

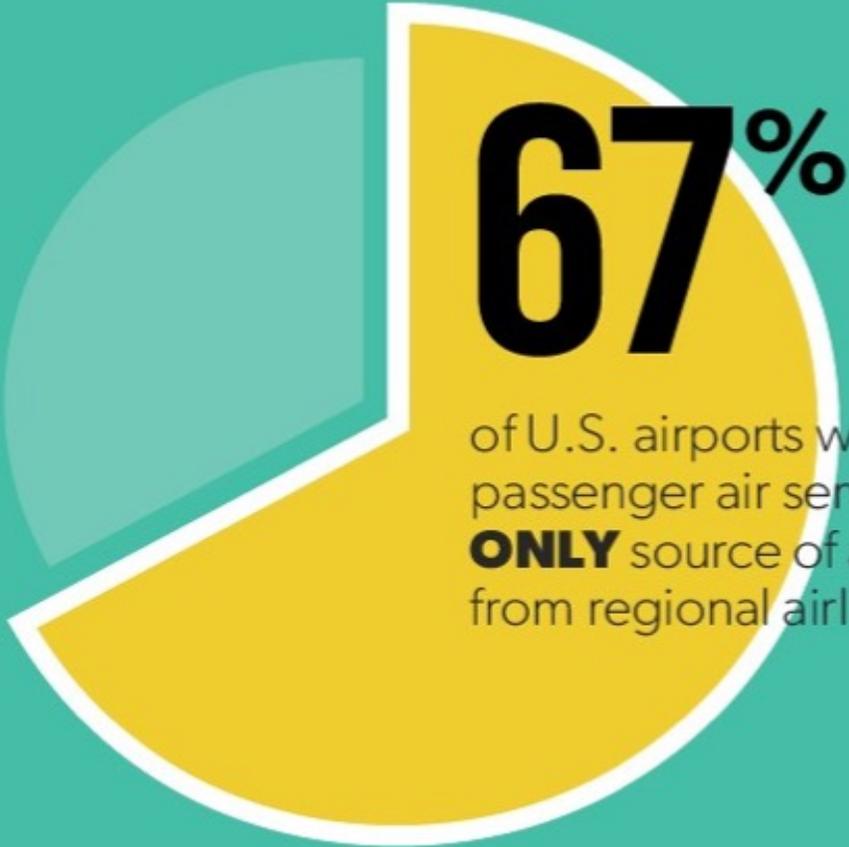


Regional Airline Association

Small Community Air Service & the Pilot Shortage

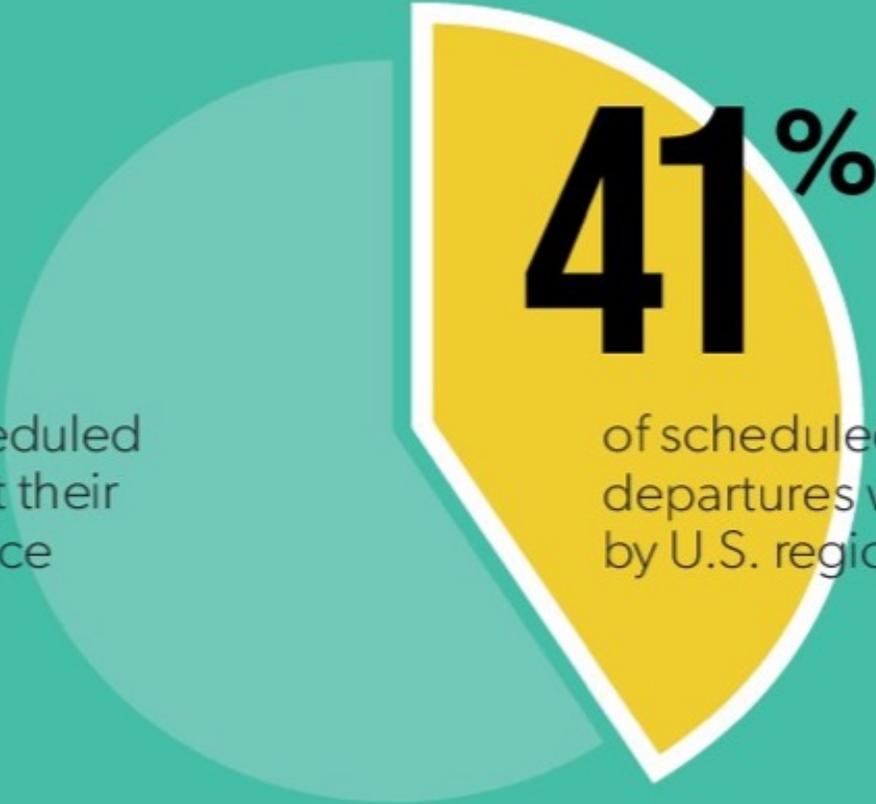
February 6, 2023

Regional Aircraft Critical to U.S. Air Service Network



67%

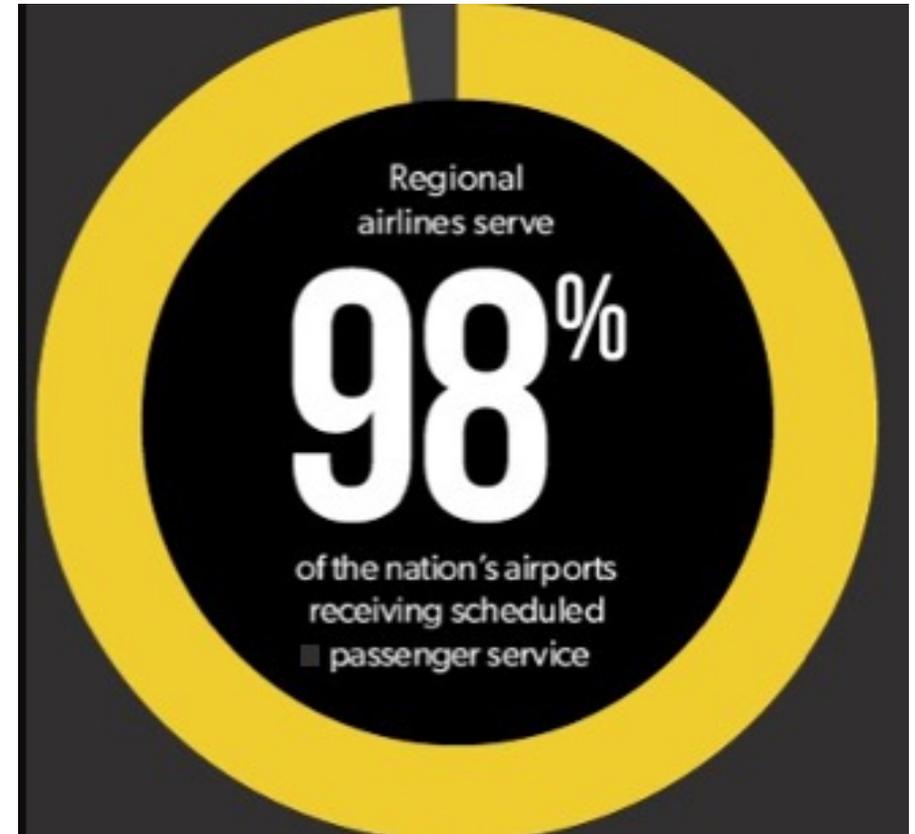
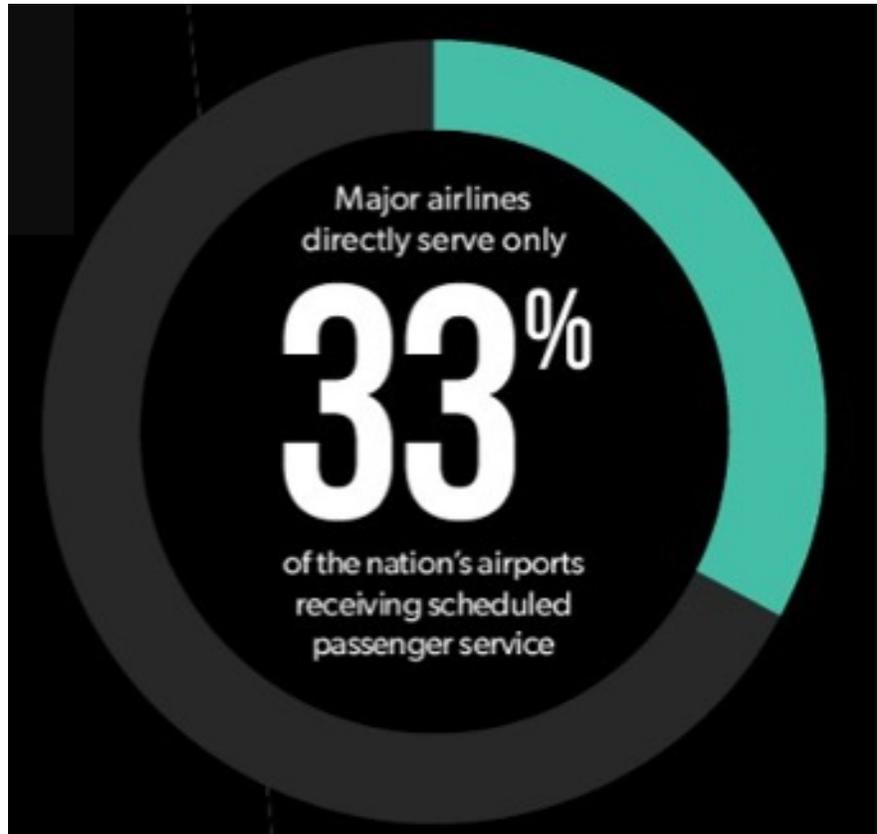
of U.S. airports with scheduled passenger air service get their **ONLY** source of air service from regional airlines.



41%

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

Service at U.S. Airports



Regional Airlines Critical to U.S. Air Service Network

2021 U.S. AIR SERVICE NETWORK



U.S. AIR SERVICE NETWORK
WITHOUT REGIONAL AIRLINES



State by State Reliance on Regional Airlines

REGIONAL AIRLINES PROVIDE

75%
OR MORE

of the air service
in these states:

Vermont (93.38%)
West Virginia (91.12%)
North Dakota (87.64%)
Alaska (87.63%)
South Dakota (84.60%)
Mississippi (81.99%)
Kansas (81.63%)
Alabama (81.01%)
Arkansas (80.85%)
Maine (78.98%)
Iowa (77.99%)

REGIONAL AIRLINES PROVIDE

50%
OR MORE

of the air service
in these states:

Montana (72.72%)
Idaho (72.72%)
New Hampshire (68.93%)
Rhode Island (67.12%)
Wisconsin (66.73%)
Wyoming (63.96%)
New Mexico (62.71%)
Kentucky (60.19%)
Nebraska (59.68%)
Indiana (59.04%)
Pennsylvania (58.96%)
Utah (58.40%)
Michigan (57.48%)
South Carolina (56.64%)
Oklahoma (55.27%)
North Carolina (54.52%)
Oregon (54.17%)
Ohio (51.91%)

Top 10 U.S. Airports for Regional Departures

Ranked by total scheduled departures with regional aircraft in 2021

- Regional airlines are also important at hubs, bringing smaller community passengers through and beyond.
- Regionals operate more than **half** the departures at many large hub airports.

TOP 10

Rank	Airport	Airport Code	Regional Departures	Total Departures	Regional Share
1	Chicago	ORD	171,634	299,896	57%
2	Dallas	DFW	134,760	309,888	43%
3	Charlotte	CLT	128,432	236,044	54%
4	Denver	DEN	87,206	278,529	31%
5	Houston	IAH	86,905	178,716	49%
6	Atlanta	ATL	76,380	334,194	23%
7	Detroit	DTW	69,979	134,806	52%
8	Minneapolis/StPaul	MSP	60,786	133,996	45%
9	Philadelphia	PHL	57,234	107,272	53%
10	Seattle	SEA	56,875	173,192	33%

#11-20

Rank	Airport	Airport Code	Regional Departures	Total Departures	Regional Share
11	Los Angeles	LAX	52,572	189,903	28%
12	Salt Lake City	SLC	51,293	121,190	42%
13	Washington Dulles Int. Airport	IAD	50,554	82,420	61%
14	Ronald Reagan Washington Nat.	DCA	44,515	85,005	52%
15	New York	LGA	40,695	88,643	46%
16	Phoenix	PHX	39,835	168,890	24%
17	San Francisco	SFO	36,931	105,437	35%
18	Boston	BOS	33,627	110,894	30%
19	Newark Liberty Int. Airport	EWR	32,225	123,535	26%
20	Portland	PDX	21,896	57,846	38%

Small Communities in Crisis



- Larger airlines have drawn thousands of pilots from regional airlines, where pilot shortages preceded the pandemic. The pipeline of replacement pilots is thousands of pilots below need.
- An acute *Captain* shortage is yet another symptom of the overall pilot shortage. Larger airlines draw Captains (and Captain-ready First Officers) from regional airlines, who can only be replaced by other Captains. First Officer hiring will be *additionally and artificially constrained* by the limited number of eligible Captains, despite an overall worsening shortage across all ranks.
- Without pilots to fly them, 414 regional jets have already been parked. Remaining aircraft were flown at a fraction of the norm, and small community air service is collapsing.
- 76% of U.S. communities have already experienced service cuts. The average loss among communities with losses was 30% fewer flights. The situation has continued and will worsen without intervention.

Network Carriers on the Pilot Shortage

“We, along with Delta, American and Southwest alone are planning to hire about 8,000 pilots this year, compared to historical supply in the 6,000 to 7,000 range. Pilots are and will remain a significant constraint on capacity.”

- Scott Kirby, United Airlines CEO,
January 18, 2023 earnings call

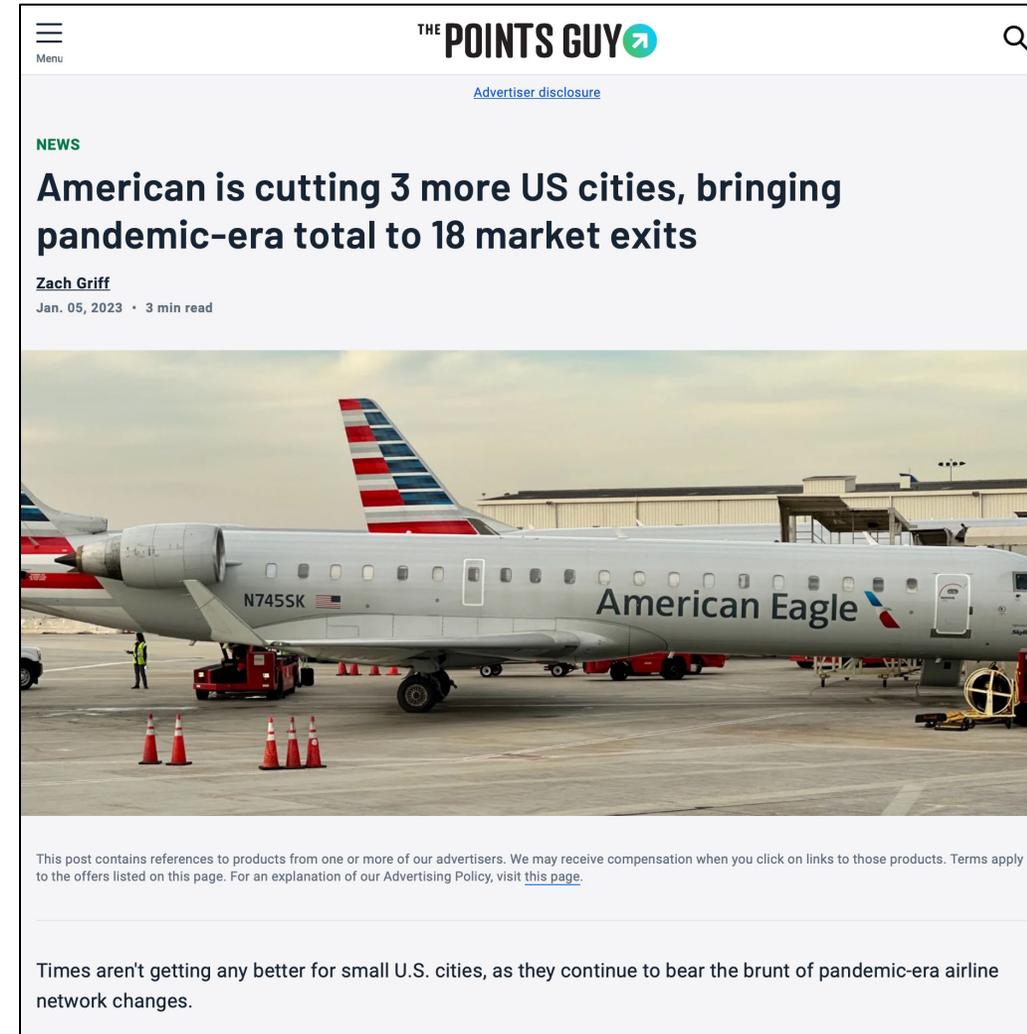


Sources: UAL 4Q/FY22 Earnings Call, January 18, 2023. See: <https://ir.united.com/static-files/5b5b2c9c-aa92-44da-ad37-753035bedd8d>. and

Network Carriers on the Pilot Shortage

“It's really unfortunate that we've had to reduce service anywhere, most especially to some of the smaller communities. That's certainly a result of the issues that we faced with pilot staffing at our regional airlines.”

– Robert Isom, American Airlines CEO,
January 26, 2023 earnings call

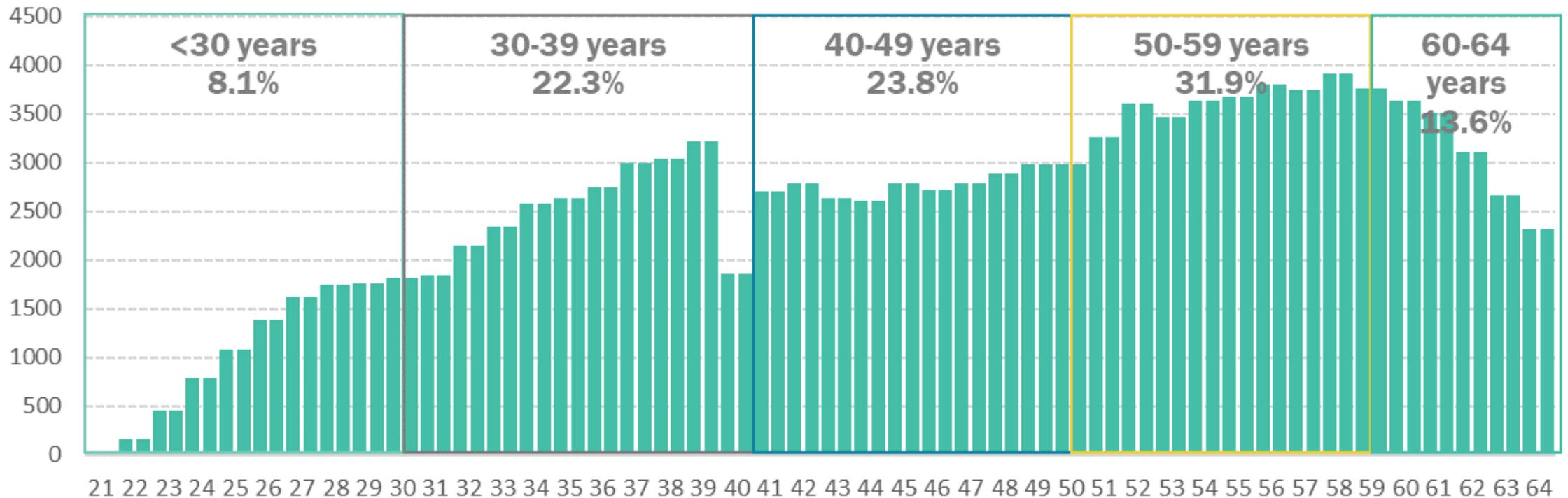


The screenshot shows a news article from 'THE POINTS GUY'. The article title is 'American is cutting 3 more US cities, bringing pandemic-era total to 18 market exits' by Zach Griff, dated Jan. 05, 2023. The article includes a photo of an American Eagle regional jet (N745SK) on a tarmac. Below the photo, there is a disclaimer: 'This post contains references to products from one or more of our advertisers. We may receive compensation when you click on links to those products. Terms apply to the offers listed on this page. For an explanation of our Advertising Policy, visit [this page](#).' At the bottom of the article, there is a paragraph: 'Times aren't getting any better for small U.S. cities, as they continue to bear the brunt of pandemic-era airline network changes.'

The Pilot Shortage – Data

Qualified Pilot Population is Disproportionately Older

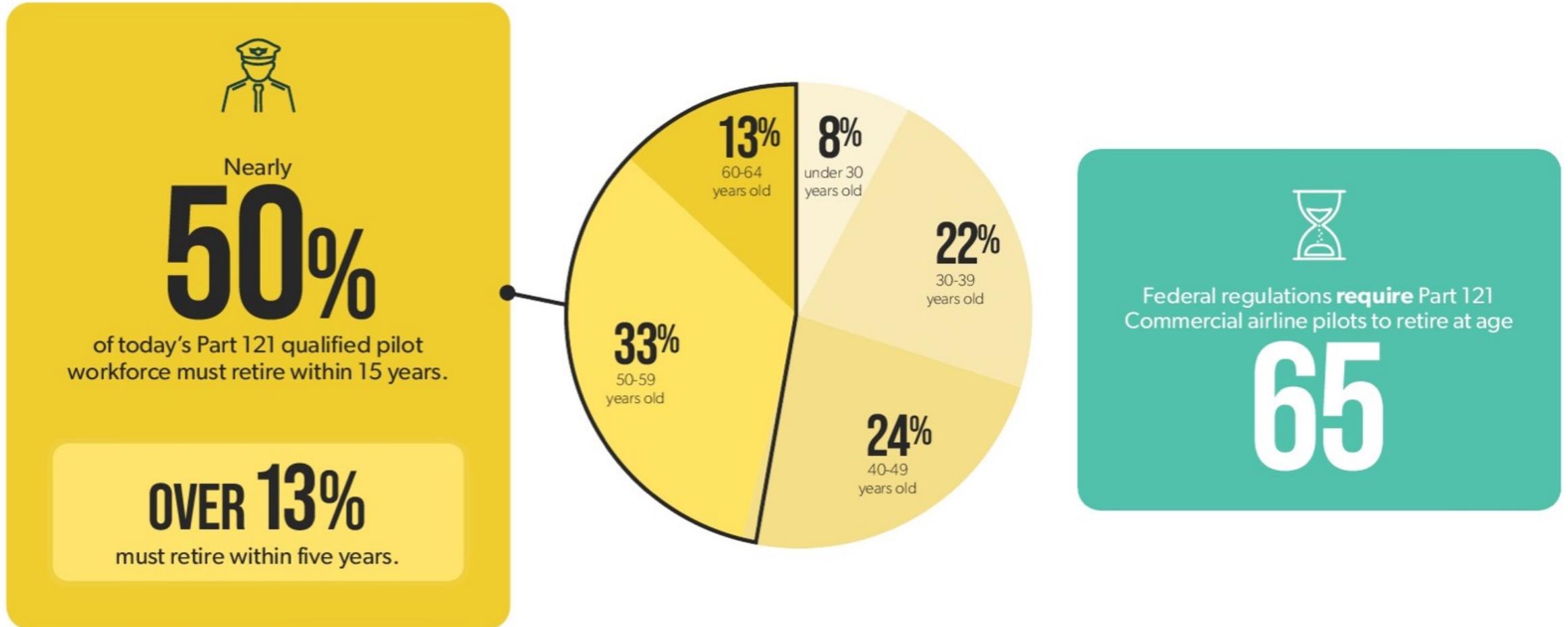
- There are 70% more pilots aged 43-64 than there are pilots aged 21-42
- Mandatory retirements will grow in the coming years. Approximately 2,225 pilots will retire in 2023. Retirements peak, at approximately 3,750, in 2029, remaining high thereafter.



ATP AMEL Pilots with Valid 1st Class Medicals by Age

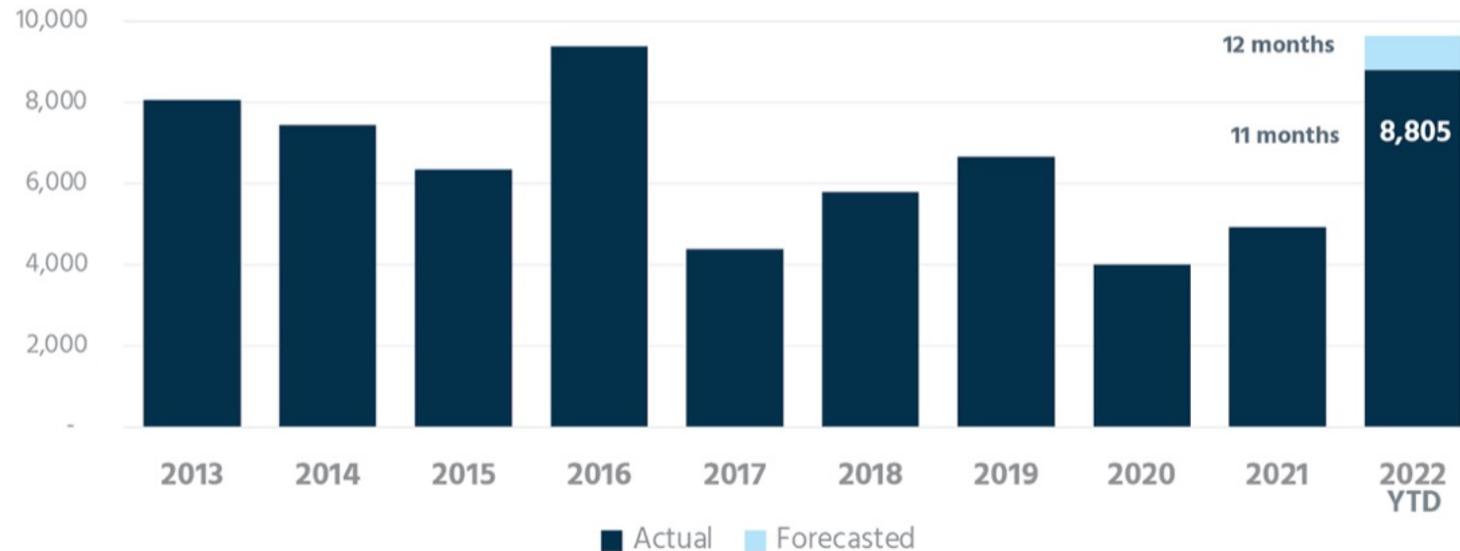
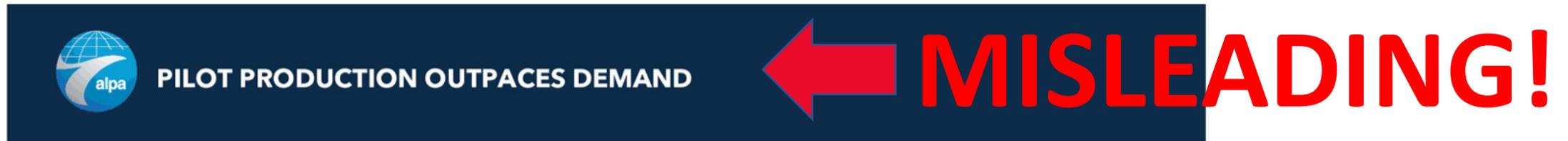
Part 121 Airline Pilots must retire at Age 65

Existing Pilots are Rapidly Aging Out



Decontextualized Data Misleads

Some have proffered misleading data, stripped of relevant context, to suggest abundant supply of pilots. This is simply inaccurate.

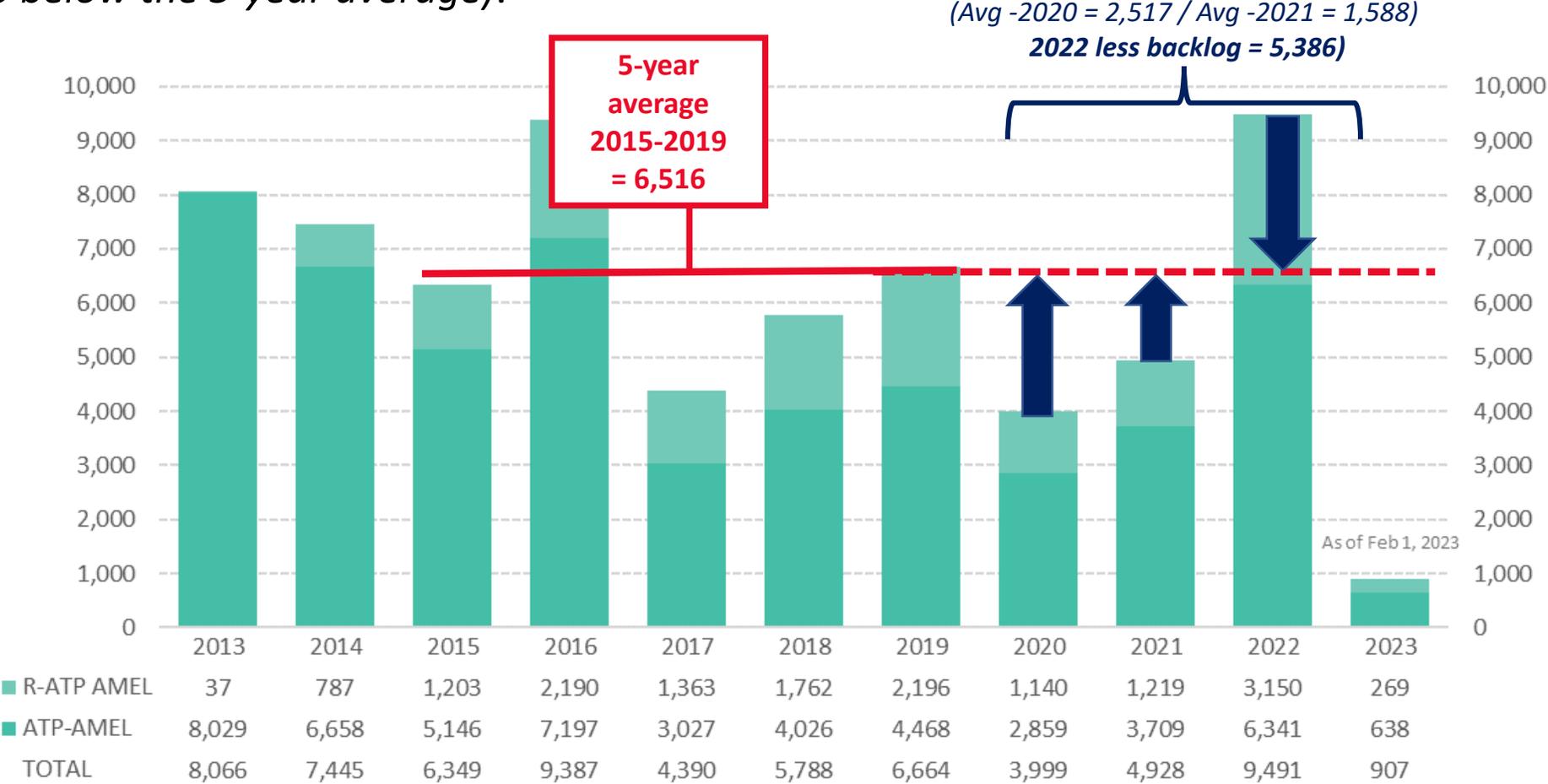


Updated December 2022
Source: FAA

#MoreThanReady

Context Counts with Pilot Qualification Numbers

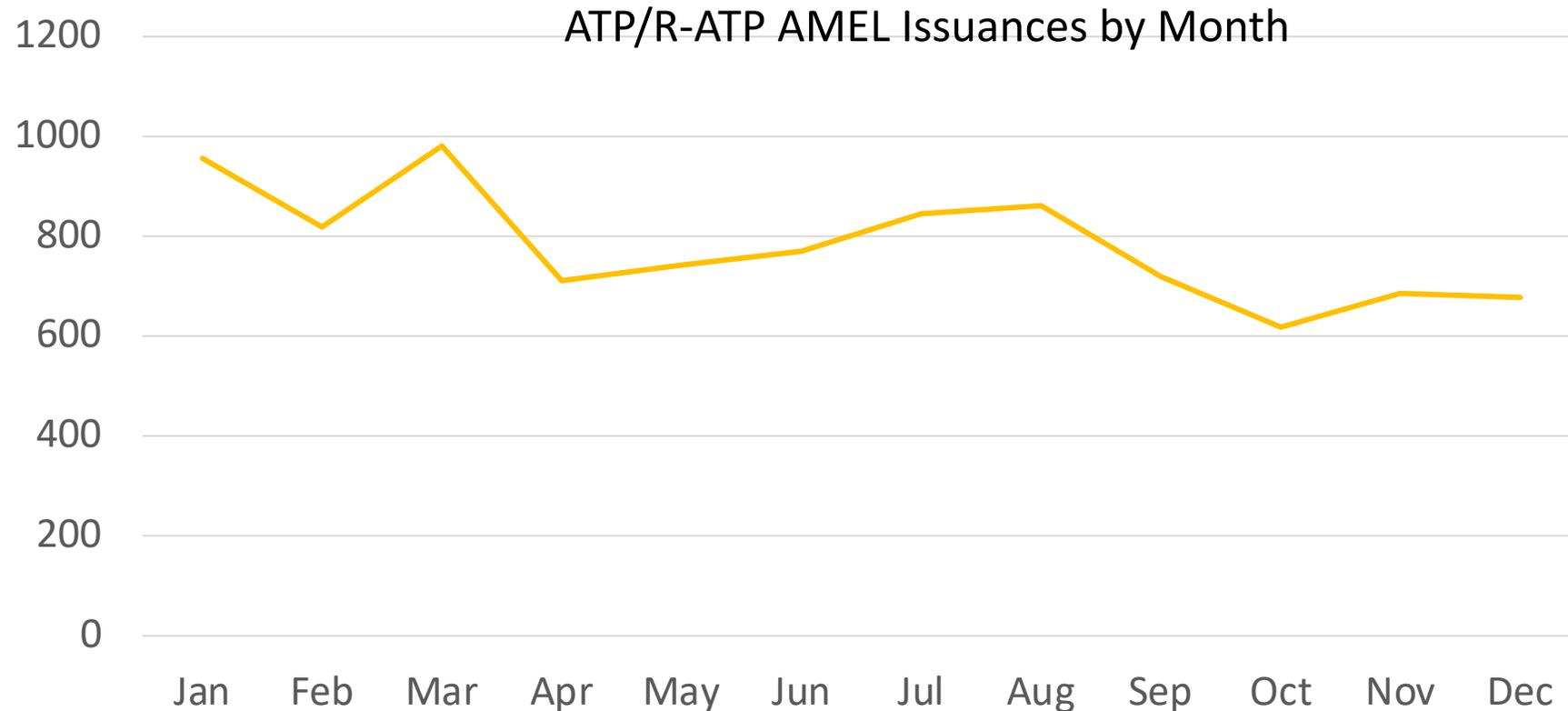
2022 Produced 9,491 new pilot qualifications (ATP/R-ATP AMEL*), which includes a backlog of certifications disrupted by Covid in 2020/2021. Once the COVID backlog is accounted for, 2022 produced only 5,386 new pilots (1,130 below the 5-year average).



*Part 121 Airline Pilots are required to hold an Air Transport Pilot Certificate with Multi-engine Land Aircraft category class rating (ATP AMEL or R-ATP-AMEL).

ATP AMEL Qualifications Moderated over the Year in 2022

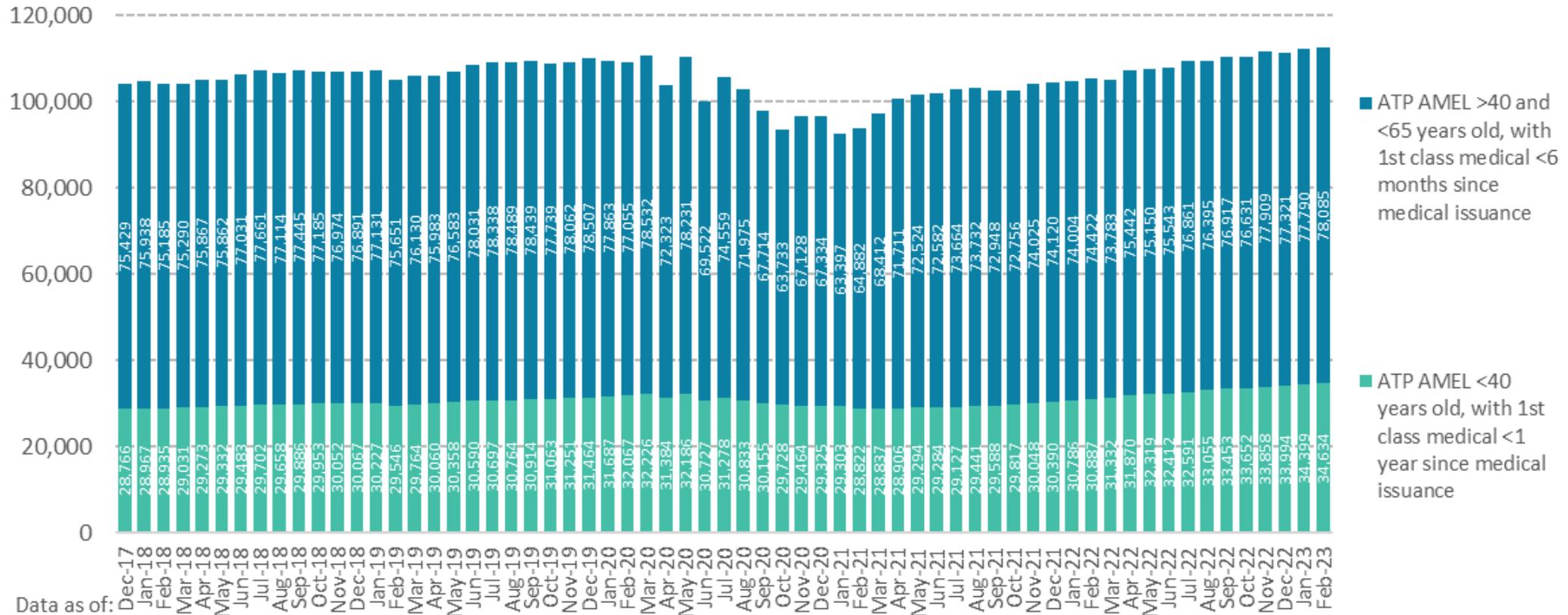
FAA's 2022 monthly issuance rate of ATP/R-ATP AMEL* certificates showed a **clear downward trend** over the year, with the highest certifications taking place in the first quarter.



**Part 121 Airline Pilots are required to hold an Air Transport Pilot Certificate with Multi-engine Land Aircraft category class rating (ATP AMEL or R-ATP-AMEL).*

Qualified Pilot Count is Not Keeping Pace with Need

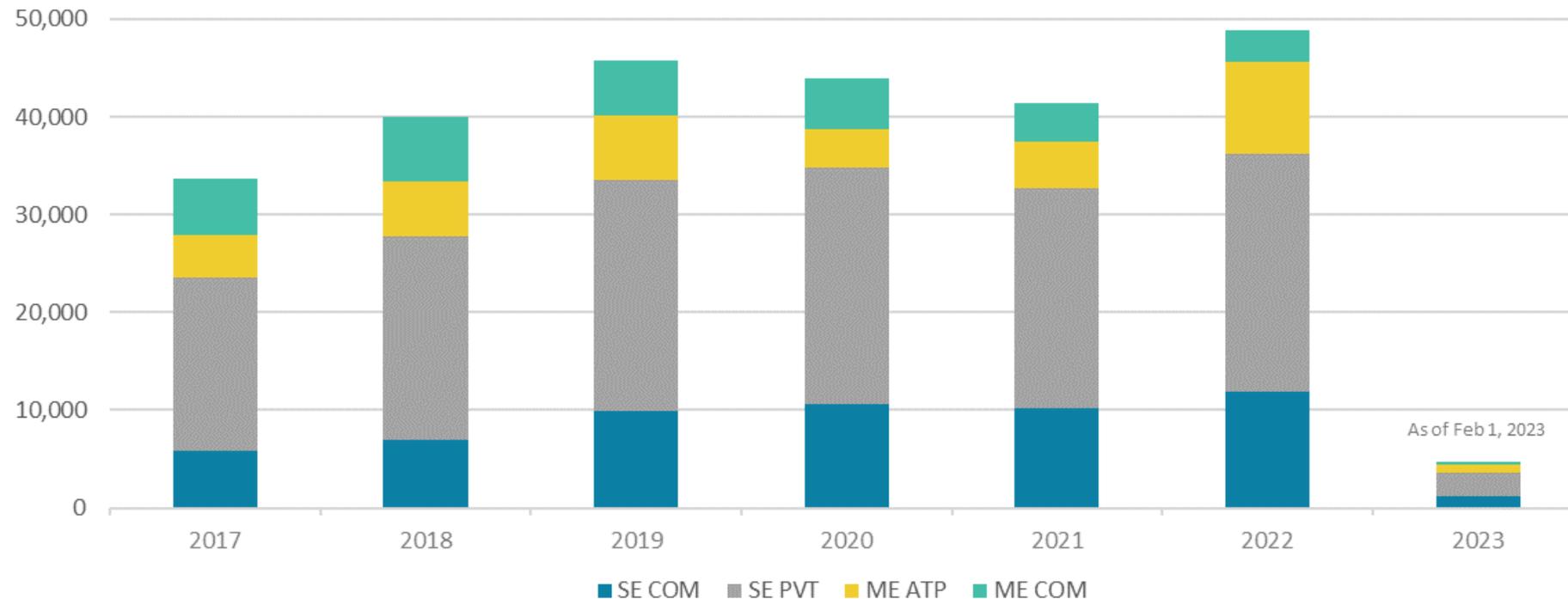
Despite producing a record number of new ATP AMEL* pilots in 2022 (2,975 above average and 5,491 more than produced in 2020), the total ATP AMEL population is only 1,961 greater than the prior peak of March 2020. This further illustrates the clearing of a Covid-disruption backlog and remains far below industry's need.



*Part 121 Airline Pilots are required to hold an Air Transport Pilot Certificate with Multi-engine Land Aircraft category class rating (ATP AMEL or R-ATP-AMEL).

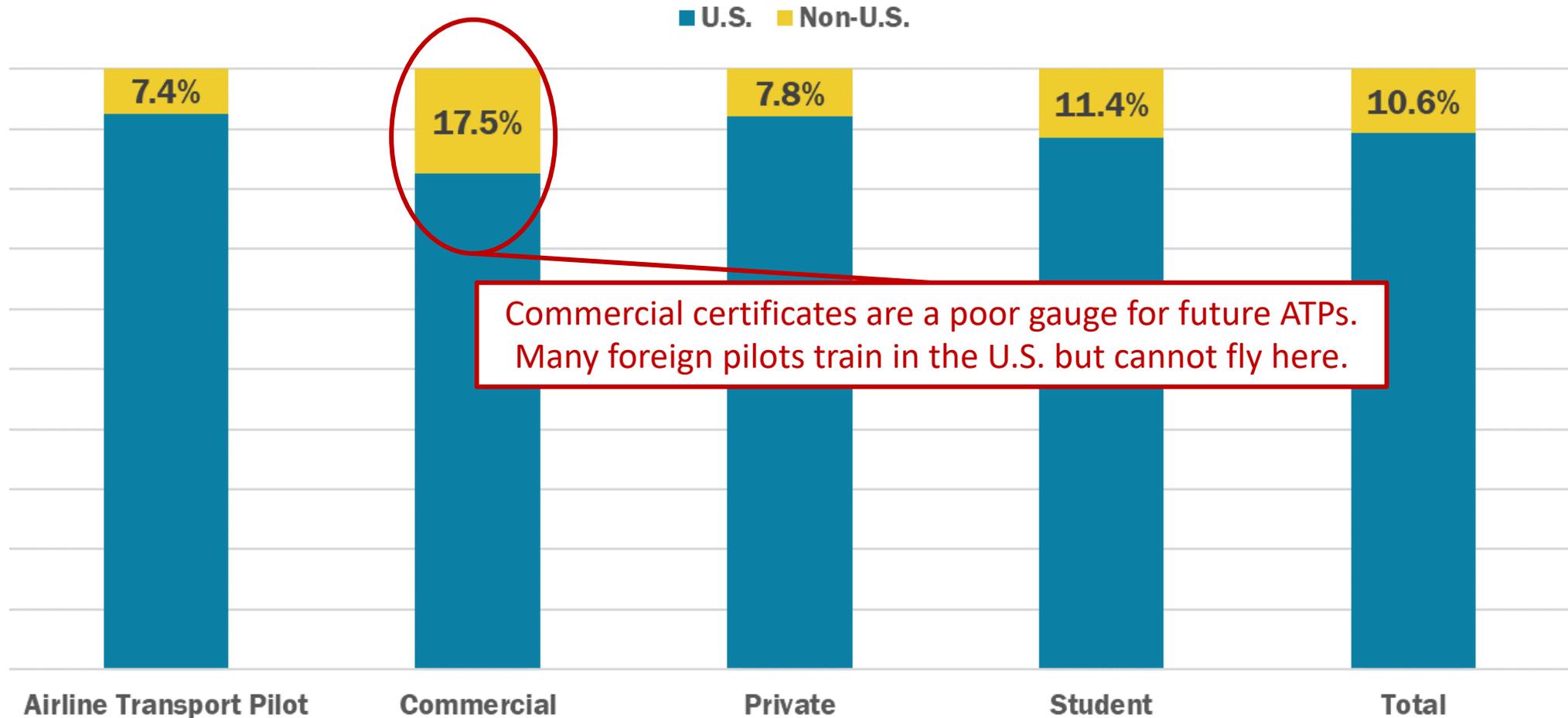
Future Pipelines Lag Prior Years

ME ATP ratings (required for airline part 121 service) have increased, BUT the other categories (pipeline of future pilots) are not keeping the same pace. The other categories must also grow if there are to be more ME ATPs in the future.



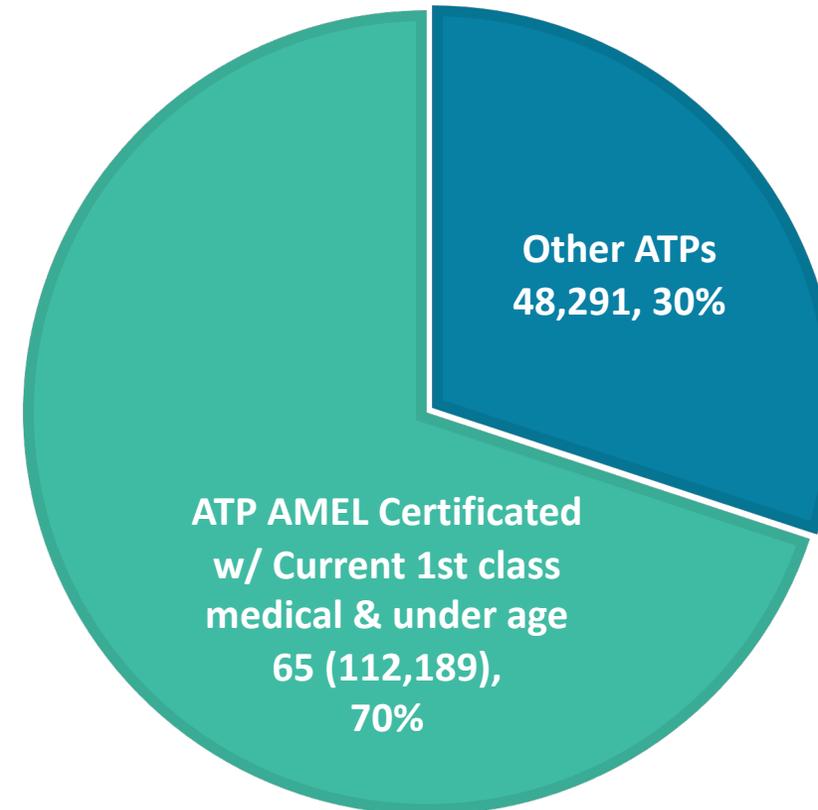
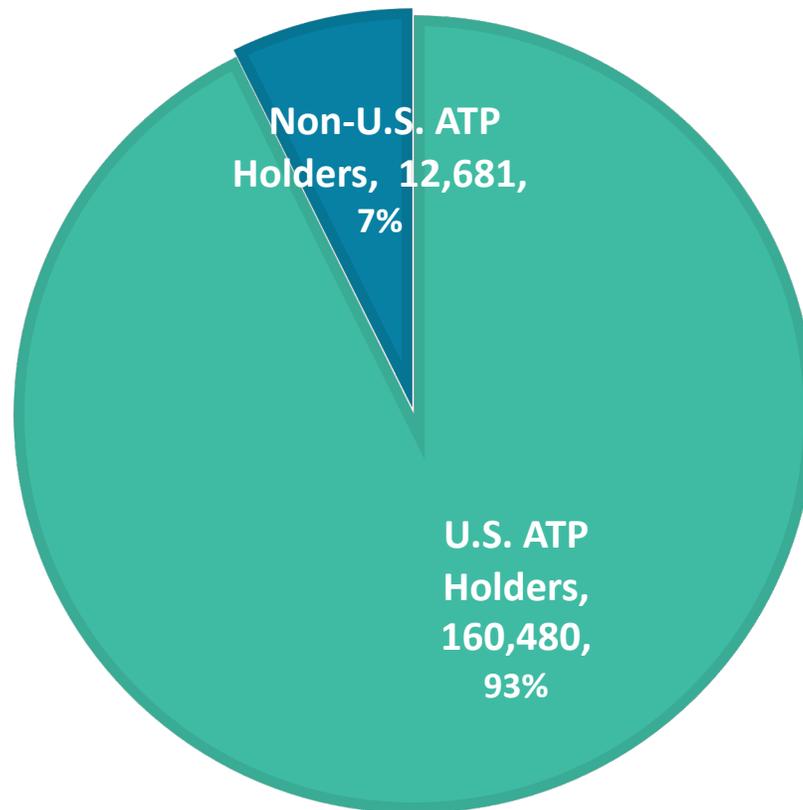
Nearly 1 in 5 commercial pilot certificates held by non-U.S. citizens

Breakdown of foreign nationality/non-U.S. citizenship for each certificate type



What's Inside the FAA's Civil Airmen Database?

Some use the FAA's Air Transport Pilot (ATP) certificate to discuss pilot supply. Notably, more than 1/3 of the 173,161 ATP certificate holders in FAA's Civil Airmen Database are ineligible for hire.



Of Remaining, *Potentially* Eligible Pilots....

- Of the 112,189 remaining ATP *potentially* eligible pilots, 97,589 are already working for the largest commercial carriers.
- Business aviation and charter operators employ thousands more ATP pilots not reflected at right – nearly every eligible pilot is already working.
- **Additional disqualifications**—*in a profession where safety is paramount*—are not quantifiable in the FAA dataset, such as:
 - Check-ride failures
 - Poor piloting ability
 - Instrument proficiency
 - Criminal record
 - Recency and type of experience

Select Airline Pilot Counts

All RAA Members	18,682
American	15,156
Delta	14,561
United	13,023
Southwest	9,122
FedEx	5,037
JetBlue	4,650
UPS	3,446
Alaska	3,400
Spirit	3,225
Atlas	2,500
Frontier	1,910
Allegiant	1,141
Hawaiian	847
Sun Country	462
Avelo	127
Breeze	300
Total Count	97,589

Source: Pilot seniority lists (select airlines only) posted on www.airlinepilotcentral.com as of 1/23/2023

Pilot Shortage is Parking Regional Aircraft



1,852

Total RAA member
operated aircraft.

BLS
Projected
Yearly
Commercial
/ Airline Pilot
Openings
thru 2030 =
18,100

2022*
ATP/R-ATP
new
certificates =
9,491

18,100 –
9,500 =
8,600
potential
pilot shortfall

At 12 pilots
per aircraft,
a shortfall of
8,600 pilots
could park
716 aircraft.

414 Regional
Jets have
already been
parked.

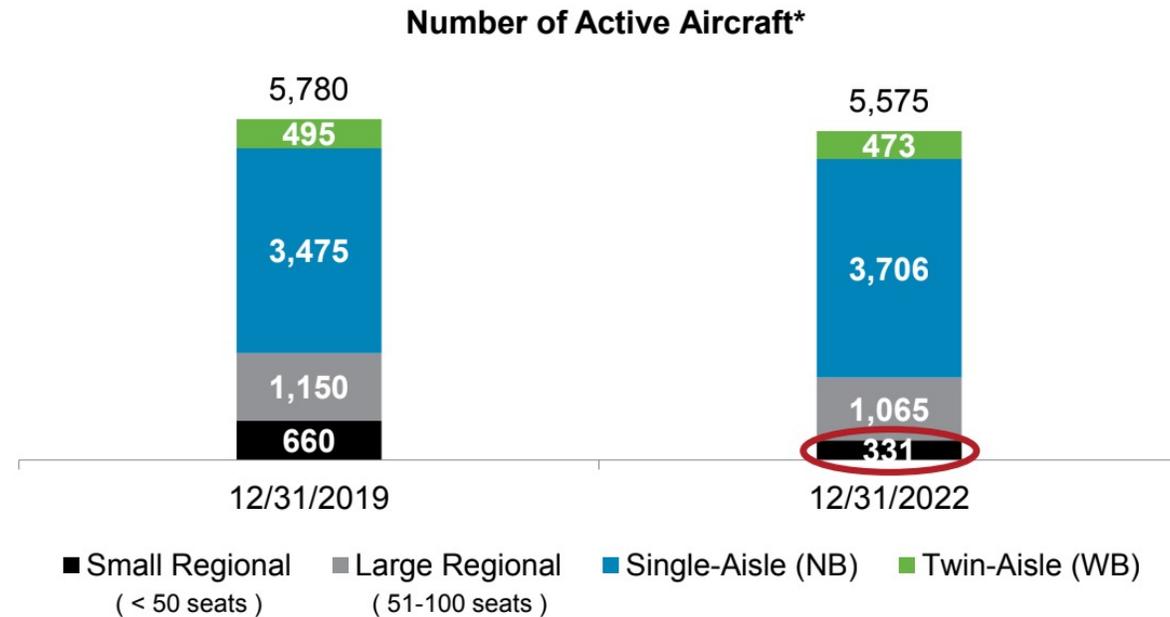
Capacity *also*
extracted by
lower
utilization of
remaining
fleet.

*2022 output was higher than usual, due to catch up certifications paused during training – *FAA's five-year average yearly R-ATP/ATP certification issuance is 6,516 certificates per year.*

Parked Regional Aircraft Cannot Serve Communities

- A4A analysis shows 414 Regional aircraft have been parked since 2019.
 - 329 small RJs
 - 85 large RJs

U.S. Passenger Airlines' Active Fleet Is Just 4% Smaller Than at End of 2019
But They Are Operating Only Half as Many Small Regional Aircraft



Source: Anuvu (formerly Global Eagle masFlight)

* Operated by or on behalf of Alaska/Allegiant/American/Delta/Frontier/Hawaiian/JetBlue/Southwest/Spirit/Sun Country/United in any of the previous seven days



Pilot Shortage is Reducing Regional Aircraft Utilization

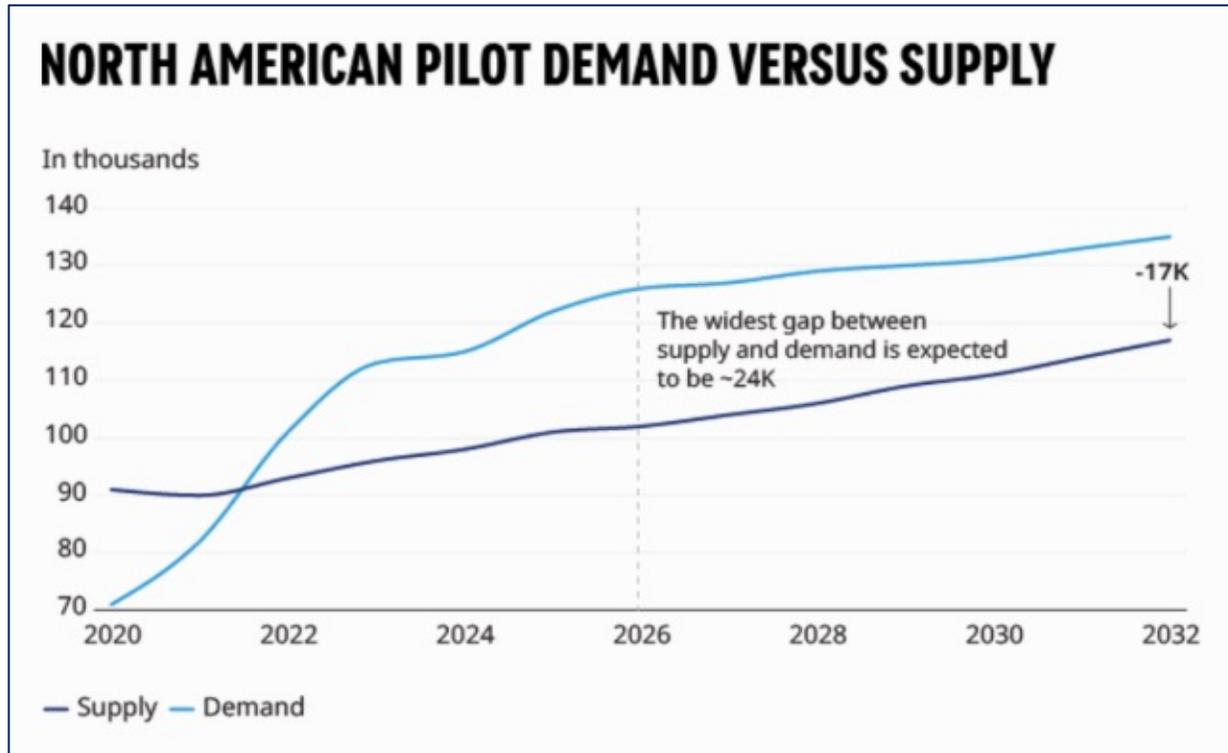
Smallest Aircraft Sharply Reduced (Block hours is a measurement of aircraft use)

NETWORK CARRIER BLOCK HOUR CHANGES: JUL 2022 - JAN 2023								
Scheduled Block Hours by Equipment Type by Month								
		July		October		January		Changes Jul - Dec
AA	Mainline	209,357	60.8%	206,579	63.6%	203,335	63.9%	-2.9%
	Dual Class	112,653	32.7%	101,341	31.2%	99,672	31.3%	-11.5%
	50-Seat	22,257	6.5%	16,660	5.1%	15,371	4.8%	-30.9%
	Total	344,267	100.0%	324,580	100.0%	318,379	100.0%	-7.5%
DL	Mainline	205,007	71.4%	194,773	72.1%	203,717	74.7%	-0.6%
	Dual Class	70,882	24.7%	67,701	25.1%	63,877	23.4%	-9.9%
	50-Seat	11,427	4.0%	7,782	2.9%	5,177	1.9%	-54.7%
	Total	287,316	100.0%	270,256	100.0%	272,771	100.0%	-5.1%
UA	Mainline	176,790	64.5%	168,519	65.3%	177,761	68.9%	0.5%
	Dual Class	57,962	21.2%	52,232	20.2%	49,196	19.1%	-15.1%
	50-Seat	39,223	14.3%	37,334	14.5%	31,133	12.1%	-20.6%
	Total	273,975	100.0%	258,085	100.0%	258,090	100.0%	-5.8%
Group	Mainline	591,154	65.3%	569,871	66.8%	584,813	68.9%	-1.1%
	Dual Class	241,497	26.7%	221,274	25.9%	212,745	25.1%	-11.9%
	50-Seat	72,907	8.1%	61,776	7.2%	51,681	6.1%	-29.1%
	Total	905,558	100.0%	852,921	100.0%	849,240	100.0%	-6.2%

Source: Volaire Aviation Consulting Analysis of Scheduled Block Hours by Equipment Type by Month July 2022– January 2023

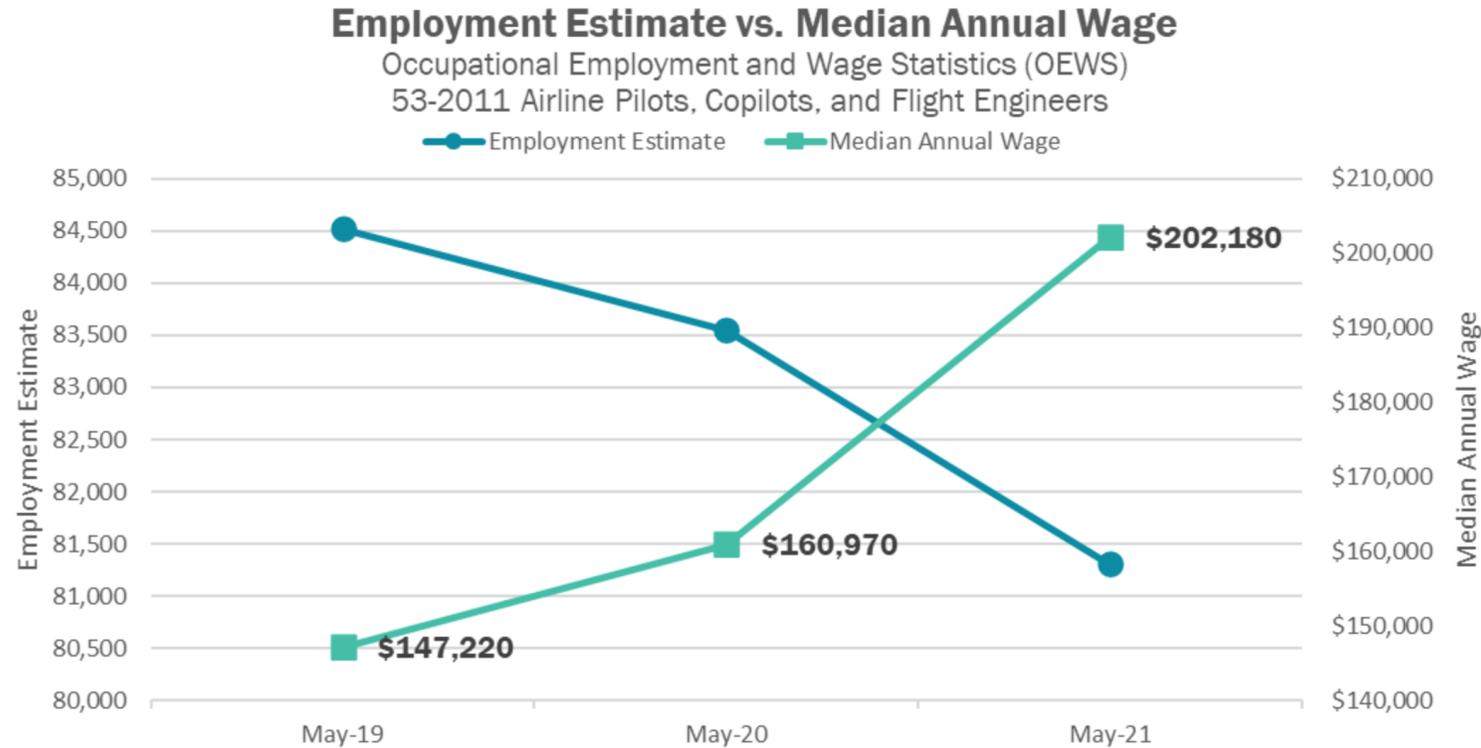
Oliver Wyman Research:

- North America will be 17,000 pilots short of need (15% of current workforce) for the next two years, **peak at 24,000 short of need (23% of current workforce) in 2026** and will remain 17,000 (15%) short of need by 2032.
- 84% of recruiters faced challenge or extreme challenge recruiting qualified pilots last year



U.S. BLS Data Shows Pilot Workforce is Shrinking (Despite Pay Increases)

Median wage for pilots was \$202,180, compared to median wage for all occupations of \$58,260 in 2021.



The US Bureau of Labor Statistics (BLS) shows airline and commercial pilots had the second-highest median pay, behind only medicine. Massive, additional pay increases have been made since 2021.

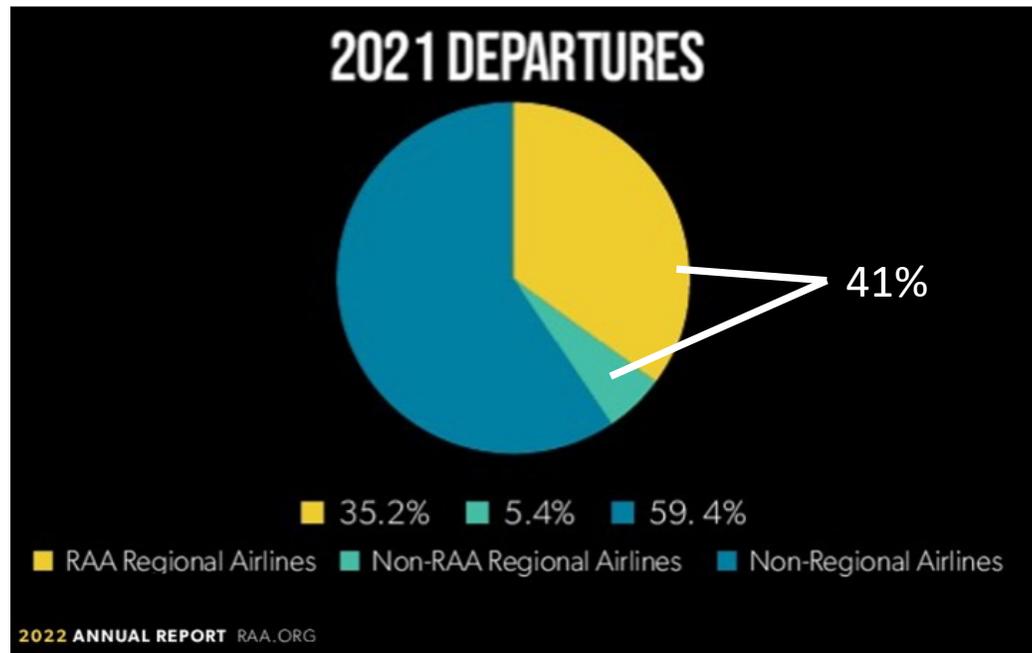
BLS projects **18,100 openings for airline and commercial each year over the next decade.**

Air Service Loss

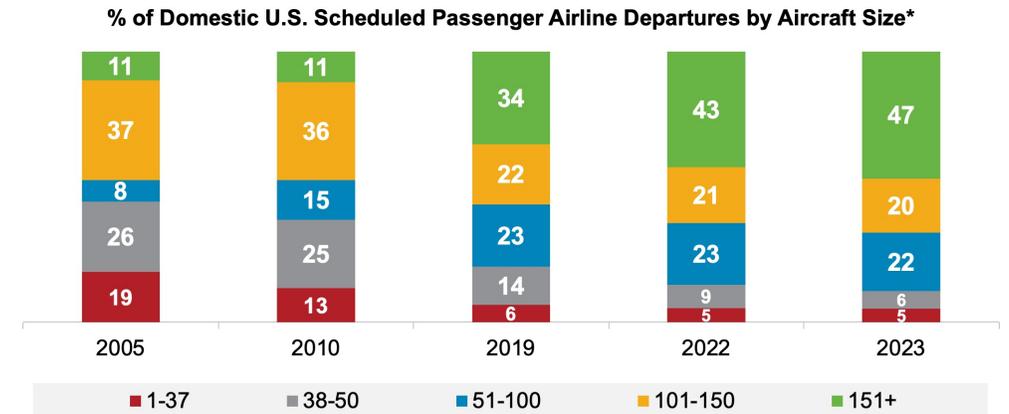
Small Community Air Service is Collapsing as a Result of the Pilot Shortage;
The Crisis Will Worsen without Intervention.

Air Service Declines Follow Regional Airline Industry Contraction

- Regional airlines operated 41% of U.S. departures in 2021; by 1Q 2023, regional airlines operated just 33% of departures.
- This void is not being filled by larger carriers; 76% of U.S. Airports have experienced air service loss. **The average loss was 30% of departures.**



Upgauging and the Growth of ULCCs / Other Mainline-Only Carriers Has Boosted Aircraft Size Regionals Account for 33% of Domestic Departures in 1Q23, and Two-Thirds of Those Are > 50 Seats



324 U.S. airports (76%) lost service – *airports losing service lost average of 30 % of their flights*

152 airports (35%) lost more than 25% of flights

53 airports (12%) lost more than half their flights

14 airports (3%) lost all scheduled, commercial flights

Source: OAG Published Schedules January 2020 vs. January 2023 (Analysis excludes Alaska)

AVIATION

Small communities see airlift vanish as pilot shortage hits regional flyers

By Robert Silk | Feb 22, 2022

🖨️ | A+ A-



Williamsport, Pa., home to the Little League World Series, lost its lone airline route last September. Photo Credit: Courtesy of Lycoming County Visitors Bureau

Smaller Airports Hurt Worst

Comparing January 2020 with January 2023

- **20 large hub airports lost flights;**
the average loss was 11%
- **24 medium hub airports lost flights;**
the average loss was 15%
- **54 small hub airports lost flights;**
the average loss was 19%
- **176 non-hub airports lost flights;**
the average loss was 32%
- **50 nonprimary airports lost flights;**
the average loss was 45%

Data Source: OAG Published Schedules January 2020 vs. January 2023
(Analysis excludes Alaska)

AVIATION

Small communities see airlift vanish as pilot shortage hits regional flyers

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Williamsport, Pa., home to the Little League World Series, lost its lone airline route last September. Photo Credit: Courtesy of Lycoming County Visitors Bureau



American is cutting 3 more US cities, bringing pandemic-era total to 18 market exits

In a statement confirming the city cuts, an American spokesperson shared:

“In response to the regional pilot shortage affecting the airline industry and soft demand, American Airlines has made the difficult decision to end service in Columbus, Georgia (CSG), Del Rio, Texas (DRT) and Long Beach, California (LGB) this spring. We’re extremely grateful for the care and service our team members provided to our customers in these cities, and are working closely with them during this time. We’ll proactively reach out to customers scheduled to travel to offer alternate arrangements.”

These three affected cities join a growing list of [65 domestic airports](#) that have lost service by one of the big three U.S. airlines (American, Delta and United) during the pandemic, according to Cirium schedules and analysis performed by aviation consulting firm Ailevon Pacific.

All these station exits come at a time when major airlines have been facing [staffing shortages](#), particularly in their pilot ranks. The [pilot shortage](#) has been especially challenging for regional affiliates that have historically served as stepping stones for budding aviators looking to jump-start their careers and eventually work at major U.S. carriers.

<https://thepointsguy.com/news/american-cuts-us-cities/>

<https://www.travelweekly.com/Travel-News/Airline-News/Small-communities-see-airlift-vanish-as-pilot-shortage-hits-regional-flyers>

Dubuque? We Don't Fly There Anymore. Airlines Say Goodbye to Regional Airports.

Small-market airports have borne the brunt of schedule cutbacks, with some losing commercial service entirely. That has travelers facing steeper fares, inconvenient routes or long drives to bigger terminals.

Give this article



1.4K



In September, American Airlines stopped flying to MacArthur Airport in Islip, N.Y., part of the continued deterioration of service at the country's smaller airports. Kirk Condyles for The New York Times

By Julie Weed

Published Nov. 23, 2022 Updated Dec. 3, 2022

Airports that have Lost *All* Scheduled Flights:

- San Carlos, CA (SQL)
- Cincinnati, OH (LUK)
- Seattle, WA (BFI)
- Seattle, WA (LKE)
- Williamsport, PA (IPT)
- Atlanta, GA (PDK)
- Grand Canyon West, AZ (GCW)
- Cleveland, OH (BKL)
- Destin/Ft. Walton Beach, FL (DSI)
- Morrisville/Stowe, VT (MVL)
- Mobile, AL (BFM)
- Ogden, UT (OGD)
- Montauk, NY (MTP)
- Dubuque, IA (DBQ)

Toledo Largest U.S. City to Lose *1* Service Due to Pilot Shortage

Edward Russell, Skift

June 16th, 2022 at 3:11 PM EDT

Share



Toledo, Ohio, has the unfortunate distinction of being the largest U.S. city, and one of the first, to entirely lose air service on a network carrier due to the [pilot shortage](#).

American Airlines will end flights to Toledo from Chicago O'Hare on September 7 citing the "regional pilot staffing shortage," a spokesperson confirmed Thursday. With American's departure, Toledo will lose its sole connection to the global airline network — in other words, there are no longer one-stop flight connections to Los Angeles, New York, or Tokyo. Allegiant Air will continue to serve Toledo but the discounter serves a leisure traveler niche of people that only want to go to Orlando or Phoenix, and not further afield.



(MrJacon000/Wikimedia)

Airports that have Lost *More than 60%* of scheduled flights:

- Fort Dodge, IA (FOD)
- Johnstown, PA (JST)
- Riverton, WY (RIW)
- Alamosa, CO (ALS)
- Kalamazoo, MI (AZO)
- Hilton Head Isl, SC (HHH)
- Sacramento, CA (SCK)
- Las Vegas, NV (BLD)
- Mason City, IA (MCW)
- Pocatello ID (PIH)
- Wenatchee WA (EAT)
- Hawthorne, CA (HHR)
- New York, NY (SWF)
- Yakima, WA (YKM)
- Muscle Shoals/Florence, AL (MSL)
- Kapalua, HI (JHM)
- Toledo, OH (TOL)

Airports that have Lost *More than 50%* of Scheduled Flights:

- Champaign/Urbana, IL (CMI)
- Decatur, IL (DEC)
- Victoria, TX (VCT)
- Evansville, IN (EVV)
- Columbia, MO (COU)
- Joplin, MO (JLN)
- Akron/Canton, OH (CAK)
- Walla Walla, WA (ALW)
- Burlington, IA (BRL)
- Altoona, PA (AOO)
- Wilkes-Barre/Scranton, PA (AVP)
- La Crosse, WI (LSE)
- Eau Claire, WI (EAU)
- Wausau WI (CWA)
- Elmira/Corning NY (ELM)
- Newport News/Williamsburg, VA (PHF)
- Lansing, MI (LAN)
- Hyannis, MA (HYA)
- Twin Falls, ID (TWF)
- Rochester, MN (RST)
- Everett, WA (PAE)
- Latrobe, PA (LBE)

Airlines forced to drop service at these US airports due to the pilot shortage

By Chris Isidore, CNN Business Jul 12, 2022 0

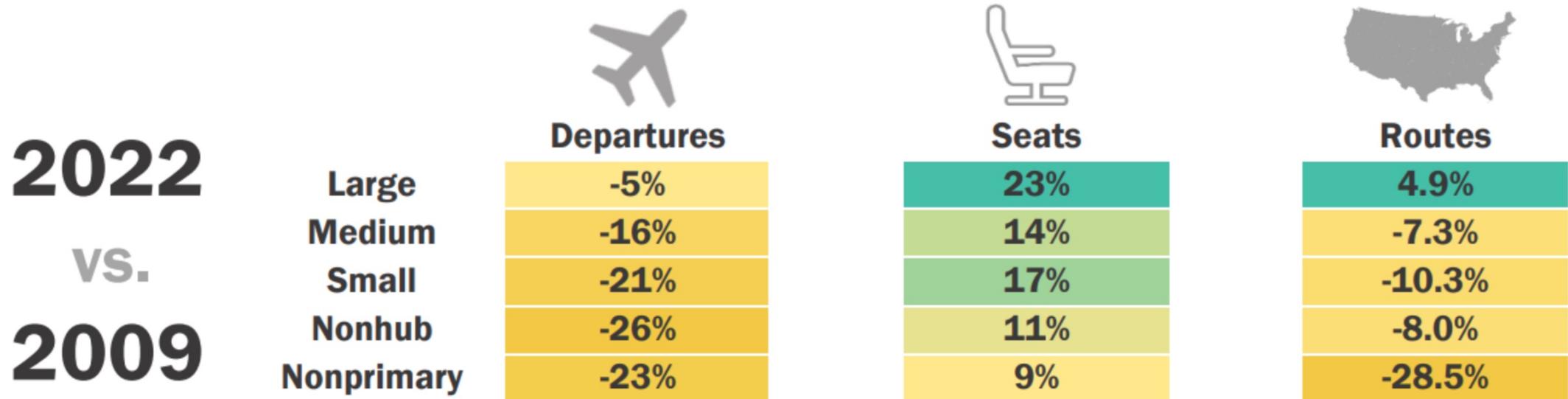


American Airlines is dropping its routes due to a lack of pilots needed to staff the regional jets serving the airport. The airline is also dropping service in Islip, New York, on eastern Long Island, Ithaca, New York, the upstate home of Cornell University, and Toledo, Ohio, for the same reason.

Chris Heloren/Reuters

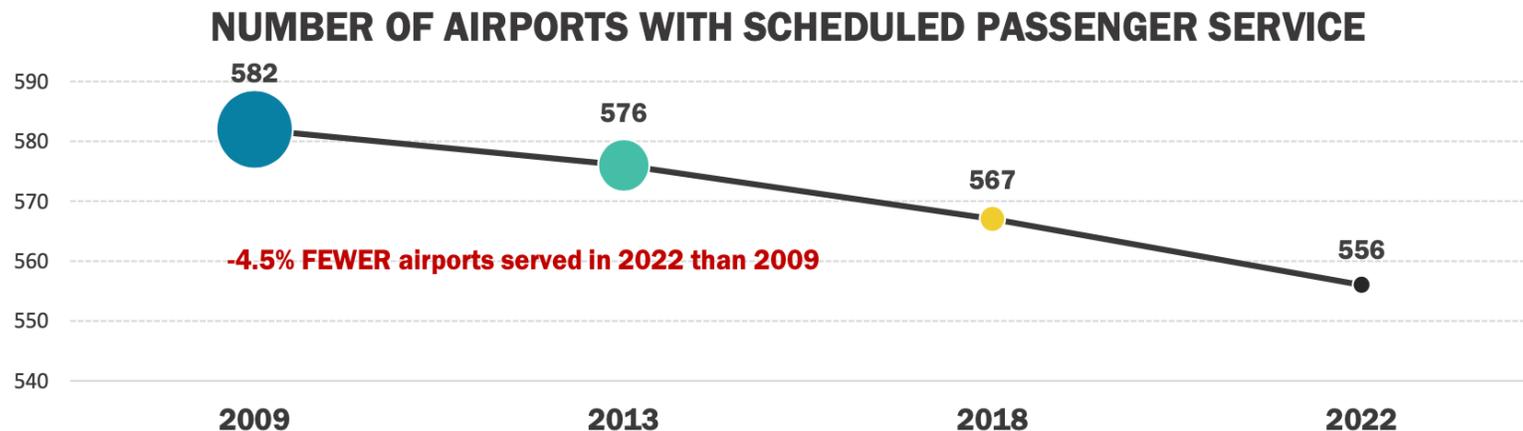
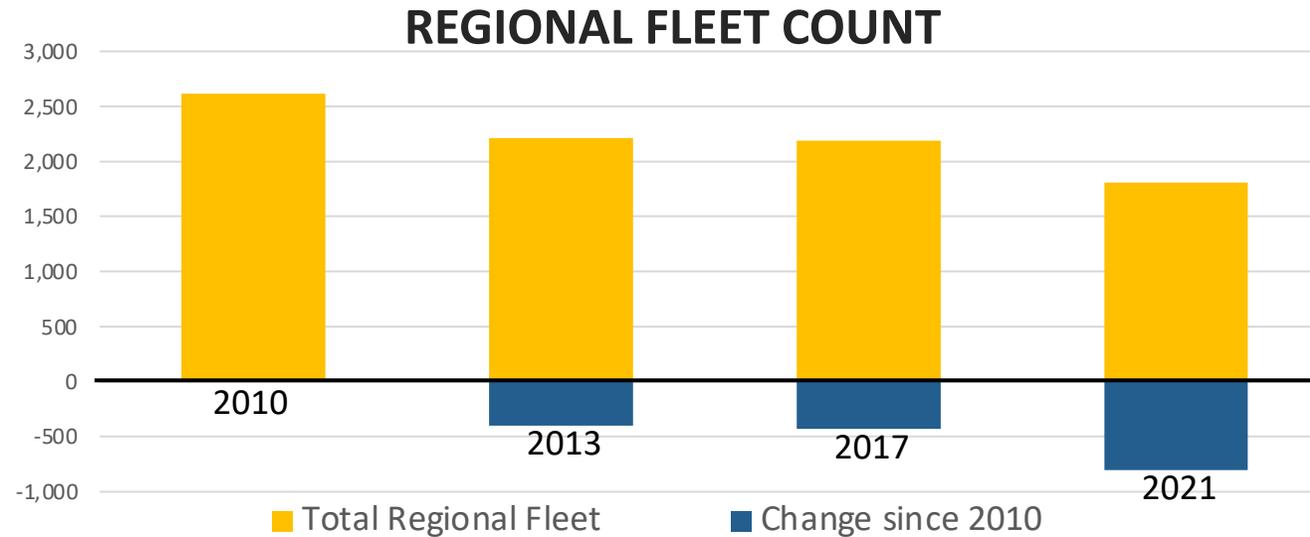
Major Airlines Have Not and *Cannot* Replace Most Regional Flights

Regional airlines use aircraft rightsized for smaller markets. When larger aircraft with more seats can be used, all but the very largest airports lose both destination options and frequency. Airports of all sizes lose frequency.



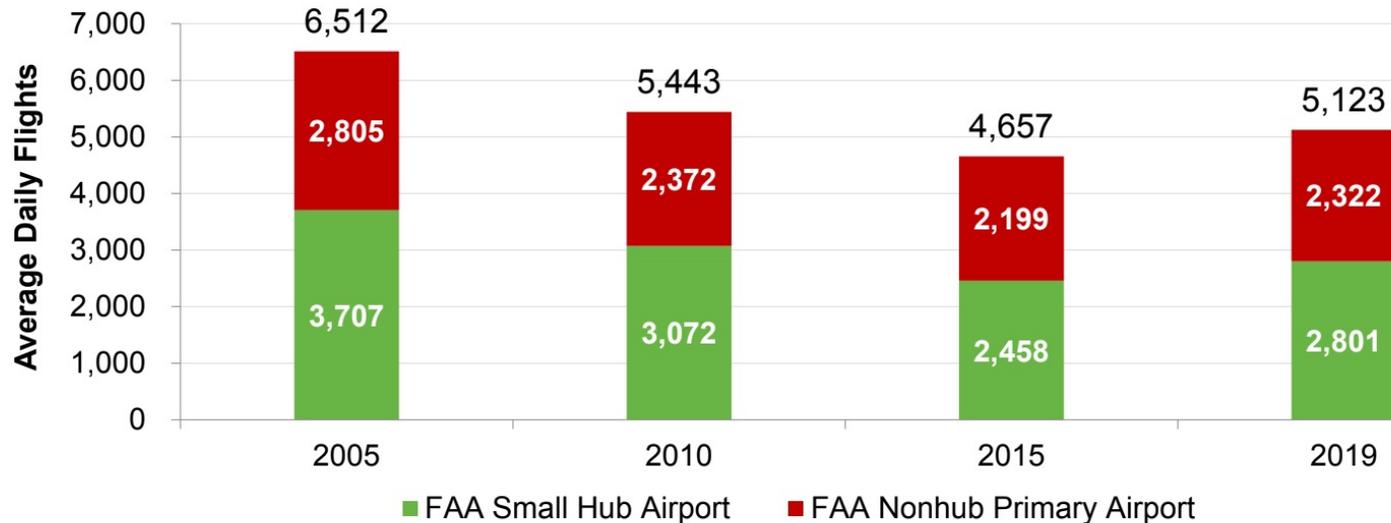
Communities Lose Service When Regional Airlines Shrink

Many airports simply cannot support service with larger aircraft at all. Many communities **lost all of their air service** when the regional industry contracted.



Small Markets Served by 50 Seat Aircraft are not “Upside Down”

Scheduled Flights From Small Community U.S. Airports* Up 10 Percent From 2015 to 2019
Flights Up 14 Percent at “Small Hub” Airports and 6 Percent at “Nonhub” Airports



- 50 seat aircraft utilization is declining because of the pilot shortage, not "poor market economics."
- 50 seat served markets were **growing** in '19 and in '21, demonstrating ongoing demand for air travel in these markets.

Notes: Recession (Dec-2007–Jun-2009); FAA pilot qualification (1,500-hour) rule effective Jul-2013; pilot flight/duty/rest rule effective Jan-2014

* Per https://www.faa.gov/airports/planning_capacity/passenger_cargo_stats/categories/, U.S. airports with less than 0.25% of annual passenger boardings

Sources: Diao by Cirium published schedules as of Jan. 10, 2020, for all airlines providing scheduled passenger service from U.S. airports to all destinations

Economic Importance of Air Service

- According to a U.S. Government Accountability Office (GAO) report on small community air service development released on March 26, 2020: “Communities of all sizes seek access to air service as a driver for attracting investment, generating employment, and providing mobility for citizens. Small communities obtain economic benefits from connection to the global air transportation network. Direct service to a mainline airline’s hub provides one-stop access to hundreds of additional destinations around the globe.”
- According to the Federal Aviation Administration, aviation is important to economic performance because it supports economic output, attracts business and tourism, supports local economic development, and helps retain jobs that might otherwise be relocated elsewhere.

Sources: <https://www.gao.gov/assets/700/698730.pdf>

and https://www.faa.gov/about/plans_reports/media/2020_jan_economic_impact_report.pdf

Economic Impact of Air Service Loss

- **Caterpillar** CEO Jim Umpleby: “Locating our headquarters [closer to a global transportation hub](#) means we can meet with global customers, dealers and employees more easily and frequently.”
- **Krystal** CEO Doug Pendergast said moving the headquarters to Atlanta will [improve air service](#) to its units.
- “**Albemarle** has been in Baton Rouge for seven years and has decided to move its headquarters to Charlotte. One big draw was [better airline service](#) at Charlotte Douglas International Airport.”
- **Charter** spokeswoman Anita Lamont: “New York's air service [makes it easier to travel](#) to the 25 states where Charter operates, and not have two transfers on the flight.”
- Nonstop, global connections were a big reason **ConAgra** decided to move from Omaha to Chicago in 2015: “Omaha’s relatively slim pickings for [direct flights to major cities](#) can be a big detriment when it comes to selling the city.”
- Agriculture giant **Archer Daniels Midland** [cited air service](#) as one of the benefits of moving its headquarters last year to Chicago from Decatur, Illinois.

The image shows a screenshot of a news article from the Times Free Press. The main headline is "Caterpillar Moving Corporate HQ From Peoria To Chicago". Below the headline, there is a video player showing a man in a suit speaking. To the right of the video player, there is a sub-headline "Krystal offices moving to Atlanta" and a photo of a large, modern office building. Below the photo, there is a caption "Krystal's Chattanooga headquarters" and another sub-headline "One of Chattanooga's best-known corporate icons is headed south." The article also includes a date "October 4th, 2012" and a byline "by Ellis Smith".

Safety Impact of Lost Air Service

- Without reliable and reasonably frequent air service, displaced airline passengers become highway drivers.
- The National Highway Traffic Safety Agency projects that an estimated 42,915 people died in motor vehicle traffic crashes in 2021, a 16 year high.
- Congress and the Administration must take a multi-modal approach to transportation safety.

Wages are High; Career Interest is High; Barriers to Entry are Higher.

The high cost of becoming a pilot puts the career out of reach for most. **Solutions** like equitable education financing, expanded training access and other supports are needed to improve career access, increase pilot supply, and improve diversity within pilot ranks. **Solutions Require Better Pilot Career Access.**



Safety-First Solutions

- Airline outreach, tuition reimbursement, pilot career support, workforce investments and other strategies will continue.
- High pay has not solved lack of flight education access and financing. Policymakers must tackle inequitable access to pilot careers.
- Flight education costs exceed student loan caps by \$80,000 or more; those without wealth or credit have inequitable career access. RAA backs legislation to close the gap, improving pilot supply while strengthening diversity, equity and inclusion in pilot careers.
- Training-based qualification pathways produce **safer** pilots vs. hours-based qualifications, yet access to these proven pathways is limited. The *Airline Safety Act* allows FAA to approve training pathways that enhance safety. FAA must also keep pace with the technological advantages offered by modern flight simulators. FAA's decisions must be based on facts and data, not political pressure.
- Measures like increasing mandatory retirement age to 67 with robust medical screening and Visa streamlining for qualified pilots, can provide immediate relief while longer-term solutions take shape.
- **All solutions must put safety first and follow the law.**

Training-Based Pathways Enhance Safety

Through the *Airline Safety Act of 2010*, which mandated the FAA's First Officer Qualifications (FOQ) Rule, Congress authorized Alternate (R-ATP) Pathways where a portion of a pilots' unsupervised flight hours are replaced by **intensive structured training** as credit toward qualification.



Military and Academic Institutions are already approved for these R-ATP Pathways, but FAA's authority is not limited to existing programs.



Unbiased, empirical data consistently shows newly-hired pilots following structured training-based pathways perform better than hours-based pathways.

More Training = *Higher Safety*



- Pilots following hours-based pathways complete training *then* must fly hundreds of hours in small, single-engine aircraft with little resemblance to commercial airliners, before hire. *No training is given during this time.*
- Pilots fly alone or with students, often in uncontrolled airspace. Insurance prohibits flying in weather or other challenging conditions commercial pilots routinely encounter. Pilots rarely, if ever, encounter engine outs, wind sheer, unusual altitude/upsets, icing, or other key skills relevant to commercial flying.
- Training **recency** is a key component of pilot proficiency. Data shows the longer the time between training and hire, the worse pilots performed when hired. Skills soften as training recency fades.
- Structured training pathways give credit for *additional* training towards a portion of this unstructured flying. Use of simulators and other modern training technologies ensure pilots gain relevant experience alongside superior training. Pilots with these training credits perform better than pilots with higher flight time when hired.
- Airline-based foundational training pathways improve career access by shifting costs from aspiring pilots to the airlines who will hire them, extending career access to those without wealth.

Empirical Data Shows Advantage of Training vs. Hours-Based Qualification

- The Pilot Source Studies (PSS) are independent, academic studies of a pilot's training and qualification background relative to success in initial airline training. FAA used PSS2010 to inform development of the Congressionally-mandated First Officer Qualifications Rule (the Rule), including the Rule's structured training pathways. Later studies examined the effects of the rule.
- PSS2015: Pilots hired after the Rule performed **worse** than before. "The congressionally mandated gap between earning pilot certificates and beginning airline training reduced the positive effects of pilots' educational and experience backgrounds."
- PSS2015 and PSS2018: Successful training completions decreased from 93% before the law to 84% after the law and Post-Law pilots required significantly more extra (remedial) training and extra Initial Operating Experience (IOE) to complete training. Post-law pilots needed more than twice as much extra training than Pre-Law Pilots. By 2018, nearly half (45%) of all new-hire pilots required extra training.
- Each of the studies found pilots with more than 1,500 hours *required more extra training and failed to complete training more than all other groups*. Pilots with fewer than 1,500 hours, had more recent training graduations, or followed structured training pathways required less extra training and completed training more often.

For references, including studies, FAA and NTSB presentations, Congressional testimonies and peer-reviewed academic publications, see:

<https://www.pilotsourcestudy.org>

PSS2015, on the effect of PL 111-216 and the FOQ Rule on pilot hiring and pilot training in US regional airlines:

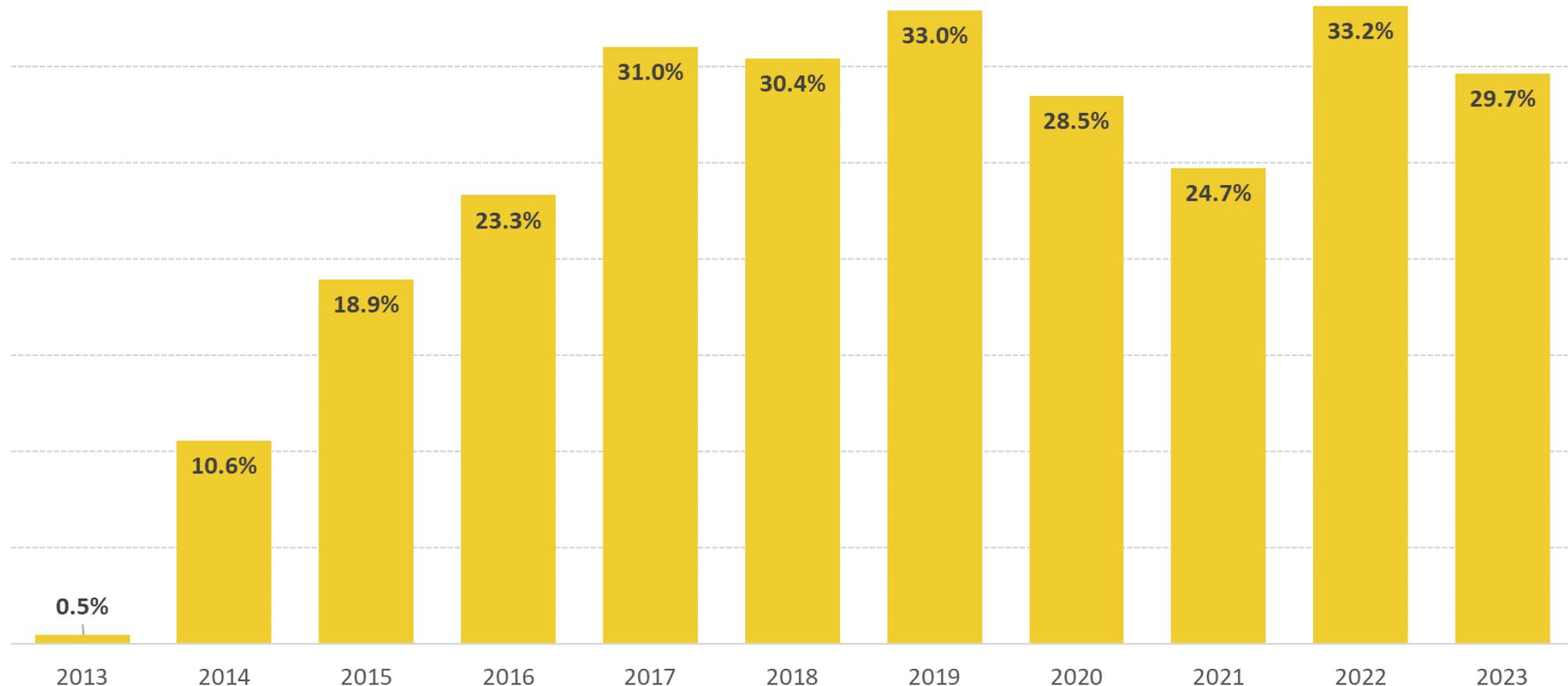
“Contrary to intent, PL 111-216 did not create highly successful regional airline pilots; instead, it eliminated a group of pilots from the pilot pool who had performed well in the earlier Pilot Source Studies 2010 and 2012. The Pilot Source Study 2015 supports the earlier results—pilots with fewer than 1,500 total flight hours were more successful than their counterparts with more total flight hours.”

Source: Smith, MaryJo O.; Smith, Guy M.; Bjerke, Elizabeth; Christensen, Cody; Carney, Thomas Q.; Craig, Paul A.; and Niemczyk, Mary (2017) "Pilot Source Study 2015: A Comparison of Performance at Part 121 Regional Airlines Between Pilots Hired Before the U.S. Congress Passed Public Law 111-216 and Pilots Hired After the Law's Effective Date," *Journal of Aviation Technology and Engineering*: Vol. 6: Iss. 2, Article 4.

see: <https://docs.lib.purdue.edu/cgi/viewcontent.cgi?article=1151&context=jate>

Too Few Pilots Access R-ATP (Training-Based) Pathways Today

Just one-third of recent pilots used enhanced training pathways in lieu of hours-based pathways. Access to these pathways is limited by financial, geographical and access barriers. Airlines and premier flight training institutions have asked FAA to approve more of these proven pathways *when they enhance safety*.



Structured Training Pathway Proposals have Been Mischaracterized.

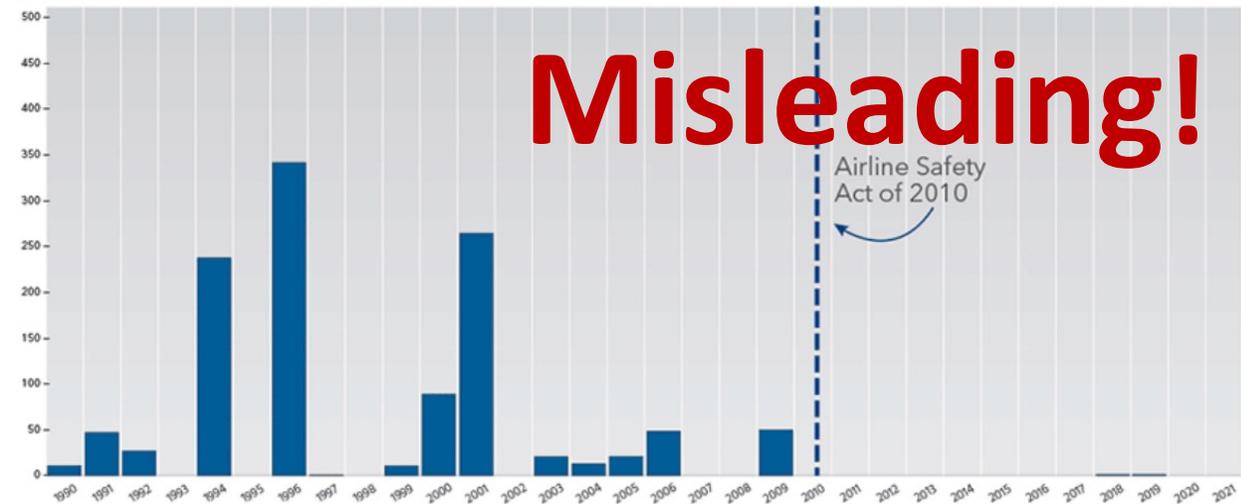
Some stakeholders – who perceive a benefit from a labor shortage – deny a pilot shortage and have sought to discredit airline solutions, **even when solutions improve career access and training and enhance safety**. The claims used to further this agenda are readily disproven.

Flight Time, Flight Training and The Mischaracterization of a Rule

- The chart at right is titled: “Airline Pilot Training Matters,” but airlines have never proposed to reduce training. No *training* is provided at all, as pilots accumulate flight hours. Airlines propose to *add more training*.
- The chart at right credits only the Airline Safety Act with reduced airline fatalities since 2009, but the Rule they are characterizing was not implemented until August 2013. There were no U.S. commercial airline fatalities during the intervening four years.
- To the contrary of this chart, FAA found “no accident value benefit” to increasing flight time. FAA instead credits the “continuous evolution of safety oversight, risk detection and response, and collaborative information sharing” for safety improvements. NTSB has never taken a position on flight hours, and instead refuted any link between hours and accidents.
- Hundreds of voluntary and mandated safety advances have since taken place, like pilot training and screening improvements and updated fatigue rules. Aircraft and training technology advances further enhanced safety.

AIRLINE PILOT TRAINING MATTERS
Part 121 Passenger Airline Accident Fatalities

#MoreThanReady



Since the 2010 law was enacted, the United States has seen a 99.8% reduction in airline fatalities.

Source: National Transportation Safety Board

NTSB has refuted any connection between flight time and accidents.

FAA: Safety Oversight, Culture, Programs Reduced Fatalities

“The commercial aviation system in the United States operates at an unprecedented level of safety. During the past 20 years, commercial aviation fatalities in the U.S. have decreased by 95 percent as measured by fatalities per 100 million passengers.

We achieved this safety record because the FAA continually evolved in how it approaches safety oversight – both in detecting risks and in responding to the risks identified. Key to this approach is a longstanding commitment to sharing data through an open and collaborative safety culture to detect risks and address problems before accidents occur.

Our comprehensive, risk-based safety oversight process consists of several key elements: the Commercial Aviation Safety Team; the Aviation Safety Information and Sharing program; voluntary reporting programs; Aviation Safety Infoshare; the FAA’s Safety Assurance System; airline Safety Management Systems; and the FAA’s approach to ensuring compliance..”

NTSB: No Correlation between Flight Time and Accidents

Senator Byron Dorgan: “Ms. Hersman, do you want to comment on the issue of ATP license and the practice of requiring only a commercial license for the right seat? Has that played a role, in your judgment, in anything that you have investigated?”

The Honorable Deborah A.P. Hersman, NTSB Chair: “We've investigated accidents where we've seen very high-time pilots, and we've also investigated accidents where we've seen low-time pilots. We don't have any recommendations about the appropriate number of hours for different categories... we don't have any data supporting the number of hours for a certificate, or its correlation with being involved in an accident”

FAA: “No Quantifiable Benefit” from 1,500 Flight Hours

“The FAA was unable to find a quantifiable relationship between the 1,500-hour requirement and airplane accidents and hence no benefit from the requirement. For most accidents reviewed by the FAA, both pilots had more than 1,500 hours of flight time and for those SICs that did not, there were other causal factors identified by the NTSB.”

Let Experienced Pilots Fly

While Congress pursues long-term policy solutions that improve pilot training and career access, short term solutions are needed to mitigate against additional air service collapse. One such solution is raising the pilot retirement age to keep more experienced pilots (and particularly, Captains, in place).

- In 2007, the retirement age for pilots in the United States was raised from 60 to 65 after medical reports concluded age had an ‘insignificant impact’ on performance in the cockpit and there were safety precautions already in place to prevent accidents in case of incapacitation.
- Fifteen years of subsequent data demonstrates raising the pilot age did not detract from safety.
- Despite positive health and longevity trends, as well as improved medical diagnostic and preventive/predictive tools, the mandatory retirement age for pilots remains capped at 65 for part 121 pilots. However, pilots over the age of 65 are already safely serving in airline Part 135 operations. These experienced pilots have the additional benefit of providing mentorship and support to younger pilots.
- Canada and nine other countries have no mandatory retirement age. Japan has a retirement age of 68.
- Pilots must maintain a first-class medical certification, **which must be renewed every six months for pilots in this age range**. Such pilots who meet FAA’s stringent health standards can continue to fly safely.
- Several U.S. lawmakers introduced the “Let Experienced Pilots Fly Act” in July of 2022, to raise the age for pilots engaged in commercial aviation operations. RAA supports this legislation and encourages its reintroduction and passage.

Structured training proposals deserve consideration based on their safety value alone. Many of the solutions to enhance aviation safety also improve career access among those facing financial and other barriers of entry today. As long-term solutions are implemented, short-term solutions like raising the pilot age provided are needed.

It's time for a fact-based conversation.

For more information or questions, please contact media@raa.org.