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Oliver Wyman 2018 Flight Operations Survey

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What is Oliver Wyman?

- **Oliver Wyman** is a consulting firm – we help companies anticipate and solve complex challenges
  - Very strong focus on aviation and aerospace
  - Experience working with most major airlines, OEMs, suppliers and sponsors, including many here

Strategy

| Business and growth strategy | M&A Partnerships | Sales and go-to-market | Innovation and R&D efficiency |

Transformation

- Digital Transformation and Digital industry
- Agile organization design
- Empowerment and Leadership
- Turnaround and recovery
- Design to cost and design to value

Operations Excellence

- Customer support and MRO
- Manufacturing and Lean
- Technical problem solving
- Program management
- Procurement
- Logistics and Supply Chain optimization

Why are we here?

- We help shape the industry discourse – wide range of cutting edge publications, surveys, and reports

- We recently conducted our inaugural **Flight Operations Survey**, targeting leaders from across the industry – OEMs, airlines, and training companies

- We asked about trends in the Flight Operations profession in the following areas:
  - Disruptors
  - Working environment of the future
  - Culture and organization
  - Standards and Training
  - Flight Operations' influence on the airline

- Our focus today is on our findings on pilot engagement, learning styles, and industry disruptors

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FLIGHT OPERATIONS SURVEY

AUGUST 2018

MARSH & McLENNAN
COMPANIES
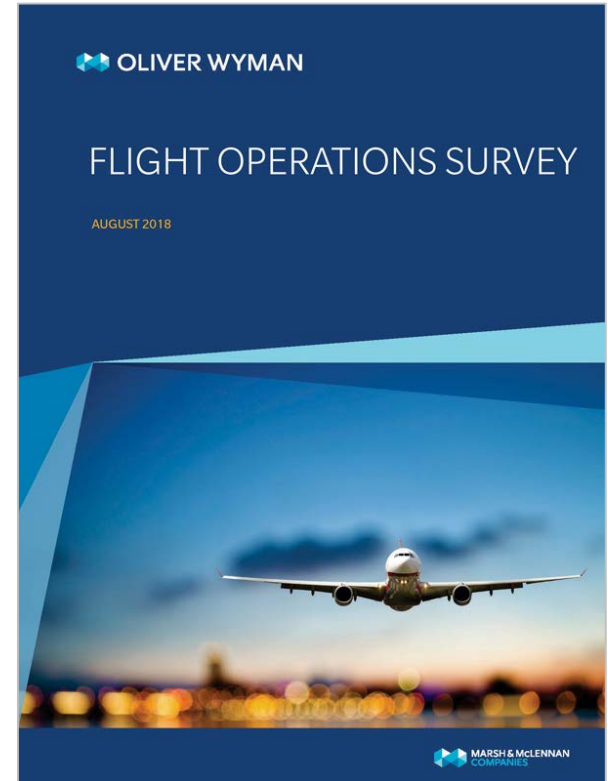
Engagement (how much pilots desire to share in the company's mission and connect with their colleagues) is a key issue at many airlines.

70%

of Flight Operations leaders believe **Pilot Behavior and Engagement** will warrant **significant attention and challenge** their company over the next 5 years
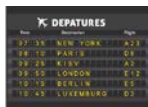
Why does pilot engagement matter?

	Passenger satisfaction	On-time performance, completion rate, timely communications
	Operational integrity	Attitude towards resolving operational issues, sick call-outs
	Schedule complexity	Willingness to operate certain routes and pairings
	Talent pool	Hiring and retaining enough pilots to fly the operation

# No silver bullet seems to exist as airlines are employing a variety of measures to improve pilot engagement.

Internal campaigns

Sharing the company's mission

Internal communication tools

Surveys on company topics

Greater use of social media

Organizing events for pilots

Involving pilots in more areas of responsibility

Encouraging them to connect with peers

Offering additional incentives

Industry leaders identified key issues impacting pilot engagement:

- Autonomous nature of pilot workforce
- Past history of relations with pilots
- Lack of cooperation from labor groups

The existing **pilot shortage and high turnover** translates into opportunities for airlines to recreate their culture and innovate, as a significant portion of their workforce will be **recently hired**

These newly hired pilots will reduce the average age of air transport pilots.

Air Transport Pilot Age Profile
2017

40K+ pilots to reach mandatory retirement age by 2027

Age
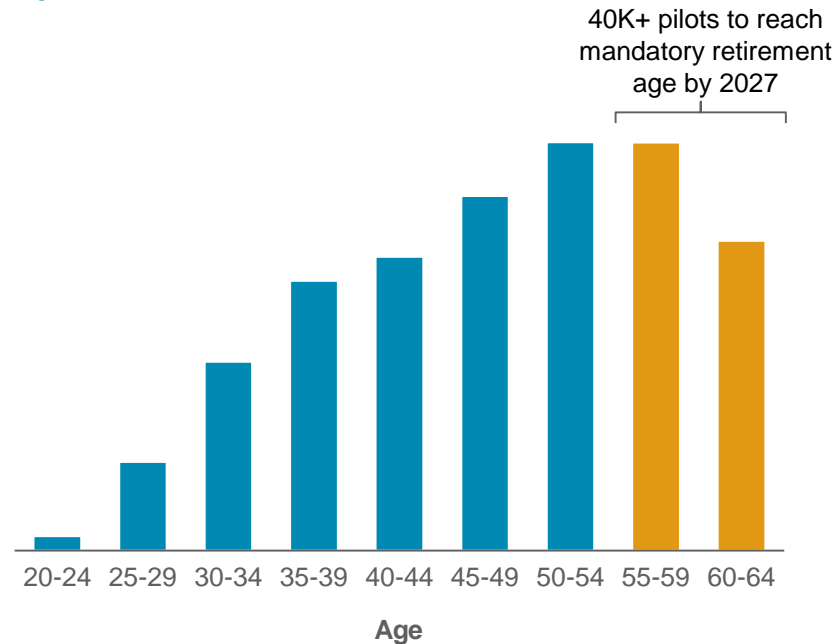
Pilot Shortage Threatens To Slow U.S. Airline Growth

Kids, get your pilots licenses, because this could be the career of the 2020s and 30s.

Brian Prentice and Phillippe Gouel, Oliver Wyman
Forbes.com

More Jobs Will Be Cleared for Takeoff. Aspiring Pilots Are Ready.

As big airlines face a wave of retirements, a fresh batch of fliers gets a chance, and the training, to seize the opportunity
NY Times

Source: FAA

Some airlines recognize a difference in learning styles across generations, and are actively updating their training programs.

Safety Training

- Increased cockpit and threat training to mitigate safety concerns

"Soft" Skills

- Increased focus on soft skills training (e.g., professionalism and customer skills)

Training Delivery

- Multiple training delivery systems to reach the highest percentage of pilots

Internal Research

- Internal study of current training effectiveness for each age group
- Partnering with scientific or academic institutions to learn best practices

We asked industry leaders for their input on a number of potential technological changes in the working environment.

Voice-activated cockpit

Multi-touchscreen capabilities for all aircraft systems

3D audio

Synthetic vision

Wearable avionics

Augmented reality
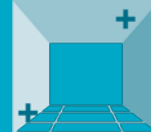
Brainwave monitoring technology

Open-world communication

Single-pilot cockpit

Fully automated flight deck

Cockpit relocation

Hypersonic flying

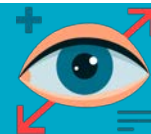# Leaders believe only a few of these options could be in place by 2030.

Voice-activated cockpit

Multi-touchscreen capabilities for all aircraft systems

3D audio

Synthetic vision

Wearable avionics

Augmented reality

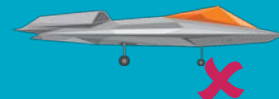**Brainwave monitoring technology**

Open-world communication

Single-pilot cockpit

Fully automated flight deck

Cockpit relocation

Hypersonic flying

Potential technological changes share common aspects making them relatively attractive—or unattractive—to airlines in the near-term.

Enabling factors for new aircraft technology

1 Common-use technology

2 Capital-light investment/retrofit costs

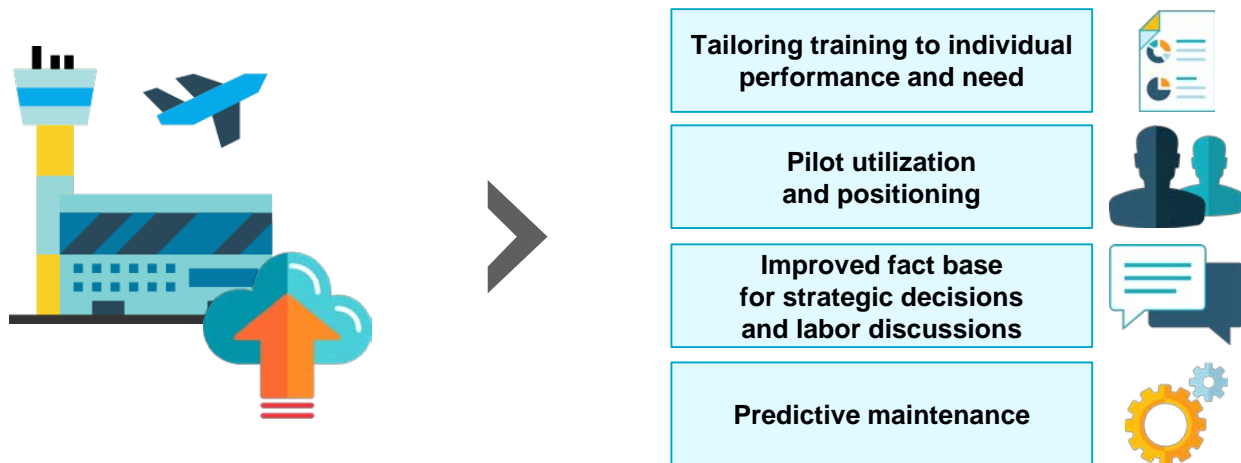**3** Limited aircraft downtime

4 Ability to quickly train pilots

Limiting factors for new aircraft technology

1 Readiness of technologies

2 Airline preferences / passenger fears

3 Regulatory

4 Labor

5 Value proposition

A commonly cited area of near-term potential change and opportunity: better utilizing the increasing treasure trove of data at airlines' disposal.

- **Airplanes currently generate a lot of data each flight** (e.g. a 787 flight creates 0.5 TB!)
  - In addition to the mountains of data airlines maintain on pilots, aircraft, performance, etc.
- Industry leaders expect this data transmission and collection to increase in volume, sophistication, and become more real-time

While their usage of data has increased, airlines have a lot of exciting potential to better use data. Flight Ops leaders have repeatedly highlighted Big Data use as an exciting area.

Tailoring training to individual performance and need

Pilot utilization and positioning

Improved fact base for strategic decisions and labor discussions

Predictive maintenance

Source: Gogo Inc.

Key takeaways

- Pilot engagement is a key concern among Flight Operations leadership
  - Airlines are working to resolve this through a number of mechanisms, but no silver bullet exists

- The age composition of pilots is becoming younger. Airlines have noticed differences in generational learning styles. Some have started to take a targeted approach to increase training effectiveness.

- While many potential technological advances are very exciting, Flight Operations leadership believes the most likely changes by 2030 will be common-use technologies and require relatively light investment in aircraft and crew

- Increasing connectivity and Big Data remain largely untapped and exciting opportunities for Flight Operations departments – and airlines in general