



Industry Update

October 2018

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

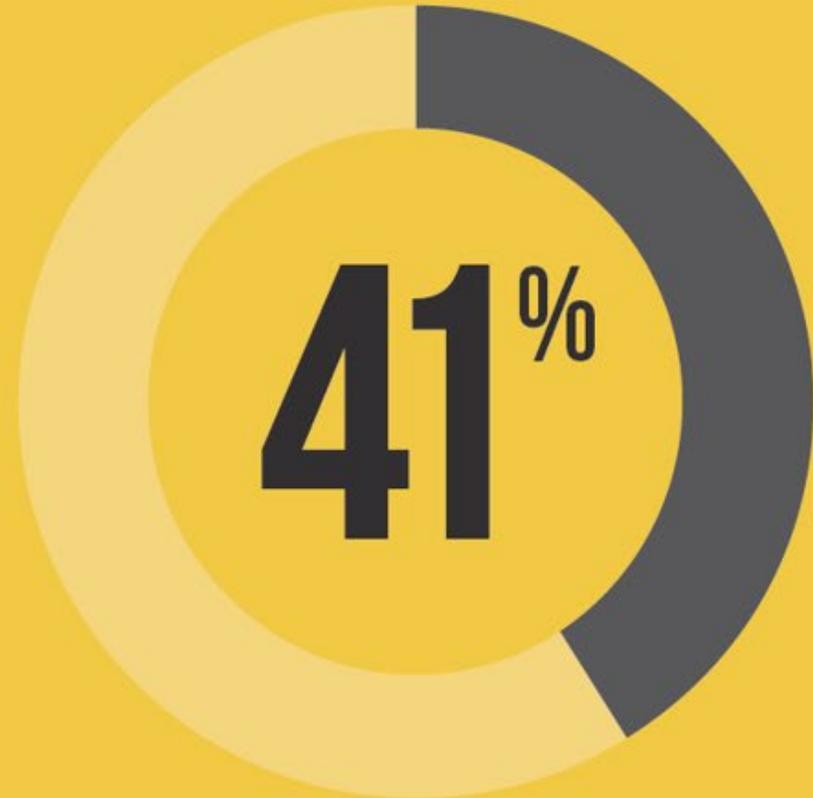
September 2017



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.

Regional Airlines are Critical Infrastructure

619

U.S. Airports with Regional Service in 2017

- Lower 48
- AK & HI
- Total



409

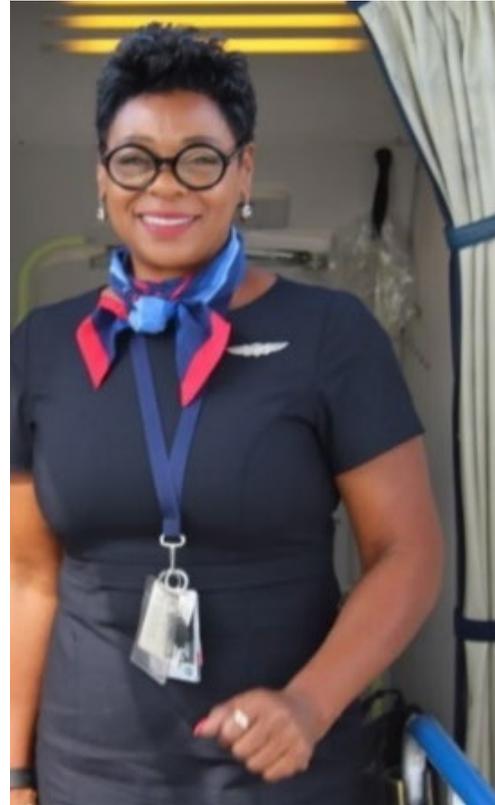
U.S. Airports with **ONLY** Regional Service in 2017

- Lower 48
- AK & HI
- Total



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



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 and eventually landing a full-time position with UPS. Sam Upshaw Jr., Louisville Co



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.

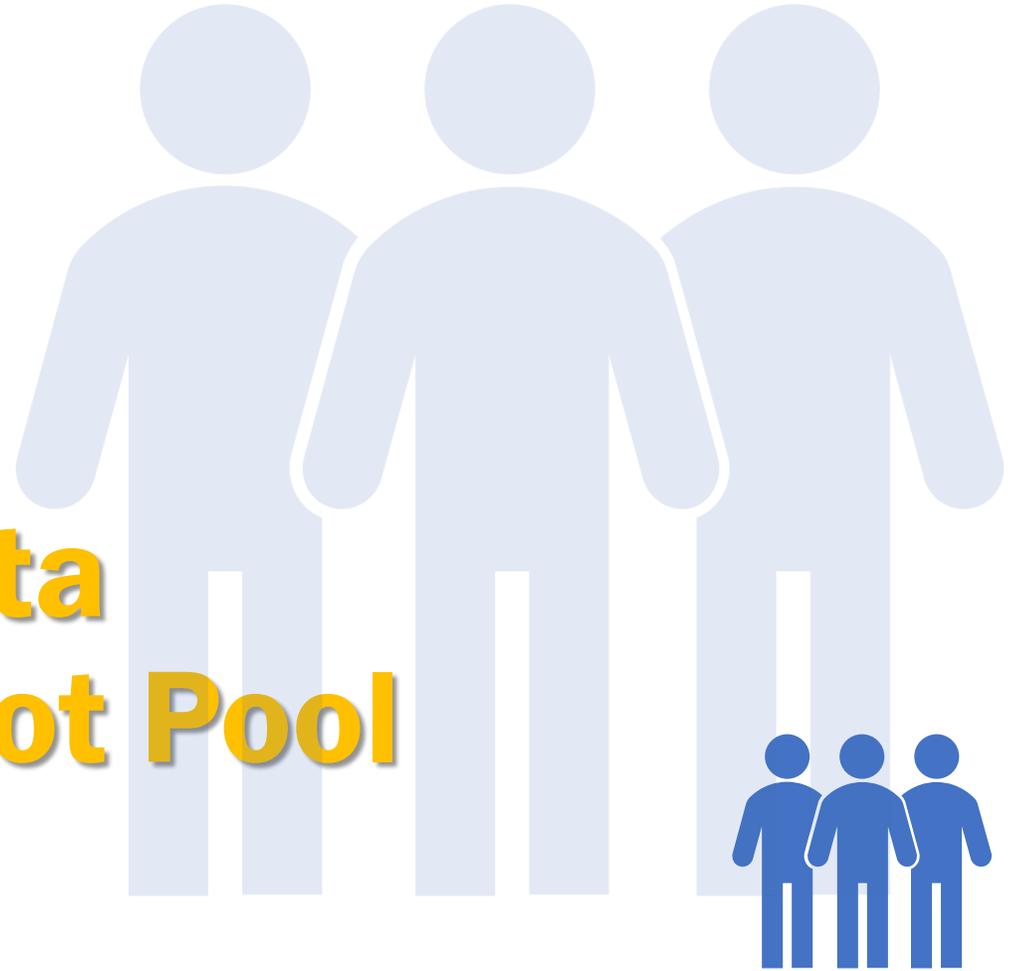
"But at a time when we need to see interest in aviation careers going up, the data is trending in the opposite direction," he said, noting a 27 percent slide in the number of private pilots in the last 10 years. At the same time, the number of commercial pilots has slid by 21 percent. And, Elwell added, "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

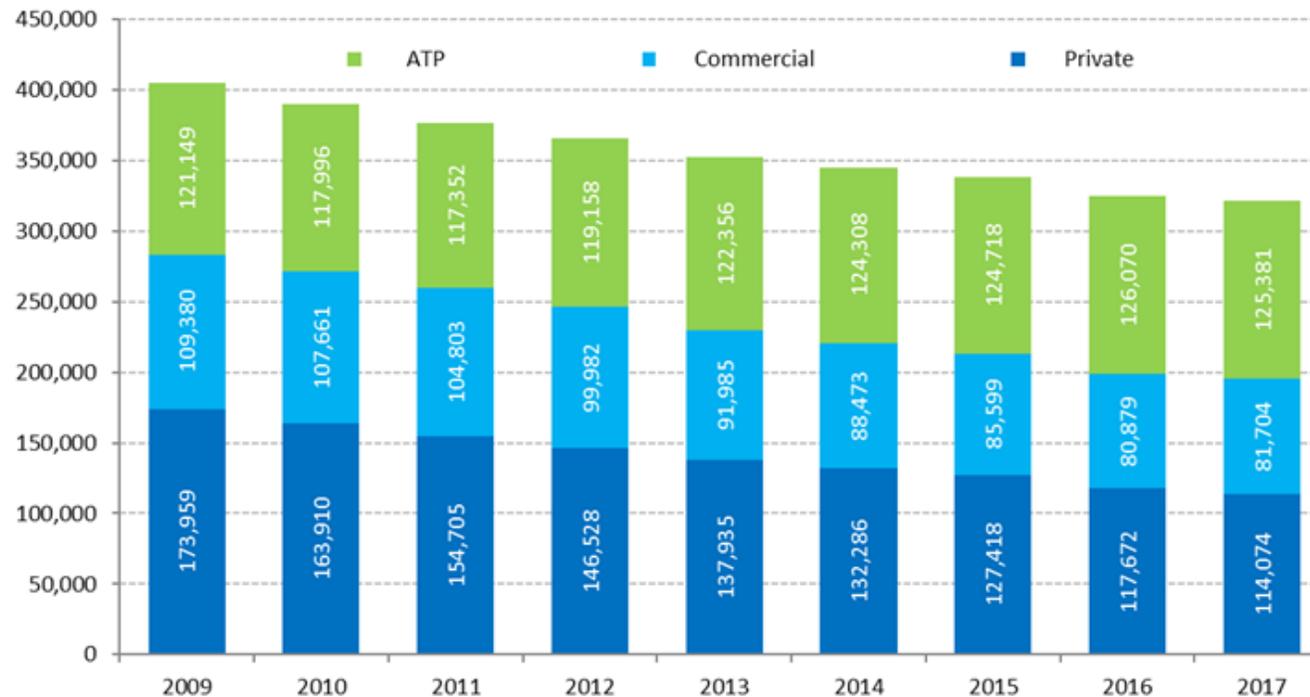
FAA Civil Airmen Data Shows Shrinking Pilot Pool



Shrinking Hirable Pilot Pool

Estimated Active Pilot Certificates Held by Category Ages 20-59

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



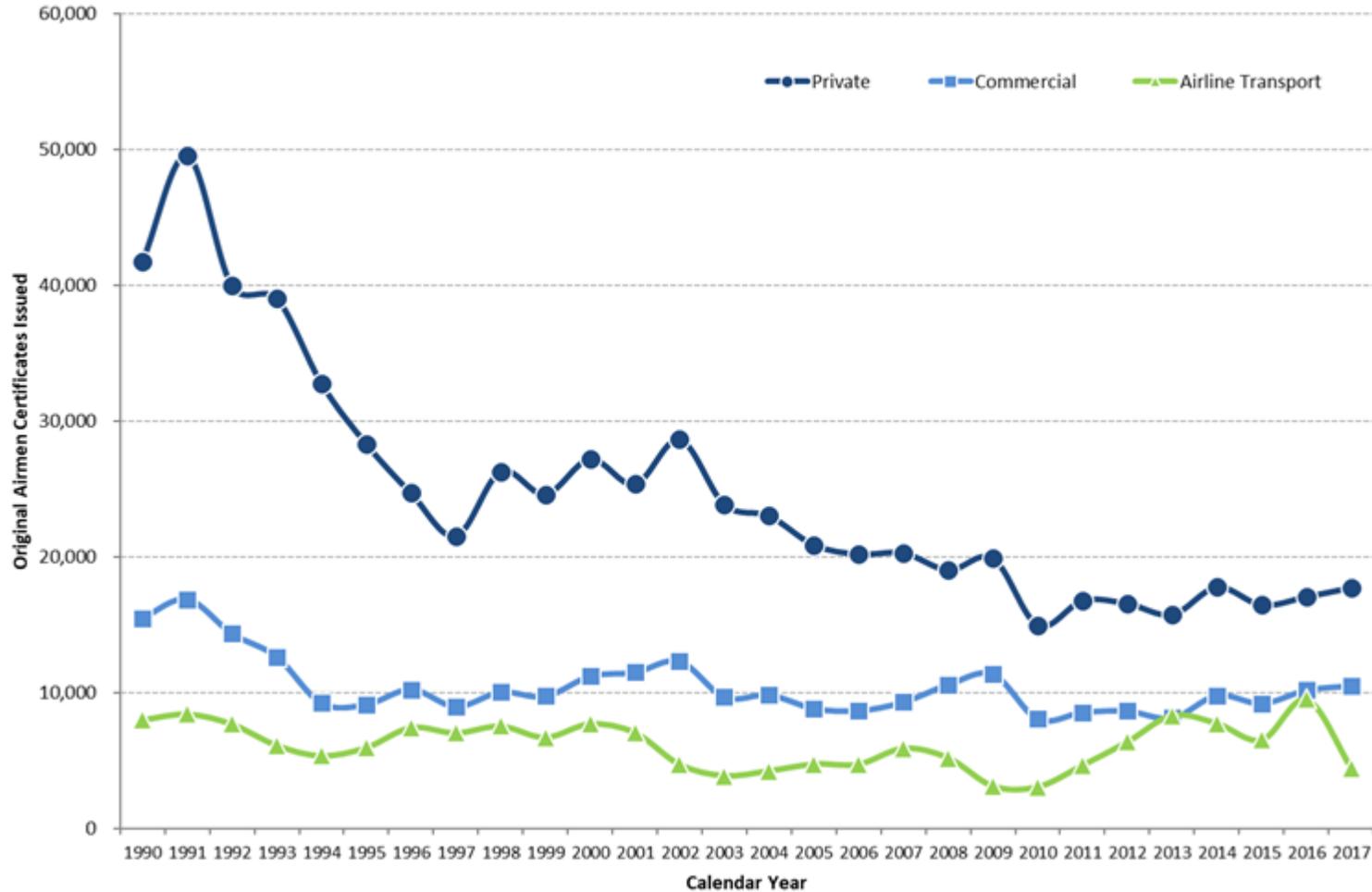
-20.6% since 2009

-992 per month

-33 per day

Original Airmen Certificates Issued by Category

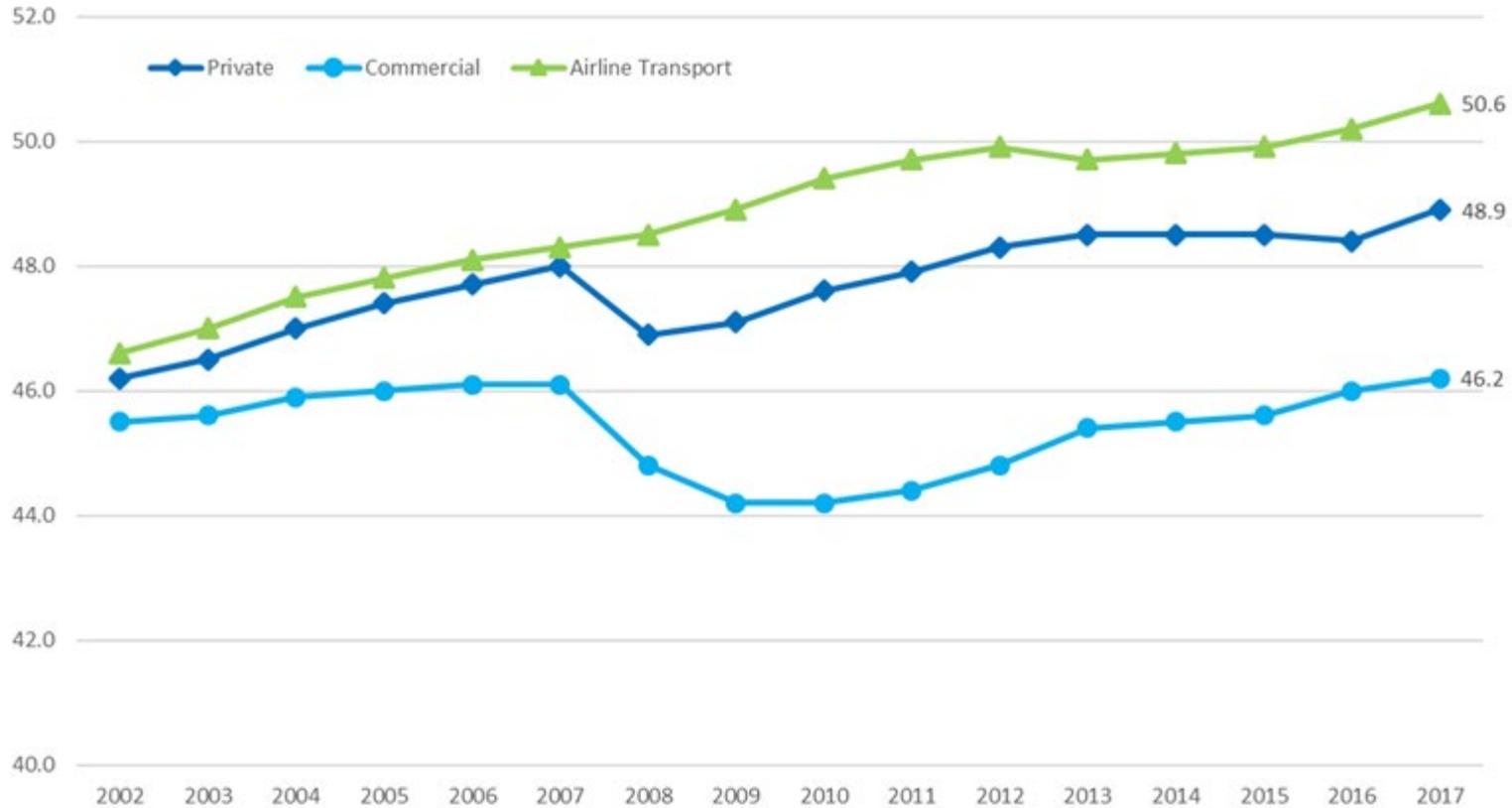
Federal Aviation Administration U.S. Civil Airmen Statistics, Table 17



Declining Original Airmen Certificates

Average Age of Active Pilots by Category

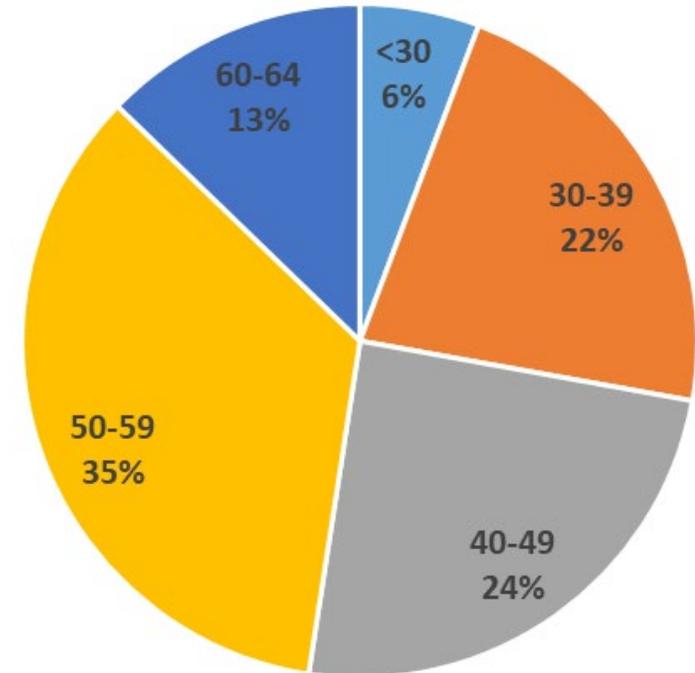
Federal Aviation Administration U.S. Civil Airmen Statistics, Table 13



Aging Pilots in all Categories

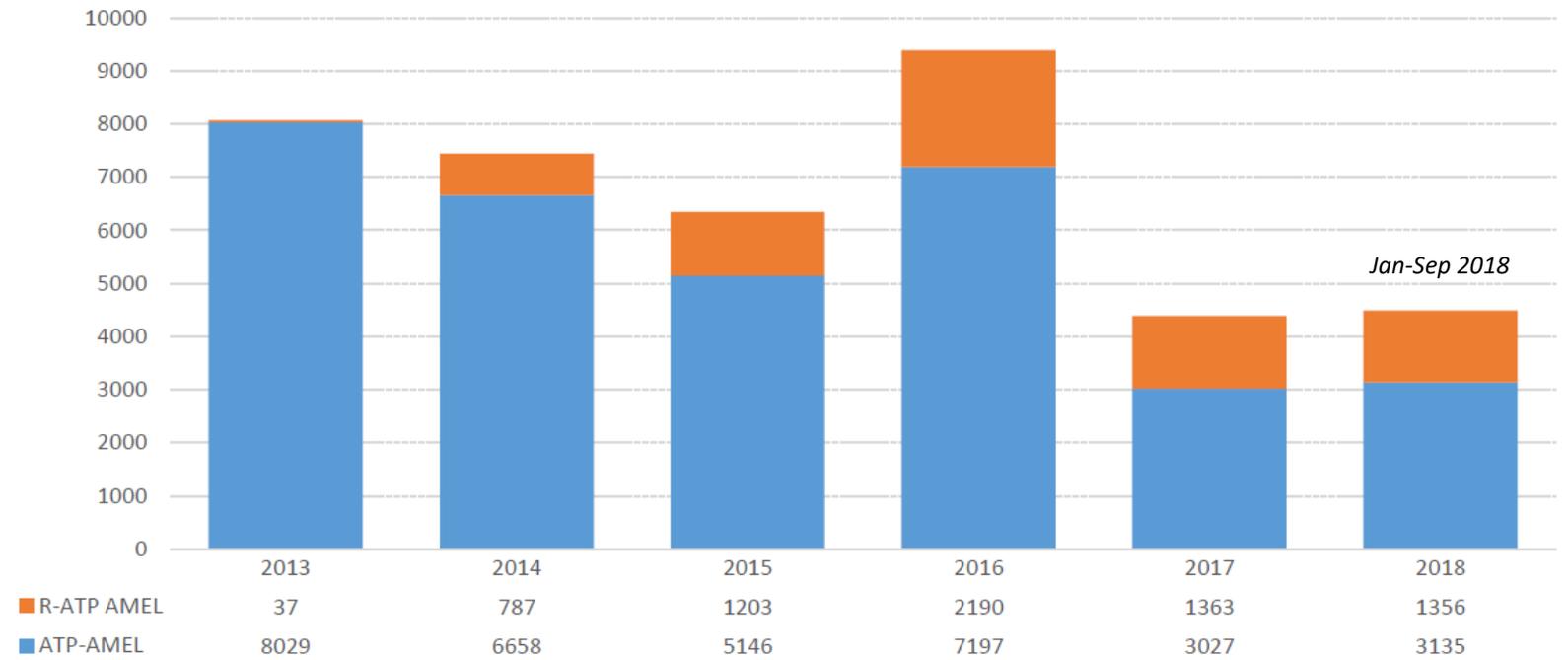
- **51,053 (48%) ATP AMEL pilots with current 1st Class Medicals are 50 years old or older and will reach mandatory retirement age within the next 15 years.**
- **13,673 of these pilots are 60-64 years old and will reach mandatory retirement age within the next 5 years.**

ATP AMEL Pilots with Valid 1st Class Medicals by Age



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.

Original Issuance ATP AMEL and R-ATP AMEL

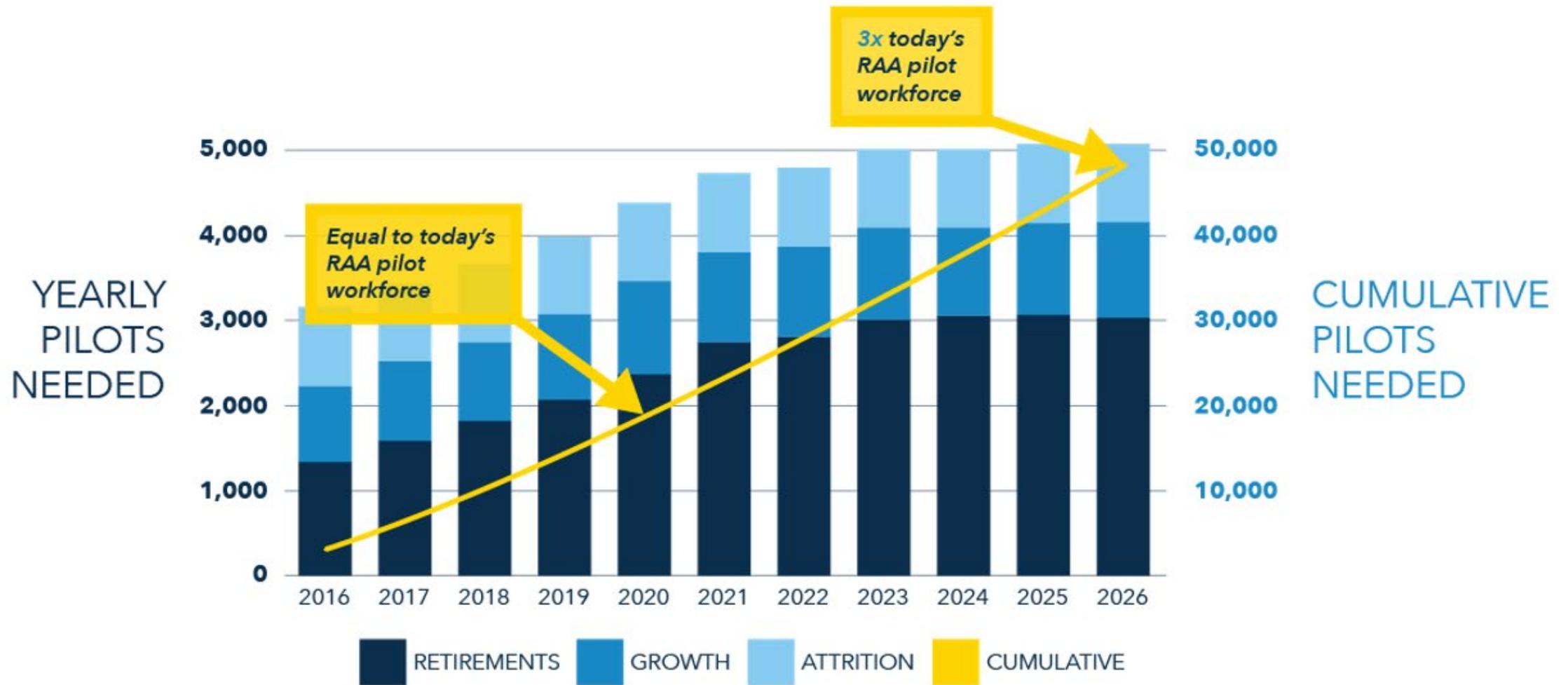




Forecast Pilot Supply & Demand

- **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

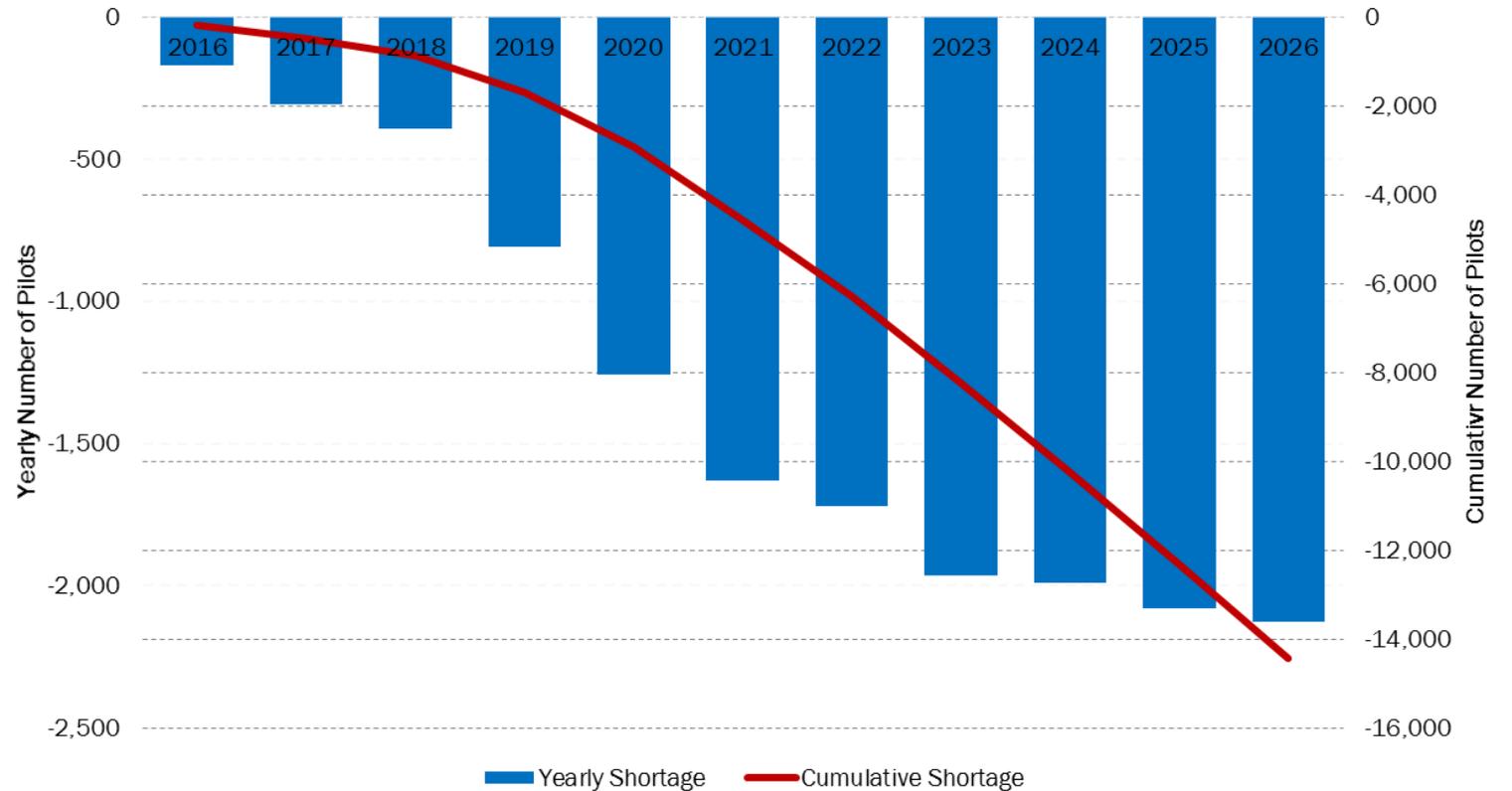
10: Number of pilots needed to Crew 1 Regional Aircraft.

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

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

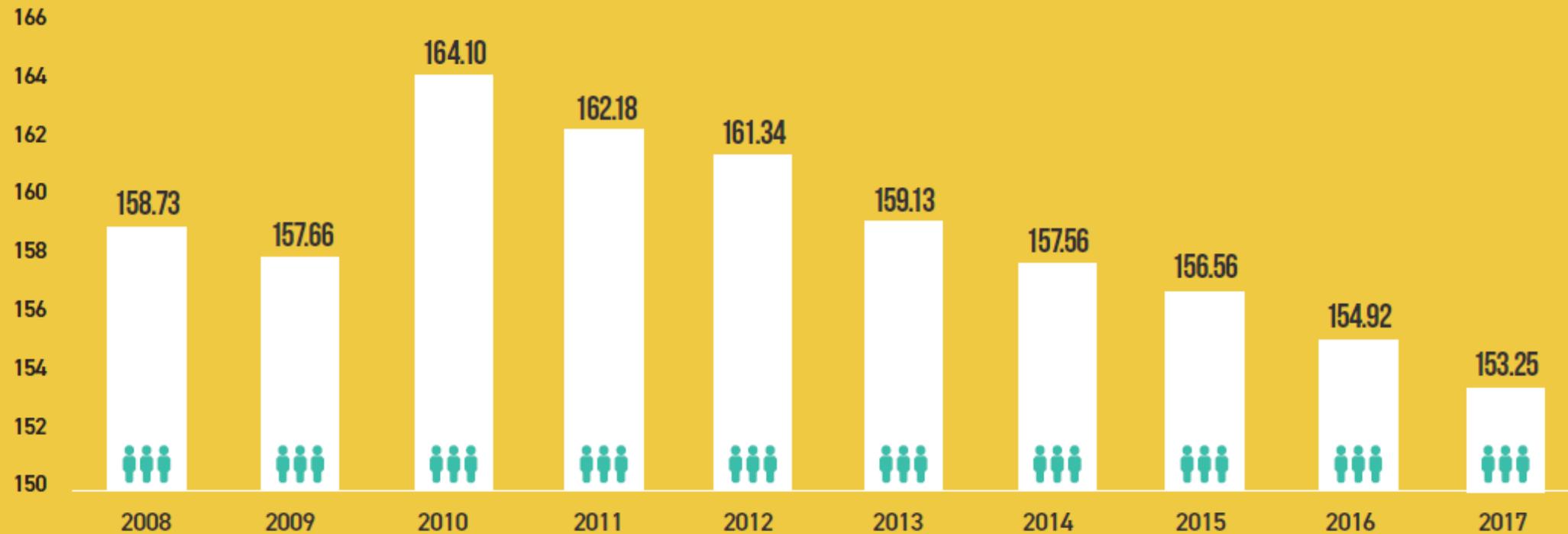
2,018: Total number of RAA member operated aircraft today.

Forecast Yearly and Cumulative Shortages of Pilots to Staff the U.S. Airline Fleet



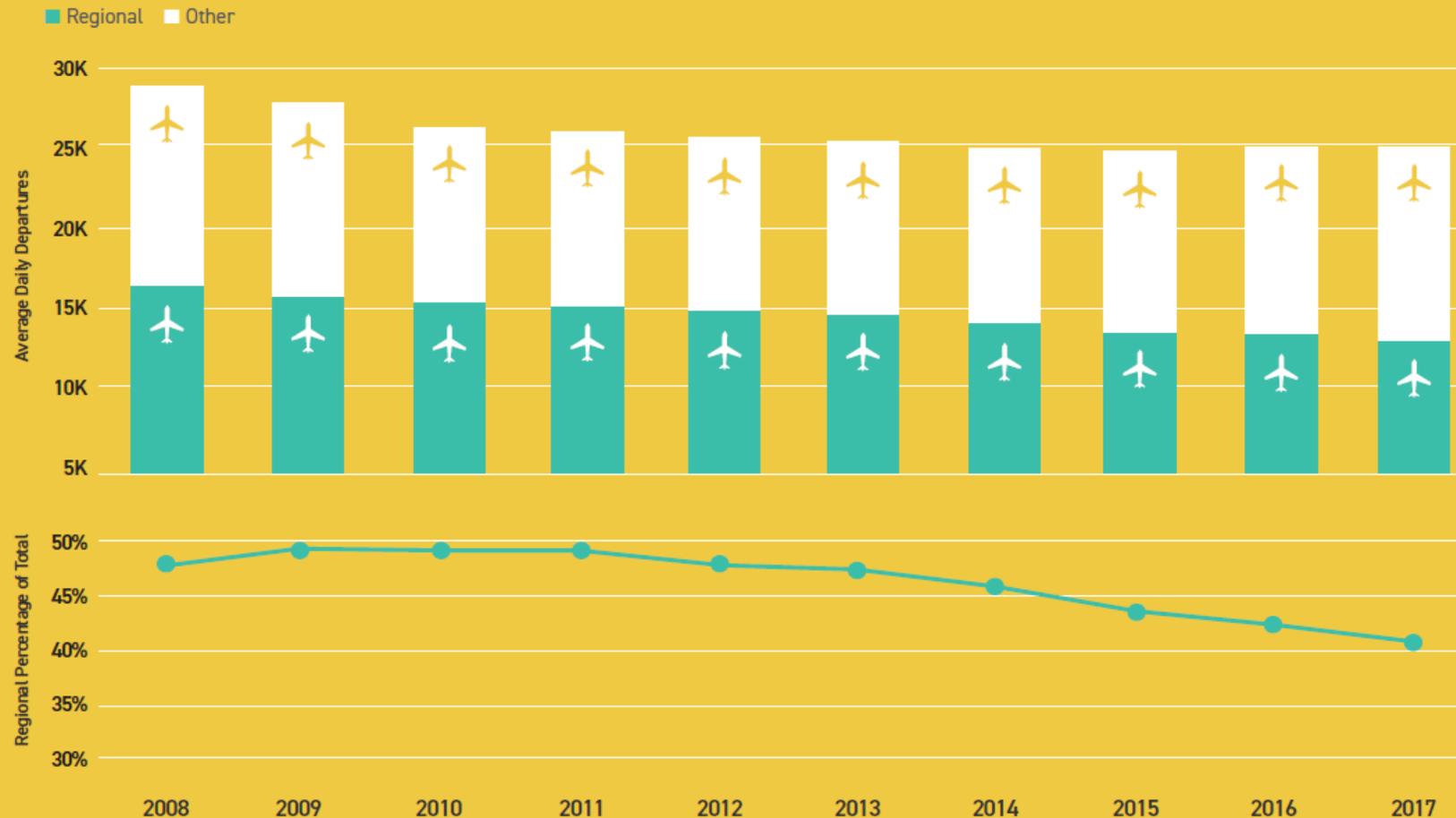
Regional Airline Industry Contraction

Passengers Enplaned (Millions)



Industry Contraction Means Fewer Departures

Average Daily Departures



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

Fewer Departures Means Air Service Reductions and Losses

2018 compared with 2013:

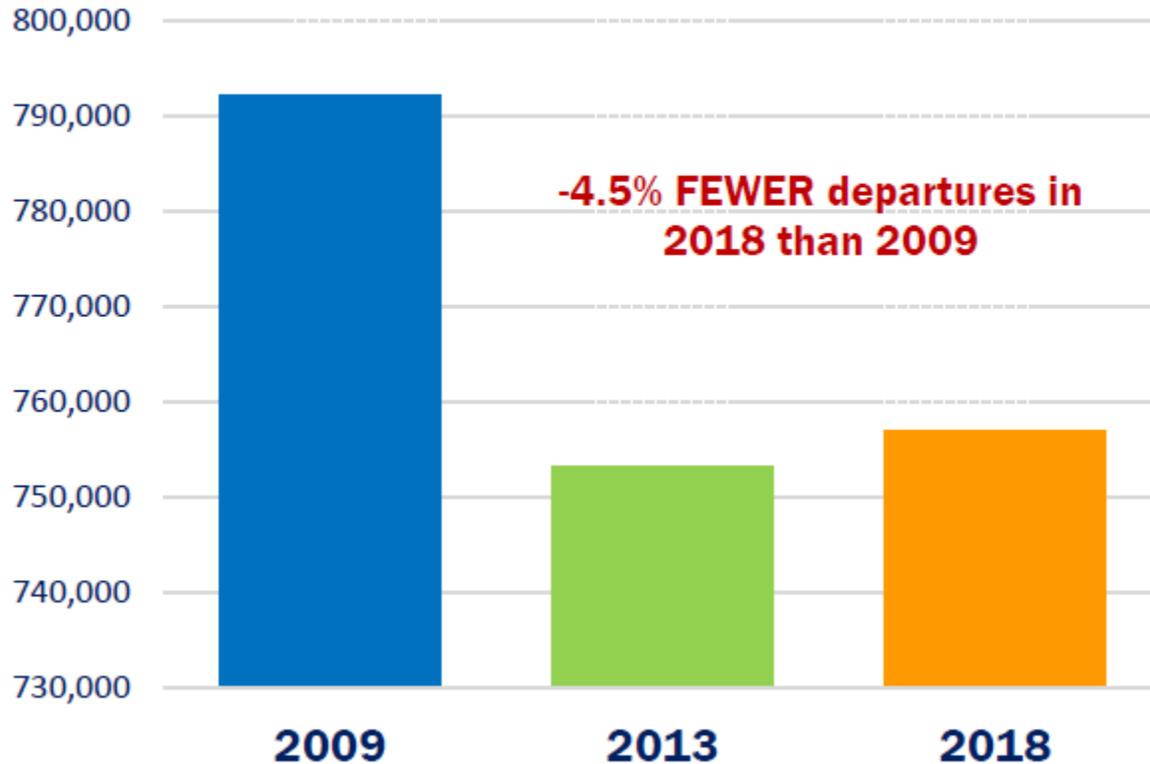
-  246 airports reduced by 10% or more
-  180 airports reduced by 20% or more
-  109 airports reduced by 33% or more
-  77 airports reduced by 50% or more
-  42 airports reduced by 75% or more
-  32 airports lost all service

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.

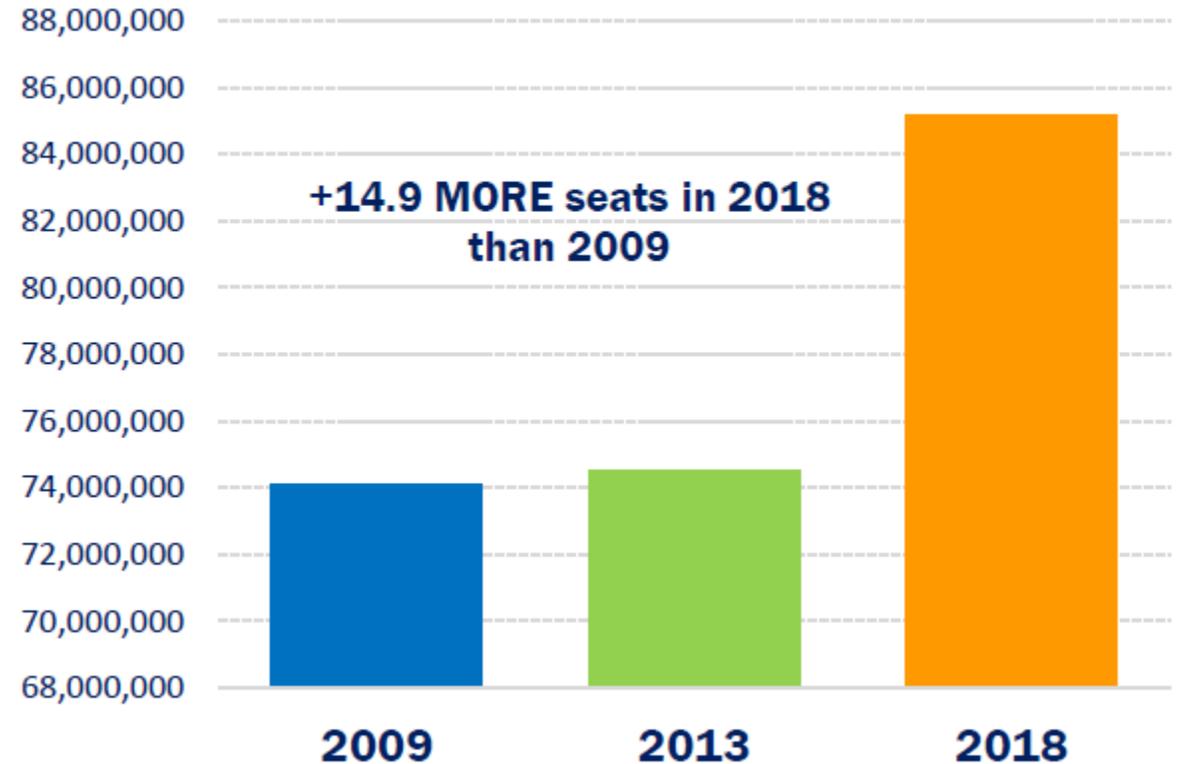


Air Service is More than Just Seats

SCHEDULED DEPARTURES



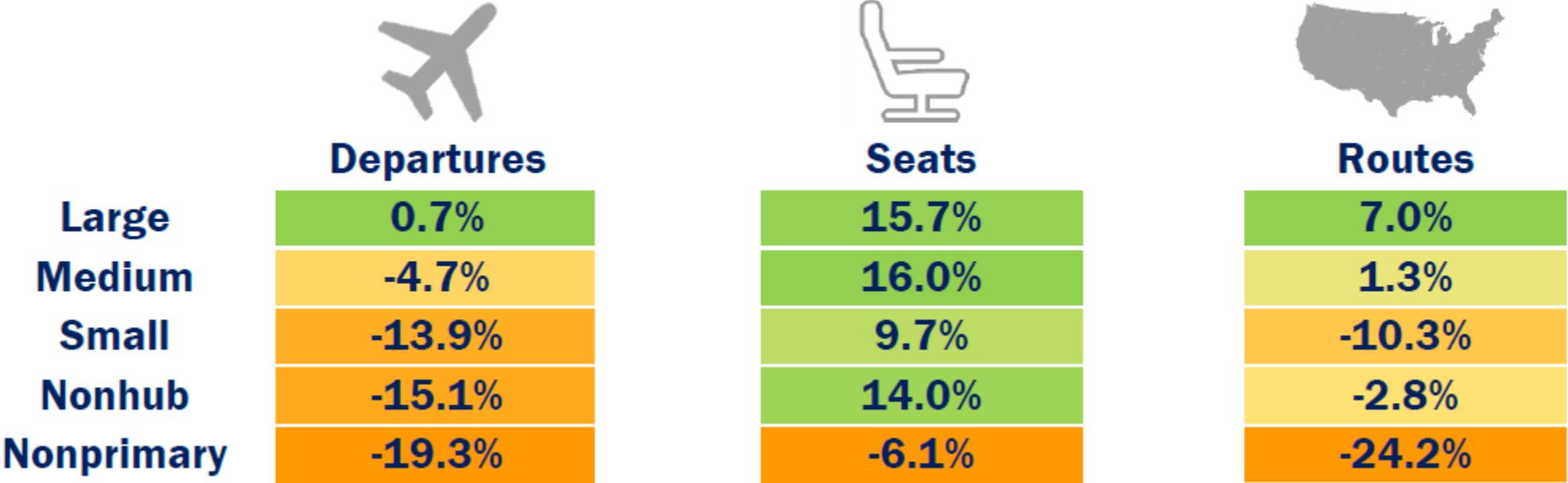
SCHEDULED SEATS



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

Departures (not Seats) Equate to Connectivity

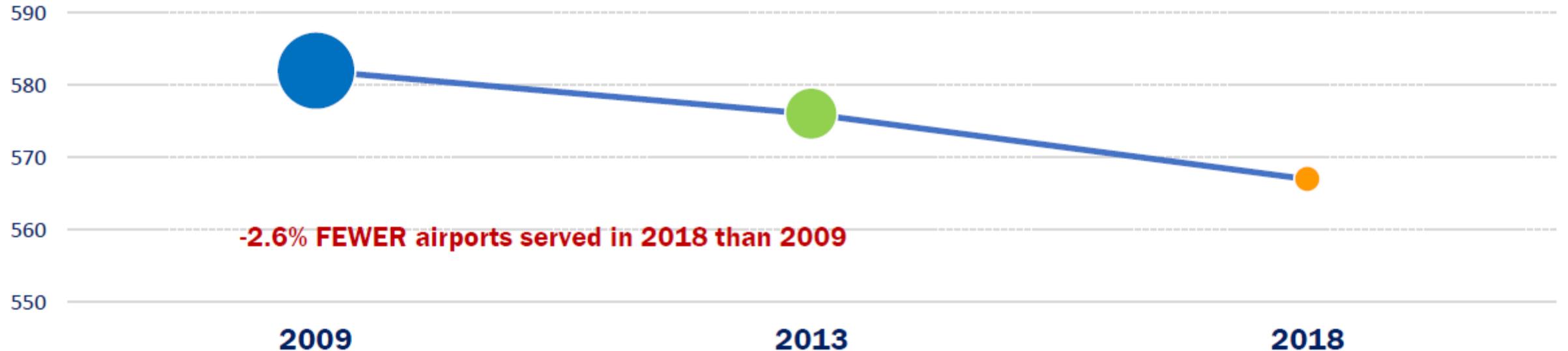
2018
vs.
2009



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

Communities Need Access to Hubs

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

January 10, 2014 10:41 am | Photo credit: Caterpillar / Chicago Business Journal | **Times Free Press** | Local | Business | Sports



CLT, lithium-processing operations factors in bringing chemical HQ

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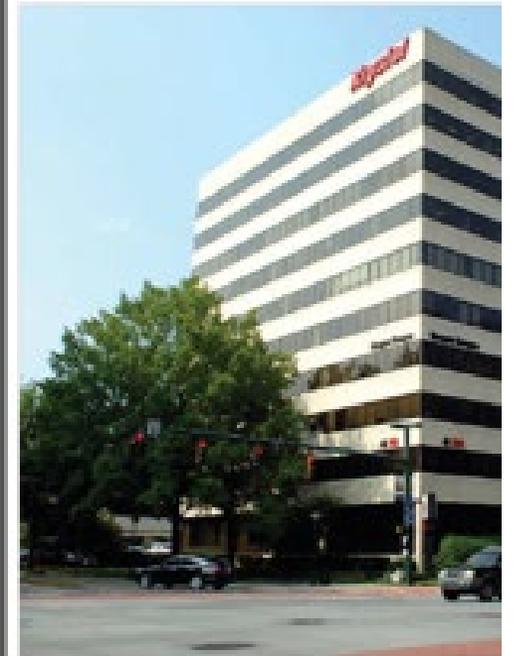


Source: Company. Company data submitted by respondents to a survey by the Office of Economic Development.

By **Ellis Smith** • Senior Staff Writer, Charlotte Business Journal
Aug 21, 2015, 1:47pm EDT | updated Aug 21, 2015, 4:17pm

Krystal offices moving to Atlanta

October 4th, 2012 | by **Ellis Smith** | In Local/Regional News |



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

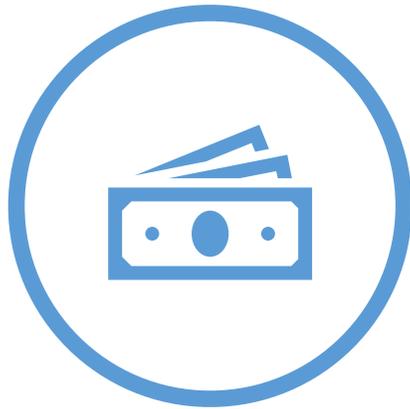
One of Chattanooga's best-known corporate icons is its south.



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)

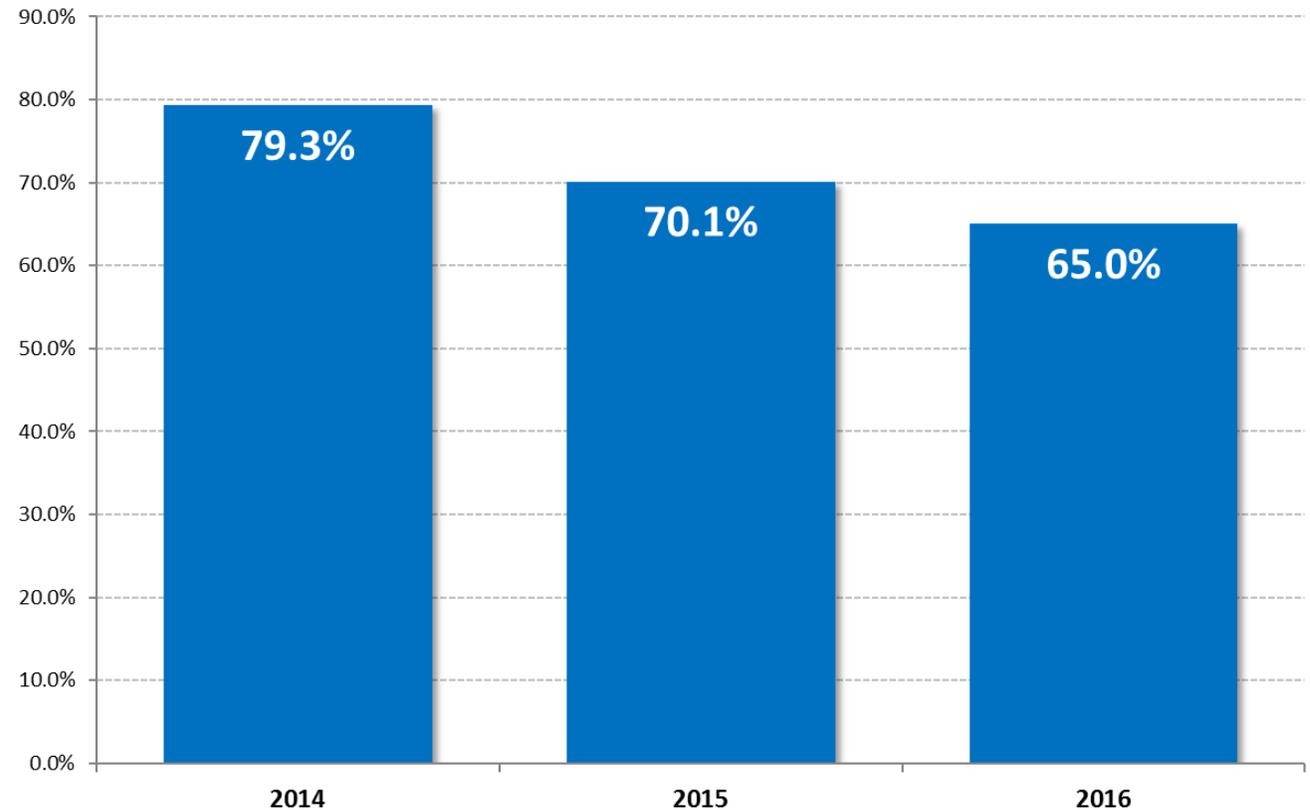
Career Path Inaccessibility

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.



New Hires in Class vs. Desired New Hire Pilots
Count of Actual NHs / Count of Desired NHs



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.