



| ICAO

ESAF INNOVATION WEBINAR

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Innovation in Aviation

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Outline

1. Aviation Innovation and Regulators
2. Contribution of innovation to the growth of Aviation
3. Challenges
4. Future Trends
5. The Way forward
6. Ethiopia's Initiative
7. Conclusion



1. Aviation innovation and Regulators

The current activities of ICAO and member states related to innovation are mainly focusing on: -

- ❑ Keeping up with the innovation and formulate regulatory frameworks and standards that address new technological developments, and
- ❑ Trying to address challenges posed by these new aviation technologies,



Aviation innovation and Regulators...

It is now time for ICAO and Member States: -

- ❑ To proactively engaged and take leadership on aviation innovation matters beyond innovations led by science,
- ❑ To play an enabling role for innovation in an organized, planned, and systematic way,
- ❑ To support those who are in need and lag- technology transfer and capacity building,



2. Contribution of innovation to the growth of Aviation

Since humankind desired to fly and after the success of the first flight trial:

- ❑ adding value regarding efficiency and sustainability,
- ❑ boosting economy and benefit society,
- ❑ enabling the air transport mode to be the safest and most reliable modes of transportation in the world,
- ❑ mitigation of environmental concerns, and
- ❑ creating more personalized services and enhancing the customer experience, etc.



3. Challenges

- ❑ to maintain the industry's record of safety and security,
- ❑ Privacy, liability, and the like risks,
- ❑ Inadequate legal frameworks and institutional capability to address emerging innovation and technological developments,



4. Future trends

- ❑ The aviation sector is growing fast and will continue to grow,
- ❑ crowded skies and airports,
- ❑ Rapid expansion of UAS, powered gliders and ultra light aircrafts,
- ❑ Demand continues to change over time,
- ❑ Developments of airport cities and “smart” airports,



Future trends...

- ❑ Digitalization - Automation and Electronic services,
- ❑ Net-zero carbon emissions aspirational goal,
- ❑ Innovations like artificial intelligence; biometrics; robotics; block chain; alternative fuels and electric aircraft would abound in aviation,



5. The Way forward

- ❑ Awareness and political commitment,
- ❑ Civil aviation policy should promote innovation and encourage new entrants and start-ups,
- ❑ Mandate to oversee and promote aviation innovation and technology matters,
- ❑ Develop an innovation and technology roadmap,



The Way forward ...

- ❑ States must first build their capability of identifying and utilizing the existing technologies,
- ❑ Systematic transfer of foreign technologies,
- ❑ Increase the capacities to improve and create technology,
- ❑ Keep up to formulate regulatory frameworks and standards that address new technological developments, and
- ❑ Address challenges posed by these new aviation technologies,



6. Ethiopia's Initiatives

- ❑ Ethiopia formulated a Science, Technology, and Innovation policy,
- ❑ The policy is applicable to all sectors and aviation industry is not exceptional,
- ❑ Acknowledging the urgency and importance of the issue,
- ❑ the national civil aviation policy takes technology and innovation development as one of the strategic issues,



Ethiopia's Initiatives...

- ❑ collaboration with national relevant agencies is being established to develop an aviation technology road map,
- ❑ designing a scheme to support and promote aviation innovators,



7. Conclusion

- ❑ Unless and until Africa improves its ability to identify, use, improve, create, and ultimately own technologies, competing and surviving in the industry will be difficult, and will result remaining a technology recipient indefinitely,
- ❑ Learn to understand, appreciate, build commitment, and work together to promote the contribution of aviation innovation to the industry and overall national development,



Conclusion ...

- ❑ ICAO is expected to take a proactive role in leading and providing timely SARPs and guidance on new innovative technologies to member states and industry, and
- ❑ AFCAC should make unwavering efforts to instil strong political commitment in African Union (AU) member states; create a system for supporting, recognizing, and motivating African innovators and coordinate and collaborate with states to advance aviation innovation.



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