

A globe is centered on the page, split vertically. The left half shows a white Turkish Airlines airplane flying against a blue sky with light clouds. The right half shows a lush green landscape with a single large tree under a blue sky with light clouds.

# TURKISH AIRLINES, Inc.

Reducing Fuel Costs

# Turkish Airlines Fuel Program

Before we start pls note that managing fuel accurately and efficiently on each operation and Flight Crew improves **SAFETY** as a result of:

- Additional attention to planning
- High accuracy of the flight planning system and in the execution of flights
- Increased awareness
- Discipline to follow flight plan
- Effective analytical tools and statistics
- Training of the pilots and other operational staff
- A feedback mechanism to inform employees of airline policy, efficiency targets and performance data within regular time periods

# Turkish Airlines Fuel Program

## *Why is fuel so important?*

- The recent rapid escalation of fuel prices has decreased the profitability and threatens the existence of many airlines
- Environmental responsibility of the airlines (the less the consumption the less the emissions)
- Fuel is now the biggest cost for airlines

# Turkish Airlines Fuel Program

## Objective:

- Identifying areas in fuel conservation and reduce the environmental impact of fuel consumption
- Managing the operation and condition of an aircraft to minimize the fuel used on every Turkish Airlines flight

# Turkish Airlines Fuel Program

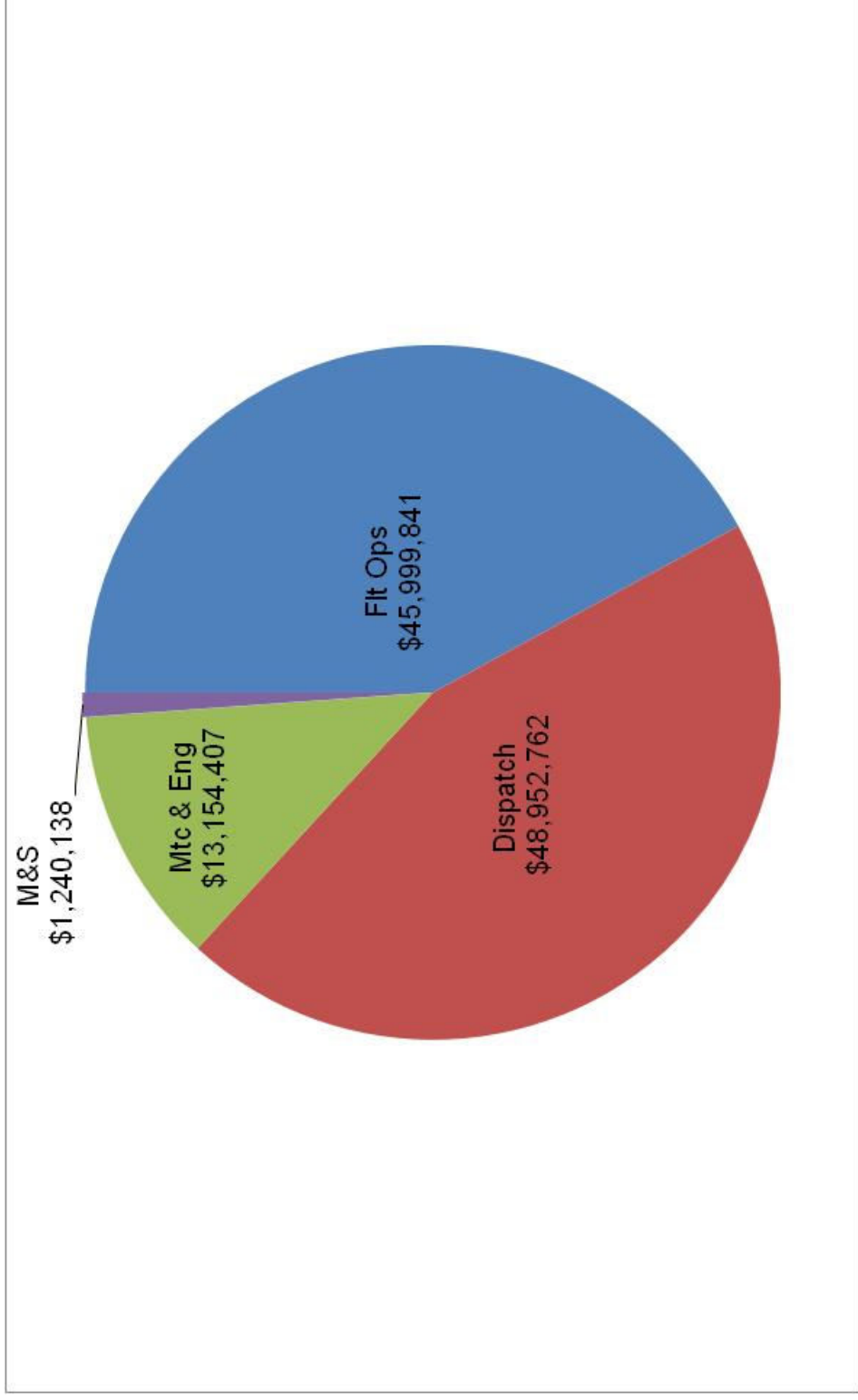
To achieve your goals in fuel program you should have at least:

- Strong interest and motivation
- Management commitment
- Good Initiatives
- Accurate or complete data
- Improved coordination among departments regarding fuel conservation efforts desirable
- Strong support structure for fuel conservation efforts
- Fuel conservation program to be sufficiently integrated into operating policies and procedures

# Turkish Airlines Fuel Program

- In the beginning of 2008 a collaborate study with IATA Green Team
- Assessment of potential fuel saving areas
- Formation of Fuel Steering Committee (competent and dedicated people from key departments, i.e. Flight Ops, Dispatch, Ground Ops, IT, Maintenance and Engineering, Catering, Quality Assurance)
- Establishment of Fuel Database, fed from ACARS, FDR and manual database (A 'Statistical Database' is the cornerstone of the successful implementation of the fuel efficiency program, you cannot manage what you cannot measure)
- Assign a full time Fuel Manager to monitor, coordinate and evaluate
- Safety remains Turkish Airlines **first priority** and that any fuel conservation procedures to be implemented should only be undertaken when consistent with operational safety

# Summary of Potential Savings (2008)



# Fuel Program Final Phase by 2009 Jan

<b>Department</b>	<b>Target</b>	<b>Achieved</b>
Flight Operations	\$46M	\$70M
Flight Dispatch	\$49M	\$19M
Maint. & Engineering	\$13M	\$22M
Commercial (M & S)	\$1.2M	\$1.5M
<b>Total</b>	<b>\$109M</b>	<b>\$114M</b>

## Turkish Airlines Implementation Results by Jan '09

Turkish Airlines Fuel Program Target	\$	109.340.417
Turkish Airlines Savings Achieved in \$	\$	114.108.095
Turkish Airlines Fuel Savings in kg		120.205.634
Turkish Airlines CO2 Emission Reduction		378.647.747

Emission reduction achieved = 378,648 tons

# Initiatives taken..

## Maintenance & Engineering

M&E T01 Aircraft Weight Reductions  
M&E T02 Engine Core Water Wash  
M&E T03 Airframe/Engine Drag/Aerodynamics/Wash/Paint  
M&E T04 Engine and APU Build Standard  
M&E T05 APU Maintenance Savings

## Marketing & Sales

M&S T01 Empty Weight Cabin Equipment  
M&S T02 Empty Weight Magazines  
M&S T03 Empty Weight Catering Services  
M&S T04 Duty Free Removal (Equip. +Magazines)  
M&S T05 Empty Weight Potable Water

## Flight Planning & Dispatch

DSP T01 Optimised Flight Planning System  
DSP T02 Alternate Selection  
DSP T03 Hold Fuel Optimization  
DSP T04 Pilot & Dispatcher Additional Fuel

## Flight Ops

FOPS T01 APU Fuel Savings  
FOPS T02 APU Single Pack after Opt Time  
FOPS T03 APU No Pack after Opt Time  
FOPS T04 Engine out Taxi out  
FOPS T05 Reduced Flap Take Off  
FOPS T06 Pilot Technique & Flight Management  
FOPS T07 Low Noise Low Drag Approaches  
FOPS T08 Reduced Flap Landings  
FOPS T09 Idle Reverse on Landing  
FOPS T10 Engine out Taxi in

# Next Steps

- **Measuring Program**
  - Measure on a daily, weekly and monthly base
  - Develop statistical analysis reports
  - Monitor and understand the trends on a daily basis
  - Continue awareness training
  - Continue to identify and remove obstacles
- **Continue the Work**
  - Complete fuel team composition and add more full time members
  - Integrate fuel management into our way of doing business

# From Jan '09 onwards..

Since the joint project with IATA Green Team has been finalized (bw Jan-Apr 09 inclusive) we have kept up the good work and achieved:

**\$43.983.829 fuel savings**

**49.516 tons of fuel**

and

**155.977 tons of CO2 emissions**

As a green airline we believe we can do better for our environment and will continue to work..

Thank you for your attention..

