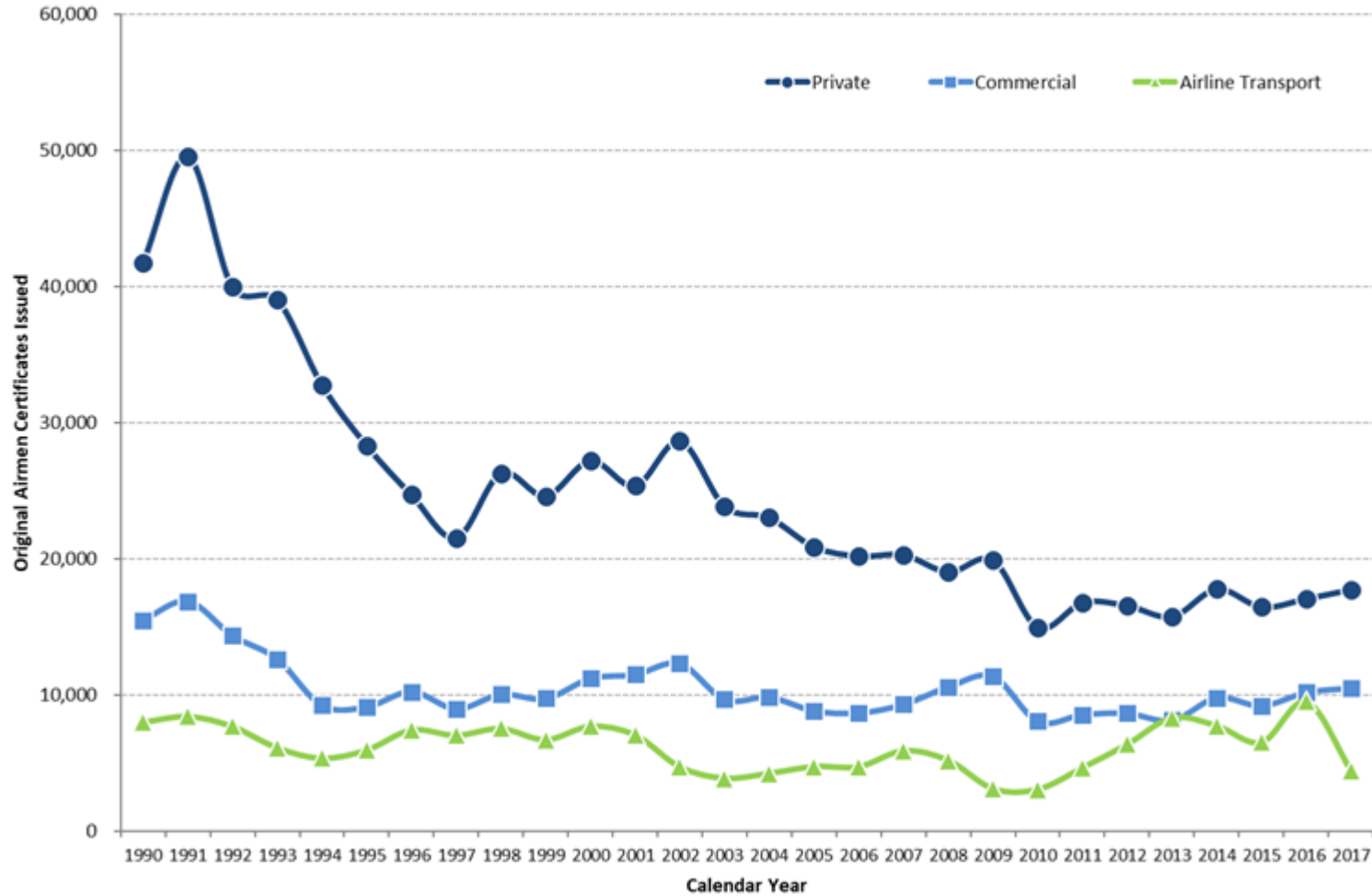


A Growing Pilot Shortage Threatens Air Service

- **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.
- “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*

Original Airmen Certificates Issued by Category

Federal Aviation Administration U.S. Civil Airmen Statistics, Table 17

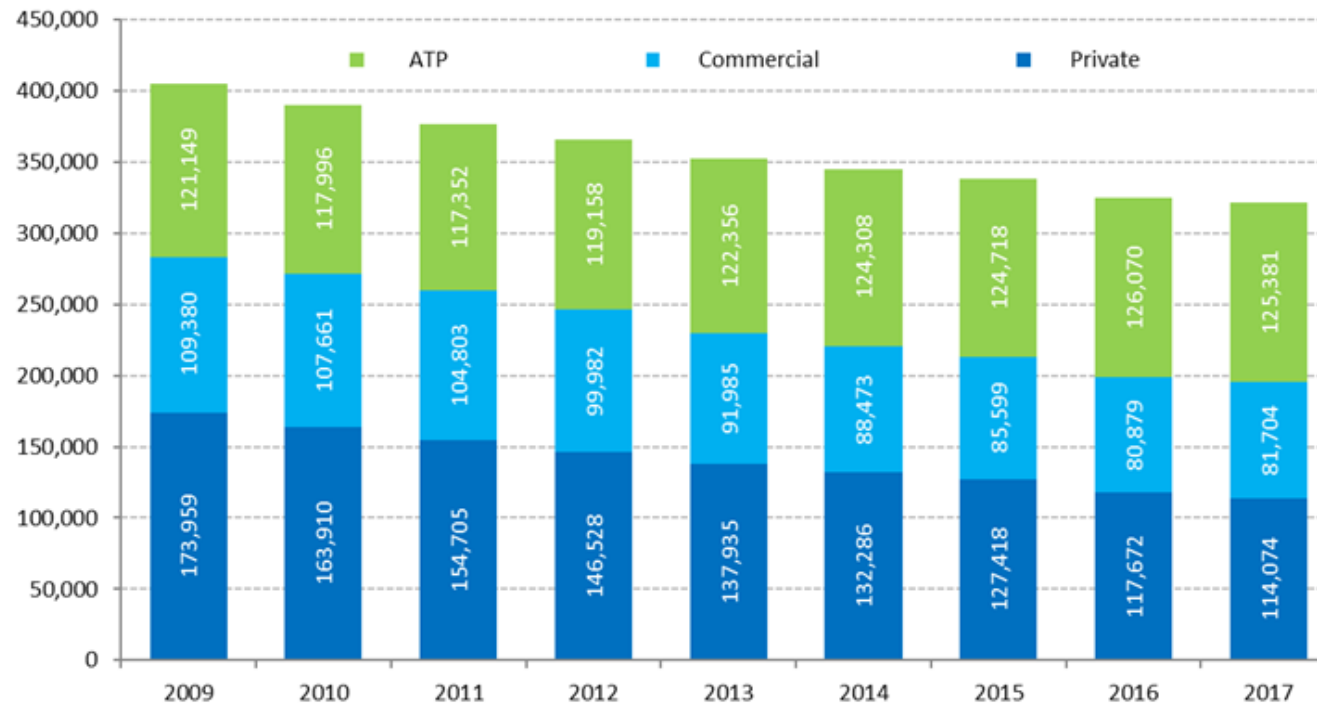


Declining Original Airmen Certificates

Shrinking Hirable Pilot Pool

Estimated Active Pilot Certificates Held by Category Ages 20-59

Federal Aviation Administration U.S. Civil Airmen Statistics, Table 12



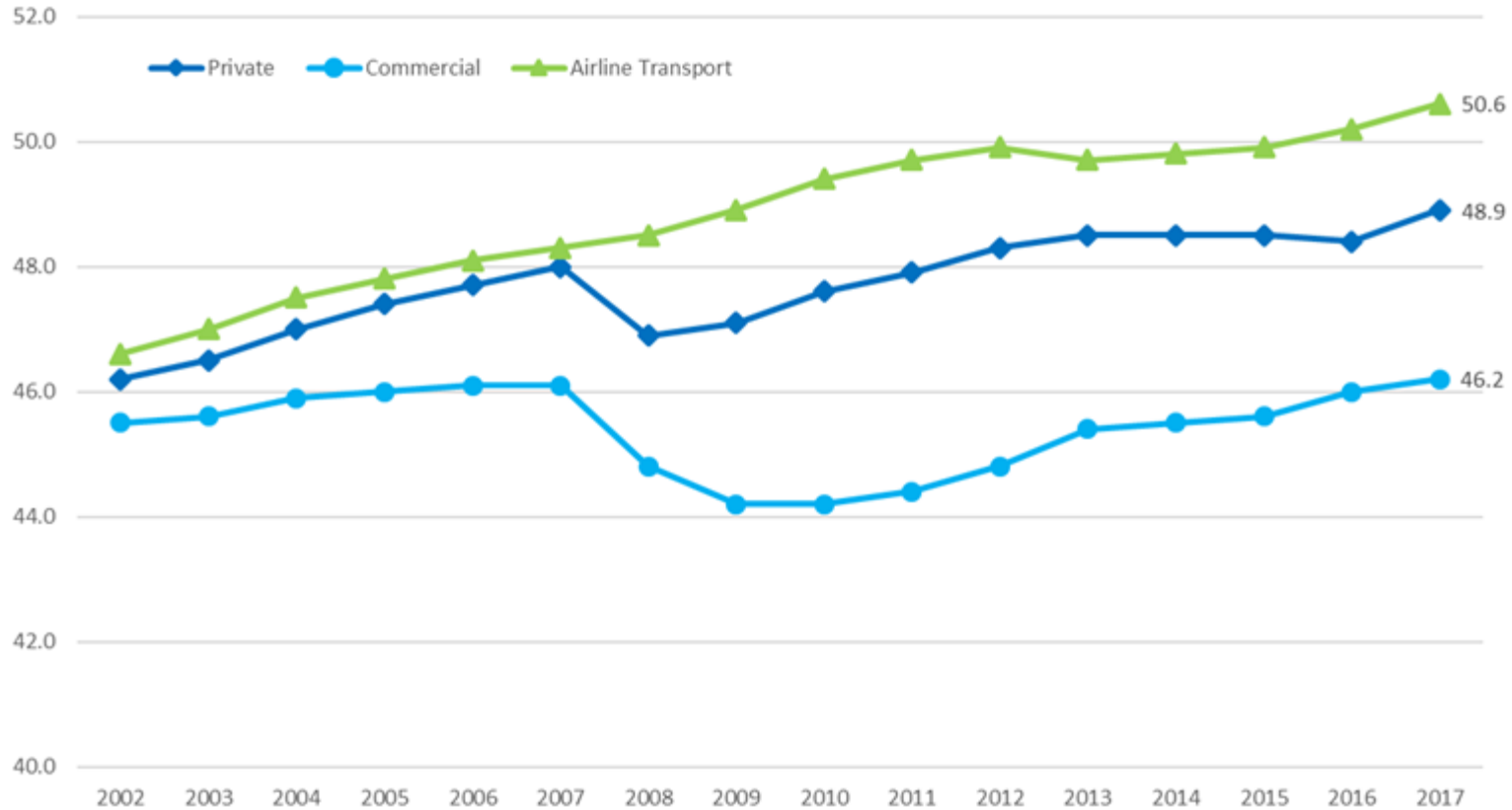
-20.6% since 2009

-992 per month

-33 per day

Average Age of Active Pilots by Category

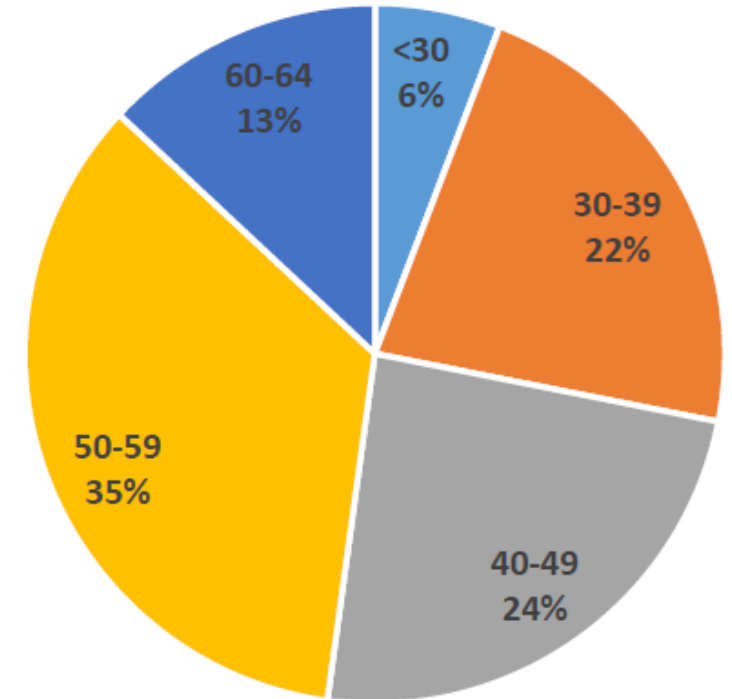
Federal Aviation Administration U.S. Civil Airmen Statistics, Table 13



Aging Pilots in all Categories

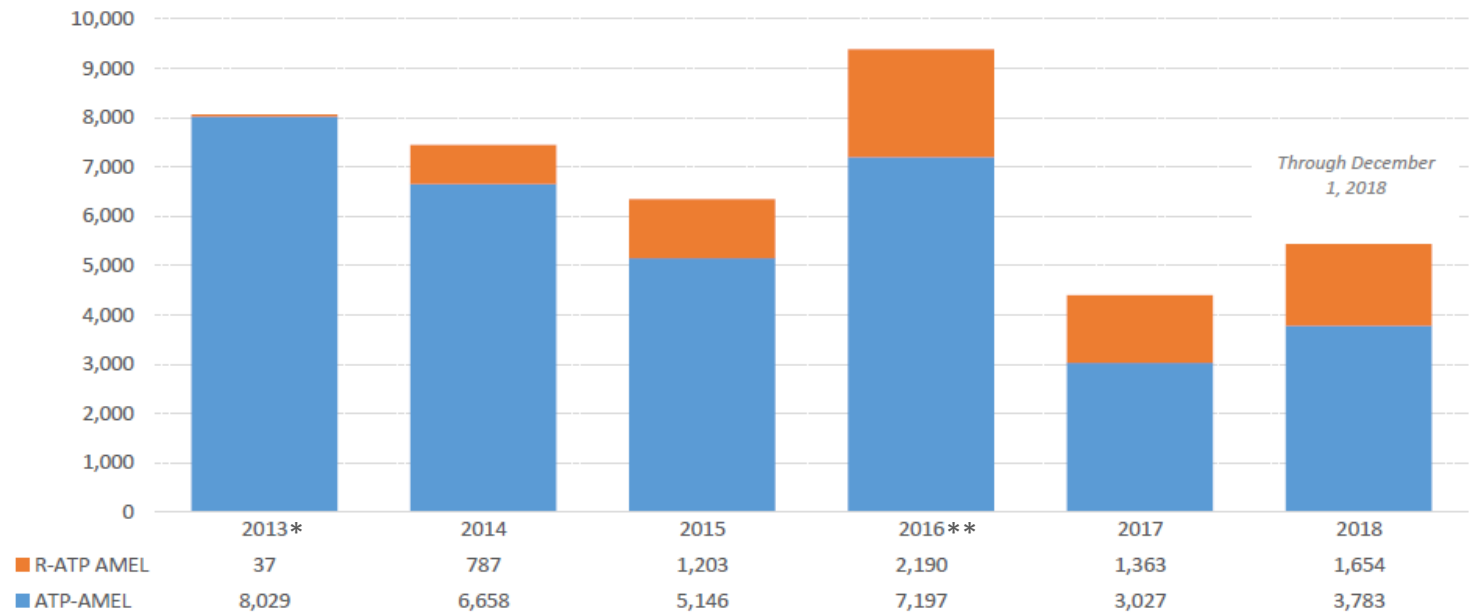
- **51,156 (48%) of today's qualified pilot workforce are 50 years or older and will reach mandatory retirement age within 15 years.**
- **13,946 of these pilots are 60-64 years old and will reach mandatory retirement age within 5 years.**

ATP AMEL Pilots with Valid 1st Class Medicals by Age



**5,811 new pilots
qualified in 2018 -- more
than 2017, but 39% less
than 2016.**

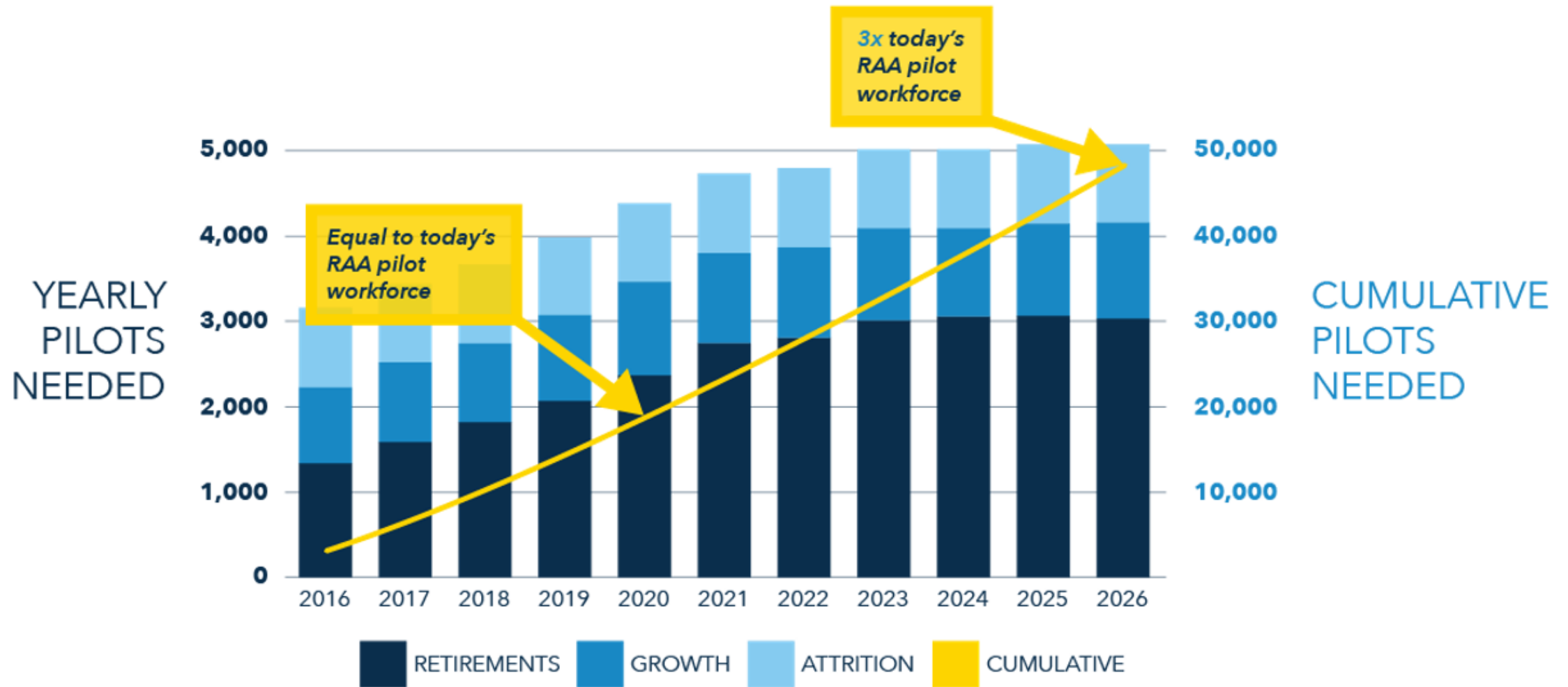
Original Issuance ATP AMEL and R-ATP AMEL



* In 2013, FAA newly required First Officers to hold ATP certificates, causing a spike in certificate issuances.

**In 2016, a regulatory window closed, after which point anyone seeking to gain an ATP must sit the ATP CTP course before taking the practical, contributing to a second spike in certificate issuances.

Major Airlines Expected to Hire Equivalent of Regional Airline Workforce between 2016 and 2020



Source: University of North Dakota Pilot Supply Forecast 2016

Great Lakes Airlines suspends operations

By Chrissy Suttles, Wyoming Tribune Eagle Mar 26, 2018 Comments

Already critical U.S. pilot shortage forecasted for continual decrease

By: Allissa Corak

Jul 18, 2018 1:36 PM EST

BOOK TWITTER

Airline pilot shortage could cost you

CBS NEWS

Regional airlines hurt by worsening pilot shortage: "It should be a national concern"

JUL 4, 2018 6:47 PM EDT CBS EVENING NEWS

National pilot shortage could impact local flights and eventually your wallet

By: Lorena Inclan, Action News Jax

Updated: Jul 5, 2018 - 6:42 PM

The pilot shortage isn't changing course. Here's how UPS

Regional Airline Industry is Contracting Under a Growing Pilot Shortage

IN-DEPTH TODAY

COCKPIT CRISIS?

INSIDE LOOK AT AMERICA'S LOOMING PILOT SHORTAGE



Pilots pose inside the cockpit of a Boeing 737 MAX 8 as Boeing Commercial Airplanes, Qatar Airways and Air Italy celebrate the delivery of their first 737 MAX in Everett, Washington on May 11, 2018. JASON REDMOND/AFP/GETTY IMAGES



Bailey Gorin is among 13 former interns that have already signed up for UPS... eventually landing a full-time position with UPS. Sam Upshaw Jr., Louisville Co



LOUISVILLE, Ky. – A shortage of airlines to rethink their approach... That includes UPS, which has cr

ebbed. In prepared remarks at the Aviation Workforce Symposium last week, FAA acting administrator Dan Elwell cited the Boeing pilot outlook, which predicts a need for 117,000 pilots in North America alone as traffic is projected to double by 2036.

"But at a time when we need to see interest in aviation careers going up, the data is trending in the opposite direction," he said, noting a 27 percent slide in the number of private pilots in the last 10 years. At the same time, the number of commercial pilots has slid by 21 percent. And, Elwell added, "The military—which used to be one of the best sources for new hires—isn't turning out as many new pilots as it used to."

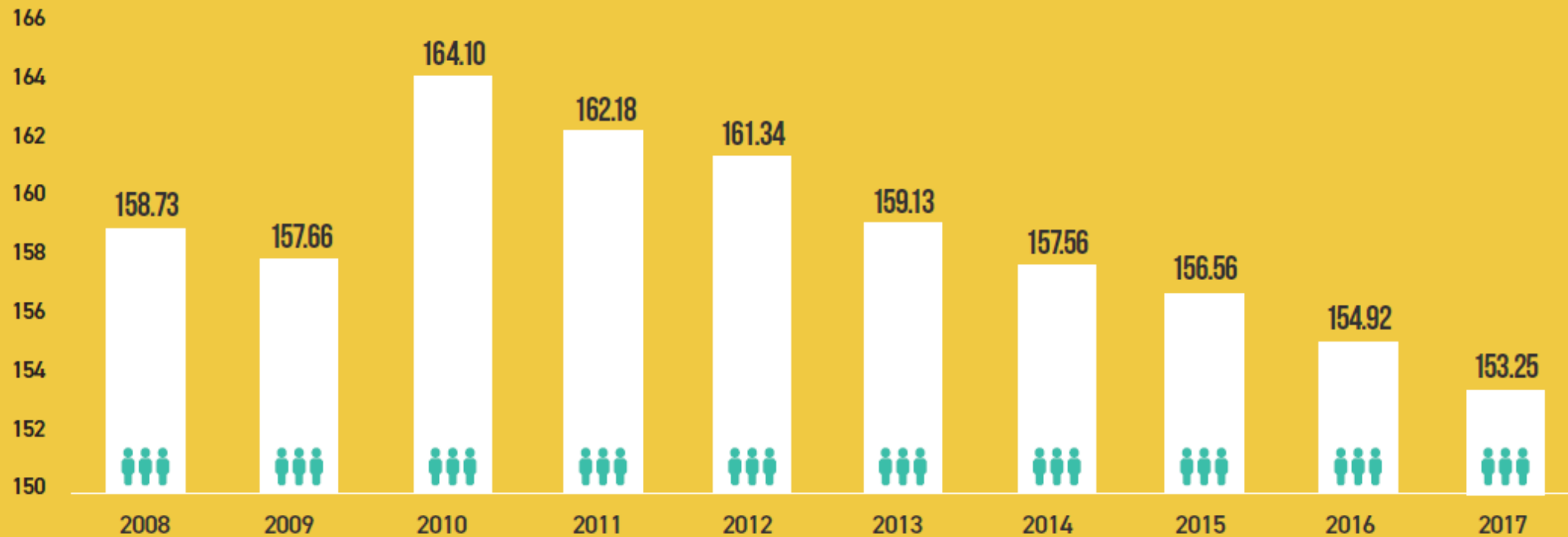
College aviation programs are suffering from a shortage of instructors because they move to the airlines as soon as they have logged enough time, he said. Complicating matters is an anticipated increase in pilot retirements over the next 10 years, since the average age of an Airline Transport Pilot certificate holder is 50 years old.

COLLABORATIVE SOLUTIONS

"There needs to be a common understanding of the gravity and urgency of this situation," he said. "We have a

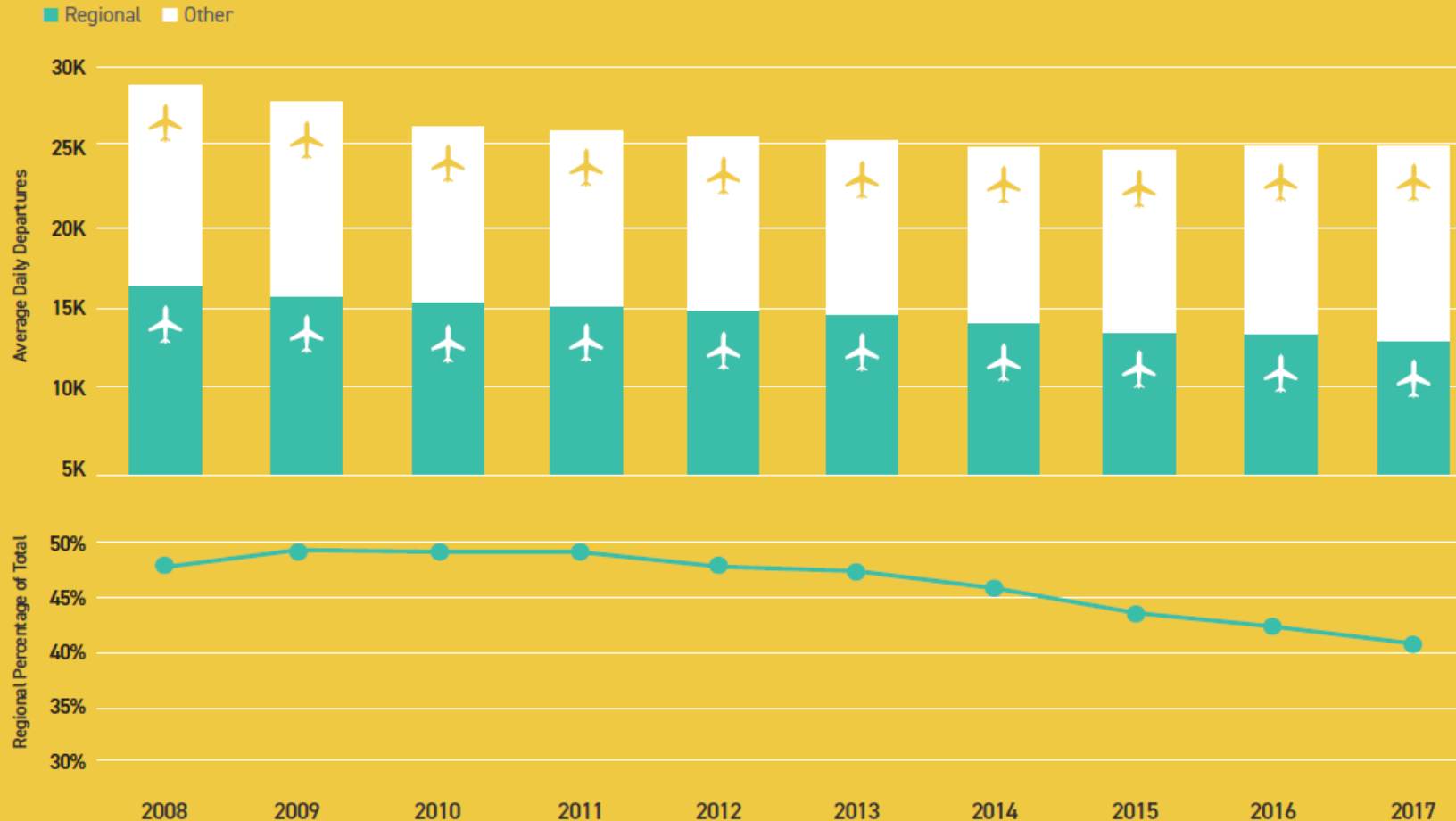
Pilot Shortage Drove Regional Airline Industry Contraction

Passengers Enplaned (Millions)



Industry Contraction Meant Fewer Departures

Average Daily Departures



Source: BTS Air Carrier Statistics Form 41 Traffic: T-100 Segment (U.S. Carriers Only)

Fewer Departures Meant Air Service 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.

Pilot Shortage = Parked Aircraft when Pilots are not Replaced

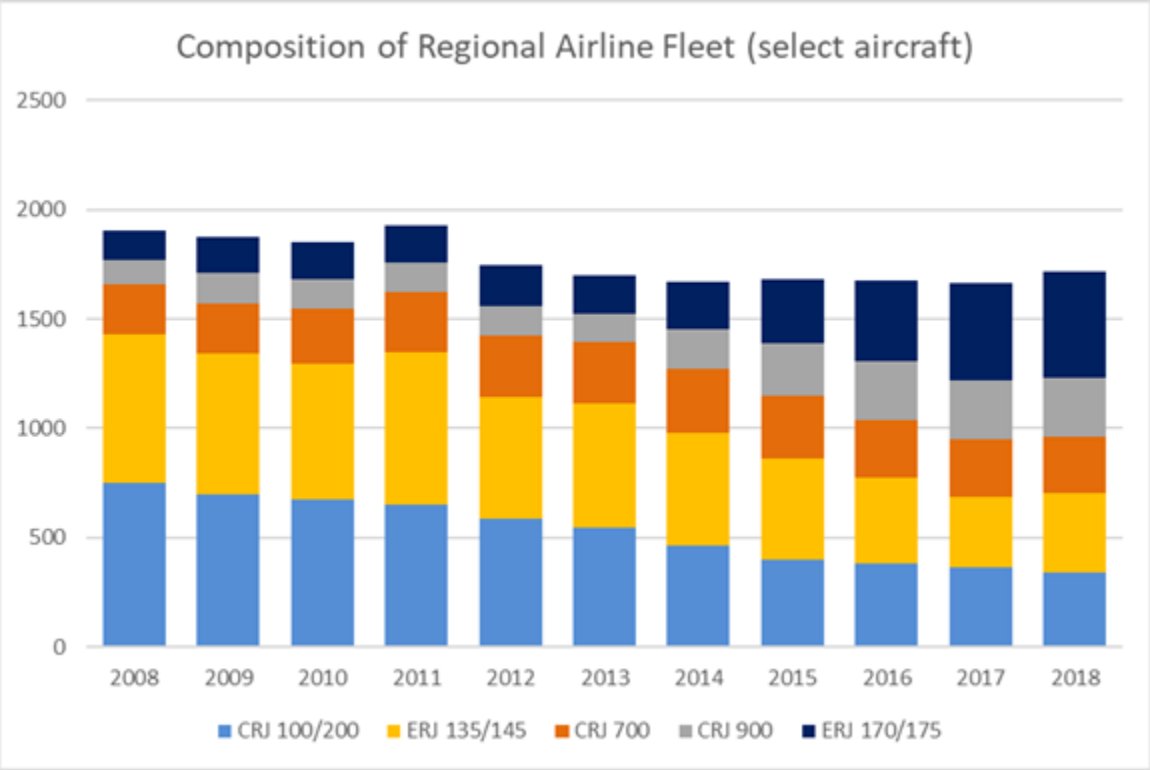
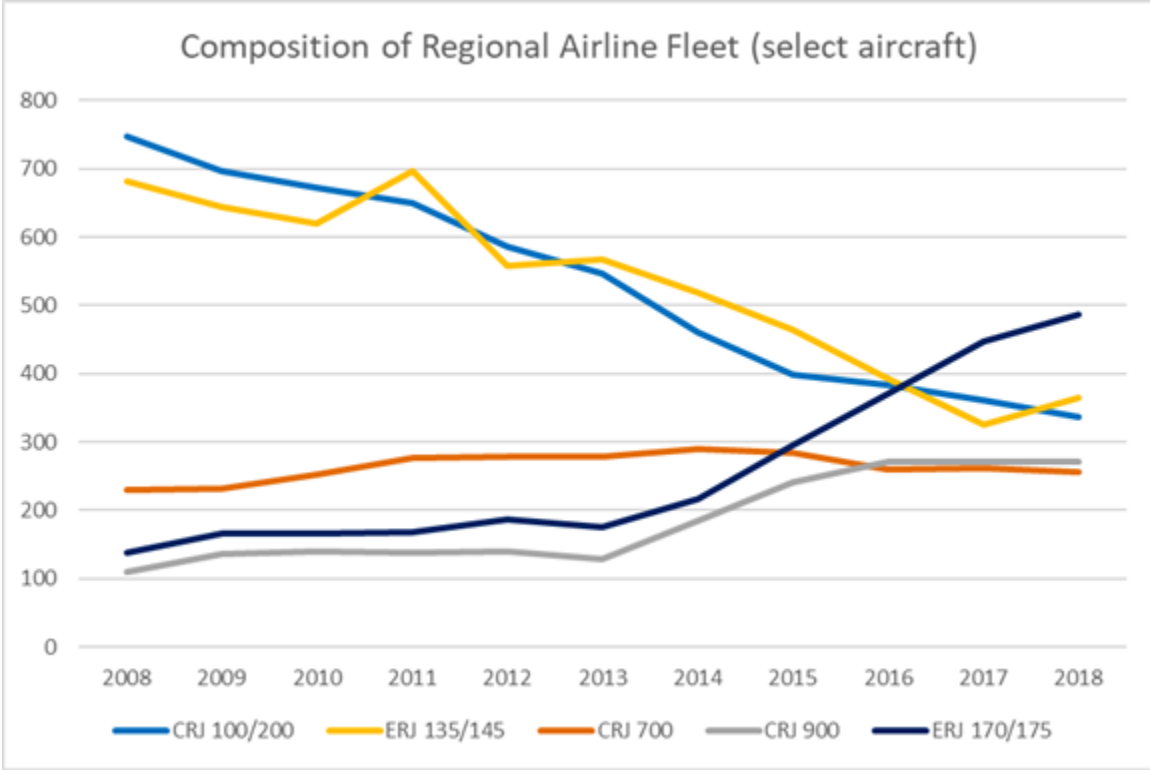
10 -- Number of pilots needed to Crew 1 Regional Aircraft.

100 -- Number of aircraft parked with shortage of 1,000 pilots.

1000 -- Number of aircraft parked with shortage of 10,000 pilots.

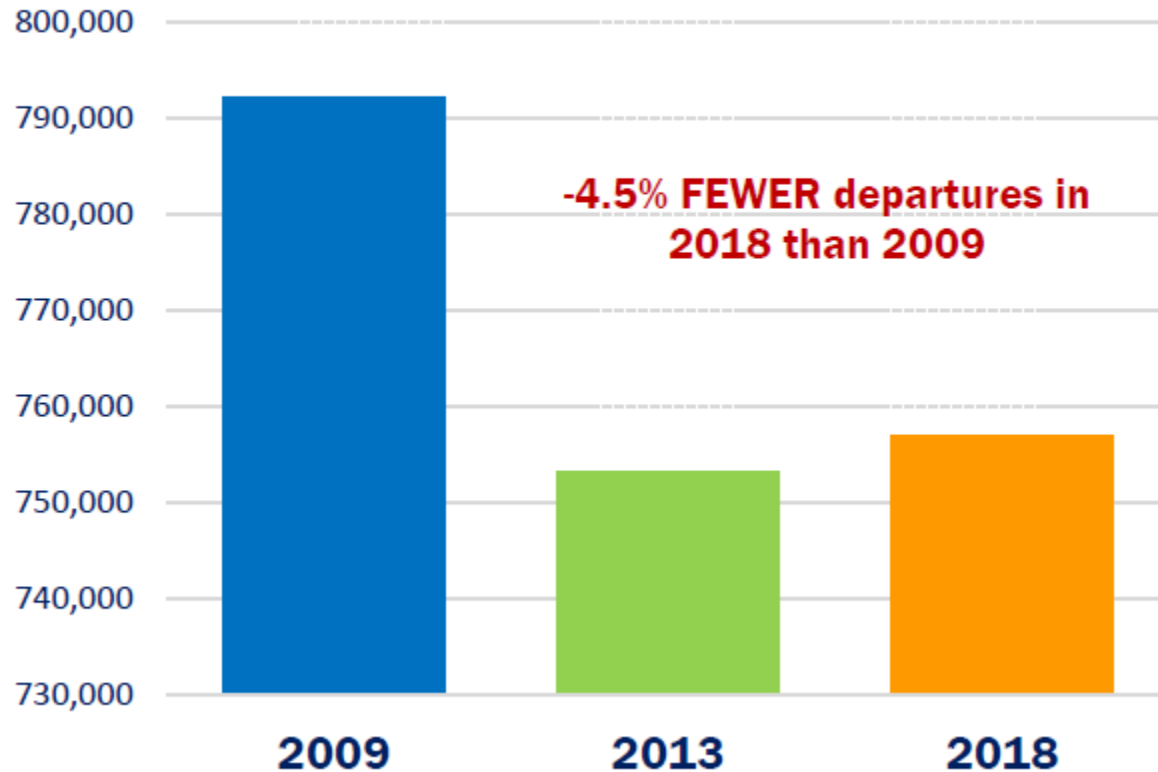
2,018 -- Total number of Regional aircraft operated today.

Using Larger Aircraft Reduces Number of Pilots Needed, but not all Communities Can Support Larger Aircraft

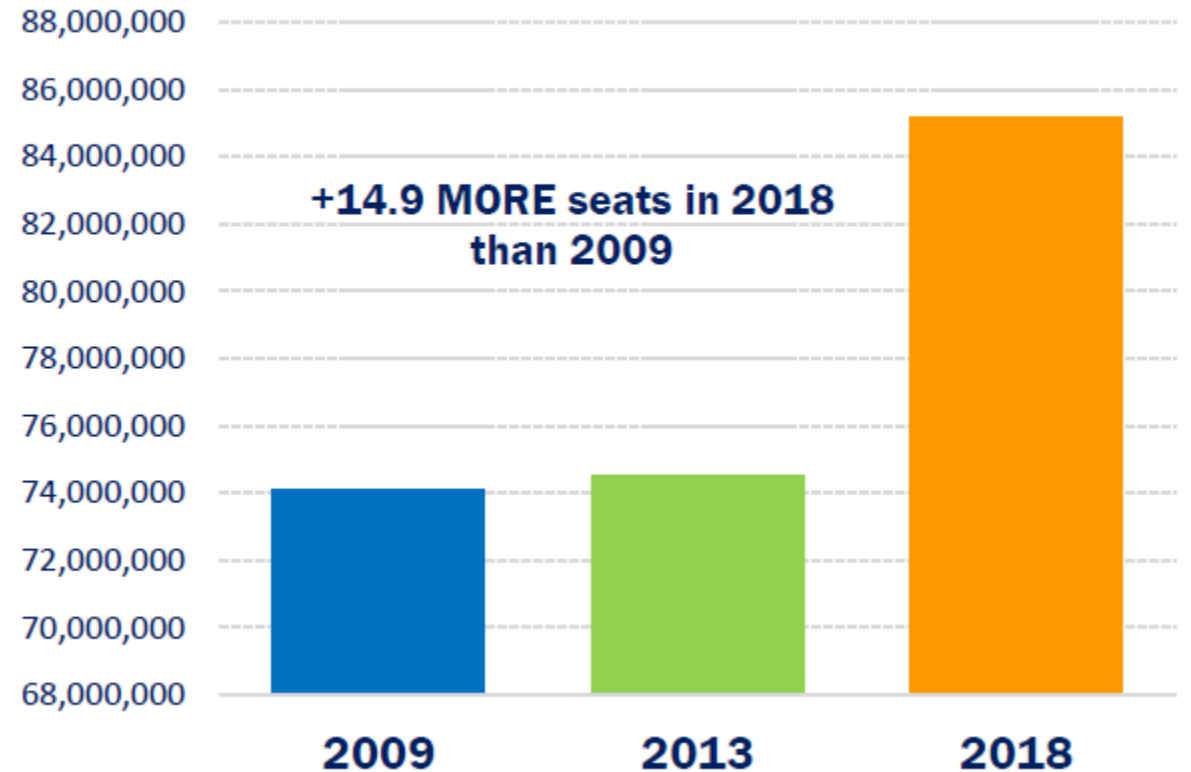


Even though Seats Increased, Departures Decreased

SCHEDULED DEPARTURES



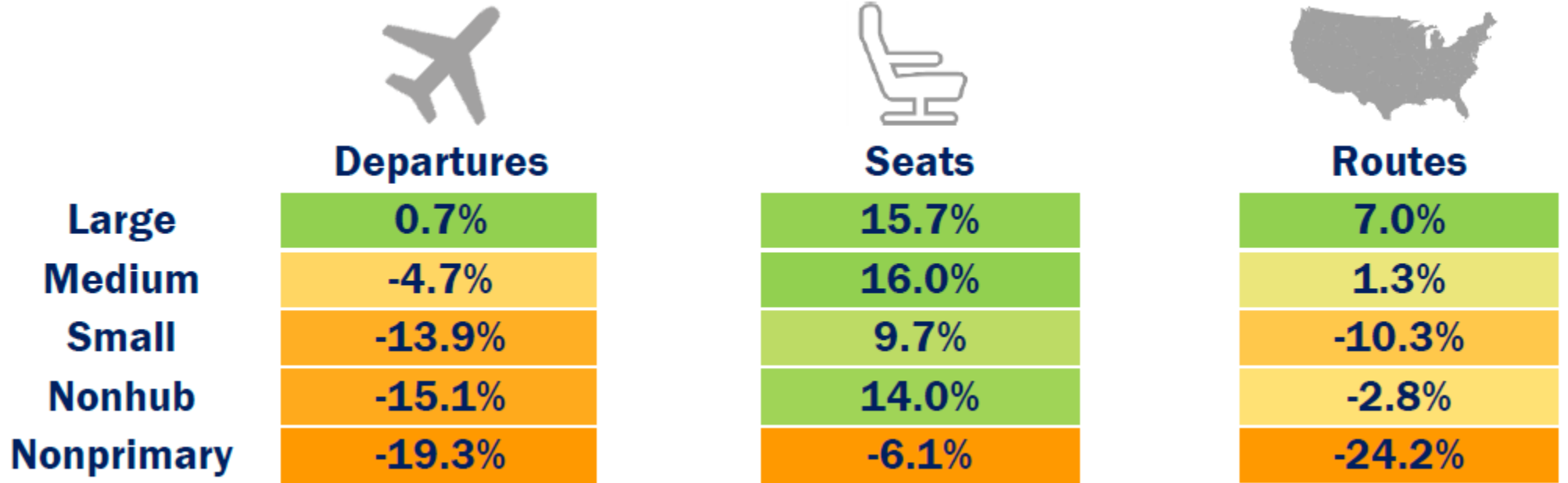
SCHEDULED SEATS



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

Departures (not Seats) Equal Connectivity

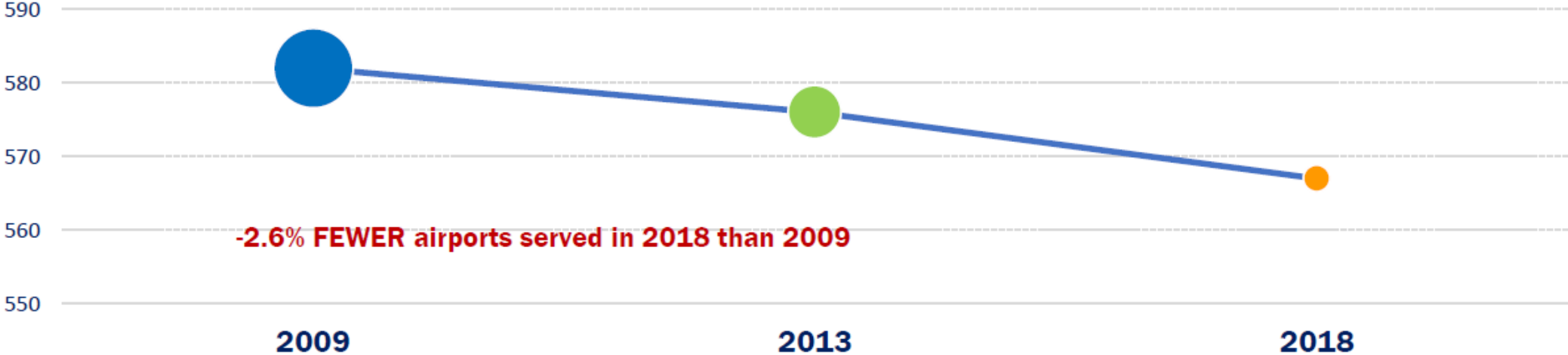
2018
vs.
2009



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

Air Service has Declined Sharply alongside the Pilot Shortage

NUMBER OF AIRPORTS WITH SCHEDULED PASSENGER SERVICE



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”

“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>

Caterpillar Moving Corporate HQ From Peoria To Chicago
Times Free Press Local Business Sports
Krystal offices moving to Atlanta
October 4th, 2012 | by Ellis Smith | In Local Regional News

CLT, lithium-processing operators in bringing chemical HQ

Krystal's Chattanooga headquarters
Photo by Staff File Photo /Times Free Press.

One of Chattanooga's best-known corporate icons is its south.



SOLUTIONS



Market-based Solutions

- **Regional 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**.

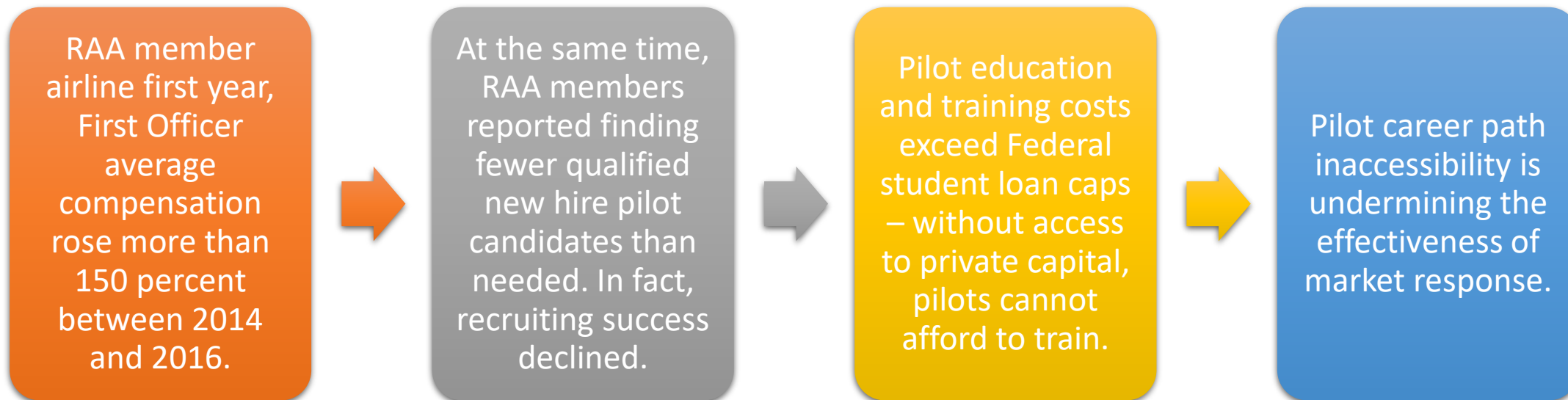


THE BUREAU OF LABOR AND STATISTICS (BLS) REPORTED 2017 MEDIAN ANNUAL WAGE FOR ALL U.S. OCCUPATIONS AT ALL LEVELS WAS **\$37,040**.



MEDIAN COMPENSATION FOR COMMERCIAL AIRLINE PILOTS IN 2017 WAS **\$137,330**. (17% INCREASE FROM 2015)

Career Path Access is Key



Pilots Need Financial Aid for Training and Education



- The [price tag](#) of 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 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.

Training Based Pilot Qualification Pathways are Permitted

- Through PL 111-216, Congress authorized FAA to approve alternate pathways for pilot qualification, allowing specific academic training courses be credited toward total flight hours. This results in a R-ATP certificate.
- Independent, empirical data consistently shows newly-hired pilots following these training-based pathways perform best.



Military and Academic
Institutions are already
approved for these R-ATP
Pathways



Training Based Compliance Pathways are Effective

- [Pilot Source Study 2018](#) findings are similar to [PSS 2015](#)
- Key “outcomes” analyzed were completions, extra training and IOE
 - 45% of new-hire pilots require extra training (up from 28% in 2015)
 - Pilots with 1500 – 3000 hours in flight required more extra training than all other groups
 - Top performing pilots are still those pilots with fewer than 1500 hours.
- The top *positive* predictors of high pilot performance, in order:
 - (1) High GPA
 - (2) Recency of graduation from foundational training
 - (3) Holding a restricted-ATP (R-ATP) rather than a non-restricted ATP (R-ATP pathways replace some unstructured flying time with rigorous structured training)
 - (4) Holding degree from AABI accredited school
 - (5) Having *fewer* than 1500 total flight hours
 - (6) Holding a bachelor’s degree

More Training Pathways are Needed

- Airlines are starting to build comprehensive foundational training programs to help pilots achieve their dream of flight.
- Additional programs to bridge the gap between existing foundational training and a pilot's qualification could provide additional support and improve training outcomes. FAA should approve these pathways when they enhance safety.
- 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.



Initial Congressional Actions

Sampling of Recently enacted U.S. Aviation Workforce Measures:

- **Aviation and Aerospace Workforce of the Future Study** –GAO study on strategies / best practices to attract people into aviation workforce.
- **Women in Aviation** – Creates a Women in Aviation Advisory Board.
- **Youth in Aviation** – Creates a Youth Access to American Jobs in Aviation Taskforce.
- **Aviation Maintenance Industry Technical Workforce** – Directs GAO study on aviation maintenance workforce needs.
- **Aviation Workforce Development Programs** – Small dollar grant program to develop pilot and technician workforce including aviation curriculum development and teacher training at high schools and supports purchasing equipment, scholarships, outreach, and career transition programs.
- **Sense of Congress** – 1) the aviation industry should hire more veterans 2) career pathways and initiatives should continue to exist to attract people into the industry and **the educational and federal aid system should support the aviation industry.**



More Solutions are Needed...

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 to allow flight schools to receive federal financial aid, and create tax incentives for employer-based programs.
- Protect and streamline GI bill funding; ensure veterans can use GI benefits for flight training.
- Encourage FAA to approve structured training pathways offered by certificated air carriers for credit toward pilot qualification when those programs enhance safety.
- Encourage FAA to provide credit for scenario-based, modern training methods, such as high-fidelity flight simulators.



Stakeholders working together can resolve the pilot shortage.

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