



Prep-Air



9:41



9:41

Thursday, June 13

SFO ✈️ JFK • ☀️ 72°

Good morning! Your flight is on time

↗ SFO Terminal 2 • Gate 58A at 11:16 AM

↘ JFK Terminal 8 • Gate 40 at 8:19 PM

⚠️ Delayed 31m

New Departure: 11:47 AM (31m late)

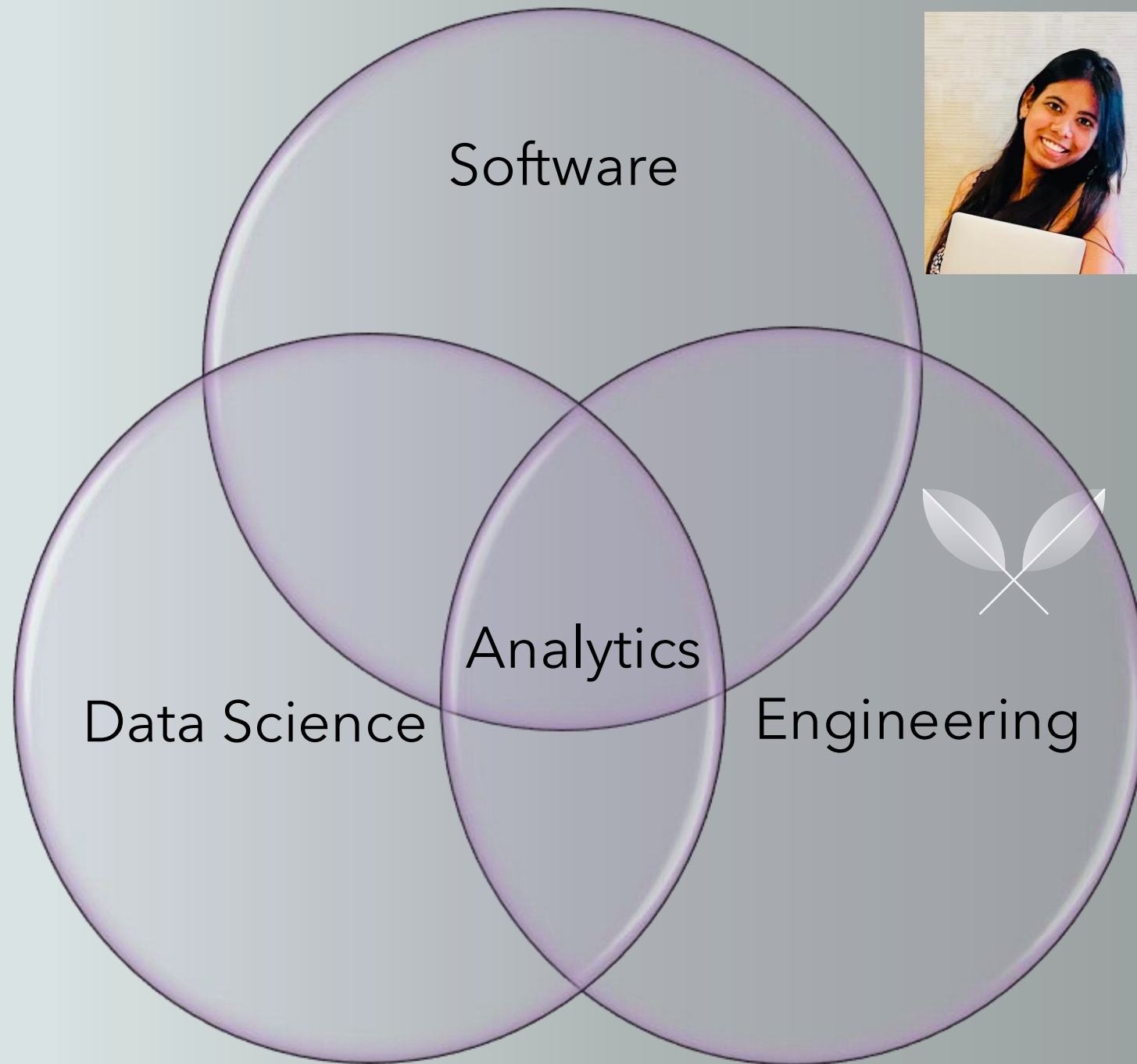
New Arrival: 8:33 PM (14m late)

Departed Gate

22m of taxiing before Take Off



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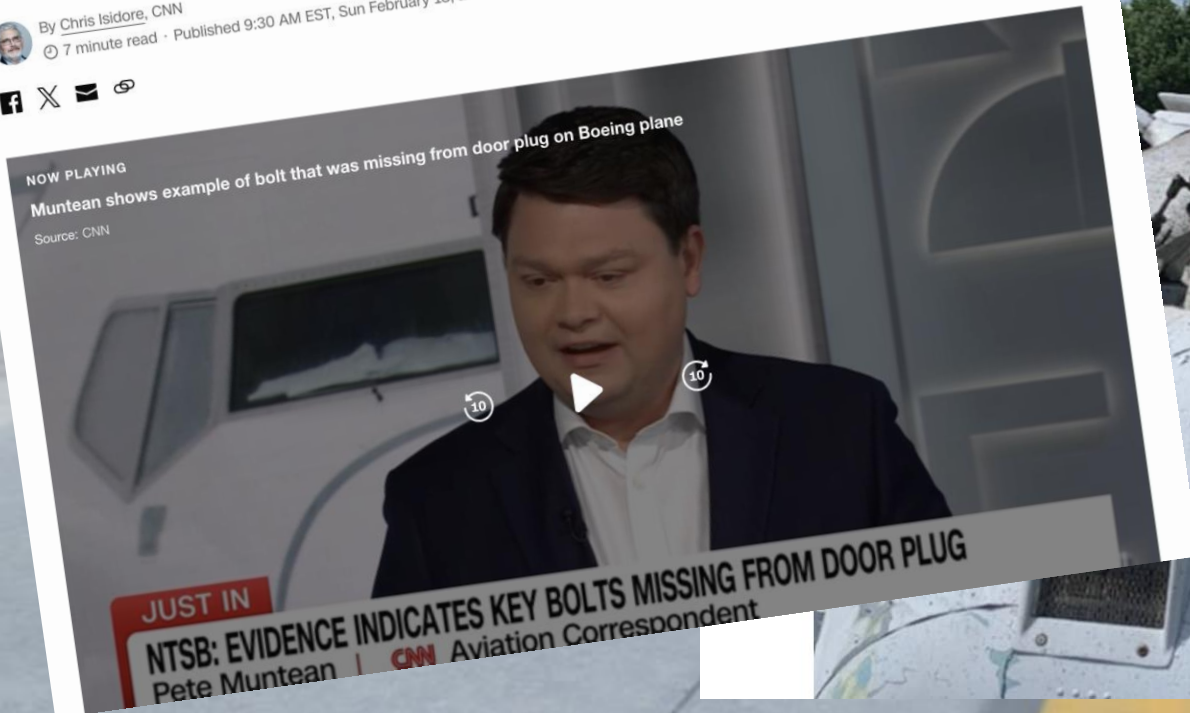
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Maintenance error leads to 172's crash

By General Aviation News Staff · September 27, 2023 · 9 Comments

The Alaska Air flight was terrifying. It could have been so much worse

By Chris Isidore, CNN
7 minute read · Published 9:30 AM EST, Sun February 18, 2024



Incidents Airlines Aircraft types Videos Database access Alerts SafetyScan

Swiss B773 near Mallorca on Feb 22nd 2024, problems with air conditioning

Last Update: February 22, 2024 / 17:49:31 GMT/Zulu time
Bookmark this article

Swiss International Airlines HB-JNB, Boeing 777-300 (Photo credit: photographer_patrickkraus / Flickr / License: CC BY)



<https://generalaviationnews.com/2023/09/27/maintenance-error-leads-to-172s-crash/>
<https://edition.cnn.com/2024/02/18/business/alaska-air-boeing-max-flight/index.html>
<https://www.aeroinside.com/19181/swiss-b773-near-mallorca-on-feb-22nd-2024-problems-with-air-conditioning>

Problems

- Frequent Flight delays and downtime
- Flight Cancellations
- Increasing accidents
- Unexpected system failures

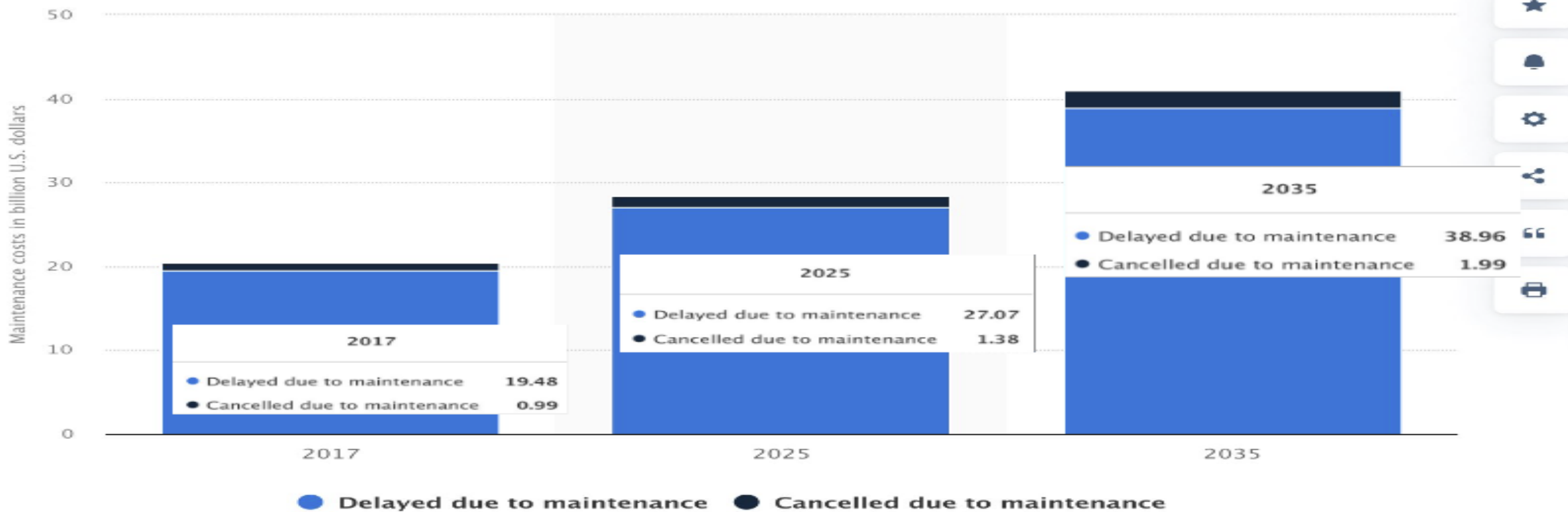
Consequences

- Financial loss
- Airline Reputation Damage
- Jeopardizing Passenger Safety

OUTDATED MAINTENANCE SCHEDULES!



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LOSS: \$29 Billion in 2025

\$40 Billion in 2035



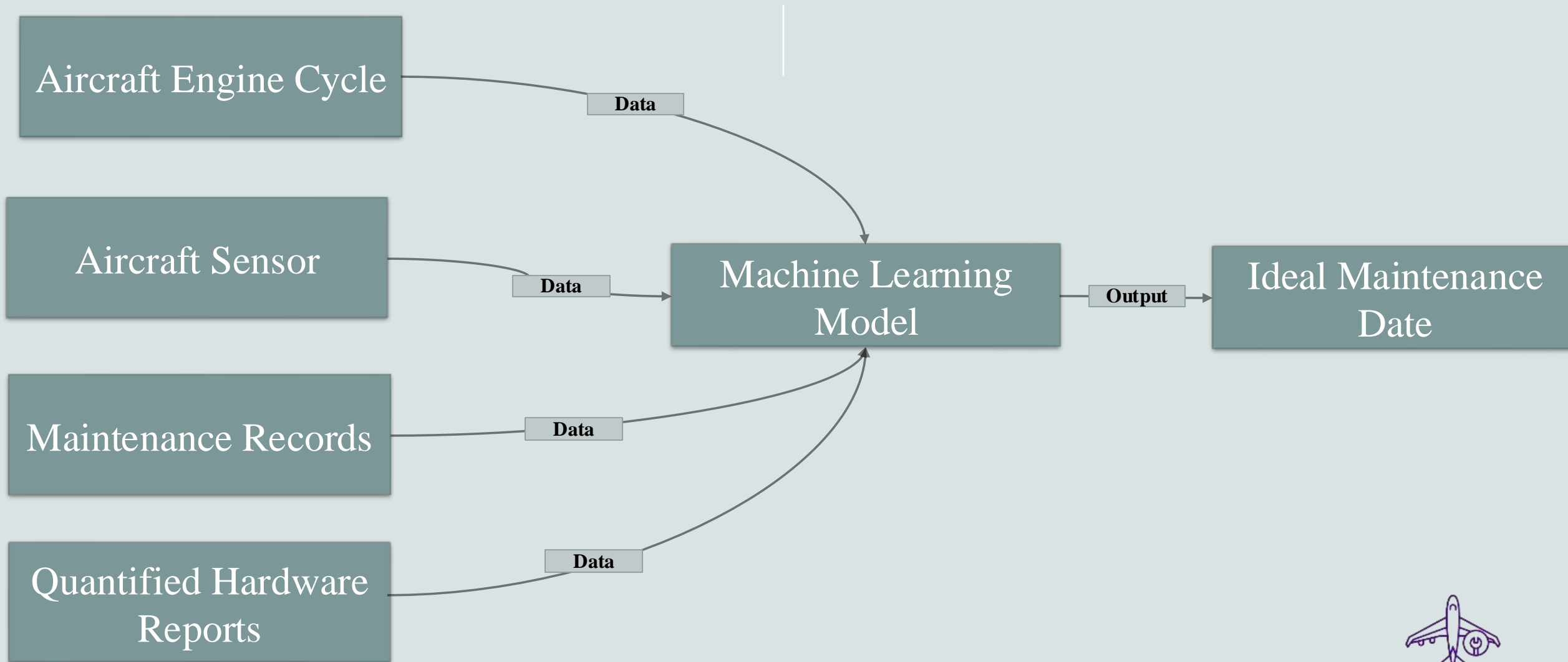
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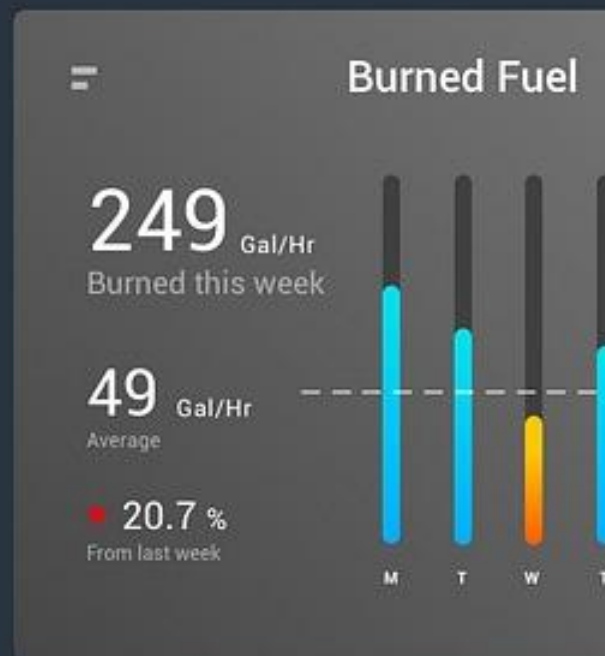
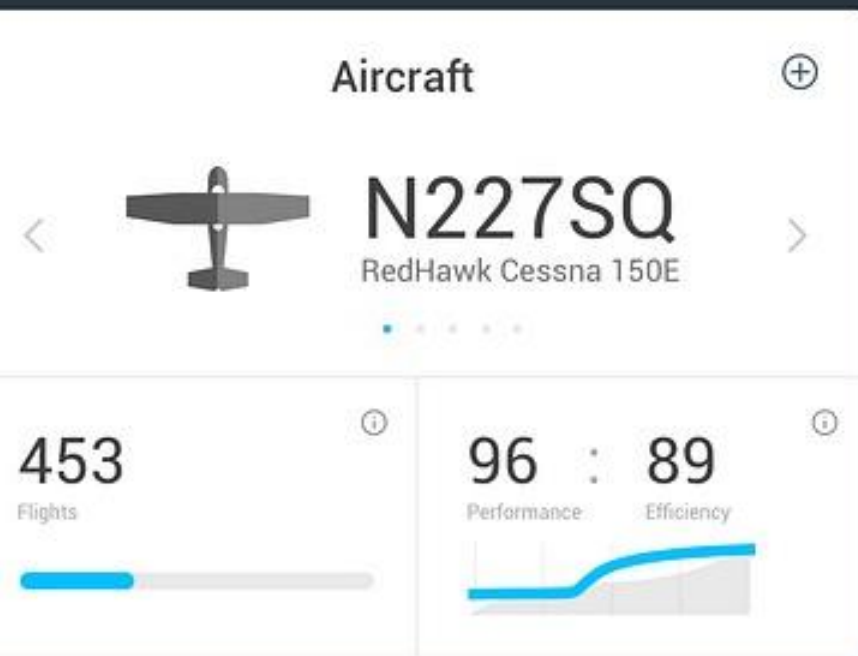
Existing Aircraft Maintenance Process

- 1. Pre-Flight Checks:** Daily checks are performed before the first flight of the day.
- 2. Scheduled Maintenance:**
 - A Checks:** Every 400-500 flight hours. Quick checks - a few hours.
 - B Checks:** Every 6-8 months, up to 180 man-hours.
 - C Checks:** Every 20-24 months, detailed inspections - a few weeks.
 - D Checks:** Every six years, full strip-down, thorough inspection.
- 3. Unscheduled Maintenance:** Repairs due to unexpected issues or damage found during inspections.



Our Solution





Data Recording and Analysis:
Each flight's data is meticulously recorded and analyzed, serving as crucial input for our predictive maintenance model.



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Flight FL123 - Aircraft N12345

Metric	Value
Fuel Level	80%
Engine Health	Good
Oil Level	Normal
Tire Pressure	Normal
Last Inspection	2024-05-30
Alerts	None

Next Maintenance Suggestion


- Aircraft N12345: Next Maintenance Date - 2024-07-01
- Aircraft N54321: Next Maintenance Date - 2024-06-25 (Urgent)
- Aircraft N67890: Next Maintenance Date - 2024-06-30

Optimal Maintenance Scheduling:

Our model provides the next best maintenance date for each flight in your fleet, ensuring seamless operations with no unexpected issues or disruptions



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Aircraft Health

Real-time statistics

Alerts & Notifications

Detailed profiles

Notification

Proactive



Maintenance


Understanding aircraft health

Next Maintenance: 10/5, 2 PM

Maintenance Team: 42 members

Task Progress: 33%

Maintenance Status:



Maintenance Trends


Key indicators

Maintenance Schedule: 15/5, 11 AM

Scheduled Inspections

Maintenance Status

Notification



Maintenance Log

Review with Team Lead

Next Inspection: 19/5, 9 AM

Status: Scheduled

Task assigned


Completed

Your Maintenance Plan

June 01- June 21, 2024

1	2	3	4	5	6	7
			<div><div>F1 Aircraft 1</div><div>Maintenance Team: Scheduled: 11 AM</div></div>			
8	9	10	11	12	13	14
		<div><div>F2 Aircraft 1</div><div>Maintenance Team: Scheduled: 2 PM</div></div>				
15	16	17	18	19	20	21
<div><div>Maintenance F3 Aircraft 2</div><div>Scheduled Inspection Time: 11 AM, Online</div></div>				<div><div>Maintenance Log Review</div><div>Scheduled Meeting Time: 9 AM, Online</div></div>		

Real-time Updates



Maintenance Basics

(Ends in: 45 min.)

Online staff: 34/40

Status: Critical

Alerts

- 

Critical issue report
Maintenance schedule

98
- 

Maintenance
Summer schedule

72
- 

Metrics & Data
Summer schedule

34

Notifications

New maintenance alert received!

Contact Prep-Air for assistance.

Our Vision:

A comprehensive Fleet Management Tool

- Intelligent Maintenance Scheduling
- Real-time Flight Health Monitoring
- Relevant Maintenance Alerts
- Critical Action alerts for the maintenance team



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Thank you.

Questions??

Business Model Canvas

Problem

Airline maintenance procedures are time-consuming, leading to extended downtime and high costs. This inefficiency reduces profitability and can impact flight schedules.

Customer segments

Airlines, private jet operators, MRO (Maintenance, Repair, and Overhaul) facilities.

Channels

Direct sales, industry conferences, partnerships with aircraft manufacturers.

Unique Value Proposition

Reduced maintenance downtime, improved efficiency, optimized preventive maintenance schedules.

Solution

AI-powered Predictive Maintenance solution optimizes aircraft maintenance, minimizing downtime and maximizing efficiency for airlines.

Unfair Advantage

Advanced Machine learning tools.

Key Metrics

Aircraft Engine Cycles
History of Maintenance and potential issues that can arise

Cost Structure

Development Costs: Expenses related to software development and data analysis.

Operational Costs: Costs for hosting and maintaining the online platform.

Marketing and Sales Costs: Expenses for customer acquisition and engagement activities.

Revenue Streams

Subscription Model: Monthly or yearly subscription fees for using the predictive maintenance tool.

Service Fees: Additional fees for customised integrations and advanced analytics services.

Training and Support Fees: Charges for specialised training programs and extended support services.