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TECHNICAL COMMISSION

Agenda Item 25: Other issues to be considered by the Technical Commission

INITIATIVES FOR PROMOTING ACTIVE ENGAGEMENT IN PILOTS AND AIRCRAFT MECHANICS

(Presented by Japan)

EXECUTIVE SUMMARY

Japan has set a government goal of increasing the number of foreign visitors to 60 million by 2030, and a significant increase in aviation demand is expected in the future. Securing and utilizing human resources, such as aircraft mechanics and pilots, necessary to achieve this goal has become a critical issue. To address this issue, the Japan Civil Aviation Bureau (JCAB) established a study group, conducted a series of discussions, and in March this year compiled specific recommendations, including promoting the active engagement of women.

JCAB recognizes that securing and utilizing aircraft mechanics and pilots is a global issue not limited to Japan, and this paper aims to share the findings compiled by the study group.

<i>Strategic Goals:</i>	This working paper relates to Strategic Goal <i>Every Flight is Safe and Secure</i> .
<i>Financial implications:</i>	
<i>References:</i>	

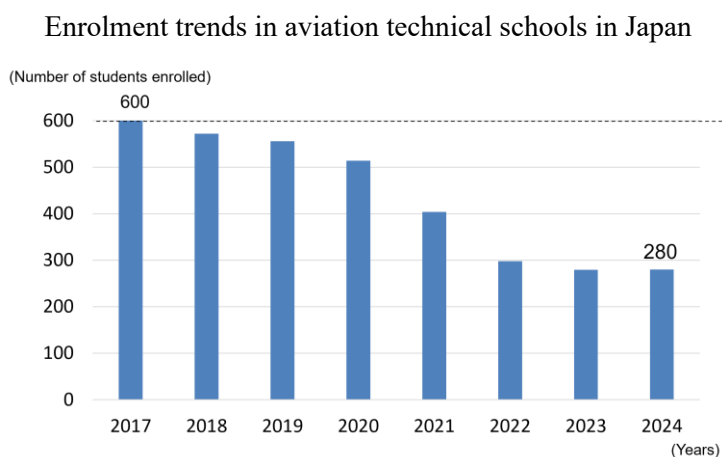
1. INTRODUCTION

1.1 In Japan, the government has set a goal of increasing the number of foreign visitors to 60 million by 2030 to promote economic growth and realize the vision of Japan as a tourism-oriented country, as a result, further growth in aviation demand is expected.

1.2 Regarding aircraft mechanics and pilots, Japan Civil Aviation Bureau (JCAB) established a study group in February last year. Based on the premise of ensuring safety, the study group has been discussing measures necessary to secure and utilize aircraft mechanics and pilots in the future. The study group compiled its final report in March this year. Several challenges exist regarding aircraft mechanics and pilots in Japan, with the emerging challenge being the need to establish a system capable of supporting future increases in aviation demand.

Aircraft mechanics

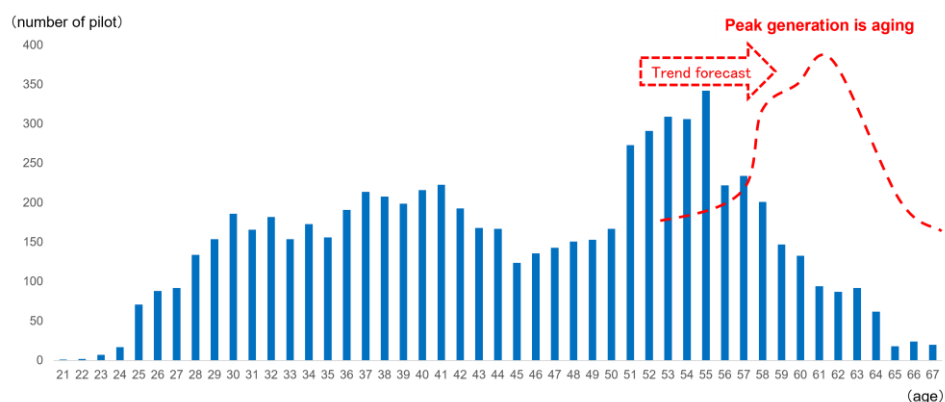
- Since the COVID-19 pandemic, enrollment in aviation technical schools - the main training institutions for aircraft mechanics - has continued to decline. The number of students enrolled in 2024 is half what it was five years ago.



Pilots

- With the upcoming wave of mass retirements and the growing global demand for aviation, the need for pilots is expected to rise, and competition to secure them will likely intensify.

Number and age composition of pilots in Japan



2. DISCUSSION

2.1 As global aviation demand is expected to continue growing significantly, JCAB recognizes that ensuring a stable supply of aviation personnel is a common challenge faced by all countries. This paper outlines JCAB's efforts to secure and effectively utilize human resources across various occupations in the aviation sector.

2.2 Regarding aircraft mechanics and pilots, the study group's final report outlined the future direction of initiatives - such as necessary reforms to domestic systems and the establishment of public-private cooperative frameworks - from the three perspectives: "effective use of resources,"

“improving training and operational efficiency,” and “expansion of the base.” This paper focuses particularly on JCAB’s efforts to expand the scope of work for aircraft mechanics and to standardize type-specific licenses under the perspective of “effective use of resources,” as well as efforts to increase the number of female pilots and aircraft mechanics under the perspective of “expansion of the base.”

1) Expansion of the scope of work for aircraft mechanics and standardization of type-specific licenses

Japan's aircraft mechanic licensing system is divided into two categories: *aircraft line maintenance mechanics*, who perform line maintenance, and *aircraft maintenance engineers* who perform base maintenance. Each category requires a type-specific license.

While *aircraft maintenance engineers* oversee comprehensive aircraft maintenance, the scope of work for *aircraft line maintenance mechanics* is limited to minor tasks, allowing the shorter training periods. However, their authorize tasks currently account for only about 60 per cent of actual line maintenance operations. As a result, *aircraft maintenance engineers* are ultimately required on-site, and the system does not fully meet the industry’s needs for utilizing *aircraft line maintenance mechanics*.

In addition, for the maintenance of large aircraft, a license is required for each aircraft type, covering all maintenance tasks from basic to advanced. However, with the standardization of maintenance procedures driven by aircraft system digitization and improvements in maintenance manuals, there is a growing demand to eliminate the requirement for type-specific licenses for minor tasks such as daily pre-flight inspections.

In response to these practical challenges at maintenance sites, JCAB plans to undertake a major revision of the mechanic licensing system in Japan, aiming to promote more effective use of maintenance personnel.

2) Increasing the number of female pilots and aircraft mechanics

The ratio of female pilots in Japan is 1.95 per cent (world: 4.69 per cent), and the ratio of female aircraft mechanics in Japan is 5.12 per cent (world: 3.11 per cent). Although the representation of female pilots is currently at or below the global average, this metric demonstrates a consistent upward trajectory. Concurrently, there is an observable trend in the number of female aircraft mechanics.

In October 2024, JCAB established the “Working Group for Promoting Women's Participation in Pilots and Aircraft Mechanics”, comprising academic experts, current female pilots and aircraft mechanics, as well as former air traffic controllers. The group has examined specific measures, and a summary of the discussions was published in February 2025.

The summary sets a target of increasing the percentage of women in these professions to 10 per cent within the next 10 years - one of the highest levels globally. It also outlines the direction of future initiatives to promote women's participation in the aviation workforce from two key perspectives: "expanding the pool of prospective candidates" and "retaining those already employed." Specific measures are as follows:

Expanding the pool of prospective candidates

- 1) Increase the percentage of female students at the Civil Aviation College* (Currently approx. 5 per cent)
 - Measures include revising admission requirements – such as height restrictions and advanced science subjects - and introducing a women’s quota by adding examination categories that assess personal attributes, in addition to the general quota open to all applicants.
- *The Civil Aviation College is Japan’s primary pilot training institution, with approximately 40 per cent of Japanese airline pilots having graduated from this college.
- 2) Strategic public relations through public-private partnerships
 - Conduct strategic and continuous public relations activities through collaboration between the public and private sectors to dispel the stereotypical images such as “pilots = male” and “mechanics = male”.

Retaining employees

- 1) Review of the national qualification system with consideration for maternity leave, etc.
 - Extend the current two-year period between the written and practical examinations to accommodate maternity and childcare leave.
- 2) Promoting awareness and use of maintenance tools that compensate for physical limitations
 - Conduct research on maintenance tools that support those with physical or muscular limitations, promote their use, and advocate for their development and adoption by manufacturers.
- 3) Fostering corporate culture, raising awareness, and improving the communication environment
 - Promote reforms in corporate culture through collaboration between management and front line staff, establish shared communities via industry associations, and encourage the sharing of career paths.

JCAB, in cooperation with airlines and other stakeholders, will continue to work proactively to implement these measures.

2.3 To ensure a stable supply of aviation personnel, it is essential to steadily implement the initiatives outlined above. JCAB will continue to address this issue in close cooperation with relevant stakeholders, while also drawing on best practices from overseas and successful initiatives in other domestic industries.

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