



**TURKISH
AIRLINES**

Data Driven Transformation in Turkish Airlines

THY Facts & Figures

~350 Destinations
in 130 Countries
Across
6 Continents

Spreading Our Wings
Across the Skies

453 Aircraft and
Counting

Carried 83.4 Million
Passengers

Offered Available Seat Kilometers (ASK)
234.8 Billion

Passenger Load Factor
82.6%

“

Turkish Technology is committed to provide comprehensive aviation and logistics products and services to the industry over the next decade

”





Data Driven Transformation Program

Advanced Analytics Projects (2024)

Potential
Contribution
(annual)

~70 M USD



Total
Project
Ideas

166



Ideation

87



Feasibility

9



Development or
Validation

37



Live

33



Data Driven Transformation Program

Hybrid



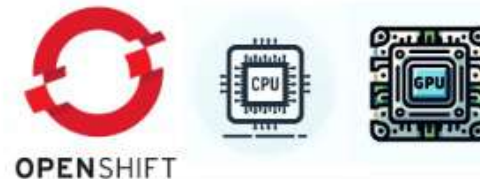


Data Driven Transformation Program





On-premise



Data Scientist



What We Gained by **Red Hat OpenShift AI**

-  Development efficiency
-  Deployment speed
-  Automated security compliance
-  Optimized infrastructure

AI in the Aviation Industry

AI is disrupting the Aviation Industry across the value chain



**Revenue
Maximization**



**Airline
Operations**



**Customer
Experience**



**Employee
Experience**

Revenue Maximization

Pricing



Prediction Models:
Load Factor & Revenue



Dynamic Pricing –
Ancillaries



Dynamic Pricing – Group
Sales



Willingness
to Pay



Dynamic Pricing –
PAX

Revenue Maximization

Dynamic Ancillary Pricing



Extra Bag



Paid Seat



Business Upgrade



Revenue Maximization

Marketing



Revenue Maximization

Cargo



Real Time Dynamic Pricing



Capacity Optimization



Overbook Optimization



Allotment Optimization



Network Optimization

%2

Growth in Revenue

AI Based Product In
Collaboration with 2
Turkish Start-ups



Airline Operation



OTP Prediction



Apron AI



Ground Time
Prediction



Block Time
Prediction



Tail Assignment

GenAI in Customer Experience



Detection of Call Reason with LLM



Categorization of IFE Surveys with LLM



Insight on Customer Feedback with LLM

GenAI

LLM

RAG

Employee Experience



Smart Search in Internal
Documents



Summarization of Inspection
Reports and LLM Based
Search



Code
Assistant



Probability of Staff
Boarding the Flight



Online Knowledge
Library Chatbot

AI's Role in Modern Airline Retailing



Tailored Offers (AirFare & Ancillaries)
throughout the journey



Dynamic Pricing based on Passenger and
Behavioral Data



IROPS : Seamless Management of all
Products in the Order



Offer Engine with Feedback Loop

AI-based Sustainability

Tank Water Level Prediction



Patterns from Historic Water
Consumption Data



Flight-based Forecasting less than
%1 Prediction Error

~100k USD

/monthly

Save in Fuel Cons.
due to excess water loadings

Tank water level adjustments
in water load operations of
each flight

Teşekkürler