



IMPACT OF EMERGING TECHNOLOGIES ON AVIATION TRAINING: FOCUS ON THE AIRPORT BUSINESS

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THE AIRPORT BUSINESS IS AT AN INFLECTION POINT

- The aviation industry is undergoing transformational shifts driven by:
 - Advanced Air Mobility (AAM) / Urban Air Mobility (UAM)
 - Artificial Intelligence (AI) & Automation
 - Biometric & Contactless Technology
 - Digital Twin & Smart Airports
 - Sustainable Aviation & Green Technologies
- **Airports must adapt to new operational models, regulatory landscapes, and customer expectations.**

HOW THESE TECHNOLOGIES RESHAPE AIRPORT WORKFORCE

Technology	New Competencies Required
AAM & Vertiports	Airspace integration, vertiport operations, new regulatory knowledge
AI & Automation	Data analytics, algorithm management, human-AI collaboration
Biometric Tech	Cybersecurity, digital identity management, passenger privacy
Digital Twins & IoT	Real-time decision-making, predictive maintenance, digital asset management
Sustainability & Green Tech	Environmental impact analysis, energy efficiency optimization, SAF handling

THE AIRPORT WORKFORCE OF THE FUTURE

From **Traditional Roles** to **Hybrid Digital Expertise**:

- Operations → AI-assisted decision-makers
- Security & Screening → Biometric specialists
- Maintenance → Predictive analytics professionals
- Air Traffic Management → Urban air mobility (UAM) coordinators

Soft Skills are Critical:

- Adaptability to automation
- Data-driven decision-making
- Cybersecurity awareness

New Training Delivery Methods:

- **Simulation & Virtual Training:** Use of digital twins and VR/AR-based simulations is reducing costs and improving realism.
- **AI-Powered Personalized Learning:** AI-driven platforms tailor training to individual learning curves, reducing training time while enhancing efficiency.



STRATEGIC RECOMMENDATIONS FOR AIRPORT LEADERS

Reskill	Reskill & Upskill
Invest	Invest in AI, data analytics, and AAM operations training.
Partner	Partner with Tech Firms & Academia – Co-develop training programs on digital transformation.
Adopt	Adopt Micro-Learning & Simulation-Based Training – Leverage digital twins for real-time training.
Foster	Foster a Culture of Agility & Innovation – Encourage cross-functional training and experimentation.
Ensure	Ensure Regulatory & Compliance Readiness – Align workforce competencies with evolving aviation regulations.
Assurance	Safety assurance to ensure AI technologies meet safety, reliability and compliance standards.



CONCLUSION

- *The future of airport business demands a **digitally proficient, AI-augmented workforce.***
- *Airports must **act now** to build a **training and reskilling strategy** that **aligns with technological evolution.***
- *Winning Formula:*
 - **Tech + Talent + Training = Future-Ready Airport Operations.**

FINAL THOUGHT

For aviation to remain competitive in attracting digital talent, it must embrace technology, agility, and innovation in both training and workforce strategy.

By implementing AI-driven training, forming academic partnerships, and positioning itself as a tech-forward industry, aviation can secure top-tier digital-native talent for the future.





THANK YOU

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