



**DIRECTORS GENERAL OF CIVIL AVIATION - ICAO EUROPEAN AND NORTH ATLANTIC
REGIONS**

2025 MEETING (EUR/NAT-DGCA/2025)

(Paris, France, 17 June 2025)

Agenda Item 4: Addressing current and emerging challenges related to Aviation Skills and Workforce Planning

AVIATION TRAINING AND WORKFORCE PLANNING

(Presented by the Secretariat)

SUMMARY

This Working Paper outlines ICAO's strategic framework under the NGAP Programme and summarizes regional efforts in the EUR/NAT area, including the outcomes of the 2025 Aviation Training and Skills Workshop. It outlines four strategic priorities to guide efforts in training and workforce planning across the EUR/NAT area.

1. Introduction

1.1 The aviation sector is facing significant workforce challenges due to rapid technological innovation, increased focus on sustainability, shortage of skilled personnel, and the need for greater diversity and inclusion. Addressing these challenges is essential to ensuring the availability of a skilled, adaptable, and motivated workforce capable of supporting the safe, secure, and sustainable development of global air transport.

1.2 ICAO, through the Next Generation of Aviation Professionals (NGAP) Programme, is implementing a structured strategy to attract, train, and retain the aviation workforce of the future. The ICAO EUR/NAT Regional Office is supporting these global efforts through targeted regional initiatives aimed at strengthening workforce planning, aligning education and training with industry needs and fostering collaboration among States, industry, academia, and training organizations.

2. Discussion

Next Generation of Aviation Professionals (NGAP), Global Aviation and Aerospace Skills Taskforce (GAASST) and Global Aviation Education Plan (GAEP)

2.1 To address the significant workforce challenges faced by the aviation sector, ICAO has revitalized the NGAP Programme and identified workforce development, more specifically “Attracting new talents”, as a high-priority enabler within ICAO’s long-term strategic and business plans. A structured global strategy has been built around four key focus areas, aimed at enhancing workforce attraction, training, and retention. ICAO’s strategic approach emphasizes collaboration among governments, industry leaders,

academia and training centers to develop harmonized solutions and ensure aviation remains an attractive, dynamic, and accessible career path for future generations.

2.2 ICAO has identified the following key focus areas under the NGAP programme:

- a) **Key Focus Area 1:** Workforce Monitoring & Forecasting – Using data-driven insights to anticipate future skill needs and address workforce gaps proactively
- b) **Key Focus Area 2:** Education & Training – Aligning education with industry requirements and fostering mutual recognition of qualifications across borders to create a more seamless talent pipeline
- c) **Key Focus Area 3:** Capacity Building & Implementation Support & Resource Mobilization – Providing expertise to States and mobilizing resources, ensuring that no country is left behind in strengthening its aviation workforce
- d) **Key Focus Area 4:** Outreach & Knowledge Sharing – Securing Political Commitment, Sharing Best Practices, and Promoting Aviation Careers

2.3 To further advance these priority areas, ICAO is organizing a Global Summit on the Next Generation of Aviation Professionals (NGAP) in South Africa from 12 to 14 August 2025. Guided by the theme “The Flight Plan for Future Aviation Talent: Innovate, Educate, Inspire” the Summit will bring together governments, industry leaders, academic institutions, training organizations, and youth to shape policies, exchange best practices and solutions, and strengthen international collaboration to build a resilient and future-ready aviation workforce.

2.4 At the 42nd Session of the Assembly of ICAO, the Council will present a working paper with a progress report on the implementation of the NGAP programme. The working paper will outline the key components of the NGAP strategy, highlight outcomes from the Global NGAP summit in South Africa, including the call to action, and propose an update to Assembly Resolution A39-29 on NGAP. ICAO EUR/NAT accredited States are encouraged to support the Assembly working paper and actively engage in the discussions.

2.5 In support of ICAO’s NGAP programme, the Global Aviation and Aerospace Skills Taskforce (GAAST) is a global industry initiative, bringing together over 100 States and international organizations, including ICCAIA, IATA, ACI, EASA, EUROCONTROL and CANSO to address global aviation workforce challenges. GAAST aims to ensure a steady supply of diverse, qualified aviation professionals by fostering collaboration, sharing best practices, scaling existing initiatives, and contributing to ICAO’s NGAP efforts in anticipation of the 42nd Assembly.

2.6 In April 2025, thirty-four universities delivering aviation programmes agreed to help develop ICAO's new Global Aviation Education Plan (GAEP), following a two-day workshop at Madrid's Escuela Técnica Superior de Ingeniería Aeronáutica y del Espacio (ETSIAE). The workshop marked the first consultation phase of GAEP, which is intended to align academic programmes with aviation industry needs. This alignment will be crucial as the industry continues to evolve and grow, while striving to achieve ICAO’s goals of zero fatalities and net zero emissions. Representatives from academic institutions from every ICAO region reviewed the proposed GAEP framework and provided initial input on its structure and objectives. These include the establishment of international education benchmarks; validation of academic institutions and aviation programmes; provision of technical assistance to help institutions meet global standards; attracting more young people to aviation and promoting early career awareness; strengthening industry-academia partnerships and expanding hands-on training to enhance employability; and facilitating career mobility through the mutual recognition of qualifications.

Aviation Training within the ICAO Strategic Plan

2.7 In line with ICAO's mission to lead international civil aviation as a key driver of social and economic development, the Strategic Plan 2026–2050 identifies "Gender Equality and Attracting New Talent" as one of eight high-priority enablers. The Plan recognizes that ensuring the availability of talented professionals for aviation is essential to support the sustainable development of air transport. It calls for actions to attract, educate, train, and retain skilled personnel, integrated and adapted to new modes of operation and technological changes, including advanced air mobility and artificial intelligence.

2.8 ICAO's TRAINAIR PLUS Programme (TPP) plays a pivotal role in implementing the actions of the ICAO Strategic Plan and in addressing key aviation training challenges related to upskilling, workforce shortages, and rapidly evolving technologies. The TPP is a network of 132 training centres, international organizations, and academic institutions from 82 Member States supporting ICAO in developing and delivering ICAO standardized Training Packages to a global aviation audience. Since the 2024 EUR/NAT DGCA meeting, five new TPP members from EUR/NAT States have joined the network, namely the Civil Aviation Academy (Kazakhstan), Munich Airport Academy (Germany), ADB Safegate (Belgium) in 2024, Turkmenhowayollary Training Center (Turkmenistan) and Turkish Airlines Aviation Academy (Türkiye) in 2025.

2.9 By diversifying course development across various training areas and delivery modes, the programme ensures that training remains relevant and accessible. Collaborations with partners like EUROCONTROL have led to innovative initiatives such as mentoring courses aimed at attracting and retaining talent from under-represented groups, aligning with ICAO's Next Generation of Aviation Professionals (NGAP) objectives. Additionally, TRAINAIR PLUS emphasizes advancing gender equality within the aviation sector, supporting ICAO's commitment to fostering an inclusive workforce. The programme also underscores the critical link between robust training capacity and the effective implementation of Standards and Recommended Practices (SARPs), highlighting that States with higher training capacity scores demonstrate better compliance and operational performance.

2.10 Based on the foregoing, the following is proposed:

Draft EUR/NAT-DGCA Conclusion 2025/1 – ICAO TRAINAIR PLUS Programme (TPP)

That the ICAO Regional Director, Europe and North Atlantic invite aviation training organizations in the EUR/NAT area that are not yet ICAO TRAINAIR PLUS Programme (TPP) members to approach ICAO in order to join the programme.

Regional Activities in the EUR/NAT area

2.11 The ICAO EUR/NAT Regional Office has been actively engaged with States, industry, academia, and training organizations to tackle the growing challenges in aviation workforce planning and training. Building on the discussions and outcomes of the DGCA 2024 Meeting, the Regional Office has launched a dedicated stream of work to support States in addressing skills shortages, fostering lifelong learning, and attracting the next generation of aviation professionals.

2.12 From 11 to 12 March 2025, the ICAO EUR/NAT Regional Office, in collaboration with JAA Training Organisation, organized an Aviation Training and Skills Workshop held at the regional office. The event brought together over 80 aviation experts from across the EUR/NAT area to address critical workforce challenges and explore strategies for strengthening aviation training and skills development. The workshop identified the following strategic priorities to guide EUR/NAT efforts in training and workforce planning:

- 1) developing a regional skills monitoring framework to better plan for future staffing needs and bridge the gap between training and workforce needs;
- 2) fostering a culture of lifelong learning that encourages aviation professionals to stay updated and agile in response to industry shifts;

- 3) attracting diverse talents at an early stage into aviation professions through outreach programs, educational initiatives, and scholarship opportunities;
- 4) building bridges within and beyond the aviation ecosystem to support more effective training solutions.

2.13 The workshop also identified several key challenges in aviation training and workforce development, including a shortage of skilled workforce, the impact of rapidly evolving technologies, and pressures related to environmental concerns, digitalization, cybersecurity, and new airspace users such as high altitude operations (HAO). To address these, participants called for the embrace of emerging technologies and innovation, with a clear message that adoption of tools like AI must serve to enhance human expertise, not replace it. The workshop emphasized that innovative tools should be used only when they solve real problems, and that attracting top-tier digital talent requires aviation to embrace innovation, agility, and technology.

2.14 NGAP was recognized as the overarching programme connecting all aspects of aviation workforce development, with the mantra of attracting, educating, training, and retaining. A holistic approach is needed, ensuring all components feed into one another, and that actions are coordinated at the regional, pan-regional, and national levels. Dialogue with the NGAP programme remains open, with participants encouraged to contribute to initiatives, propose new ones, and share how ICAO can better support their needs.

2.15 These priorities will be carried over to the next workshop in Almaty, Kazakhstan from 4 to 6 November 2025, which will be hosted by Kazaeronavigatsia, an ICAO TPP Platinum member. This workshop will be industry-focused and will bring together experts from industry, States, training organizations, academia and other key stakeholders to tackle workforce development challenges, share industry success stories and explore pan-regional and national strategies aligned with ICAO's NGAP programme.

2.16 A third regional event, planned for 2026, will be held in the Netherlands in cooperation with the JAA Training Organisation, and will focus on innovation in aviation training.

2.17 Based on the foregoing, the following is proposed:

Draft EUR/NAT-DGCA Conclusion 2025/2 – Aviation Training and Workforce Planning

That the ICAO Regional Director, Europe and North Atlantic invite States, international and regional organizations, industry and aviation training organizations to participate and actively engage in:

- a) ICAO global and regional events related to aviation training, NGAP programme and workforce planning, including the NGAP Global Summit in South Africa (August 2025), the EUR/NAT regional workshop in Almaty, Kazakhstan (November 2025), and the 2026 EUR/NAT innovation-focused workshop in the Netherlands; and
- b) collaborative regional efforts coordinated by the ICAO EUR/NAT Regional Office to help achieve progress for the following strategic priorities:
 - i. developing a regional skills monitoring framework to better plan for future staffing needs and bridge the gap between training and workforce needs;
 - ii. fostering a culture of lifelong learning that encourages aviation professionals to stay updated and agile in response to industry shifts;
 - iii. attracting diverse talents at an early stage into aviation professions through outreach programs, educational initiatives, and scholarship opportunities; and
 - iv. building bridges within and beyond the aviation ecosystem to support more effective training solutions.
- c) supporting ICAO aviation training fellowships in the EUR/NAT area, aimed at young professionals from resource-constrained States. These fellowships would provide practical, hands-on experience in key emerging areas such as environmental sustainability, digital

transformation, and unmanned aviation systems. By nurturing the next generation of aviation professionals, this initiative would complement and reinforce the global objectives of the NGAP programme, while also fostering regional capacity-building and cooperation in priority domains.

On-the-Job Training (OJT)

2.18 During the DGCA 2024 meeting, Conclusion 2024/2 was agreed with the aim to support the facilitation of On-the-Job Training (OJT) among EUR/NAT States. In this regard, EUR/NAT Letter 24-0258 was sent to States inviting them to identify challenges and share needs related to the provision of OJT for CAA inspectors for the period 2024-2026 and inviting States to offer OJT opportunities for CAA inspectors from other States in the EUR/NAT area.

2.19 As a result, 16 EUR/NAT States have expressed OJT needs for CAA inspectors during the 2024-2026 period. Six EUR/NAT States have also expressed interest in providing OJT opportunities for CAA inspectors during the same period. Additionally, two EUR/NAT States have mutually cooperated and exchanged expertise for the provision of OJTs in respect of Aerodrome Inspectors during January 2025.

2.20 Based on the foregoing, the following is proposed:

Draft EUR/NAT-DGCA Conclusion 2025/3 – Provision of OJT for CAA Inspectors

That the ICAO Regional Director, Europe and North Atlantic invite States to continue to collaborate on a bilateral basis to support each other, to the extent possible, in the provision of OJTs for CAA Inspectors.

2.21 Five Government Safety Inspector (GSI) IPacks are also being developed by ICAO-CDI relating to Air Operator and Approved Maintenance Organization Certification, Personnel Licensing, Air Operator Certification, Air Cargo Certification and Aerodrome Certification Safety Inspection Techniques. OJT activities may be envisaged under the framework of CDI Projects building upon the outcome of these iPacks, and that, in mutual agreement with the beneficiary States.

2.22 In order to support the future deployment of GSI IPacks, the following is proposed:

Draft EUR/NAT-DGCA Conclusion 2025/4 – Use and Sponsorship of ICAO GSI iPacks

That the ICAO Regional Director, Europe and North Atlantic:

- a) invite States to make full use of the Government Safety Inspector (GSI) Implementation Packages (iPacks), once available, to strengthen CAA inspector competencies; and
- b) invite States and organizations to consider sponsoring the deployment of iPacks in other States with demonstrated needs.

3. Action by the Meeting

3.1 The meeting is invited to:

- a) note the information provided;
- b) amend as necessary and endorse the proposed Conclusions; and
- c) provide directions as deemed necessary.

— END —