Pakistan International Airlines (PIA)
Operational and Financial Turnaround for Sustainable Growth

Overview

This project presents a comprehensive business case for PIA's turnaround (2022–2025), integrating fleet, maintenance, operations, and financial analysis into a structured strategy for sustainable growth and privatisation.

Built as the pinnacle of my portfolio, this case uses realistic datasets (fleet utilisation, maintenance schedules, grounding causes, delay logs, operational KPIs, and financials) and applies critical, data-driven recommendations that align with aviation industry standards.

Project Structure

Module 1 – Fleet Analysis

- Fleet composition: 34 aircraft (12 B777, 12 A320, 10 ATR).
- Groundings peaked in 2022–23 (11–17 aircraft), improving in 2024 with EASA ban lift.
- Cost of groundings: ~PKR 1.5B annually.
- Insights: Fleet age, utilisation hours, operational vs grounded status.

Module 2 – Maintenance Analysis

- Dataset: 295 maintenance events (2022–2024) across A/B/C checks.
- Planned vs Logged delays highlighted parts shortages and structural repair lags.
- Avg durations: A (2–4 days), B (7–14 days), C (14–30 days).
- Cost impact: PKR 8–10B annually, with 2023 spiking to PKR 25B.
- Deliverable: Categorised causes of groundings (technical, spare parts, regulatory, operational, fuel shortage).

Module 3 – Operations Analysis

- Flights grew from 4,500/quarter (2022) → 6,000/quarter (2024).
- Load factor improved from 68% → 80%; on-time performance from 60% → 85%.
- Cancellations reduced from 200 → 80 per quarter.
- Dataset included: Aircraft ID, route, flight count, cancellations, rerouted aircraft.

Module 4 – Financial Analysis

- Losses: PKR 97B (2022), 75B (2023).
- 2024 turnaround: PKR 9.3B operational profit, but net loss of PKR 4.6B due to costs.
- Debt reduced from PKR 825B → 450B via restructuring.
- Privatisation ongoing (as of Aug 2025): 4 shortlisted bidders, expected close by Q4 2025.
- Projection: Rs 50B net profit by 2026.

Key Recommendations

1. Fleet Optimisation – Lease 5 Airbus A320s to expand operational fleet from 26 → 31.

2. Maintenance Reforms – Deploy AI predictive maintenance to reduce C-checks by 30% and save PKR 5B annually.
3. Operational Efficiency – Expand to UK & EU markets (post-ban lift), targeting 85% load factor.
4. Financial Strategy – Accelerate privatisation (Rs 100–150B expected value) by Dec 2025.
5. Risk Mitigation – Hedge fuel, diversify parts suppliers, maintain operational redundancies.

Financial Impact (Projected)

- Revenue Growth: +PKR 50–100B by 2026.
- Cost Savings: +PKR 6.5B/year (AI maintenance + fewer groundings).
- Profitability: PKR 50B net profit by 2026.
- Privatisation ROI: Rs 100–150B sale value, govt retaining 20% stake.

Methodology

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- Data Cleaning & Structuring (Excel / CSV).
- Analytical Framework: 4 modules (Fleet, Maintenance, Operations, Financial).
- Benchmarked against industry standards (Airbus, Boeing, ATR).
- Forecasting: Logical projections based on historical delays, costs, and utilisation.
- Visualisation: Tableau dashboards for trends, groundings, and financial scenarios.

Risks & Mitigation

- Privatisation delays → Engage stakeholders, maintain transparency.
- Fuel/parts shortage → Hedge contracts, multiple suppliers.
- Operational shocks → AI-driven maintenance, staff retraining.
- Economic downturn → Focus on profitable routes (Middle East, Europe).

Structure

Data	Contains all the tables and modules related to the project
Viusals	Contains all visualisations drawn from the data
Documentation	Contains the Business Case Document
Readme	This file

Conclusion

- This business case positions PIA for sustainable growth and successful privatisation by end-2025, leveraging its 2024 operational recovery to:
- Boost fleet utilisation,
- Optimise maintenance,
- Expand profitable routes,
- Achieve financial stability.

By 2026, PIA could become a profitable, leaner, and investor-attractive carrier, with PKR 50B net profit potential and long-term viability.