IATA Survey-4 - Report

Pilots population status (as of 1st November 2021), and airline needs in the context of restart

Introduction

IATA Survey-4 was launched on 28 September 2021. It is the fourth in a series of four surveys launched in 2021 to evaluate the status of the pilots population in the context of COVID-19 and restart of operations.
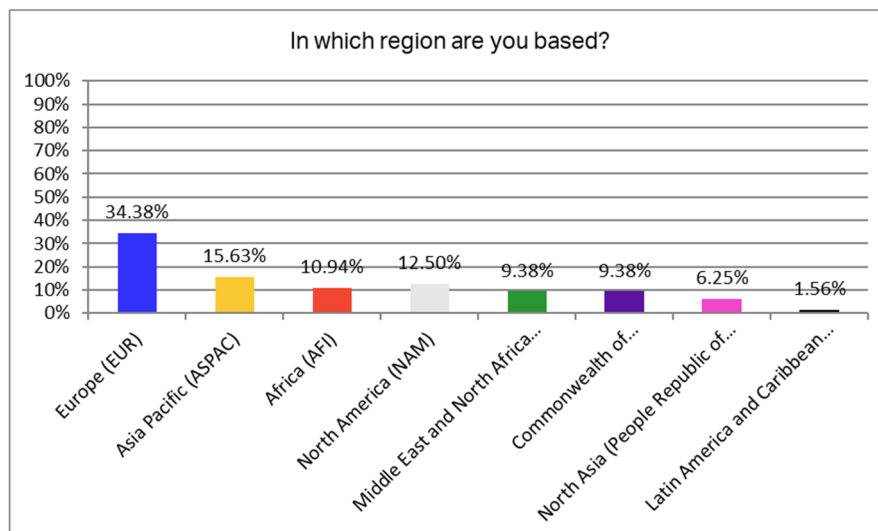
The objectives of this survey were to assess our member airlines':

- pilot population compliance status in regard to ICAO Annex 1 and Annex 6 standards
- needs in terms of training resources to bring back to operations their "grounded" pilot population
- needs in terms of additional pilot workforce beyond the recovery of their "grounded" pilot population

The survey contained 16 questions. A total of 64 airlines completed the survey: 94% of them IATA member airlines.

Note: Where necessary, a comparison between the results of this survey and the previous ones is provided in the analysis of the individual survey questions. In that case a link to the relevant previous survey is provided.

The first three questions of the survey were related to background information about the respondents, such as the name of their airline, the country and region. This allowed us to establish the following breakdown of airline respondents per region (as per the IATA regions).

In which region are you based?

Region	Percentage
Europe (EUR)	34.38%
Asia Pacific (ASPAC)	15.63%
Africa (AFI)	10.94%
North America (NAM)	12.50%
Middle East and North Africa...	9.38%
Commonwealth of...	9.38%
North Asia (People Republic of...)	6.25%
Latin America and Caribbean...	1.56%

Global overview of the survey results

As a caution mark, it is worth noting that the rate of responses is limited with only 64 airlines completing this fourth survey, and that some regions are clearly underrepresented. Therefore, the results only provide partial visibility on the global situation. In particular, the concerns expressed regarding training capacity limitations and forecasted pilot shortages need further investigations.

The macroscopic results are the following:

> **Pilot population maintained on duty**: 67.19% of the respondents indicated that they maintain 80%-100% of their pilot population on duty (flight operations, instruction).

> **Pilot population in compliance with ICAO standards**: 96.35% of compliance, as an average, across the six ICAO Annex 1 and Annex 6 standards for the pilot population maintained on duty.

> **Average grounded time of the majority of population not maintained on duty**: 73.44% of the respondents indicated that the average grounded time of the majority (more than 50%) of their pilot population that is not maintained on duty is 0-3 months or no longer applicable (34.38% said 0-3 months and 39.06% said not applicable, meaning no longer grounded).

> **Expected training capacity limitations**: 76.56% of the respondents indicated that they do not foresee any training capacity limitations to bring back to operations their "grounded" pilot population.

> **Expected pilot shortage beyond recovery of the grounded pilot population, in the context of restart of operations:** 64.13% of the respondents said that they do not foresee a pilot shortage, but an important number of respondents, 35.87%, do foresee a shortage.

Hence, the general overview demonstrates that the pilot population of almost all the respondents (on average 96.35%) are compliant with the ICAO training and operational standards.

What is apparent in the results of this last survey is the operator's growing concern of a potential pilot shortage, beyond the recovery of their grounded pilot population.

Detailed survey results overview

Q4. What percentage of your pilot population do you maintain on duty (flight operations, instruction, etc.)?

The graph below shows that a majority (67.19%) of the respondents maintain 80%-100% of their pilot population on duty. However, it is important to keep in mind that this percentage is based on the remaining pilot population after the layoffs and early retirements due to the COVID-19.

What percentage of your pilot population do you maintain on duty (flight operations, instruction, etc.)?

| Category	Percentage
80% - 100%	67.19%
60% - 80%	15.63%
40% - 60%	7.81%
20% - 40%	4.69%
0% - 20%	4.69%
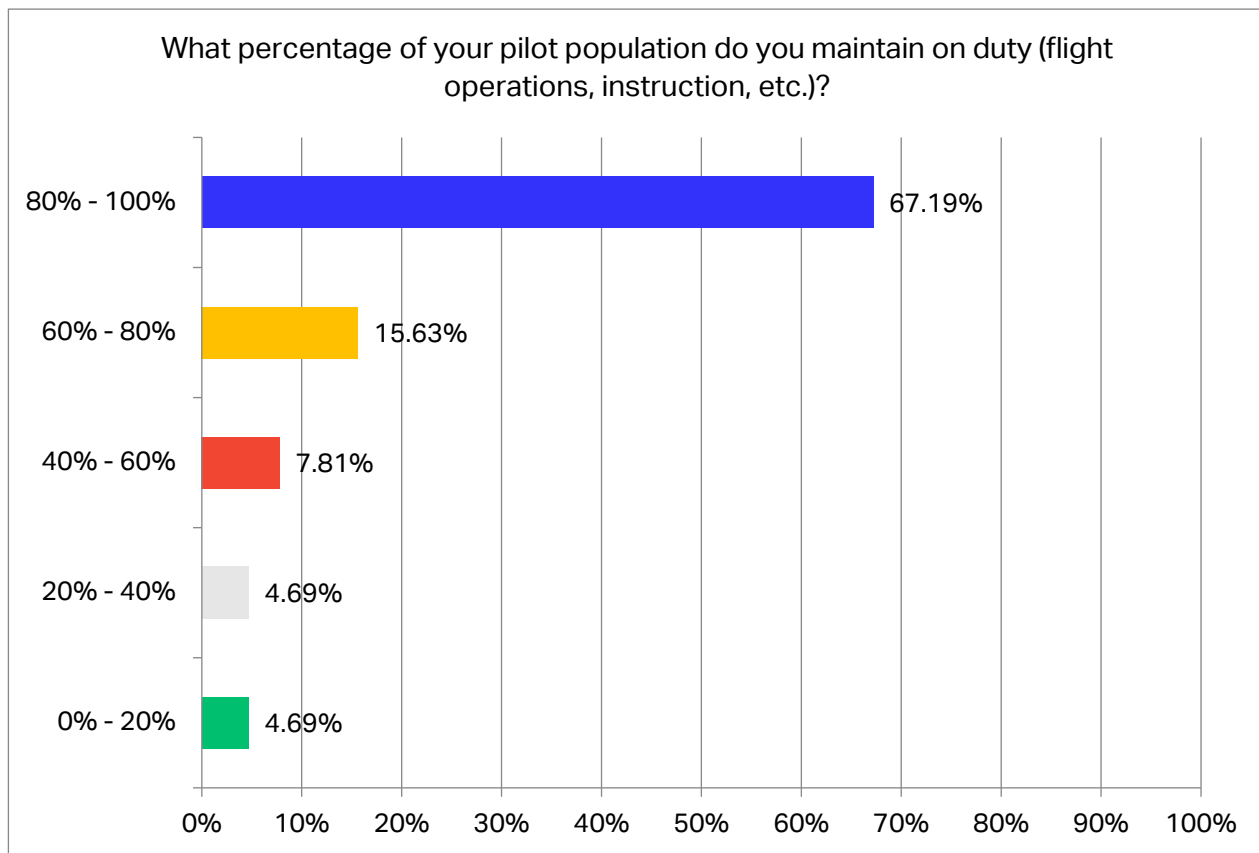
Q5. to Q10.

The following section, which covers Q5. to Q10., inclusively, is related to the compliance to ICAO Annex 1 and Annex 6 training and operational standards. Please see Appendix 1 in this report for the detailed description of these standards.

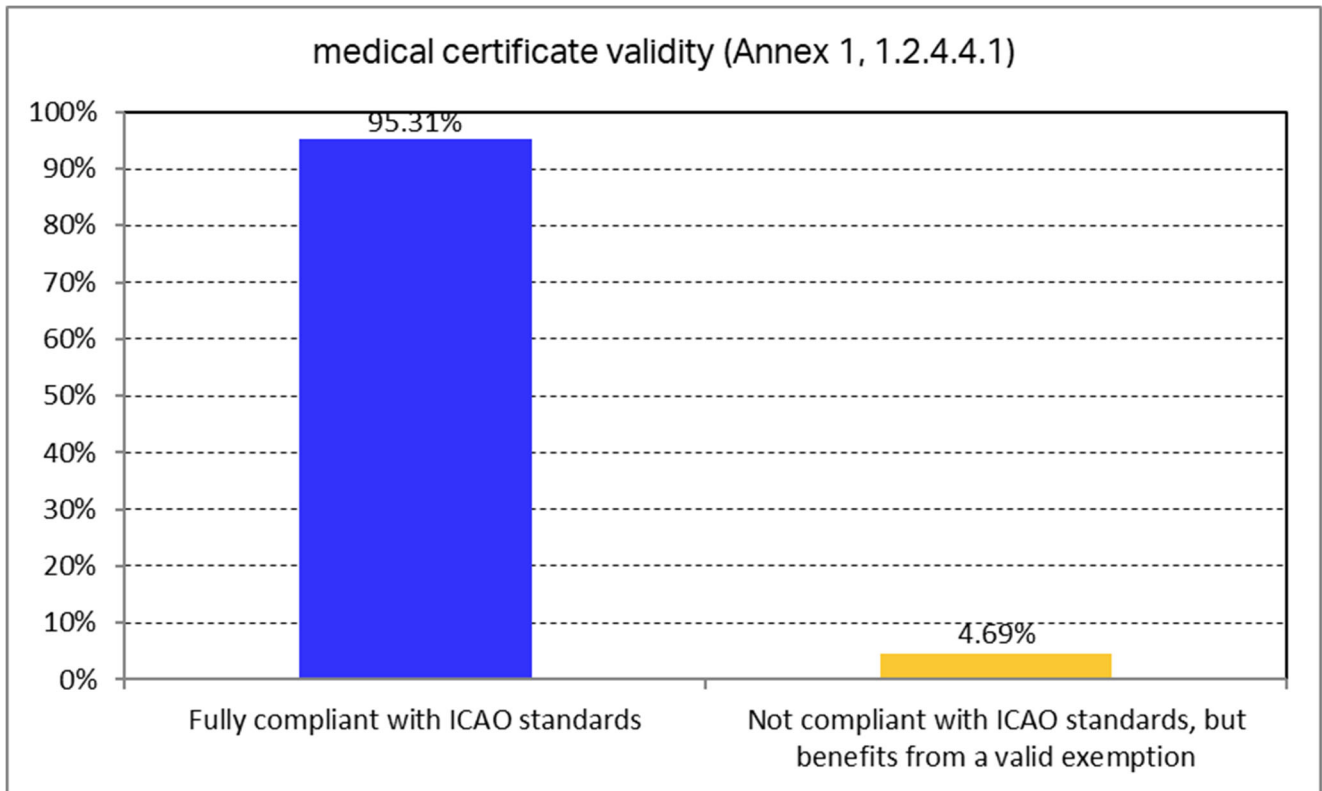The breakdown of the average percentages to Q5. to Q10. is as follows:

- 96.35% Fully compliant with ICAO standards
- 3.65% Not compliant with ICAO standards, but benefits from a valid exemption

Note: The average 96.35% fully compliant with ICAO standards confirms the increased compliance of the pilot population status that has been recorded from one survey to the other, as shown in the graph below: 87% average compliance in IATA Survey-1, 93.61% in IATA Survey-2, 93.80% in IATA Survey-3 and 96.35% in this fourth survey.
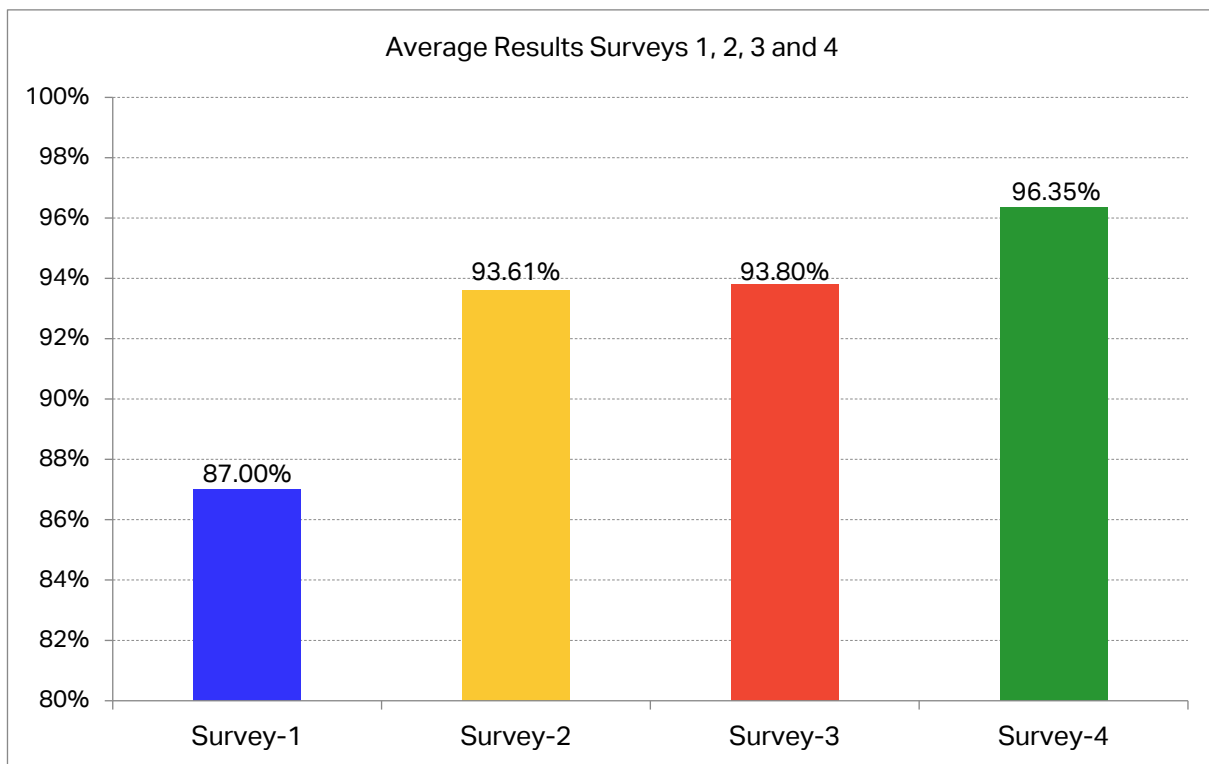
The following section shows the detailed results for Q5. to Q10. for Survey-4.

Q5. medical certificate validity (Annex 1, 1.2.4.4.1)

medical certificate validity (Annex 1, 1.2.4.4.1)
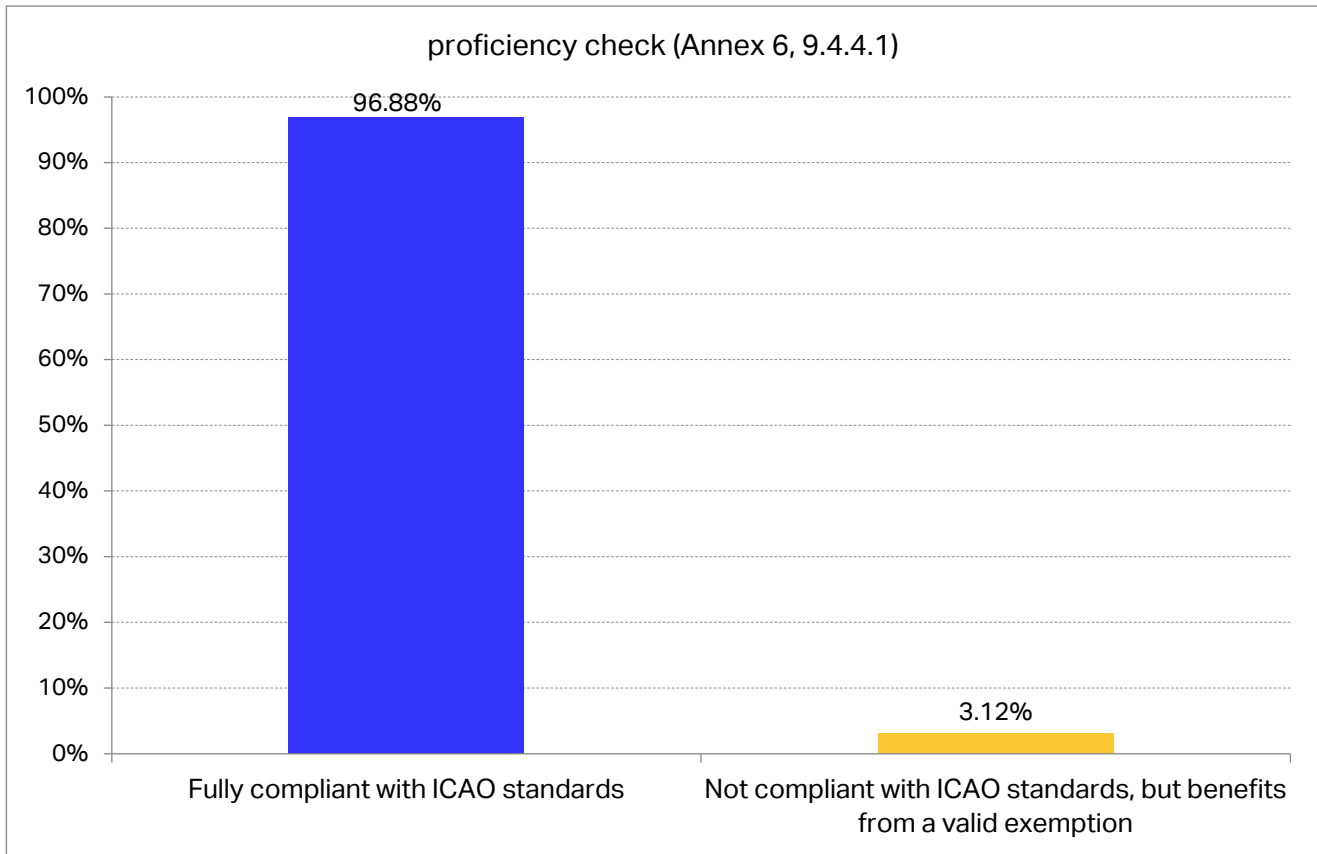

Answer Choices	Responses	
Fully compliant with ICAO standards	95.31%	61
Not compliant with ICAO standards, but benefits from a valid exemption	4.69%	3
Total	**100%**	**64**

Q6. flight crew license and rating validity (Annex 1, 1.2.5.1.2)

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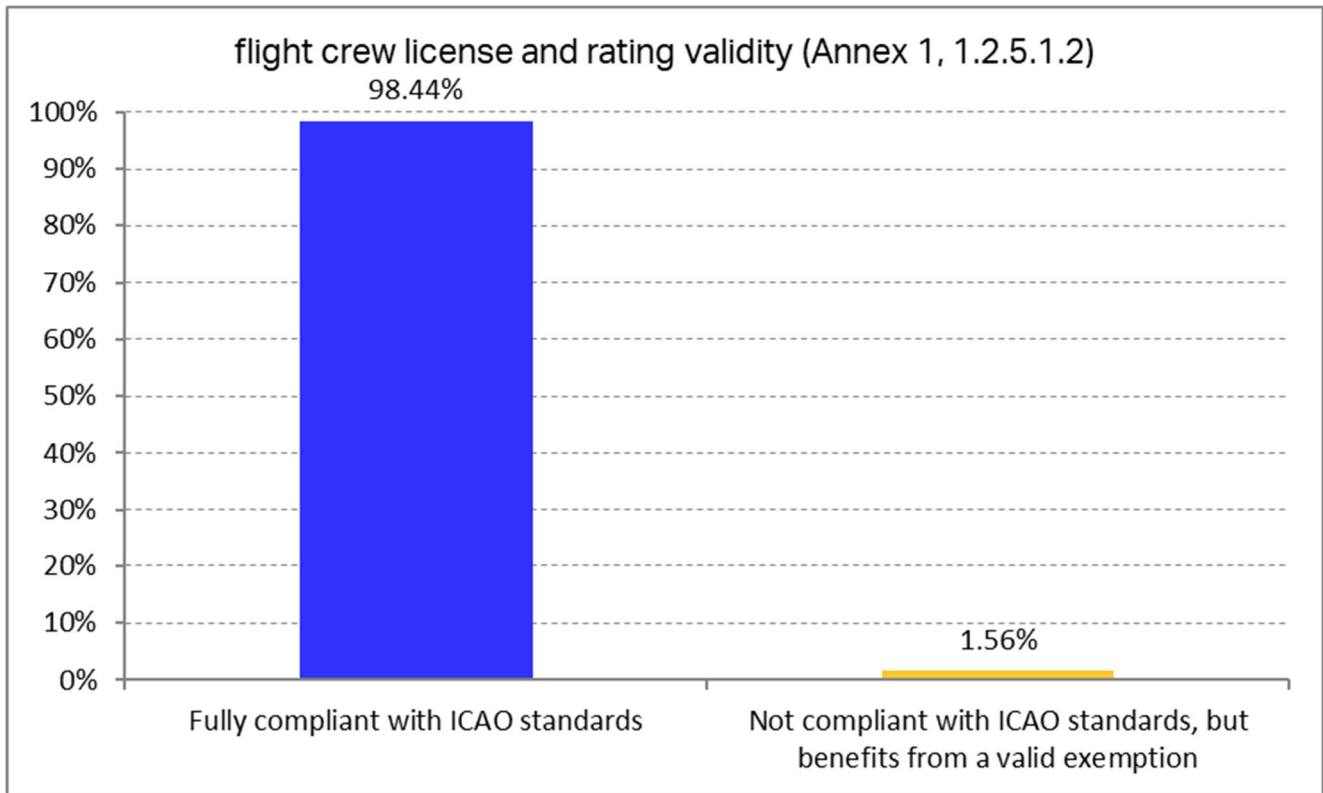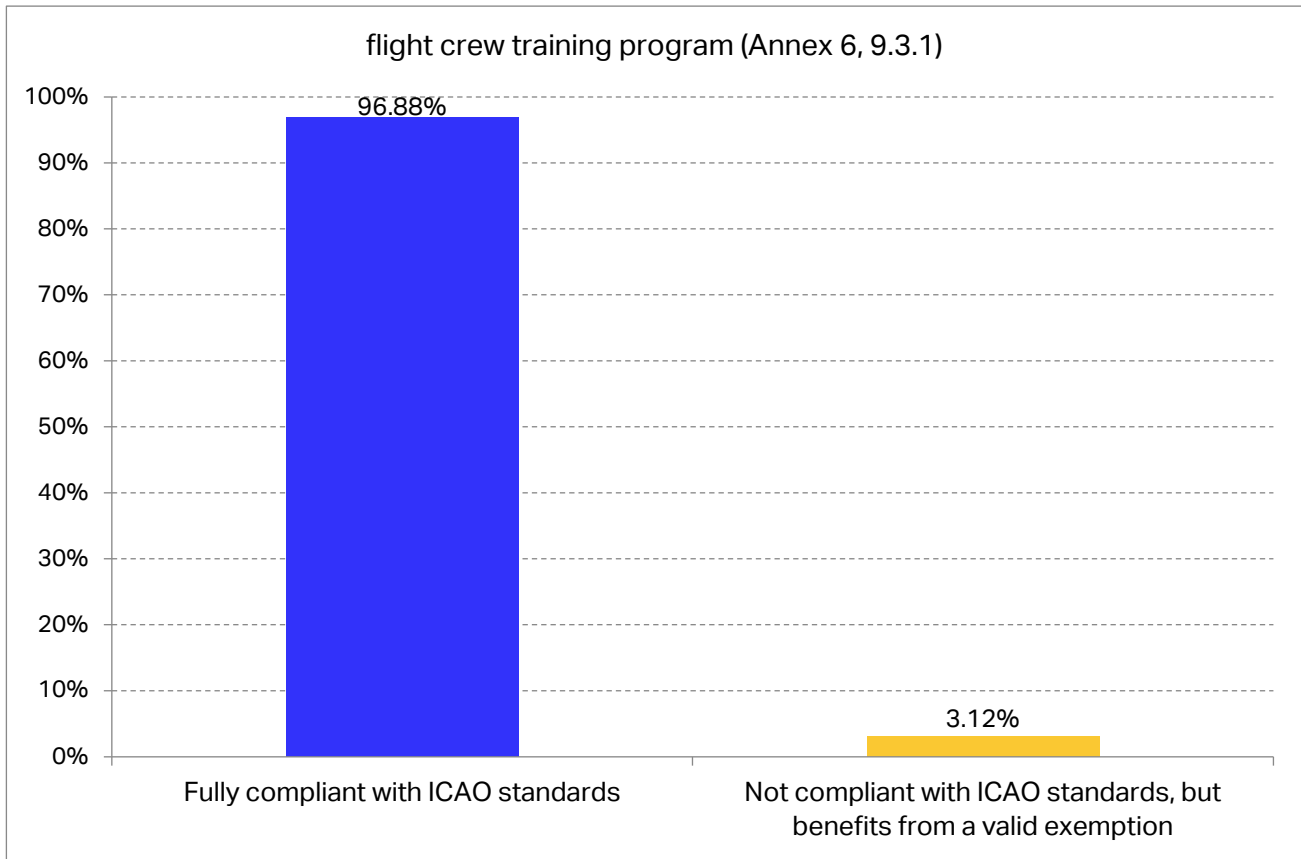
Answer Choices	Responses	
Fully compliant with ICAO standards	98.44%	63
Not compliant with ICAO standards, but benefits from a valid exemption	1.56%	1
Total	**100%**	**64**

Q7. proficiency check (Annex 6, 9.4.4.1)

proficiency check (Annex 6, 9.4.4.1)

Answer Choices	Responses	
Fully compliant with ICAO standards	96.88%	62
Not compliant with ICAO standards, but benefits from a valid exemption	3.12%	2
Total	**100%**	**64**

Q8. flight crew training program (Annex 6, 9.3.1)

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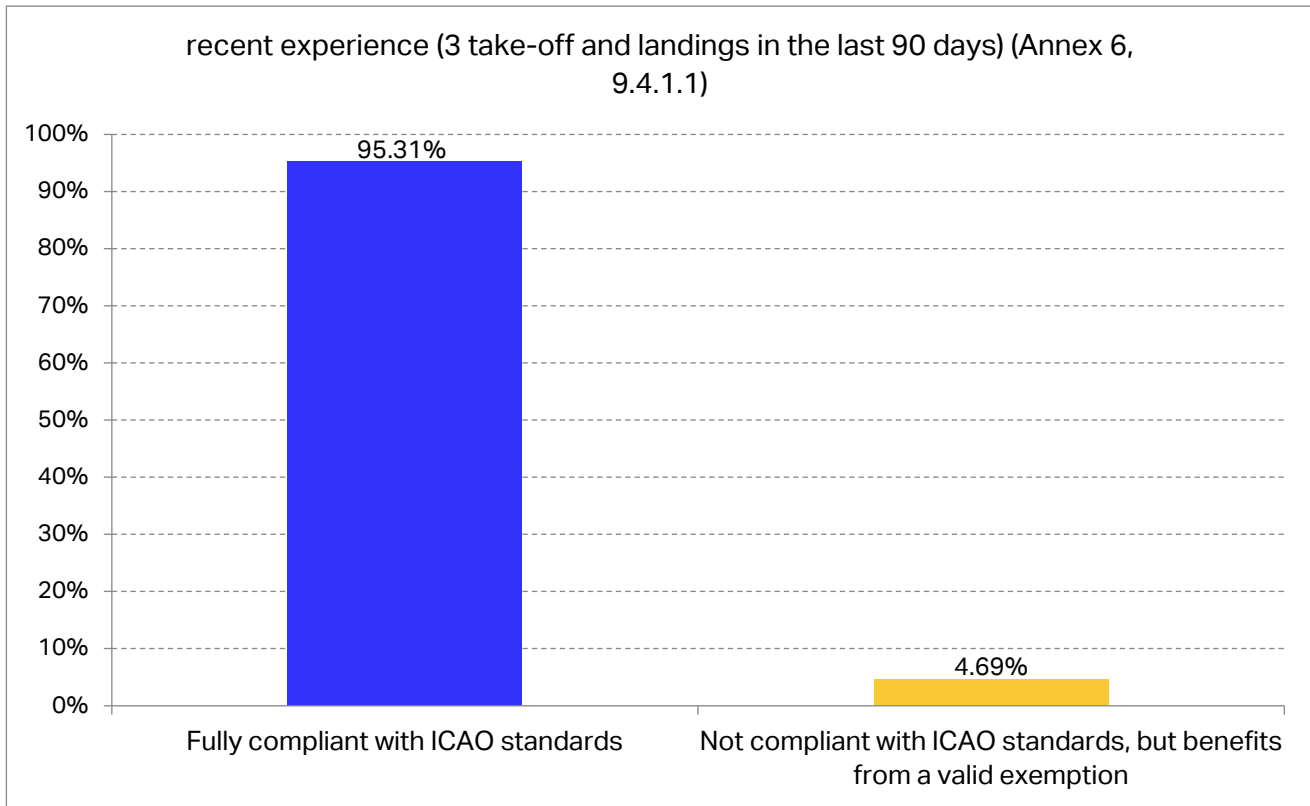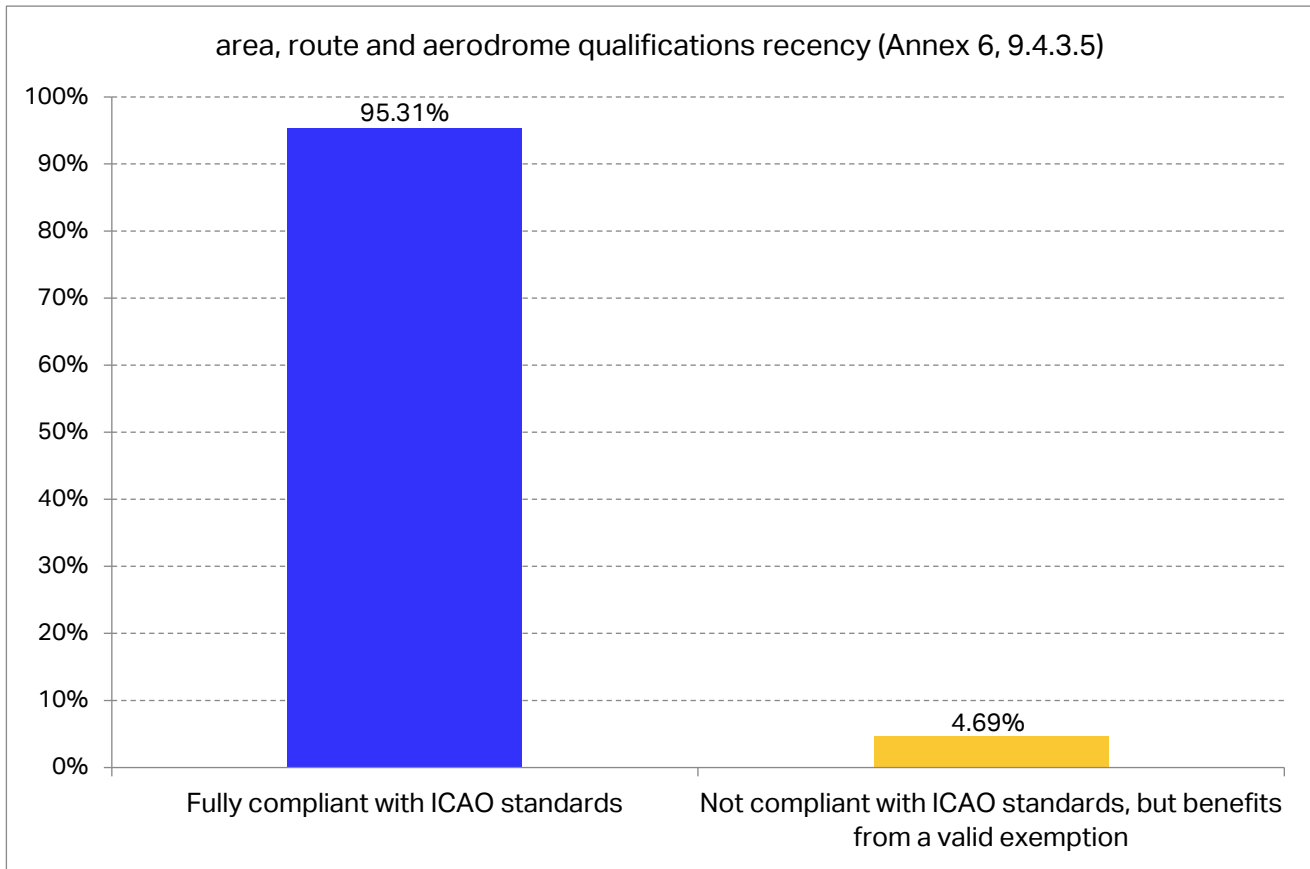

Answer Choices	Responses	
Fully compliant with ICAO standards	96.88%	62
Not compliant with ICAO standards, but benefits from a valid exemption	3.12%	2
Total	**100%**	**64**

Q9. recent experience (3 take-off and landings in the last 90 days) (Annex 6, 9.4.1.1)

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Answer Choices	Responses	
Fully compliant with ICAO standards	95.31%	61
Not compliant with ICAO standards, but benefits from a valid exemption	4.69%	3
Total	**100.00%**	**64**

Q10. area, route and aerodrome qualifications recency (Annex 6, 9.4.3.5)

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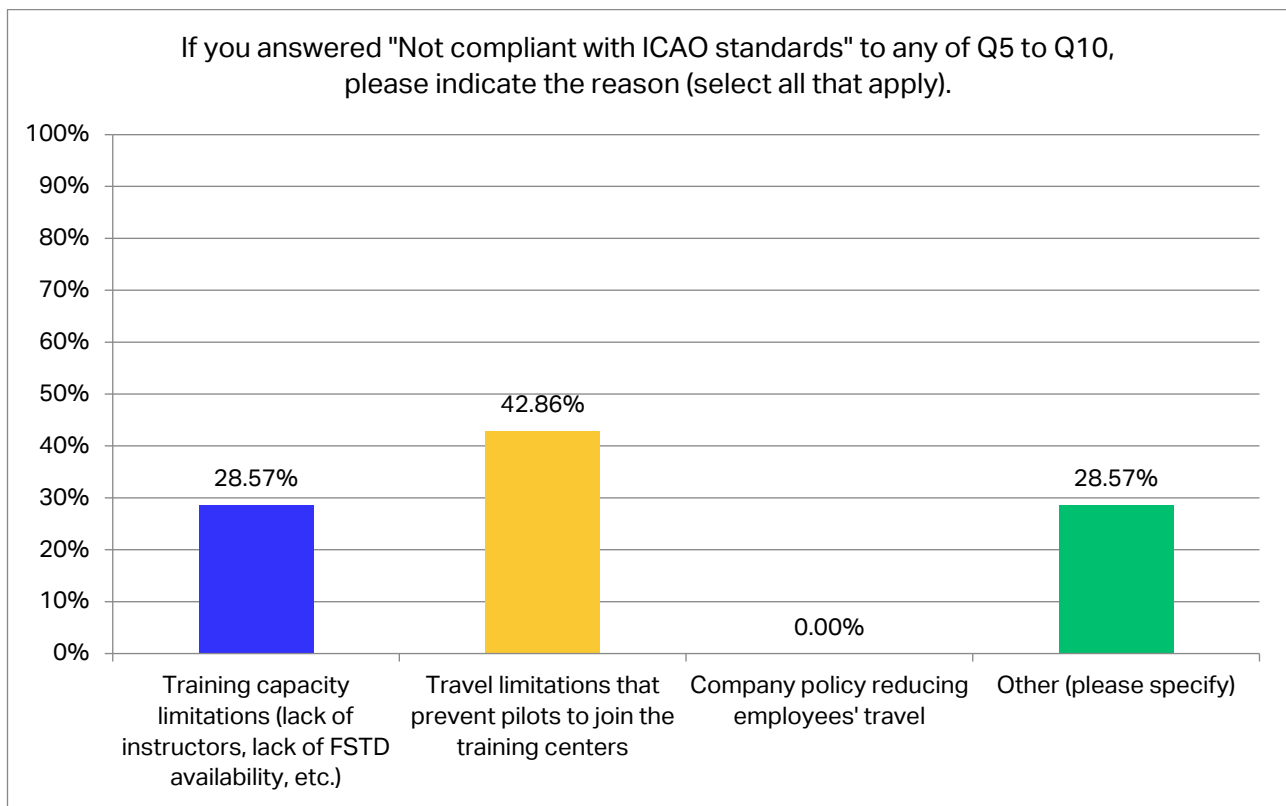| Answer Choices	Responses	
Fully compliant with ICAO standards	95.31%	61
Not compliant with ICAO standards, but benefits from a valid exemption	4.69%	3
	100.00%	**64**

Q11. If you answered "Not compliant with ICAO standards" to any of Q5. to Q10., please indicate the reason (select all that apply).

Reminder: The breakdown of the average percentages to Q5 to Q10 is as follows:

- *96.35% Fully compliant with ICAO standards*
- *3.65% Not compliant with ICAO standards, but benefits from a valid exemption*

The graph below shows the breakdown of the answers provided by the respondents who said not compliant. Please, keep in mind that these results represent the responses of an average 3.65% of the total respondents, which represents a maximum 5 not compliant answers.

If you answered "Not compliant with ICAO standards" to any of Q5 to Q10, please indicate the reason (select all that apply).

- Training capacity limitations (lack of instructors, lack of FSTD availability, etc.): 28.57%
- Travel limitations that prevent pilots to join the training centers: 42.86%
- Company policy reducing employees' travel: 0.00%
- Other (please specify): 28.57%

Those who answered "Other" (28.57%), provided the following reasons in the comment box:

- Medicals being extended and completed via online appointments
- Low volume of flight sectors

Q12. What is the average "grounded time" of the majority (more than 50%) of your pilot population that is not maintained on duty?

The results below show that 73.44% of the respondents said that the average "grounded time" of the majority (more than 50%) of their pilot population that is not maintained on duty, is either no longer applicable (39.06%) or between 0-3 months (34.38%).

The combination of these result with the results of Q4., where the majority (67.19%) of the respondents said that they maintain 80%-100% of their pilot population on duty, indicates that most of the airlines have implemented a "rotative" rostering to maintain their pilot population exposed to operations.

The remaining 26.56% of the respondents stating an average grounded time exceeding 3 months for the majority of their pilot population will have to implement recovery training either for operational recent experience and/or for compliance matters in regard to licensing and operator training requirements. The IATA Guidance for Post-COVID Restart of Operations: CBTA Training Solutions, Edition 2, provides solutions to these licensing and operator training requirements.


What is the average "grounded time" of the majority (more than 50%) of your pilot population that is not maintained on duty?
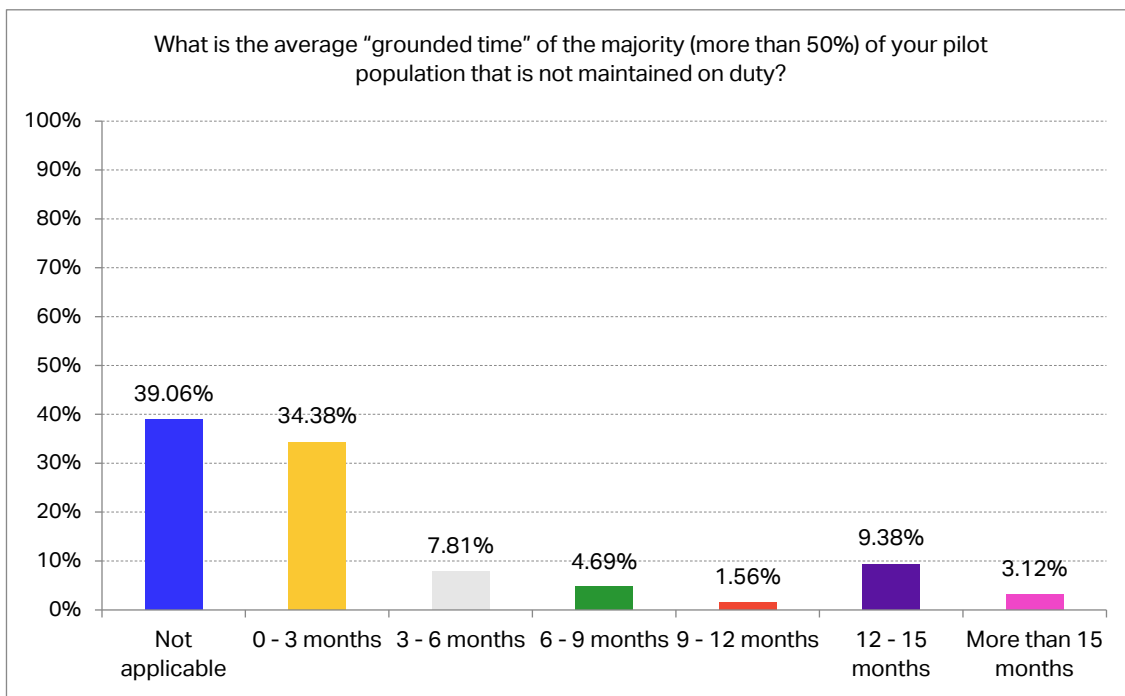
Answer Choices	Responses	
Not applicable	39.06%	25
0 - 3 months	34.38%	22
3 - 6 months	7.81%	5
6 - 9 months	4.69%	3
9 - 12 months	1.56%	1
12 - 15 months	9.38%	6
More than 15 months	3.12%	2
Total	**100%**	**64**

Q13. In the context of the restart of operations, do you foresee any training capacity limitations to bring back to operations your "grounded" pilot population?

The majority (76.56%) indicated that they do not foresee any training capacity limitations. These results are almost identical to the results of Survey-3, August 2021, (76.74%).

In the context of the restart of operations, do you foresee any training capacity limitations to bring back to operations your "grounded" pilot population?
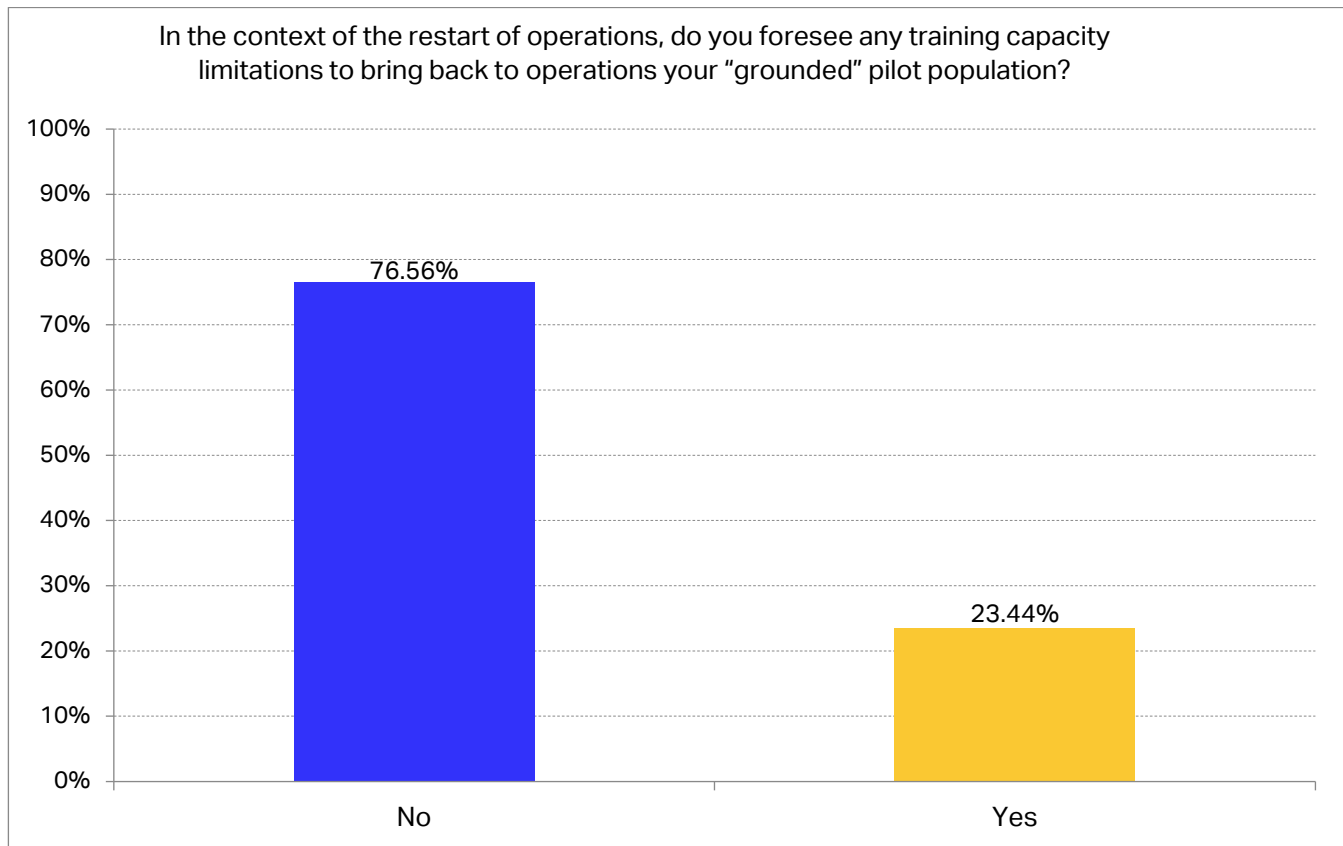
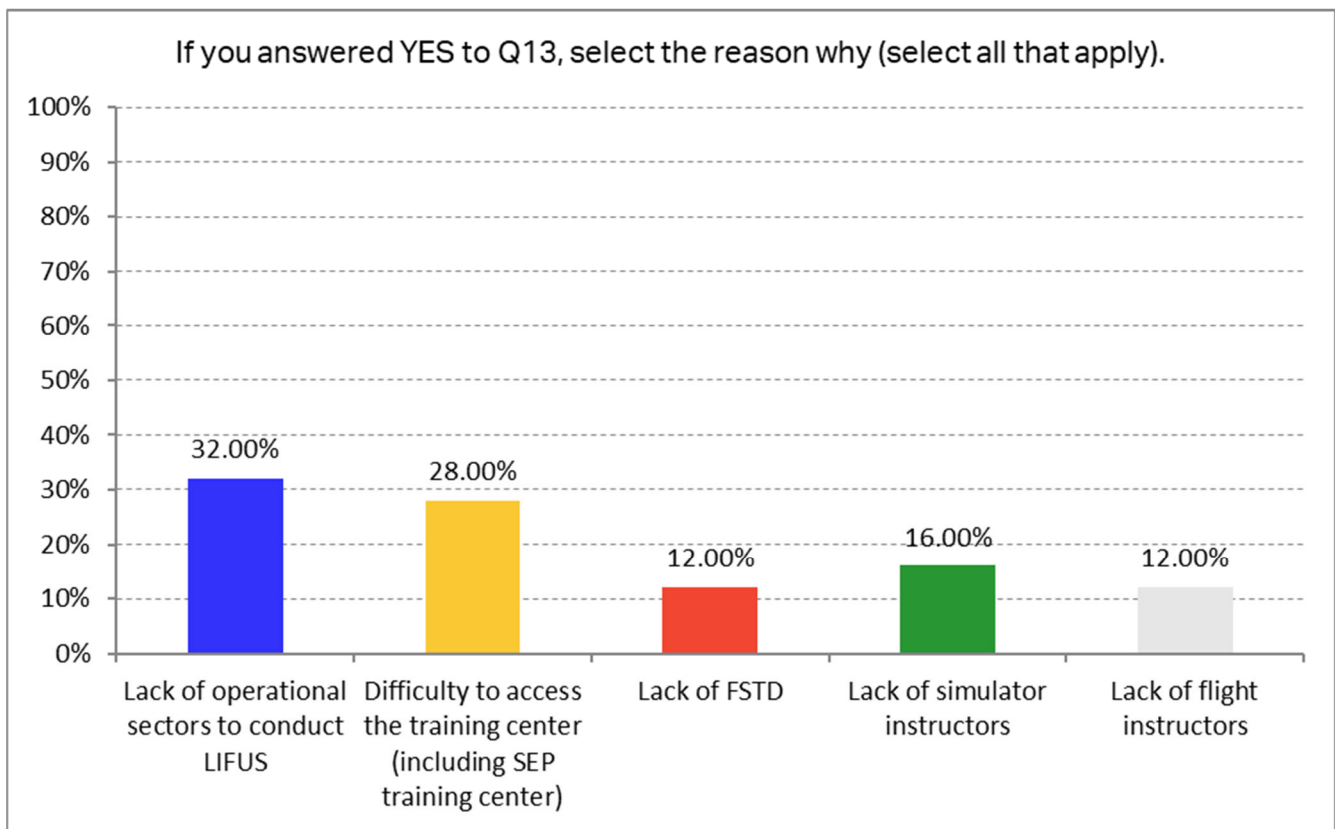| Answer Choices	Responses	
No	76.56%	49
Yes	23.44%	15
Total	**100%**	**64**

Q14. If you answered YES to Q13, select the reason why (select all that apply).

The following graph presents the breakdown of the reasons selected by the 23.44% of the operators who answered "yes" to Q13, foreseeing training capacity limitations to bring back to operations their "grounded" pilot population. The respondents could select more than one answer.

The results are consistent with Survey-3 (August 2021).

Note: There was no question in IATA Survey-1 and Survey-2 related to training capacity limitations, the main focus of those two first surveys was on compliance to ICAO training and operational standards.

If you answered YES to Q13, select the reason why (select all that apply).

| Reason	Percentage
Lack of operational sectors to conduct LIFUS	32.00%
Difficulty to access the training center (including SEP training center)	28.00%
Lack of FSTD	12.00%
Lack of simulator instructors	16.00%
Lack of flight instructors	12.00%

Q15. In the context of the restart of operations, and beyond the recovery of the "grounded" pilot population, do you foresee any pilot shortage?

64.13% of the respondents said that they do not foresee a pilot shortage, while in IATA Survey-3 (August 2021), 76.74% of the respondents had responded "No" to this question.

The results of this survey show a significant increase in the number of respondents who foresee a pilot shortage: 35.87% in Survey-4 versus 23.26% in Survey-3.

Note: There was no question in IATA Survey-1 and Survey-2 related to a foreseeable pilot shortage.

In the context of the restart of operations, and beyond the recovery of the "grounded" pilot population, do you foresee any pilot shortage?
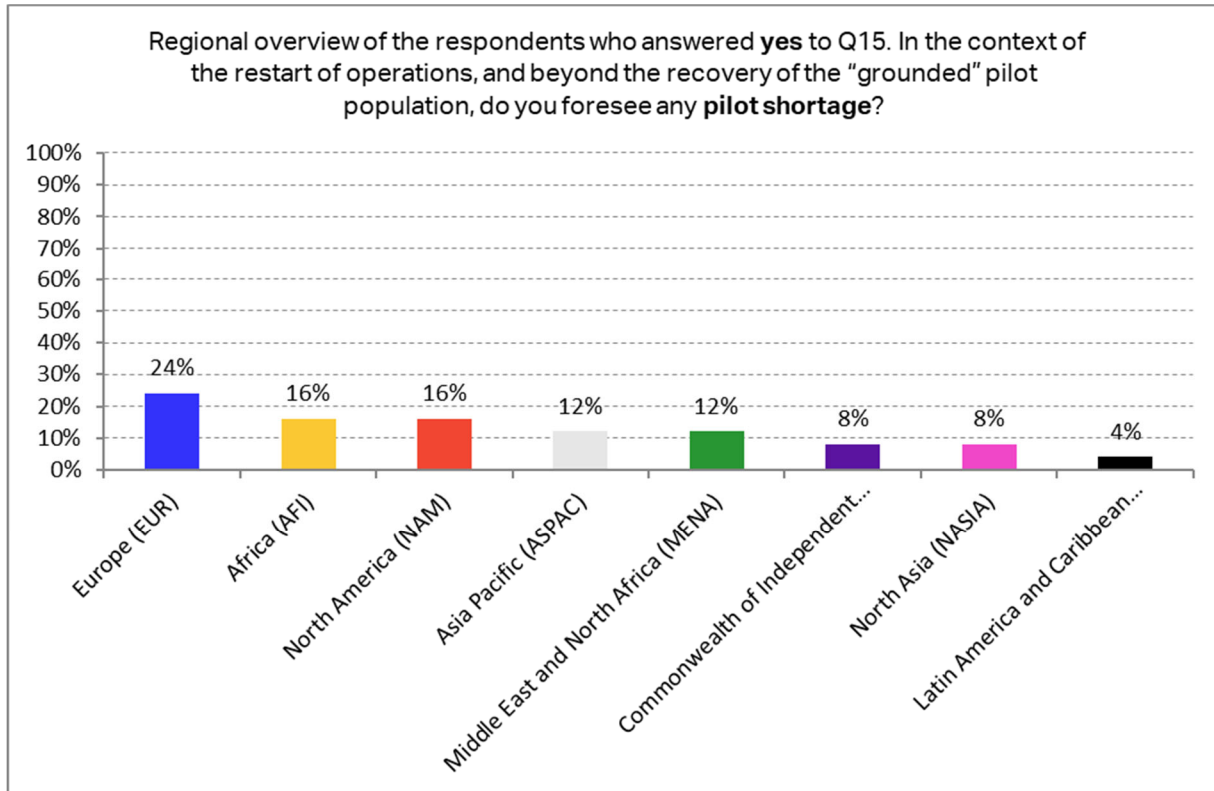
- No — 64.13%
- Yes — 35.87%
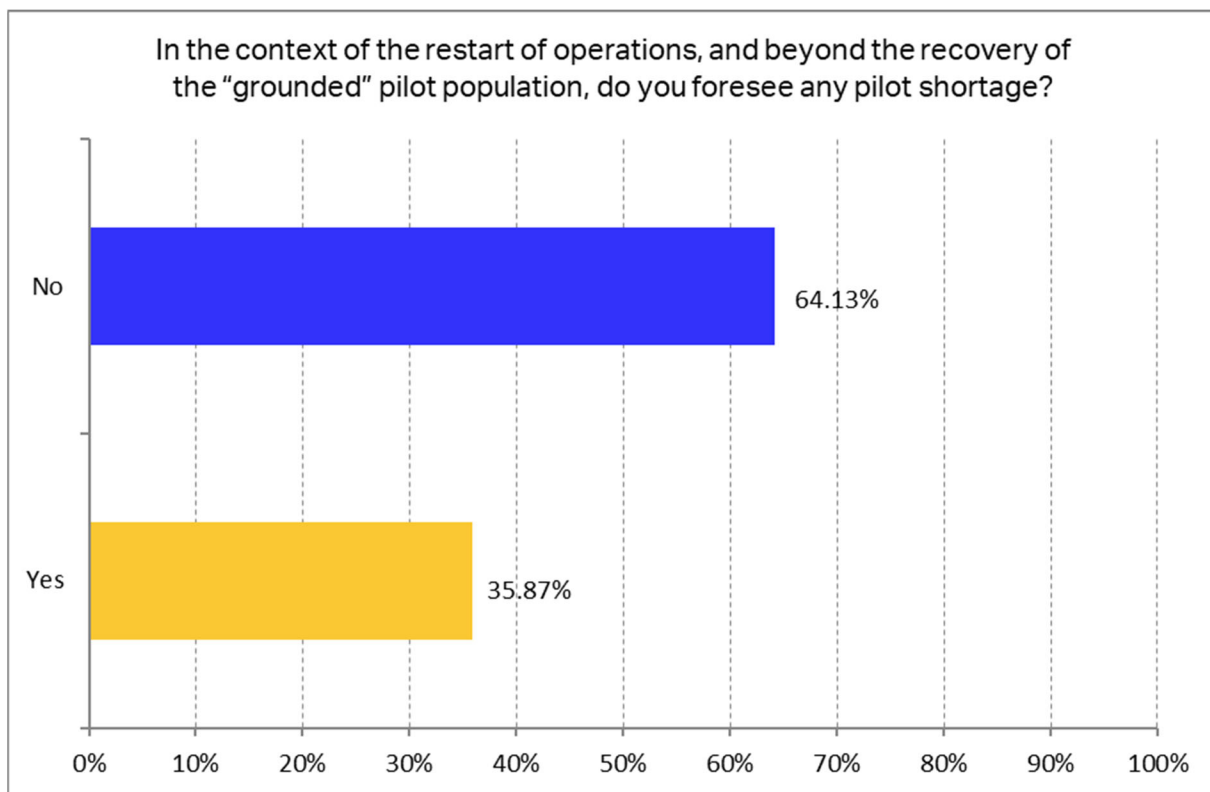
The following graph provides the breakdown, per region, of the 35.87% respondents who foresee a pilot shortage beyond the recovery of their grounded pilot population.

The top three regions to foresee a pilot shortage are: Europe (24%), Africa (16%) and North America (16%).

In Survey-3 the top three regions were: Africa, the Commonwealth of Independent States (both at 20%), followed by EUR and NAM (both at 15%) ex aequo.

Regional overview of the respondents who answered **yes** to Q15. In the context of the restart of operations, and beyond the recovery of the "grounded" pilot population, do you foresee any **pilot shortage**?

Region	Value
Europe (EUR)	24%
Africa (AFI)	16%
North America (NAM)	16%
Asia Pacific (ASPAC)	12%
Middle East and North Africa (MENA)	12%
Commonwealth of Independent...	8%
North Asia (NASIA)	8%
Latin America and Caribbean...	4%

Q16. If you answered YES to Q15, please indicate the reason why (select all that apply).
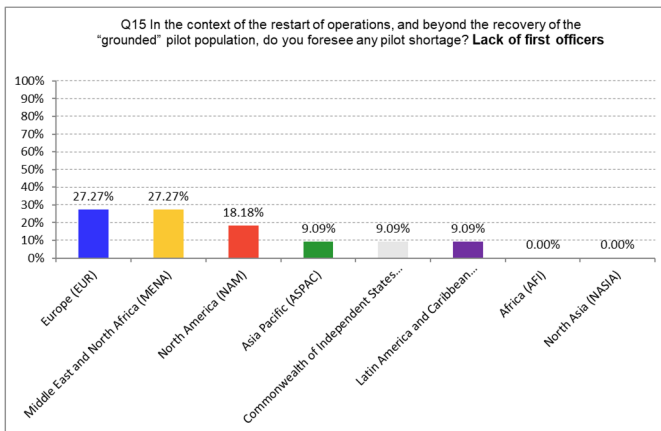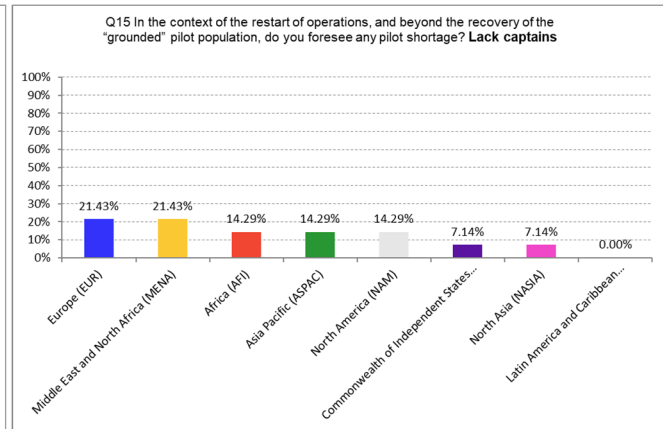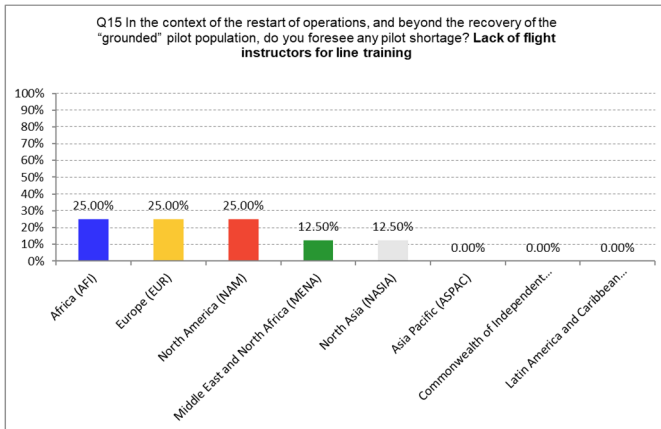
33.33% of the respondents foresee a lack of captains, followed by 26.19% for lack of first officers. These results are consistent with the results of Survey-3 (August 2021), the majority identifying "lack of captains" and "lack of first officers".
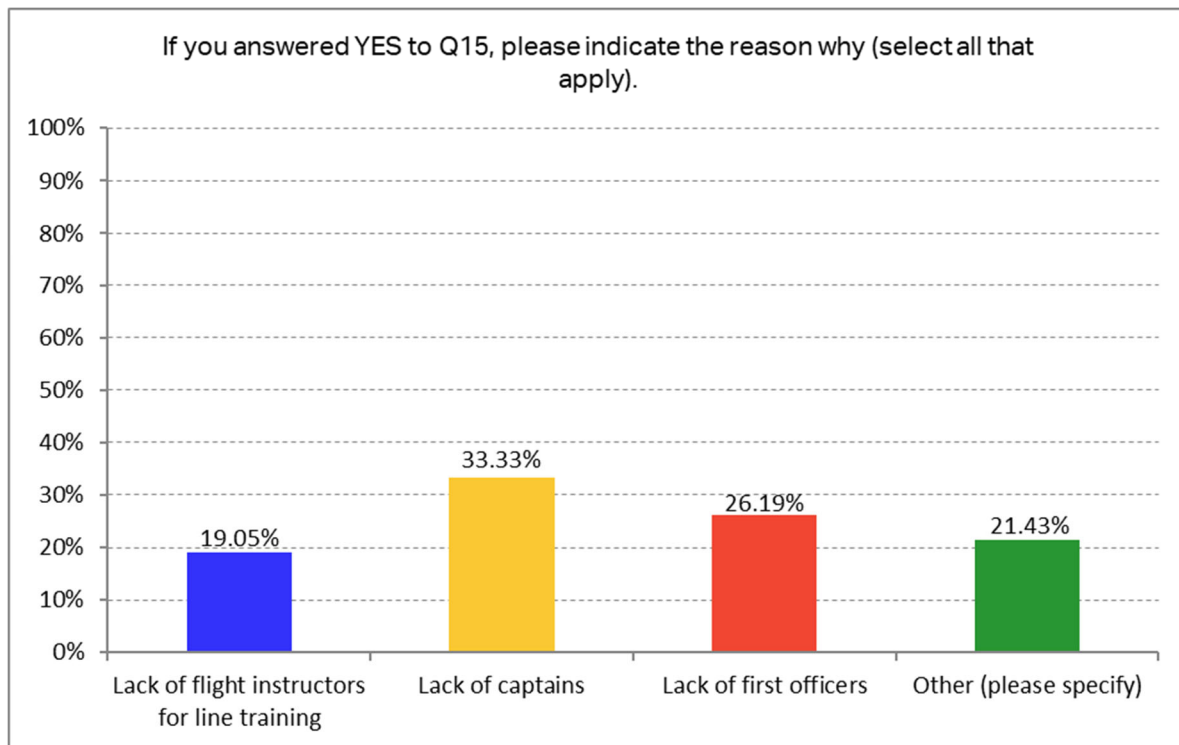
Regional overview to the results of Q16.

The following three graphs provide a more detailed breakdown per region, in terms of foreseen pilot shortage, as highlighted in the following points:

➢ **Lack of flight instructors for line training:** Majority from the AFI, EUR and NAM regions with 25% each.

➢ **Lack of captains:** Majority from the EUR (21.43%) and MENA (21.43%) regions.

➢ **Lack of first officers:** Majority from the EUR (27.27%) and MENA (27.27%) regions.

➢ **Other (please specify):** Please see below the graphs the comments made by the respondents.

Q15 In the context of the restart of operations, and beyond the recovery of the "grounded" pilot population, do you foresee any pilot shortage? **Lack of flight instructors for line training**

Q15 In the context of the restart of operations, and beyond the recovery of the "grounded" pilot population, do you foresee any pilot shortage? **Lack captains**

Q15 In the context of the restart of operations, and beyond the recovery of the "grounded" pilot population, do you foresee any pilot shortage? **Lack of first officers**

The following are the comments made by the respondents under "**Other Specify**", as potential causes for a pilot shortage:

- Some pilots leaving the industry including legacy airline pilots taking pensions early. Big expansion LCC's.

- Delivery of new aircrafts to the current fleet.

- The ability of small airlines from developing countries in mobilising the required massive financial resources for all the training required.

- Lack of pilots to recruit.

- Increase in US demand for travel compounded by mandatory retirements of senior US pilot population.

- Lack of pilots in the market.

- Lack of sectors for LIFUS.

- Lack of available flight to be used for training flights before the ramp-up.

- For now, we have good access to applicants but expect this to change when the rest of the industry recovers.

Conclusion

In regard to compliance to ICAO Annex 1 and Annex 6 training and operational standards, the results of the survey have demonstrated that almost all the respondent airlines (96.35%) have maintained the majority of their pilot population (over 50%) in compliance with the standards.

In terms of average "grounded time" of the majority (more than 50%) of their pilot population, the majority 73.44% have indicated that it is no longer applicable (39.06%), meaning no grounded pilots, or between 0-3 months (34.38%). For the 26.56% of the respondents stating an average grounded time exceeding 3 months for the majority of their pilot population. Despite the low rate of response (64 airline respondents) most of the answers are consistent with previous surveys, confirming the need for an efficient recovery training path for the grounded pilot population. Hence, IATA proposes efficient recovery training solutions in its Guidance for Post-COVID Restart of Operations: CBTA Training Solutions, Edition 2.

In terms of forecasted limitations and shortages, the results of the survey indicate that a fair number of respondents (23.44%) foresee training capacity limitations to bring back to operations their "grounded" pilot population. The survey results also indicate a significant increase in percentage, compared to Survey-3, of airlines foreseeing a shortage of pilots beyond the recovery of their "grounded" pilot population.

In regard to the regional perspective, the results provide us with indications as to the challenges faced by the different regions, but, considering the fact that some regions are under-represented, it is difficult to draw firm conclusions as to the specific regional issues. IATA needs to get a better visibility on the actual regional situation in order to propose the appropriate solutions to the concerns expressed by its members in regard to training capacity limitations and forecasted pilot shortage.

Appendix 1

ICAO standard related to Question 4. What will be the status of the majority (more than 50%) of your pilot population **maintained on duty** in terms of medical certificate validity (Annex 1, 1.2.4.4.1)

1.2.4 Medical fitness

1.2.4.4.1 The period of validity of a Medical Assessment may be extended, at the discretion of the Licensing Authority, up to 45 days.

Note.— It is advisable to let the calendar day on which the Medical Assessment expires remain constant year after year by allowing the expiry date of the current Medical Assessment to be the beginning of the new validity period under the proviso that the medical examination takes place during the period of validity of the current Medical Assessment but no more than 45 days before it expires.

ICAO Standard related to Question 5. What will be the status of the majority (more than 50%) of your pilot population **maintained on duty** in terms of flight crew license and rating validity (Annex 1, 1.2.5.1.2)

1.2.5 Validity of licences

1.2.5.1.2 A Contracting State, having issued a licence, shall ensure that other Contracting States are enabled to be satisfied as to the validity of the licence.

Note 1.— Until 2 November 2022, the maintenance of competency of flight crew or remote flight crew members, engaged in commercial air transport operations, may be satisfactorily established by demonstration of skill during proficiency flight checks completed in accordance with Annex 6.

Note 1.— *As of 3 November 2022, the maintenance of competency of flight crew members, engaged in commercial air transport operations, may be satisfactorily established by demonstration of skill during proficiency flight checks completed in accordance with Annex 6.*

Note 2.— Until 2 November 2022, maintenance of competency may be satisfactorily recorded in the operator's records, or in the flight crew member's personal log book or licence.

Note 2.— *As of 3 November 2022, maintenance of competency may be satisfactorily recorded in the operator's records, or in the flight crew or the remote flight crew member's personal log book or licence.*

Note 3.— Until 2 November 2022, flight crew members may, to the extent deemed feasible by the State of Registry, demonstrate their continuing competency in FSTDs approved by that State.

Note 3.— *As of 3 November 2022, flight crew and remote flight crew members may, to the extent deemed feasible by the State of Registry, or Licensing Authority of the State of the Operator, respectively, demonstrate their continuing competency in FSTDs approved by that State.*

Note 4.— See the Manual of Criteria for the Qualification of Flight Simulation Training Devices *(Doc 9625).*

Note 5.— See the Manual of Procedures for Establishment and Management of a State's Personnel Licensing System *(Doc 9379) for guidance material on the development of a risk assessment process.*

ICAO standard related to Question 6. What will be the status of the majority (more than 50%) of your pilot population **maintained on duty** in terms of proficiency check (Annex 6, 9.4.4.1)

9.4 Qualifications

9.4.4 Pilot proficiency checks

9.4.4.1 An operator shall ensure that piloting technique and the ability to execute emergency procedures is checked in such a way as to demonstrate the pilot's competence on each type or variant of a type of aeroplane. Where the operation may be conducted under instrument flight rules, an operator shall ensure that the pilot's competence to comply with such rules is demonstrated to either a check pilot of the operator or to a representative of the State of the Operator. Such checks shall be performed twice within any period of one year. Any two such checks which are similar and which occur within a period of four consecutive months shall note alone satisfy this requirement.

Note 1. – Flight simulation training devices approved by the State of the Operator may be used for those parts of the checks for which they are specifically approved.

Note 2. – See the Manual of Criteria for the Qualification of Flight Simulation Training Devices (Doc 9625).

ICAO standard related to Question 7. What will be the status of the majority (more than 50%) of your pilot population **maintained on duty** in terms of flight crew training program (Annex 6, 9.3.1)

9.3 Flight crew member training programmes

9.3.1 The operator shall establish and maintain a ground and flight training programme, approved by the State of the Operator, which ensures that all flight crew members are adequately trained to perform their assigned duties. The training programme shall:
   a) include ground and flight training facilities and properly qualified instructors as determined by the State of the Operator;

   b) consist of ground and flight training in the type(s) of aeroplane on which the flight crew member serves;

   c) include proper flight crew coordination and training in all types of emergency and abnormal situations or procedures caused by engine, airframe or systems malfunctions, fire or other abnormalities;

   d) include upset prevention and recovery training;

   e) include training in knowledge and skills related to visual and instrument flight procedures for the intended area of operation, human performance including threat and error management and in the transport of dangerous goods;

   f) ensure that all flight crew members know the functions for which they are responsible and the relation of these functions to the functions of other crew members, particularly in regard to abnormal or emergency procedures; and

   g) be given on a recurrent basis, as determined by the State of the Operator and shall include an assessment of competence.

Note 1.— Paragraph 4.2.5 prohibits the in-flight simulation of emergency or abnormal situations when passengers or cargo are being carried.

Note 2.— Flight training may, to the extent deemed appropriate by the State of the Operator, be given in flight simulation training devices approved by the State for that purpose.

Note 3.— The scope of the recurrent training required by 9.2 and 9.3 may be varied and need not be as extensive as the initial training given in a particular type of aeroplane.

Note 4.— The use of correspondence courses and written examinations as well as other means may, to the extent deemed feasible by the State of the Operator, be utilized in meeting the requirements for periodic ground training.

Note 5.— For more information on dangerous goods operational requirements see Chapter 14.

Note 6.— Guidance material to design training programmes to develop knowledge and skills in human performance can be found in the Human Factors Training Manual (Doc 9683).

Note 7.— Information for pilots and flight operations personnel on flight procedure parameters and operational procedures is contained in PANS-OPS (Doc 8168), Volume I. Criteria for the construction of visual and instrument flight procedures are contained in PANS-OPS (Doc 8168), Volume II. Obstacle clearance criteria and procedures used in certain States may differ from PANS-OPS, and knowledge of these differences is important for safety reasons.

Note 8.— Guidance material to design flight crew training programmes can be found in the Manual of Evidence-based Training (Doc 9995)*.*

Note 9.— Guidance material on the different means used to assess competence can be found in the Attachment to Chapter 2 of the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868).

Note 10.— Procedures for upset prevention and recovery training in a flight simulation training device are contained in the Procedures for Air Navigation Services — Training (PANS-TRG, Doc 9868).

Note 11.— Guidance on upset prevention and recovery training in a flight simulation training device is contained in the Manual on Aeroplane Upset Prevention and Recovery Training (Doc 10011).

ICAO standard related to Question 8. What will be the status of the majority (more than 50%) of your pilot population **maintained on duty** in terms of recent experience (3 take-off and landings in the last 90 days) (Annex 6, 9.4.1.1)

9.4 Qualifications

9.4.1 Recent experience — pilot-in-command and co-pilot

9.4.1.1 An operator shall not assign a pilot-in-command or a co-pilot to operate at the flight controls of a type or variant of a type of aeroplane during take-off and landing unless that pilot has operated the flight controls during at least three take-offs and landings within the preceding 90 days on the same type of aeroplane or in a flight simulator approved for the purpose.

ICAO standard related to Question 9. What will be the status of the majority (more than 50%) of your pilot population **maintained on duty** in terms of area, route and aerodrome qualifications recency (Annex 6, 9.4.3.5)

9.4 Qualifications

9.4.3.5 An operator shall not continue to utilize a pilot as a pilot-in-command on a route or within an area specified by the operator and approved by the State of the Operator unless, within the preceding 12 months, that pilot has made at least one trip as a pilot member of the flight crew, or as a check pilot, or as an observer in the flight crew compartment.

a) within that specified area; and

b) if appropriate, on any route where procedures associated with that route or with any aerodromes intended to be used for take-off or landing require the application of special skills or knowledge.