



**EASA**  
European Aviation Safety Agency

# Pilots' Age Limits Study

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# Disclosure Information

90<sup>th</sup> Annual Scientific Meeting

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I have no financial relationships to disclose.



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# Background

## Pilot age limits – history

- 1919,  
International Commission for Air Navigation (ICAN) - 45 years age limit
- 1947,  
ICAO takes over from ICAN – no age limit in ICAO documentation
- 1963,  
ICAO introduced age limit 60 based on the statistical data regarding the risk of sudden incapacitation
- 2006,  
ICAO increased the age limit to 65 for multi-crew operations subject to the second member of the flight crew to be below the age of 60
- 2013,  
ICAO proposed to abolish the ‘1 under, 1 over’ policy



# Background

## Europe – Pilot age limits – history

➤ 1987,

JAA - the age limit of 60 years old for pilots engaged in commercial air transport (CAT) operations except as a member of a multi-pilot crew, subject to the second member of the flight crew being below the age of 60.

Furthermore, it imposed as hard limit for all pilots in CAT operations - age of 65.

- Some European States still maintained in their national requirements the hard limit at the age of 60 for all pilots;
- However, some allowed single-pilot CAT operations with pilots over the age of 60 under certain circumstances and subject to certain conditions.

➤ 2011,

**EASA** - the Aircrew Regulation Part FCL initially took over the wording of JAR-FCL 1.



# Background Europe – Pilot age limits

The Aircrew Regulation

Commission Regulation (EU) No 1178/2011

## ***FCL.065 Curtailment of privileges of licence holders aged 60 years or more in commercial air transport***

(a) Age 60-64. Aeroplanes and helicopters. The holder of **a pilot licence who has attained the age of 60 years shall not act as a pilot of an aircraft engaged in commercial air transport** except as a member of a multi-pilot crew.

(b) Age 65. Except in the case of a holder of a balloon or sailplane pilot licence, the holder of a pilot licence who has attained **the age of 65 years shall not act as a pilot of an aircraft engaged in commercial air transport.**

(c) Age 70. The holder of a balloon or sailplane pilot licence who has attained **the age of 70 years shall not act as a pilot of a balloon or a sailplane engaged in commercial air transport.**



# Background

## Europe – Pilot age limits

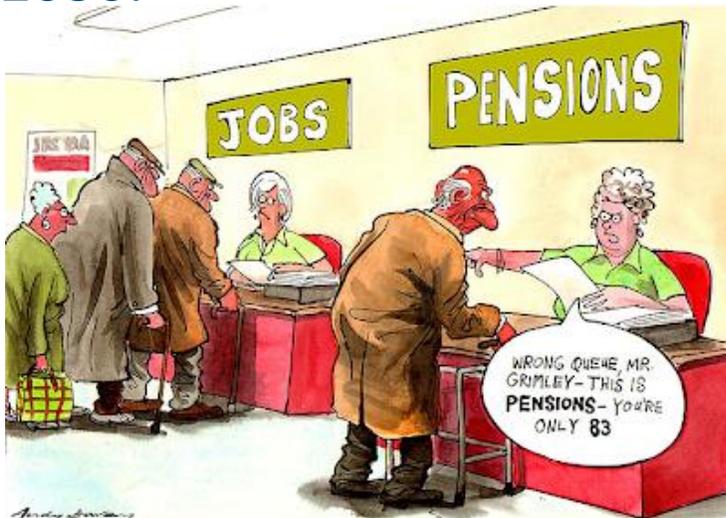
- The Agency has received **Article 71 (old 14.4) Exemption** requests with individually specified mitigating measures from Switzerland, Austria, Czech Republic, Germany mainly related to allowing pilots in helicopter ops. (HEMS) to continue after the age of 60.
- This is mainly based on the fact that retirement age for male population is 65 in many of the MSs.





# Retirement age

- The retirement age in the EU is currently around 65, with some exceptions.
- The retirement age will grow in the next 10 years to reach 68 and above by 2030.



	Current general retirement age (2019)	Future retirement age
<b>EU</b>	<b>Men/ Women</b>	<b>Retirement age or men/women</b>
Austria (AT)	65 / 60 years	65 years (2033)
Belgium (BE)	65 years	67 years (2030)
Bulgaria (BG)	66 years and 4 months	67 years (2023)
Croatia (HR)	65 years / 62 years	67 years (2038) / 65 years (2030); 67 years (2038)
Cyprus (CY)	65 years	65+ years (2018)
Czech (CZ)	63 years and 6 months / 63 years and 2 months	65 years (2036)
Denmark (DK)	67 years; 65 years and 6 months*	67 years (2022); 68+ years (2030)
Estonia (EE)	63 years and 6-9 months	65 years (2026) 68+ (2027)
Finland (FI)	63 years 3-6 months . 68 ; 65* years	65+ years (2027); 65+ (2030)
France (FR)	66 years and 2 months	67 years (2023)
Germany (DE)	65 years and 7 months	67 (2031)
Great Britain (GBR)	65 years	67+ (2028), 68 (2046)
Greece (EL)	67 years	67+ years (2021)
Hungary (HU)	64 years	65 years (2022)
Ireland (IE)	66 years	68 years (2028)
Italy (IT)	66 years and 7 months	67+ years (2022)
Latvia (LV)	63 years and 6 months	65 years (2025)
Lithuania (LT)	63 years and 10 months / 62 years and 8 months	65 years (2026)
Luxembourg (LU)	65 years	–
Malta (MT)	63 years	65 years (2027)
Netherlands (NL)	66 years	67+ years (2022)
Poland (PL)	65 years / 60 years	–
Portugal (PT)	66 years and 5 months	66+ years (2016)
Romania (RO)	65 years / 61 years – 61 years and 2 months	-/63 years (2030)
Slovakia (SK)	62 years and 6 months	63 years and 2 months+ (2024)
Slovenia (SI)	65 years	–
Spain (ES)	65 years and 6 months	67 years (2027)
Sweden (SE)	61-67 years; 65 years*	63-69 (GP; 2023), 63+ (2026); 66 (2023), 66+ (2026)



# Background

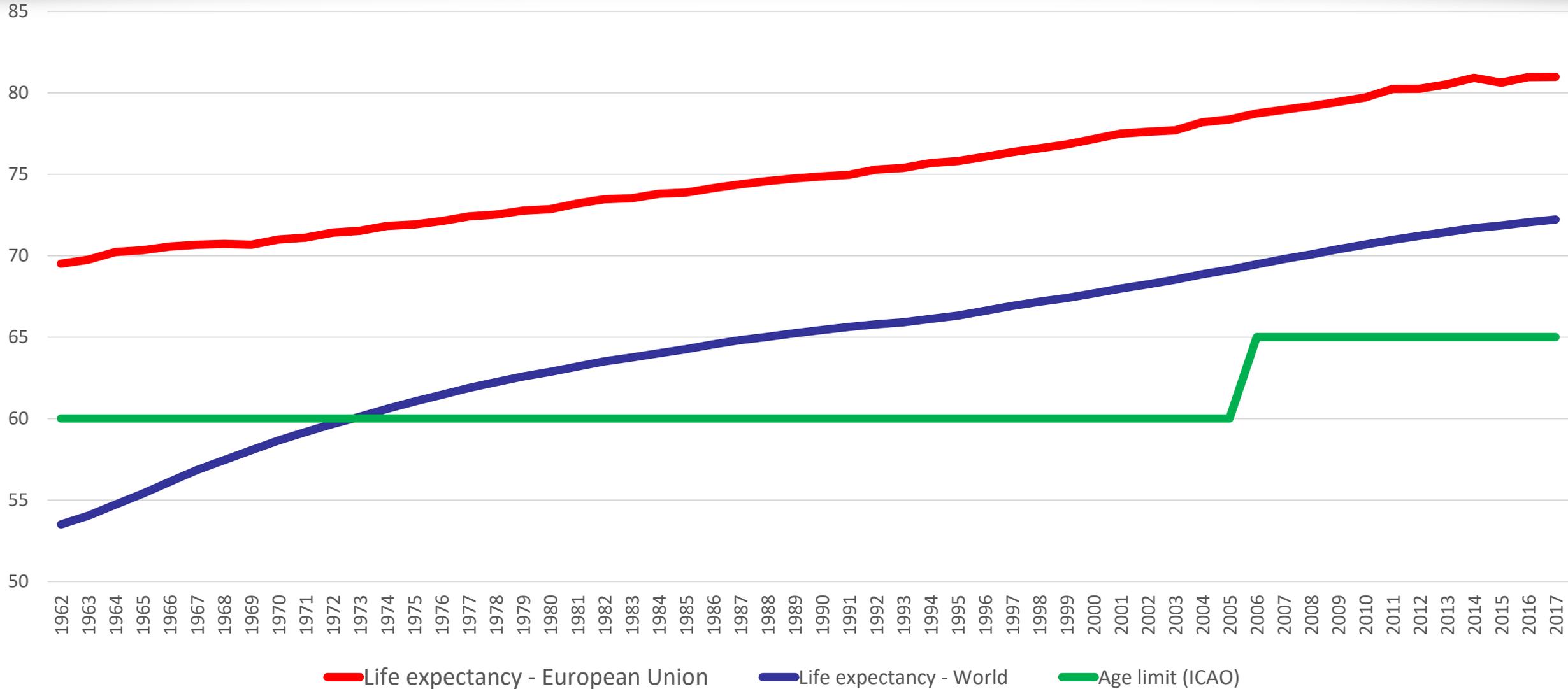
Life expectancy in the EU has increased

- Is there a link between increased life expectancy and fitness?





# Comparison – Life expectancy and Age limit





# Background - Summary



- The aviation industry is expanding
- The demand for properly trained pilots is increasing
- To be pilot is not so attractive

- Retirement age in the EU has been increased to 65 years old or above
- Life expectancy in the EU has increased





# International examples

The Agency has requested information from ICAO, FAA, Transport Canada, NZ, Japan and China on how these regulatory bodies are dealing with the Age issue.

- The FAA has no known plans to amend their age 60 limitation.
- Transport Canada has abolished seemingly all age limitation whilst filing a difference to ICAO.
- Australia and New Zealand informed EASA that the state law forbids the limitation of a persons right to work based on age, as it is considered 'age discrimination'.
- Japan has raised the mandatory retirement age to 68 in March 2015.

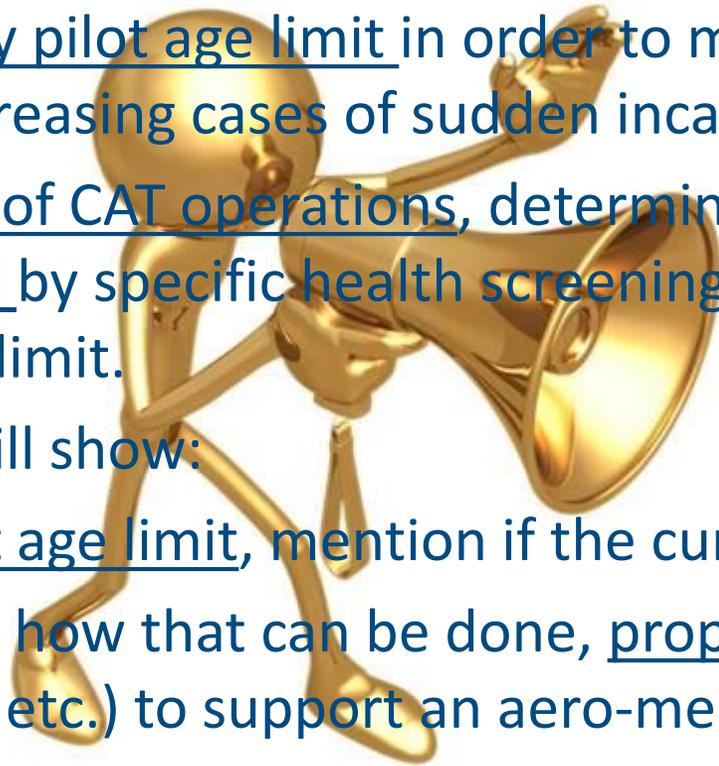


# Study

The Agency launched a Research study “**Pilot age limits in CAT operations**”

## Proposal contribution

- Assess the **need** for a regulatory pilot age limit in order to mitigate the risk to flight safety resulting from the potential increasing cases of sudden incapacitation for pilots aged over 60.
- Considering the different types of CAT operations, determine whether the risk of incapacitation can be **mitigated** by specific health screening or shortened screening intervals rather than by an arbitrary age limit.
- In the case where the results will show:
  - the need to maintain a strict age limit, mention if the current age limit is relevant, or
  - the need to be adjusted and how that can be done, propose a **battery of tests** (medical, physiological, psychological, etc.) to support an aero-medical decision on the applicant’s fitness on an individual basis.



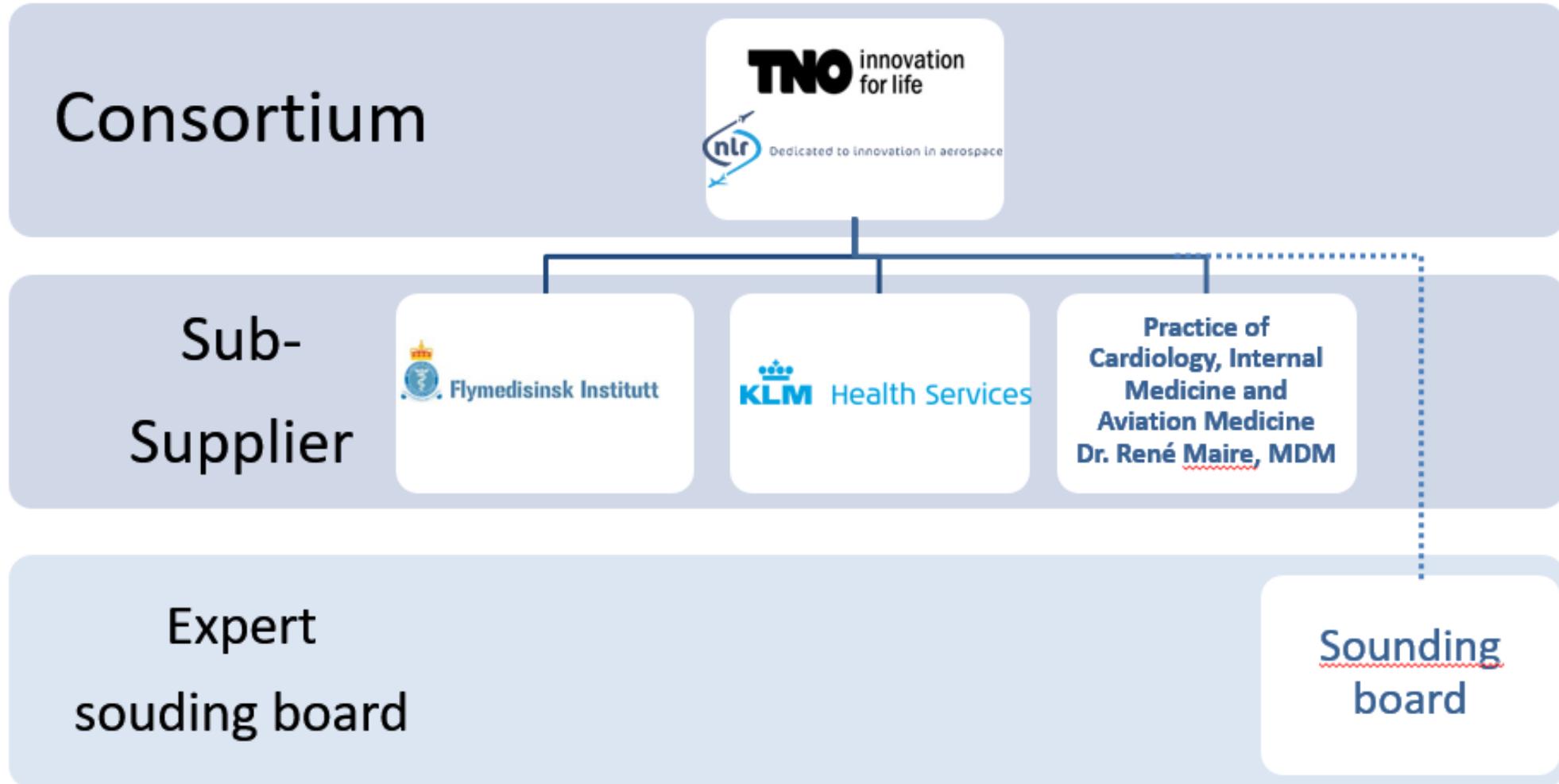


# Pilot Age Study – Project tasks

- **Task 1.** LITERATURE REVIEW AND GATHERING OF AVAILABLE DATA
  
- **Task 2.** RISK ASSESSMENT MODEL BASED ON OPERATIONS CONSIDERATIONS
  
- **Task 3.** AEROMEDICAL ASSESSMENT AND EVIDENCE-BASED AERO-MEDICAL REQUIREMENTS TO DETERMINE APPLICANT'S FITNESS ON AN INDIVIDUAL BASIS
  - INITIAL SCREENING OF CARDIOVASCULAR RISKS IN ASYMPTOMATIC PILOTS
  - ENHANCED SCREENING OF CARDIOVASCULAR RISKS IN ASYMPTOMATIC PILOTS
  
- **Task 4.** RECOMMENDATIONS FOR IMPLEMENTING RESEARCH RESULTS AND FOR FURTHER INVESTIGATION



# Pilot Age Study – Project team





# Pilot Age Study – Project tasks





# Analysis of the literature

- In-flight incapacitation as a consequence of medical problems is rare
  - up to 0.45 times per 106 flight hours or 0.25% per annum
- Majority of the incapacitation causes are age-independent
  - E.g gastro-intestinal conditions, laser strikes, headaches
- Most frequent age-dependent medical causes for total incapacitation
  - cardiovascular, cerebrovascular and neurological conditions.
- Most prevalent medical reasons for long-term grounding of pilots
  - Cardiovascular, neurological and psychological/psychiatric conditions
- Disqualification rates increase with age
  - The assessment of this risk is hindered by small numbers of pilots aged over 60



# Analysis of the collected data

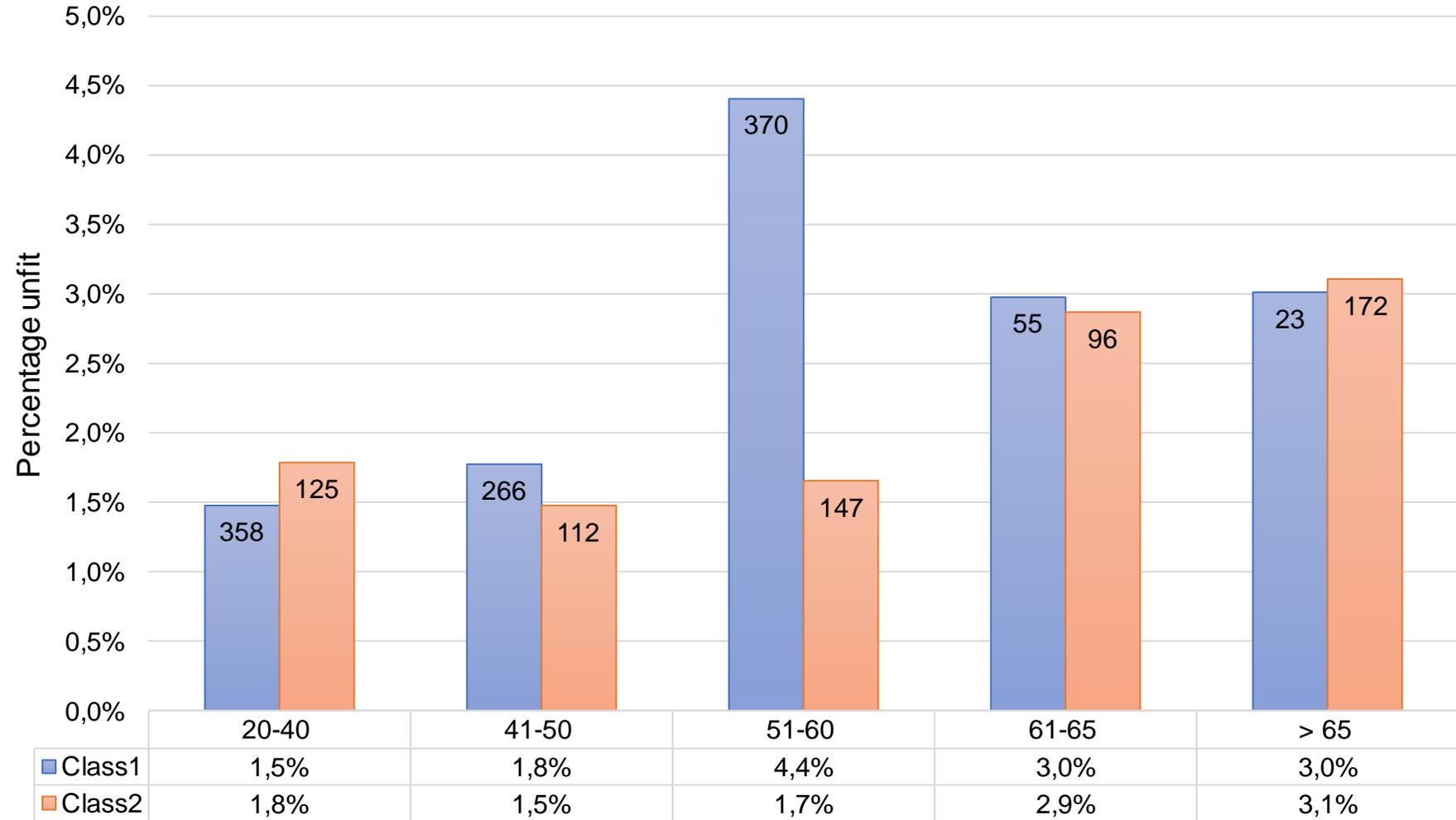
- Six countries supplied medical data of good quality
  - Number of pilots screened
  - Number of pilots declared (temporarily) unfit
  - Medical diagnosis
  - Age
  - CAT category (Class 1 and 2)



# Analysis of the collected data

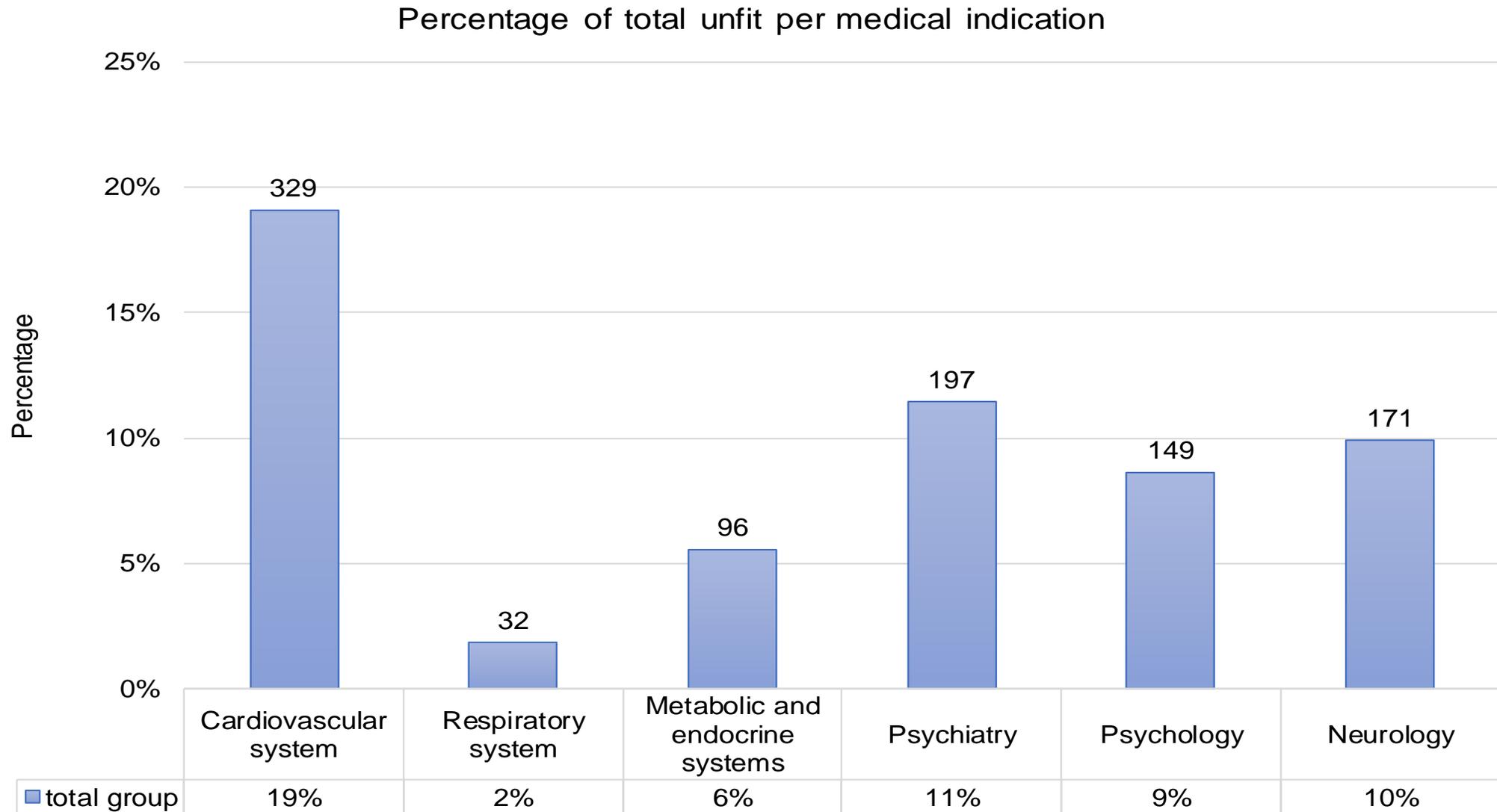
CLASS1	UNFIT (%)
50,101	1,072 (2.1%)
CLASS2	UNFIT (%)
32,334	652 (2.0%)
TOTAL	UNFIT (%)
82,435	1,724 (2.1%)

Percentage (temp) unfit for each age category



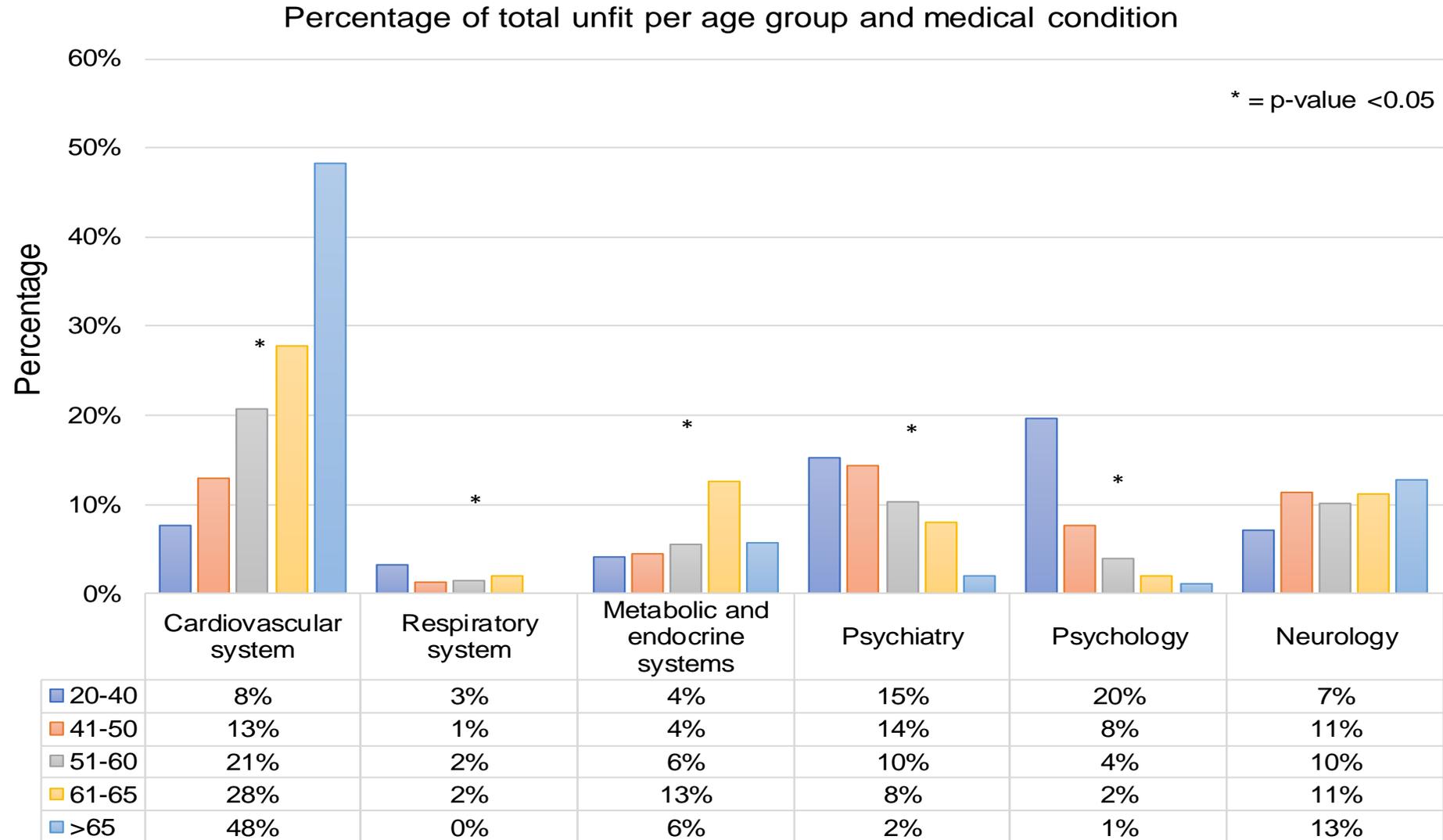


# Analysis of the collected data





# Analysis of the collected data





# Incapacitation data from reported inflight incapacitation events

Type of incapacitation	Number of occurrences
Gastro-intestinal	35
Myocardial	27
Syncope	5
Cerebrovascular	4
Cancer	
Diabetes	2
Epileptic	1
Psychiatric	1
Other illnesses	16
<b>Unknown</b>	<b>164</b>



ECCAIRS data 1970-2017 Commercial air transport



# The study recommendations

## ➤ Single pilot operations:

- Extend age limit of CAT pilots flying single pilot operations from 60 years to the pilot's 65th birthday.
- Extension of the age limit for single pilot operations should be accompanied by additional measures to reduce the likelihood of pilot incapacitation to meet current operational accident acceptability values.

## ➤ Multi pilot operations:

- Keep the age limit at 65 years as it is currently set by EASA (FCL.065; EASA, 2016).
- Use the same additional measures as for single pilots to reduce the likelihood of pilot incapacitation.



## Accident and Incident Reporting System

- ECCAIRS data:
  - Optimize registration of in-flight incapacitation occurrences:
    - data concerning age;
    - medical cause of incapacitation;
    - level of incapacitation.



**EASA**  
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# Pilots' Age Limits Workshop

18-19 March 2019

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# Workshop

- More than 60 participants
- More than 25 nationalities
- Organisations: European Commission, ICAO, IATA
- Stakeholders representing: pilot associations, medical societies, HEMS, operators in both fixed and rotary wing
- Non EASA states – China, Japan, US, NZ
  
- The workshop - collecting data from stakeholders
- Review the study recommendations



# Points from the WS discussion

- The study only looked at sudden incapacitation. Subtle incapacitation was not considered;
- The study showed an increasing risk for pilots above the age of 60;
- All the neuropsychological abilities declined with age, with the exception of reasoning performances;
- In order to increase the age limits and maintain safety additional mitigating measures on medical and operational level need to be in place;
- Early cardiovascular risk factor management indifferent of the implementation of a change in age limits;
- The need for pilot health data for future evaluation of the age limits.



# Outcome of study

The research study as well as the presentations delivered during the workshop are available on-line at the following links:

- ▶ <https://www.easa.europa.eu/document-library/research-projects/easarepresea20171> and respectively
- ▶ <https://www.easa.europa.eu/newsroom-and-events/events/pilots%E2%80%99-age-limits-workshop>.





## Next steps

### EASA is **considering**:

- an increase of the age limit for single pilot from the age of 60 to 65 with additional mitigating measures as recommended by the research, including the early risk factors management and comprehensive ophthalmological, neurological and ENT examinations.
- an increase of the pilot age for multi pilot CAT operations, however, additional risk-mitigation measures such as specific tests to support aero-medical decision on the applicant's fitness on an individual basis must be imposed.
- a reduction of the maximum monthly/ yearly FTL to 80% of the maximum allowed for pilots over 60 performing single pilot ops and for pilots over 65 performing multi pilot ops.



# Next steps



**However, a final decision has not been made yet.**





## Next steps

- Development of options based on the feedback from the Workshop and MEG etc.;
- Working closely with ICAO and International Authorities on the future steps to coordinate actions;
- EASA high-level decision
  - Impact assessment will be consulted with EASA Advisory Bodies
  - Further feedback from the advisory bodies on the way forward
- Final high-level decision following consultation
- Regulatory activities in congruence with the decision



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Thank you for your attention!



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