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(57) Abstract :

The present invention discloses an IoT-enabled framework for smart airport operations management that integrates multiple operational modules into a unified architecture. The framework comprises a passenger flow monitoring module (101), baggage tracking system (102), aircraft ground operations unit (103), predictive maintenance engine (104), energy management module (105), cybersecurity and data integration layer (106), and a centralized operations dashboard (107). The system ensures real-time monitoring, predictive analytics, sustainability, and enhanced passenger experience, thereby optimizing airport efficiency and security while minimizing delays, downtime, and resource wastage.

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