

# Employer challenges now and in the future

Captain Torbjorn Wischer  
CAE Global Leader Training Solutions

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# 2018 CIVIL AVIATION MARKET DRIVERS

## Business Aviation

Signs of  
Improvement

 **+4%<sub>YOY</sub>**  
Utilization strengthening

 **-6%<sub>YOY</sub>**  
Inventory for sale decreasing

 **NEW**  
Large jet programs coming

## Commercial Aviation

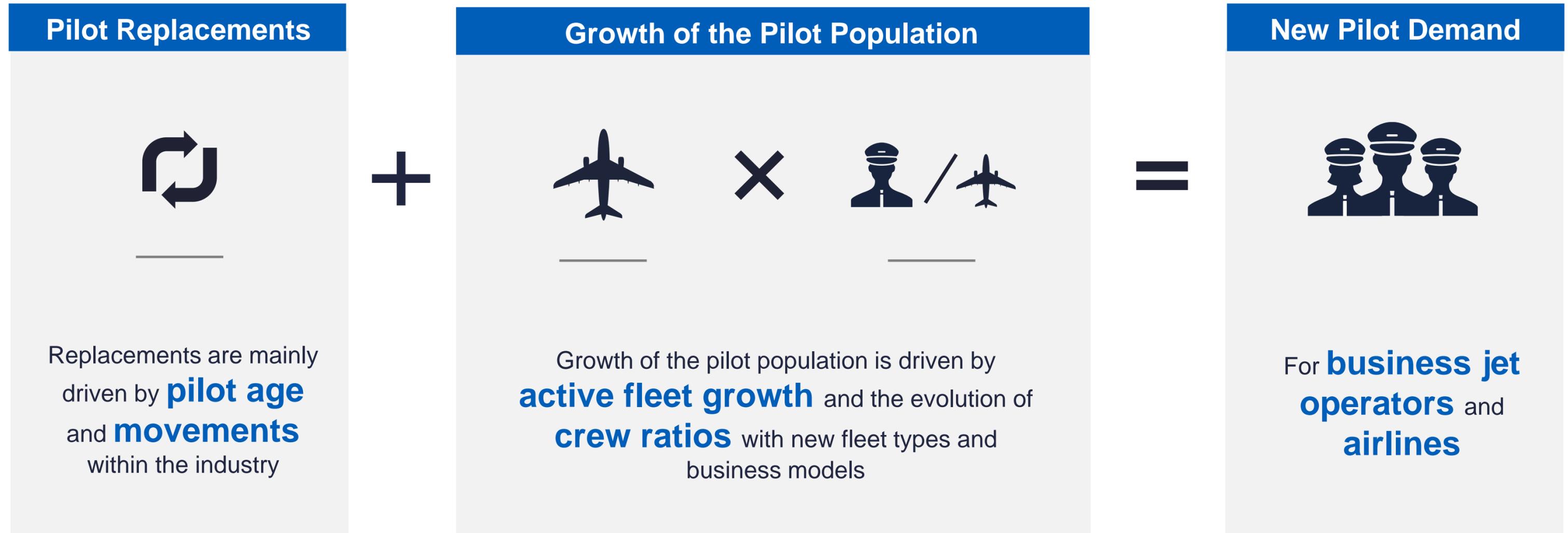
All-Time  
High

 **+7%<sub>YOY</sub>**  
Passenger traffic rising

 **>20K**  
Direct city-pairs augmenting

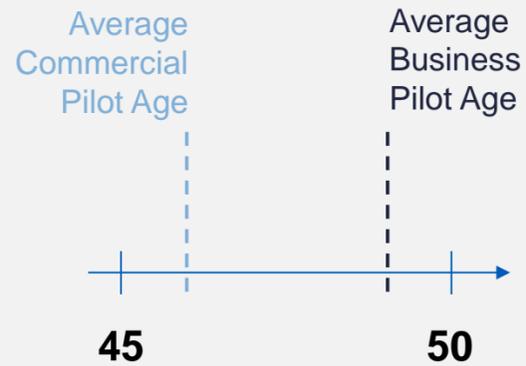
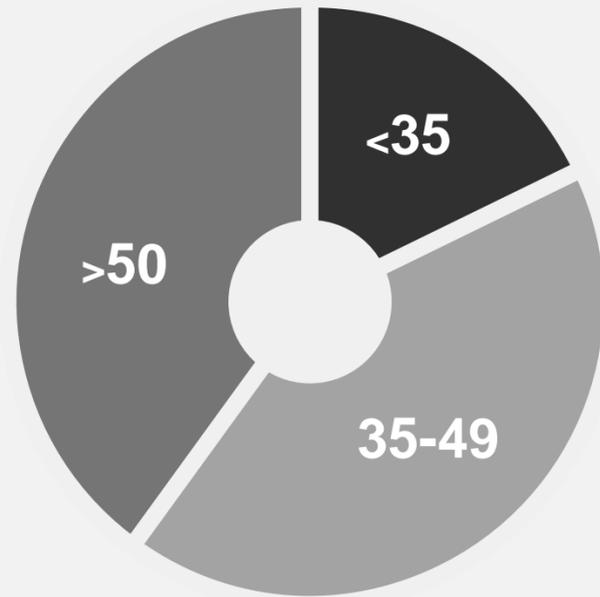
 **>81%**  
Average load factor increasing

# WHAT DOES THIS MEAN FOR PILOT DEMAND?



# PILOT REPLACEMENTS

## Pilot Age Distribution in 2018



=



## Business Aviation // 55K Active Business Jet Pilots in 2018

**4%\***  
Retirements / year

+

**4%**  
Movement to commercial / year



**+40K**  
new pilots in next 10 yrs

## Commercial Aviation // 305K Active Airline Pilots in 2018

**3%\***  
Retirements / year



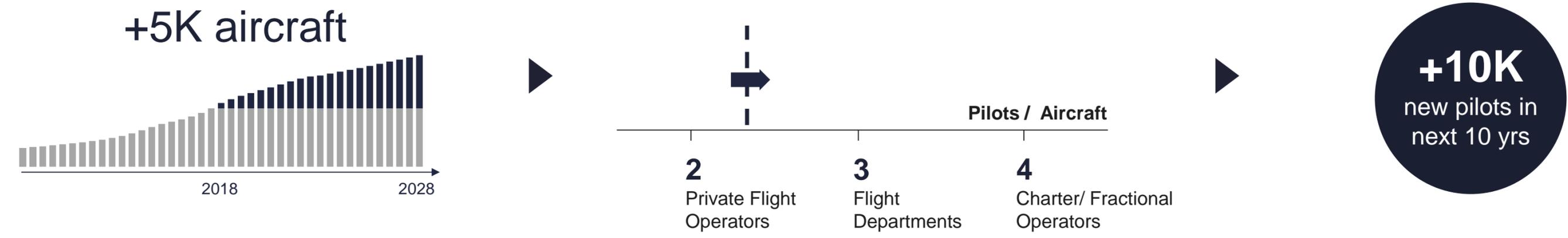
**+110K**  
new pilots in next 10 yrs

\*Including other attrition factors (pursuit of non-flying career, loss of medical fitness, etc.)

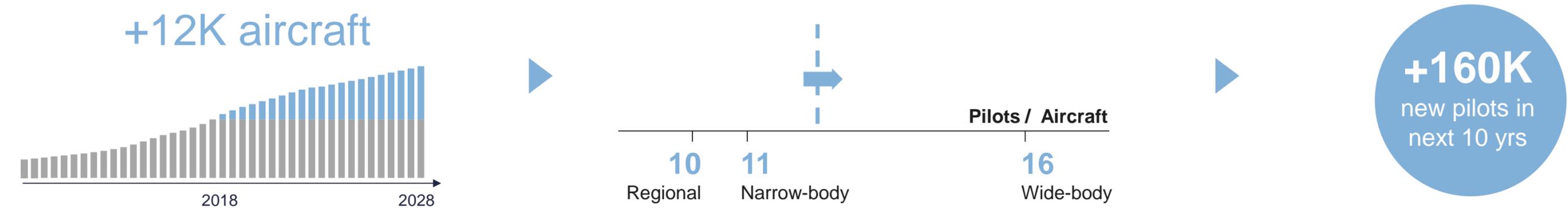
# ADDITIONAL PILOTS FOR GROWTH



## Business Aviation // 22K Active Business Jets in 2018

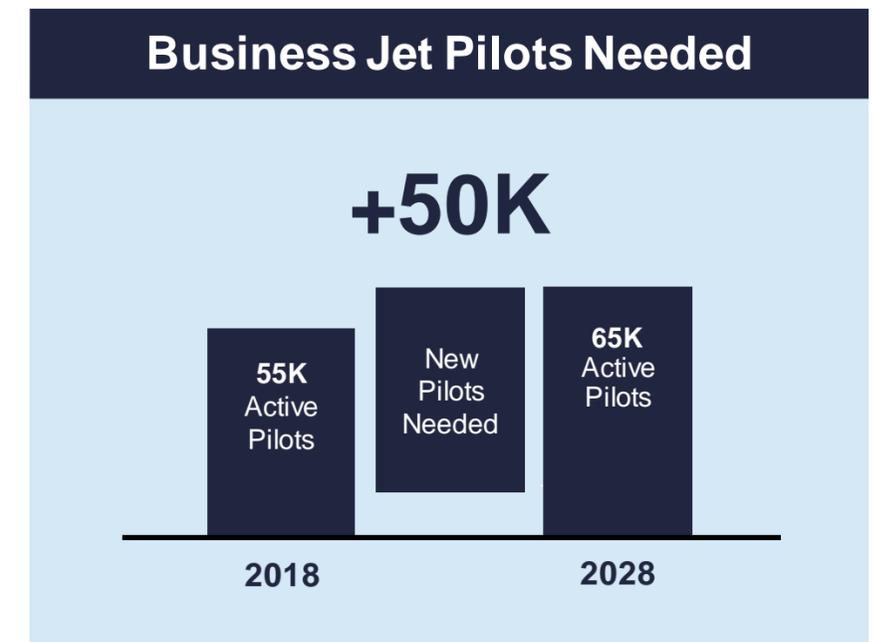
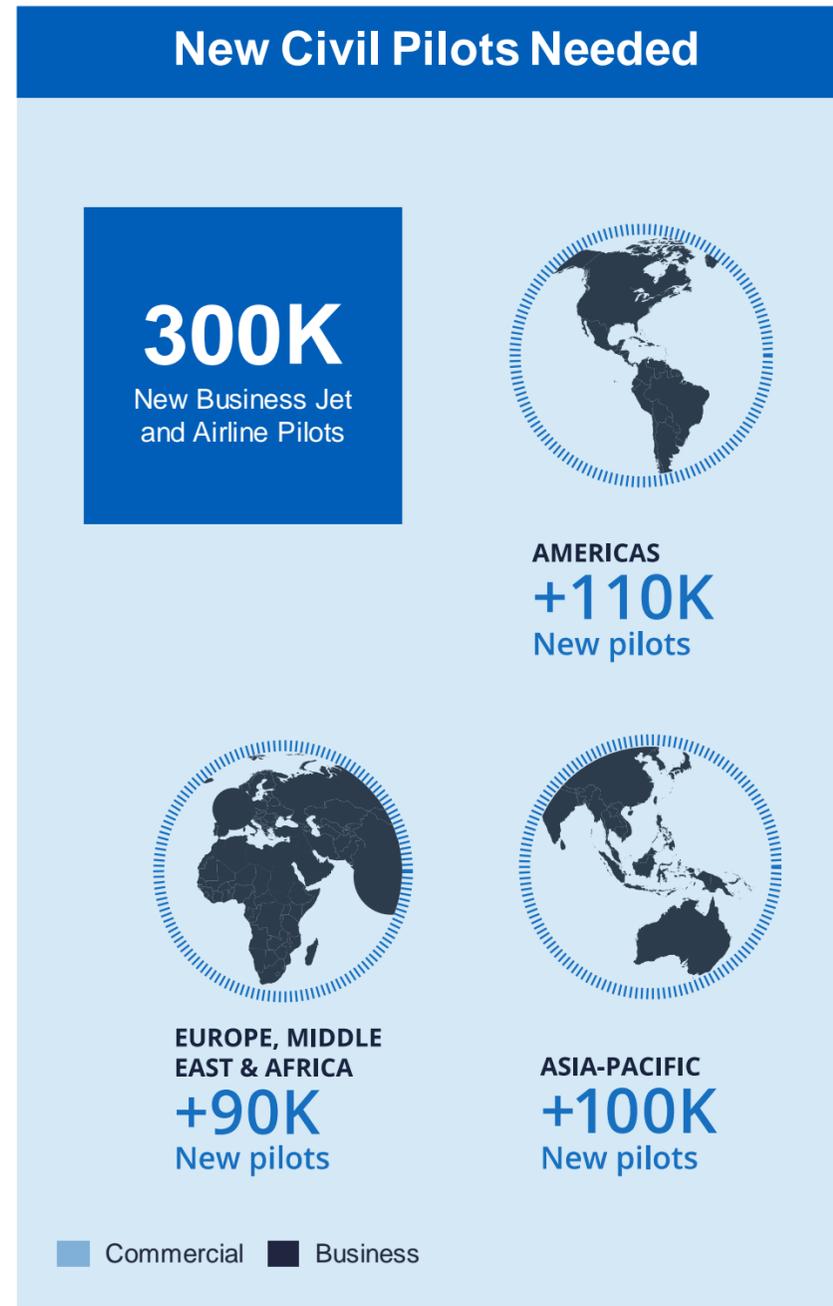
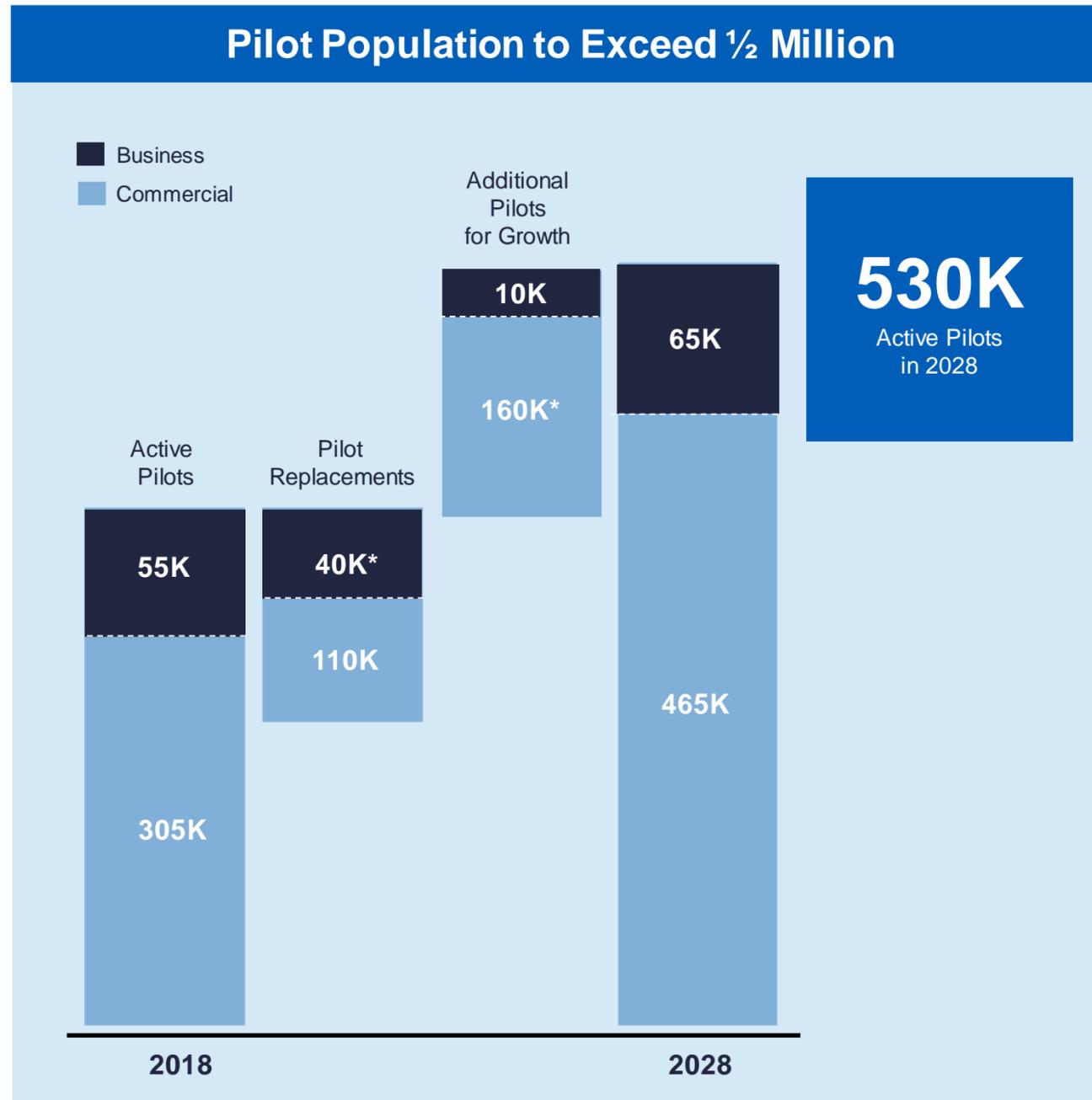


## Commercial Aviation // 27K Active Passenger Airliners in 2018



Sources: Business aviation based on Jetnet iQ (2018) and CAE analysis, Commercial aviation based on a combination of aircraft manufacturer, industry forecasts and CAE analysis

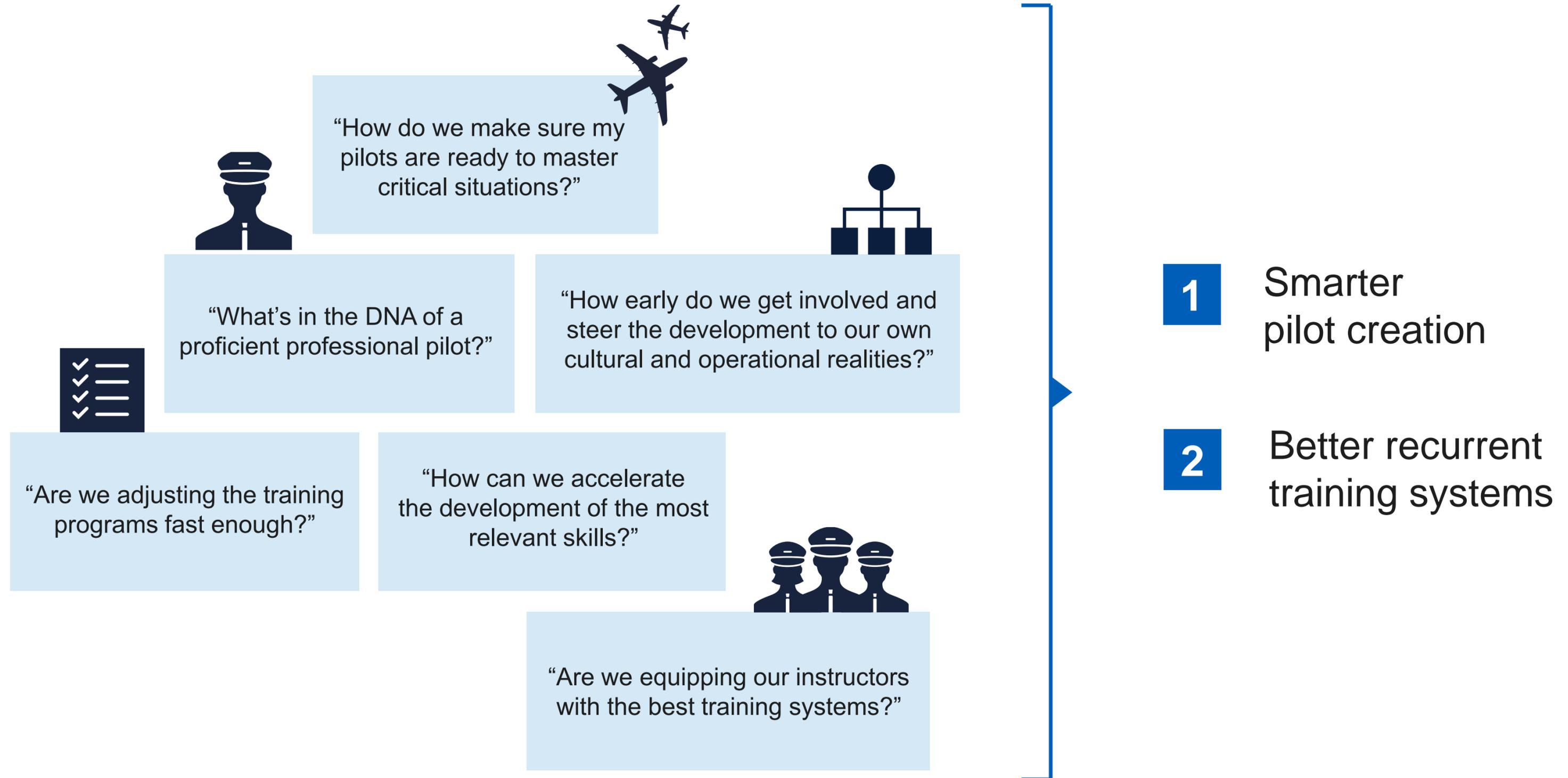
# 10-YEAR AIRLINE AND BUSINESS JET PILOT DEMAND OUTLOOK



\*Including a net 20K business jet pilots movement to airlines

Sources: Based on CAE analysis

# HOW CAN WE DEVELOP MORE PILOTS, FASTER?



# SMARTER PILOT CREATION – ASSESSING AND SELECTING THE RIGHT CANDIDATES

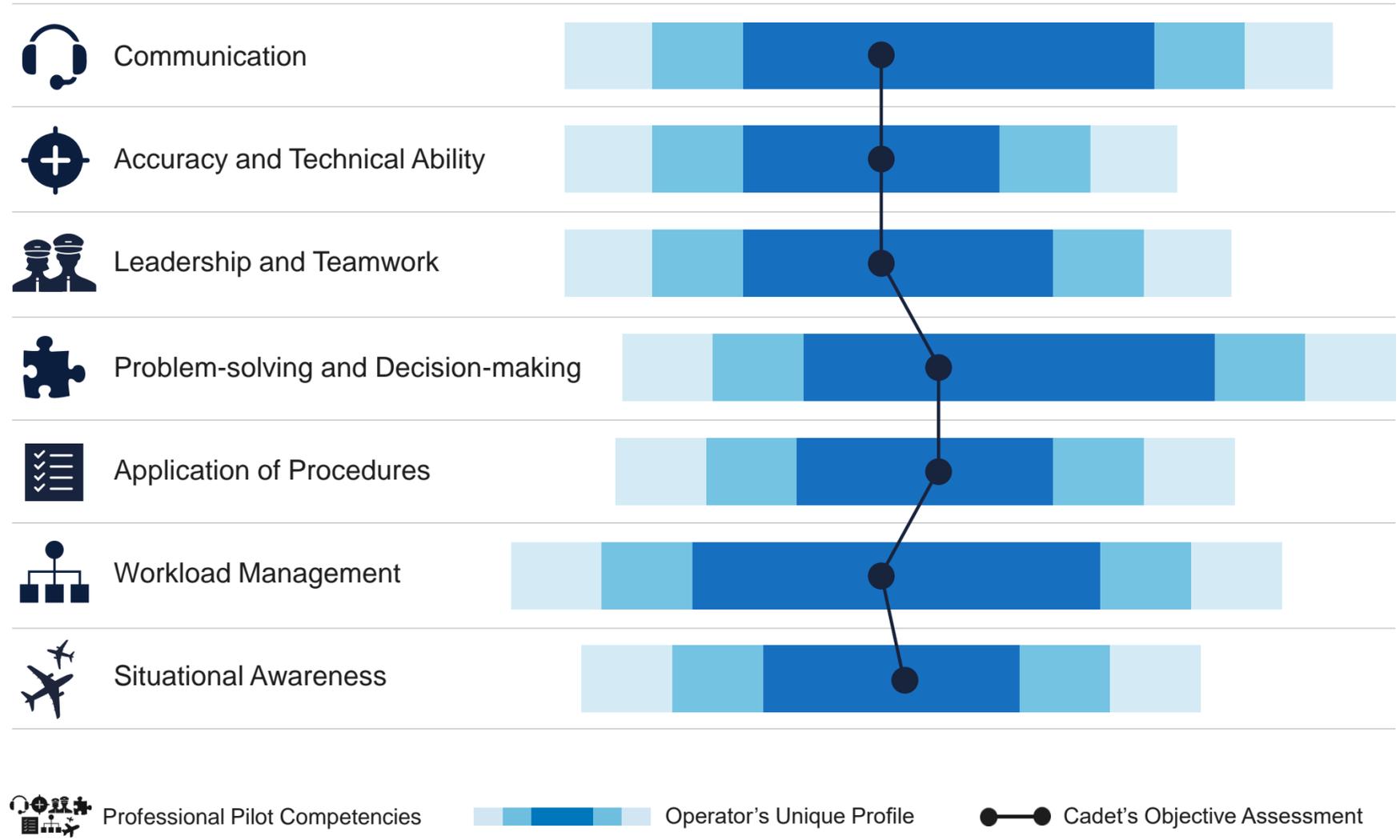


Objective assessment of the **professional pilot competencies** at the start



Development of the desired pilot profiles in **partnership with the operators**

## CAE Cadet Selection System



# 10+ NEW AIRLINE-SPONSORED PILOT CREATION PROGRAMS IN LAST 3 YEARS



New Programs	Launch
AEROMEXICO	2018
American Airlines	2018
jetBlue	2016

New Programs	Launch
VOLOTEA	2017
KUWAIT	2017
CITYJET	2016
Anchor Programs	Since
easyJet	2010
RYANAIR	2004

New Programs	Launch
JET AIRWAYS	2017
Jetstar	2017
IndiGo	2016
深圳航空 Shenzhen Airlines	2016
AIR CHINA 中國國際航空公司	2015
中國東方航空 CHINA EASTERN	2015
Anchor Programs	Since
JAL JAPAN AIRLINES	2014
AirAsia	2010
中国南方航空 CHINA SOUTHERN AIRLINES	2010

**+1,500**  
Graduates/Year

- Flight Training Locations
- Classroom and Simulator Training Centers

# BETTER RECURRENT TRAINING SYSTEMS – EVIDENCE-BASED TRAINING

## Evolution of the Recurrent Pilot Training Framework



**CAERise**<sup>TM</sup>  
TRAINING SYSTEM

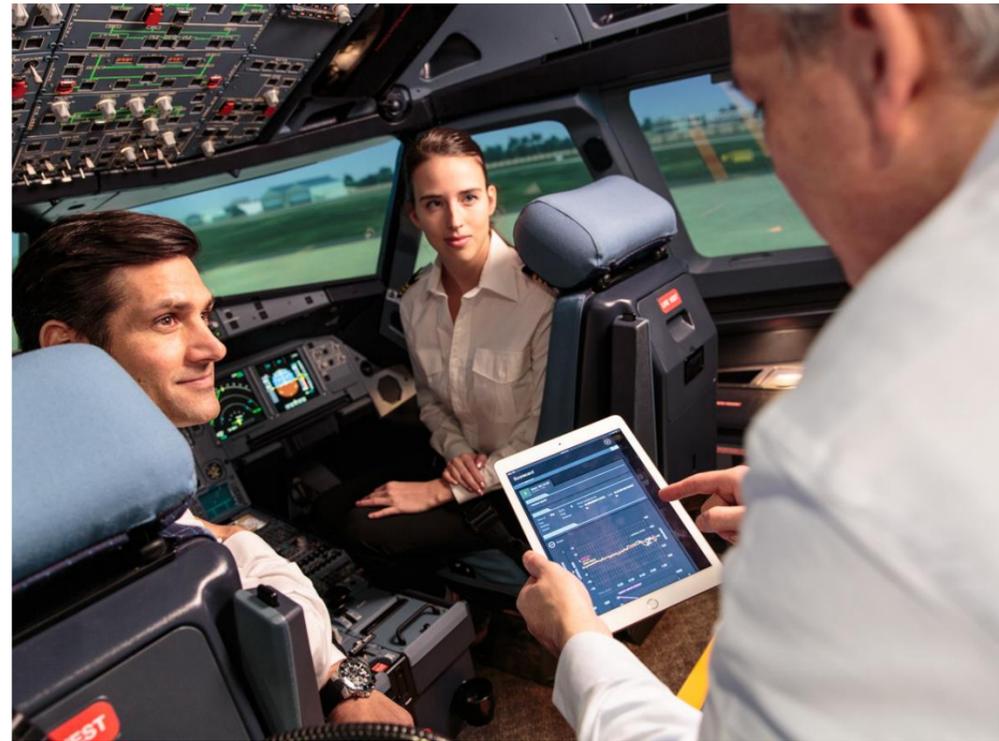
- More Objective Assessments of Technical Skills (incl. SOP\*)
- Increased Focus of Instructors on Soft Skills
- Standardized Evaluations and Framework for Faster Programs Evolutions

\*SOP: Standard Operating Procedures

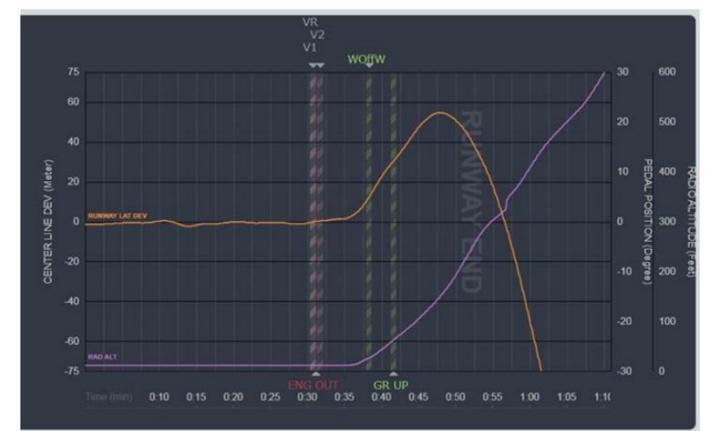
# BETTER RECURRENT TRAINING SYSTEMS – CAE RISE™ IN ACTION

## Manoeuvre: Engine Failure After Takeoff

## CAE Rise™ Grading and Real-time Insights



Centerline deviation on runway



### Instructor Focal Points for Performance Assessment:

- Flight Controls
- Flight Displays
- Control Panels
- Exterior Visuals
- Crew Interactions



### Other Potential Insights

- Tail strike advisory
- Late landing gear retraction
- Exceedance of airspeed tolerance
- High bank angle below 1000 ft



# A FINAL WORD ABOUT DEMAND AND A PARADOX IN OUR INDUSTRY

**300K**

New civil pilots  
needed over the next  
10 years

**5%**

Current pilots,  
instructors and cadets  
who are women



**CAE Women in Flight**

Find out more at:

[www.cae.com/womeninflight](http://www.cae.com/womeninflight)



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