



20 . 10 . 2010 @ ICAO
WORLD STATISTICS DAY



**AVIATION STATISTICS & DATA:
A VITAL TOOL FOR THE
DECISION MAKING PROCESS**

Narjess Teyssier

ICAO

Chief Economic Analysis & Policy
Section

Montréal 20 October 2010



Civil Aviation - the global picture

2.3 Billion passengers

39 million tonnes of cargo

920 airlines

4,200 airports

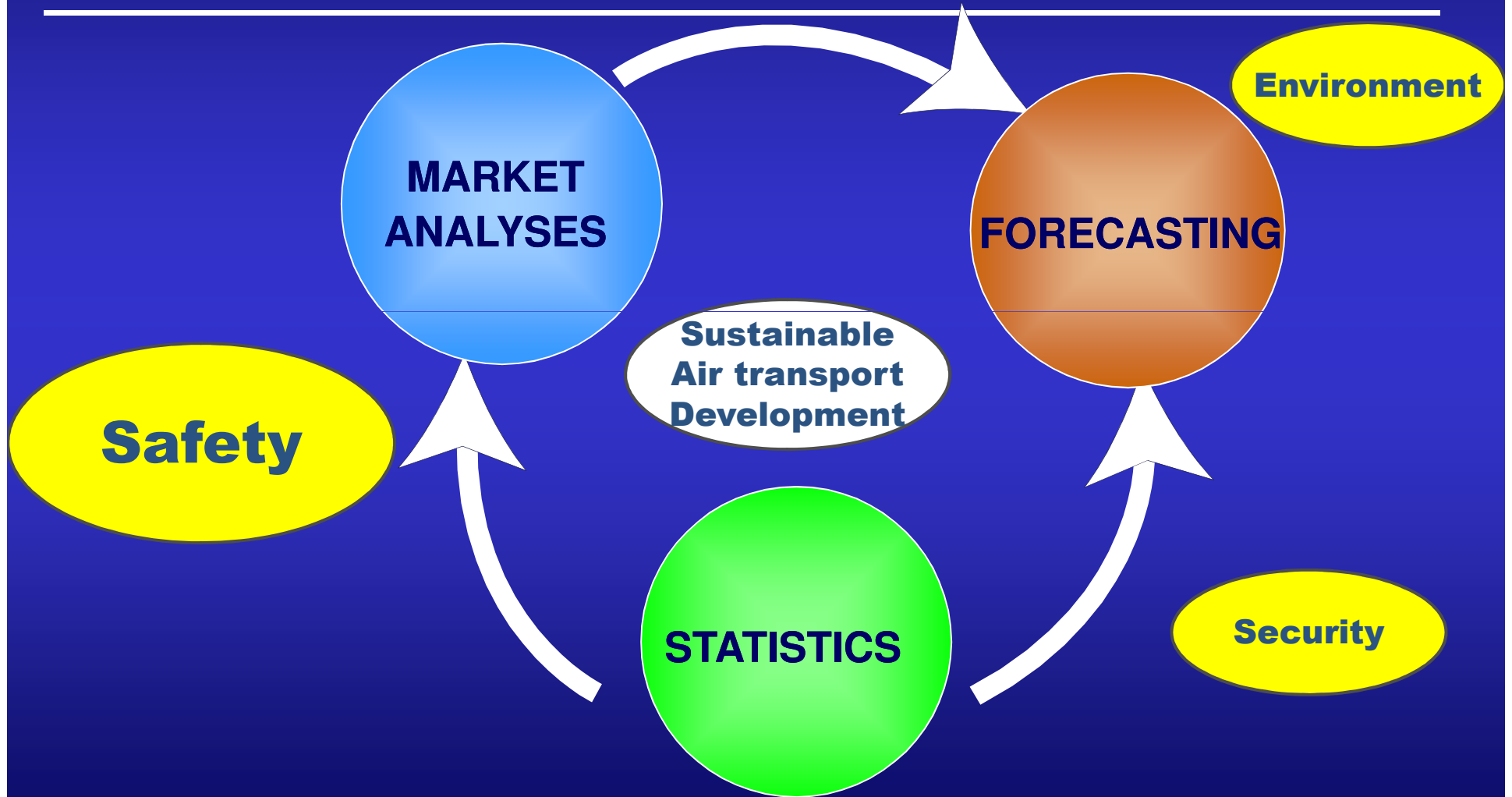
62,000 aircraft in service

35 billions kilometres of network

170 Air Navigation Service Providers



Monitoring air transport development: Statistics, analysis and forecasts



ICAO : an independent and reliable source of information on civil aviation matters



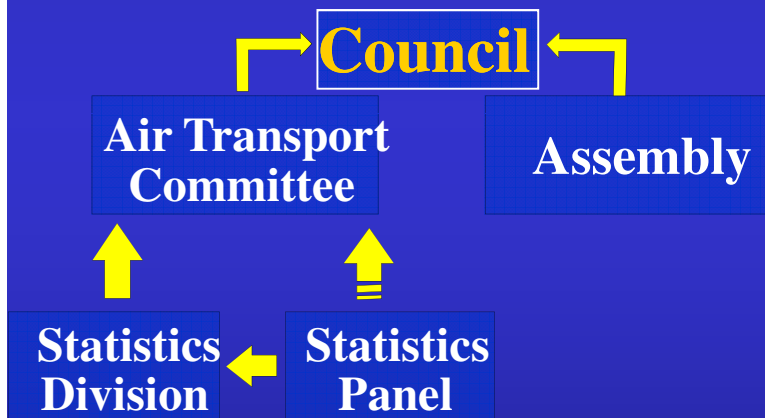
ICAO Statistics Programme foundations

Chicago Convention (Art. 54, 55, and 67)

Each contracting State undertakes that its international airlines shall, in accordance with requirements laid down by the Council, file with the Council traffic reports, cost statistics and financial statements showing among other things all receipts and the sources thereof.

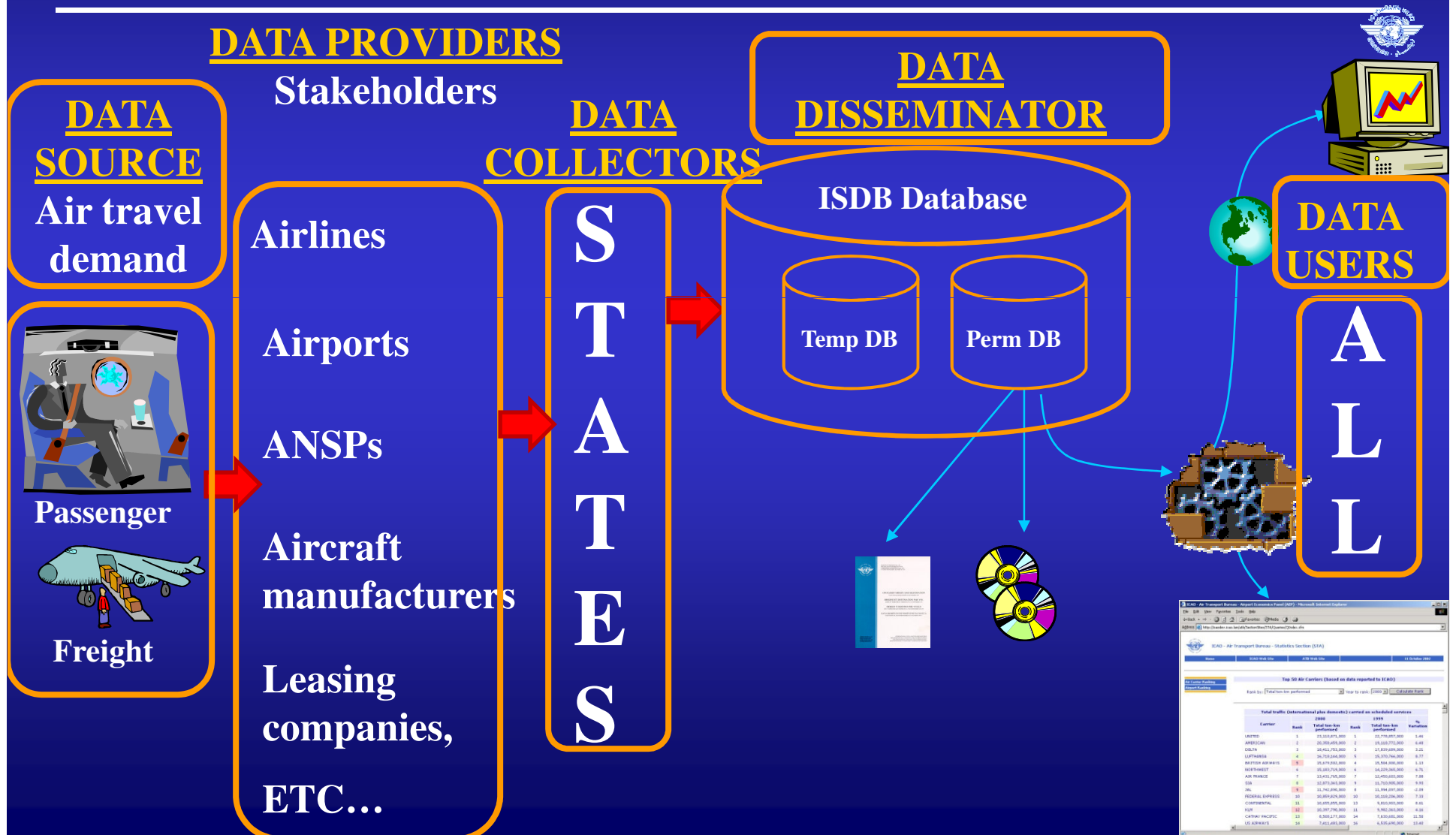
Assembly Resolutions (A37-20, App. B):

- *Whereas the development of ICAO's validation and storage **Integrated Statistical Database** provides Contracting States and other users with an efficient online system for the retrieval of statistical data;*
- *Requests the Council, calling on national experts in the relevant disciplines as required, to examine on a regular basis the statistical data collected by ICAO and etc...*





Aviation statistics collection, dissemination and use: a value chain





12 existing reporting forms for the States

COMMERCIAL AIR CARRIERS STATISTICS

- **A** Commercial air carrier traffic by carrier
- **A-S** Total traffic of all commercial air carriers of a State
- **B** On-Flight Origin and Destination
- **C** Traffic by Flight Stage
- **D** Fleet and Personnel
- **EF** Financial Data

AIRPORTS

- **I** Airport traffic by airport
- **I-S** Total traffic of all the airports in the territory of a State
- **J** Financial data

AIR NAVIGATION SERVICES PROVIDERS

- **K** Financial data
- **L** Traffic

CIVIL AIRCRAFT ON REGISTER

- **H** Number of aircraft in the register



ICAO Statistics Programme

Why do we need Statistics?



1— Monitor ICAO Strategic Objectives

- Air travel safety rates
- The environmental impact on air transport
- The sustainability of air transport development



Traffic recovery started in 2010, despite the volcanic ash impact

VOLCANIC ASH IMPACT ON AIR TRAFFIC

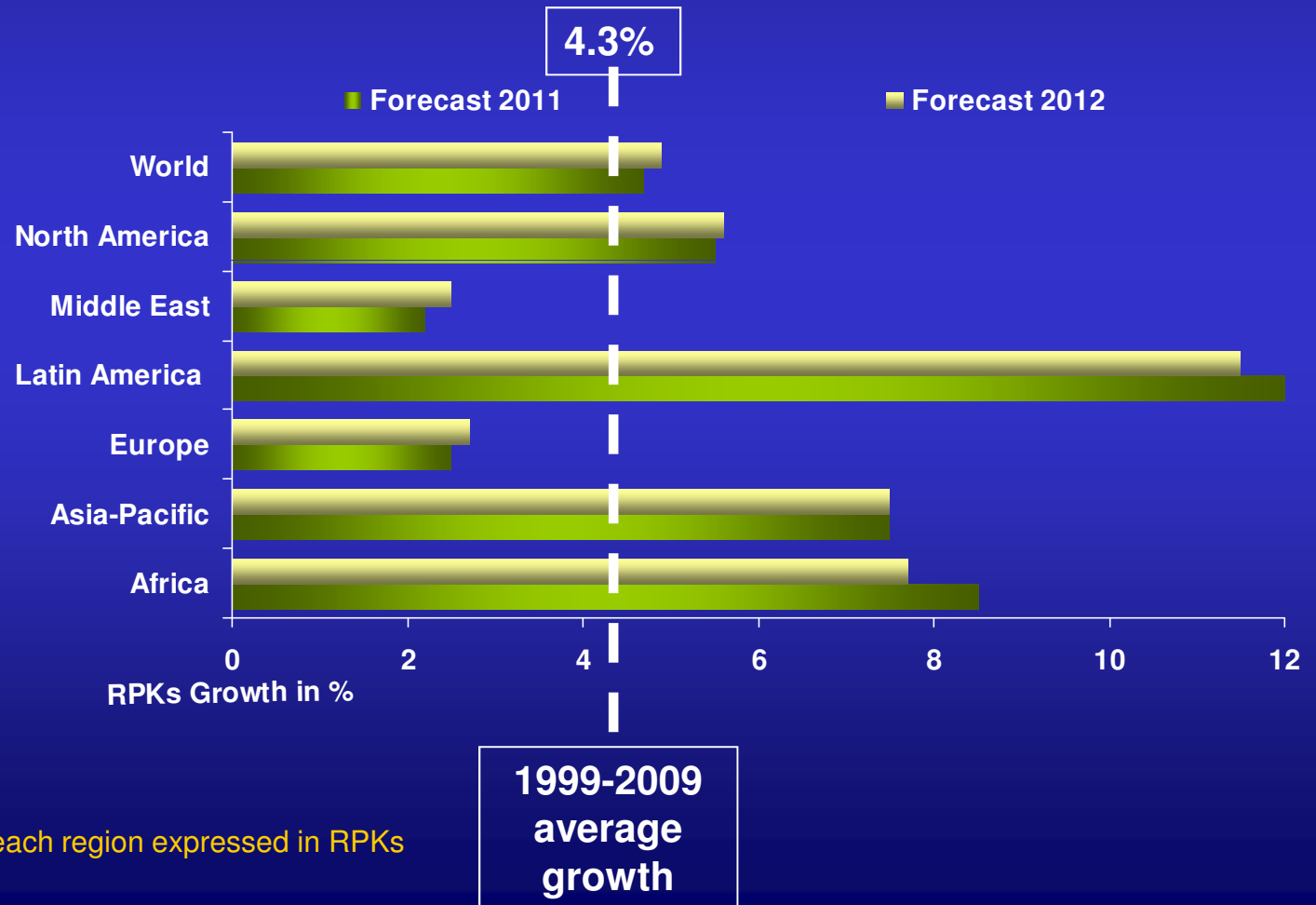
101,600 flights cancelled;
80% in Intra-European market.

Revenue Losses

Global Air Transport Industry: \$2.8 bn
Tourism Industry: \$2.3 bn

9 MILLION PASSENGERS AFFECTED

Regional traffic* growth forecasts

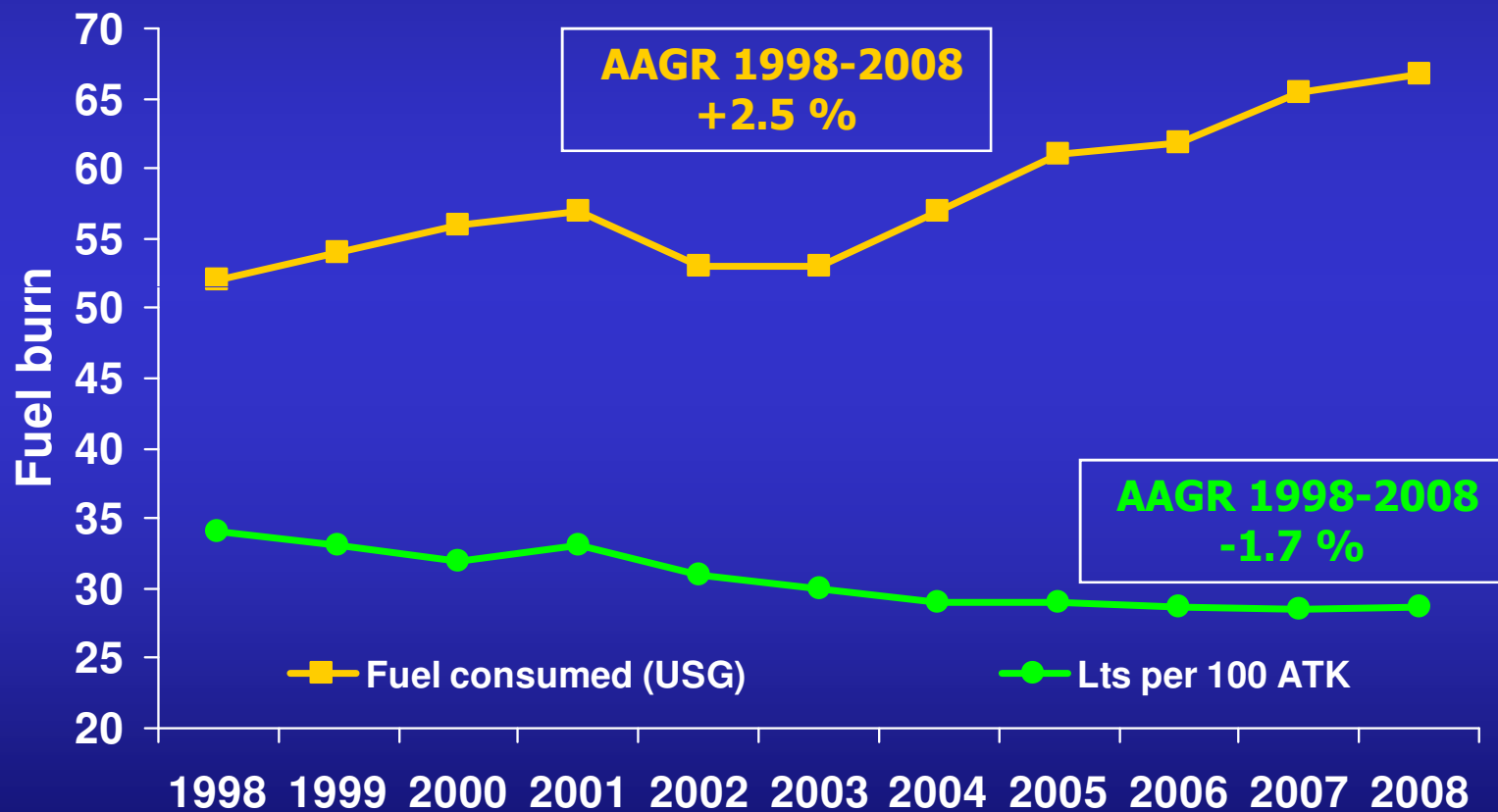


*Traffic of airlines registered in each region expressed in RPKs

Source: ICAO



Fuel consumption and efficiency evolution



Source: ICAO based on OAG timetable



ICAO Statistics Programme

Why do we need Statistics?

1 – Monitor ICAO Strategic Objectives

- Air travel safety rates
- The environmental impact on air transport
- The sustainability of air transport development



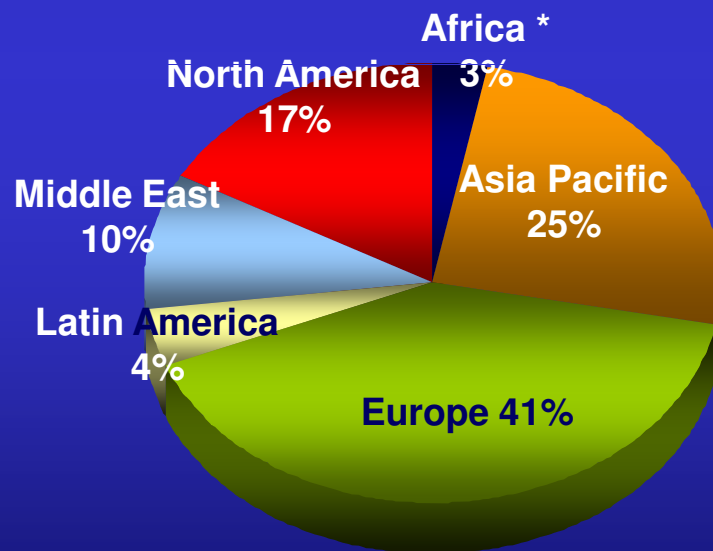
2 – Analyse the air transport market



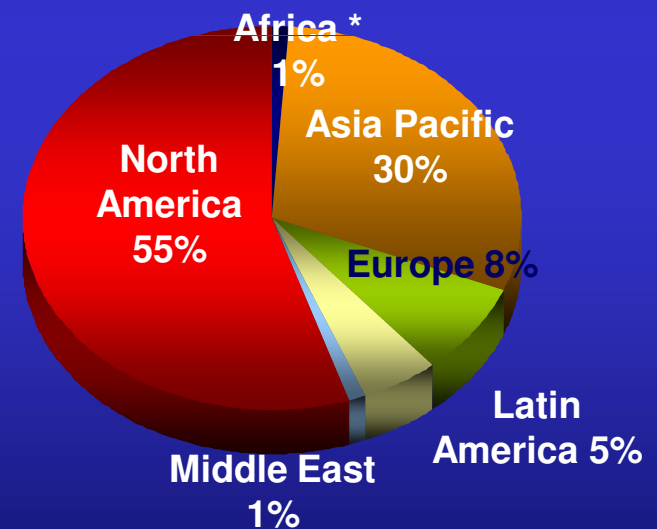
Market shares* achieved

International traffic represents 60% of the total passenger traffic

International passenger traffic**



Domestic passenger traffic**



* Market share of the scheduled traffic of the airlines domiciled in the region

**Expressed in Revenue Passenger Kilometre



ICAO Statistics Programme

Why do we need Statistics?

1 – Monitor ICAO Strategic Objectives

- Air travel safety rates
- The environmental impact on air transport
- The sustainable air transport development

2 – Analyse the air transport market



3 – Assess the impact of new regulations



Main drivers for air travel demand



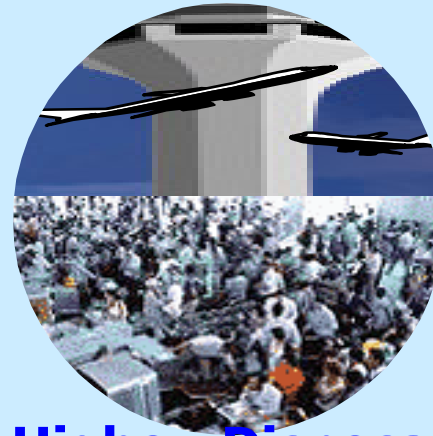
Globalization



Falling air fares



Liberalization

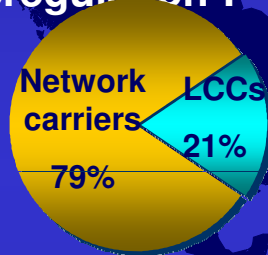


**Higher Disposable
incomes**

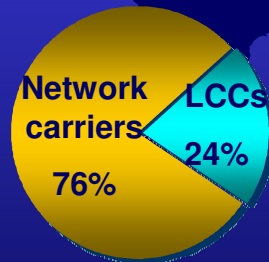


Low Cost Carriers development

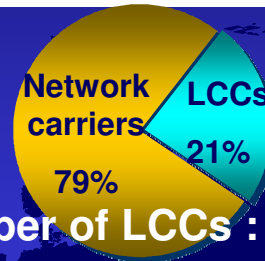
Number of LCCs : 13
Deregulation : 1978



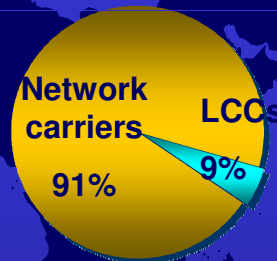
Number of LCCs : 10
Deregulation : in progress



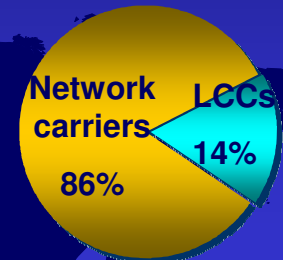
Number of LCCs : 48
Deregulation : 1987- 1997



Number of LCCs (Africa and Middle East) : 10
Deregulation : uneven



Number of LCCs : 33
Deregulation : accelerating





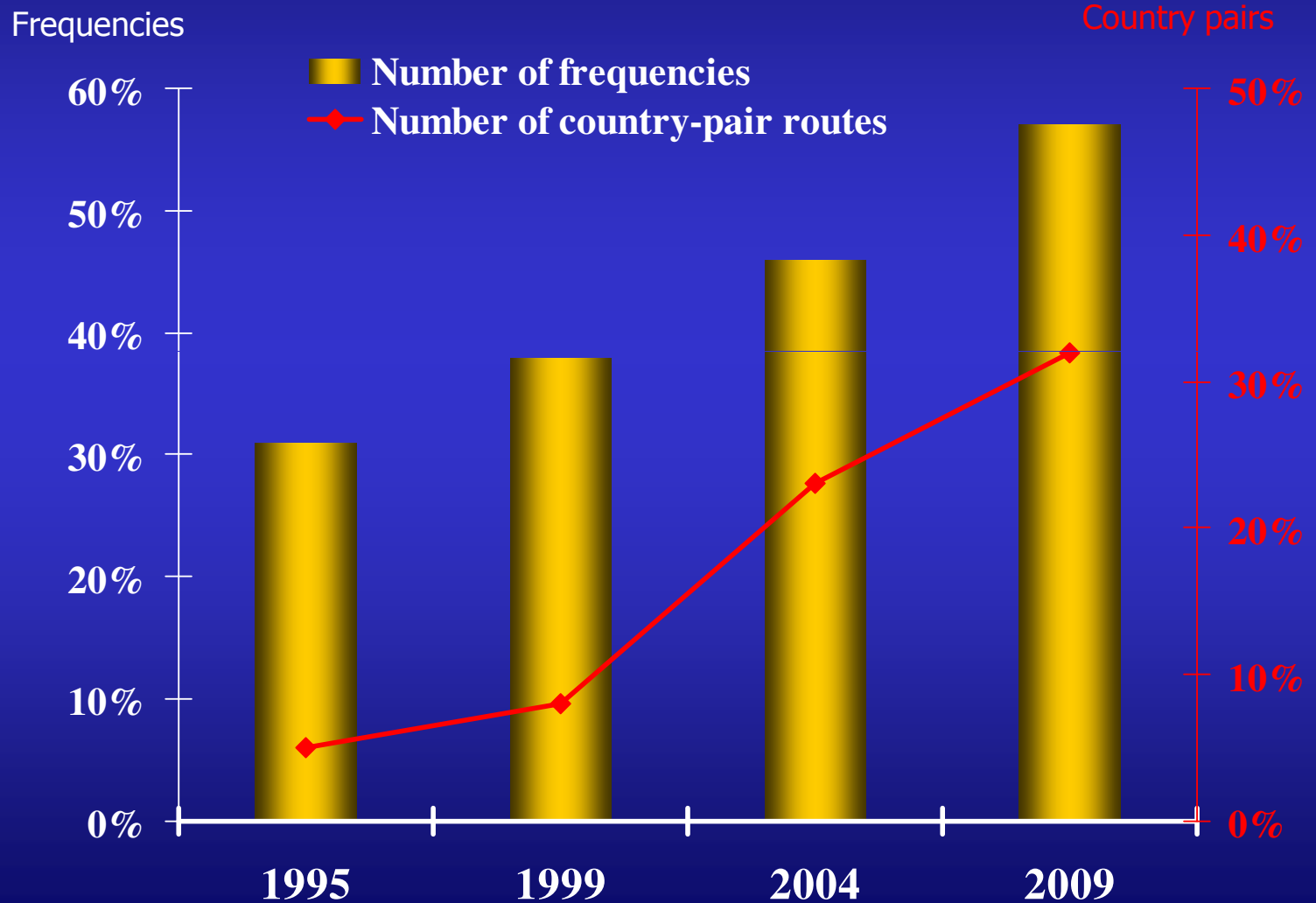
ICAN: ICAO forum for liberalization

 ICAN 2010	ICAO Air Services Negotiation Conference 28 June to 2 July 2010 Montego Bay, Jamaica	
 ICAN 2009	ICAO Air Services Negotiation Conference 28 September to 2 October 2009 Istanbul, Turkey	
 ICAN/ 2008	ICAO Air Service Negotiation Conference 24 to 27 November 2008 Dubai, United Arab Emirates	<div> هيئة دبي للطيران المدني Dubai Civil Aviation Authority</div>



Air transport conducted under liberal arrangements

As a % of international scheduled services



Source : ICAO



ICAO Statistics Programme

Why do we need Statistics?

1 – Monitor ICAO Strategic Objectives

- Air travel safety rates
- The environmental impact on air transport
- The sustainable air transport development

2 – Analyse the air transport market

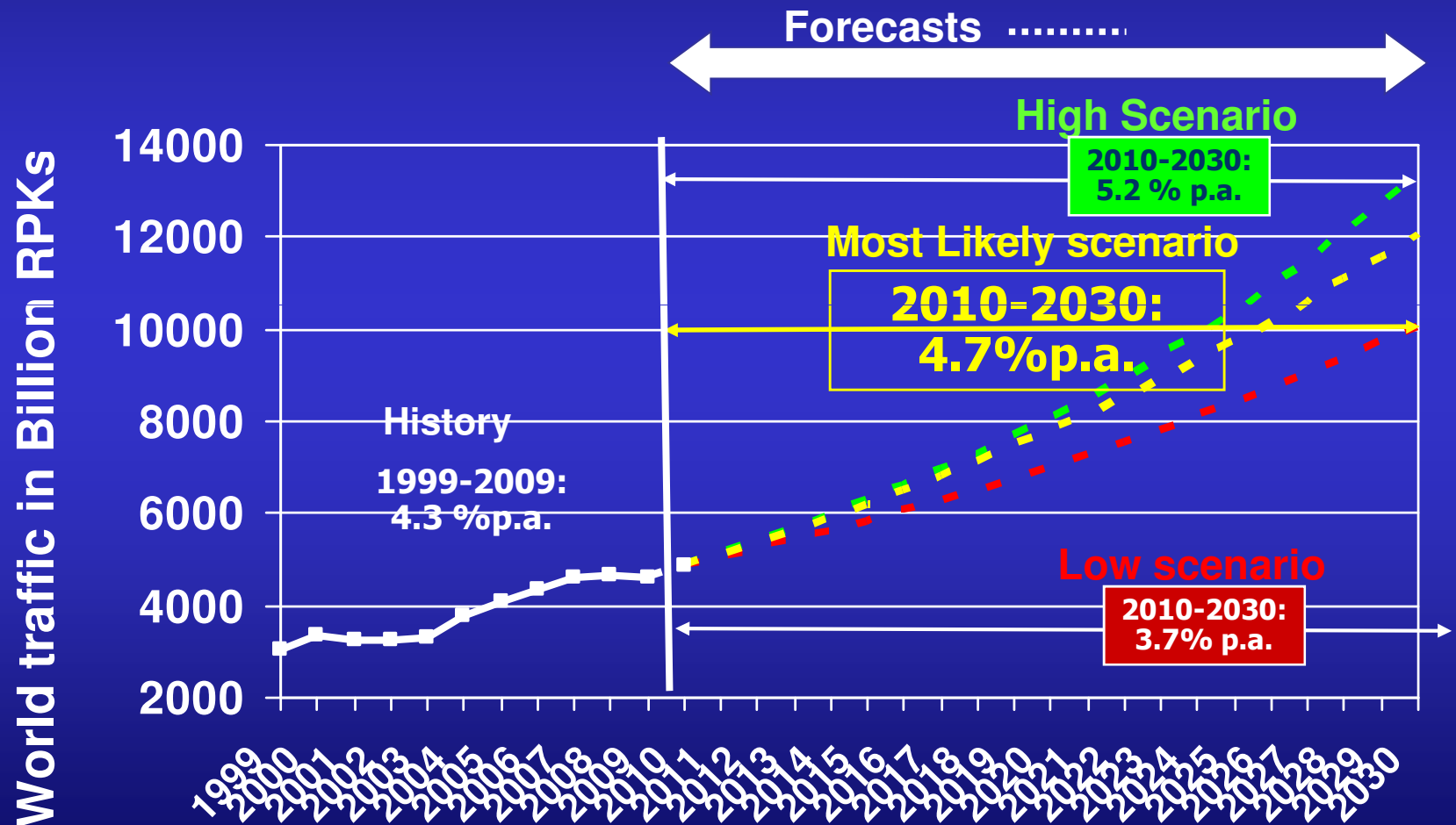
3– Assess the impact of new regulations



4– Forecasting



Long-term traffic forecast results





ICAO Statistics Programme

Why do we need Statistics?

1 – Monitor ICAO Strategic Objectives

- Air travel safety rates
- The environmental impact on air transport
- The sustainable air transport development

2 – Analyse the air transport market

3 – Assess the impact of new regulations

4 – Forecasting

5 – Plan the development of airport and ANS facilities

6 – Negotiate bilateral agreements

7 – Calculate the individual financial contribution of States



8 – Implement future strategies



Future pilots requirements* vs training capacities

Most likely scenario

North America

	Pilots Needs	Capacity
ICAO	10 449	27 655

Europe

	Pilots	Capacity
ICAO	15 552	7 955

Middle East

	Pilots	Capacity
ICAO	2 458	860

Asia / Pacific

	Pilots	Capacity
ICAO	13 983	4 935

Africa

	Pilots	Capacity
ICAO	3 814	1 010

Latin America

	Pilots	capacity
ICAO	6 250	1 945

World

	Pilots	Capacity
ICAO	52 506	44 360

Source: ICAO preliminary figures

*Estimate of average annual needs for 2010 to 2030 period based on various world fleet categories;: Regional and business jets, Turboprops, Single aisle, Twin aisles and Freighters

Training capacity is based on current figures without any incremental effect due to planned additional capacities



Users' opinion on internal & external ICAO data sites

Aviation Statistics
AIR TRANSPORT BUREAU

Home | ICAOSec Menu | ICAO Web Site

Welcome to the Air Transport Bureau's

Introduction

Cor
Rep
rele
200
Int
ava

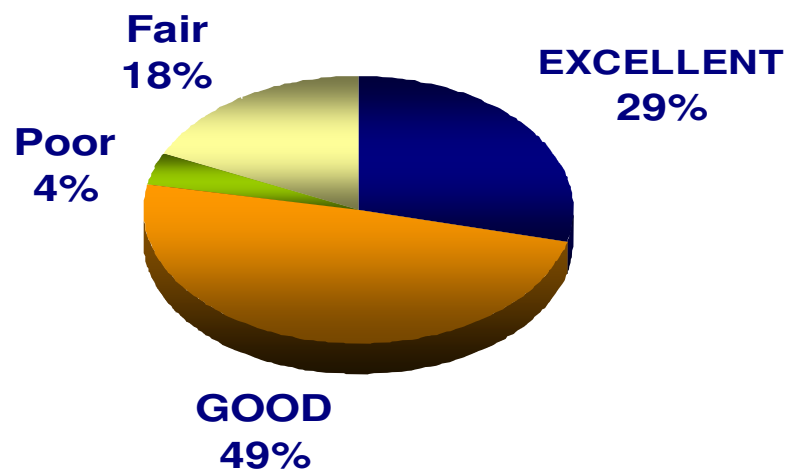
sho
with
iten

ICA
new
are
and
Res
pos
ava

What's New



International Civil Aviation Organization



Around 80% rate ICAO sites as excellent or good

Air T

Weekly data upload 30 September 2010



Some general comments

"ICAO secure site is very important for ICAO membership countries...there they can find many important and useful information"

"The content is quite useful. The reason it doesn't score higher is the confusing layout and difficulty finding what you want."

"Very frustrating when trying to access data at an aggregated level."

"Data has proven not to be particularly helpful as at times quite unreliable"

"Great source of air transport information, very useful for data analyses."

"I find it invaluable for my research so I am sure my peers would find it equally useful"

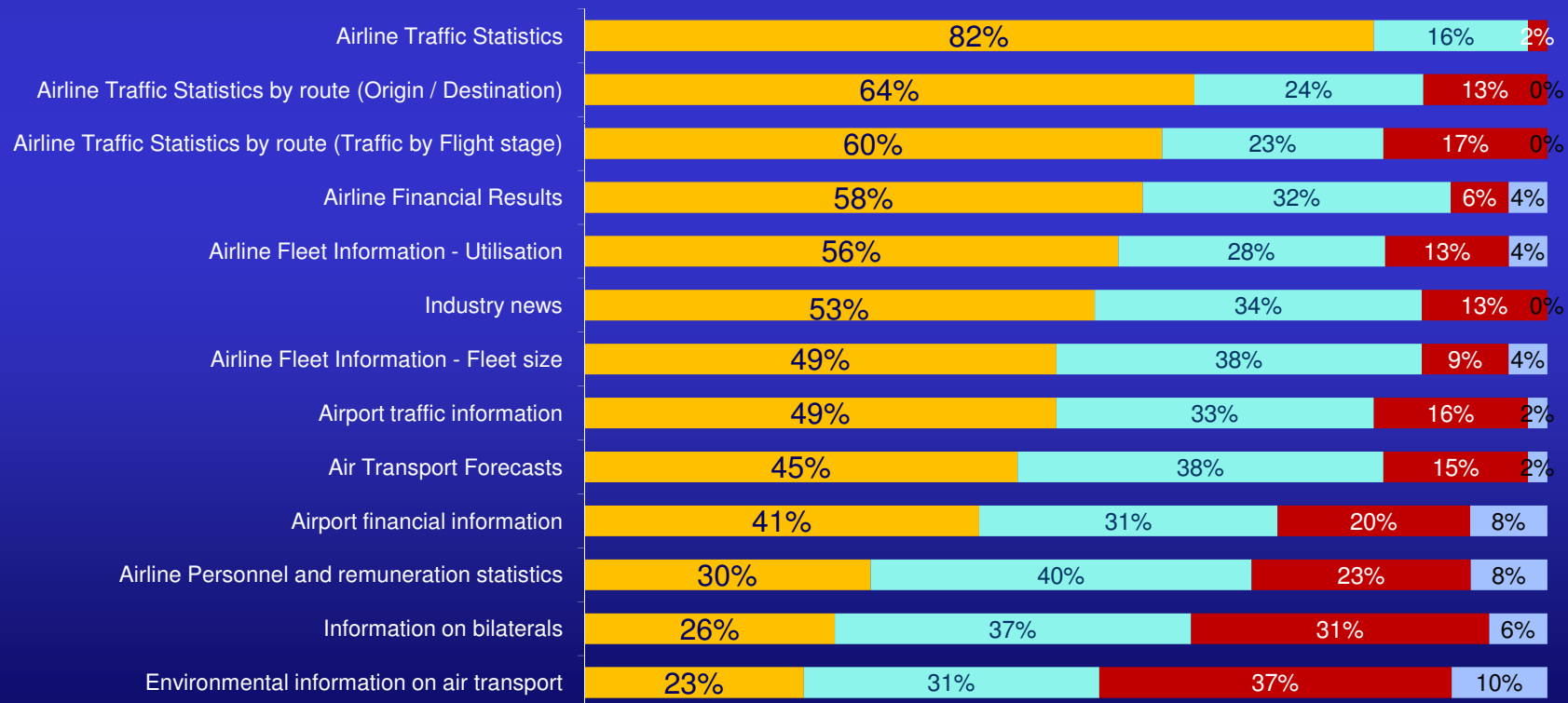
"Very useful information...the data collected and disseminated by ICAO are very useful to the Aviation Statistics Centre of Canada as they complement our own aviation programme"



Rating of different types of information according to importance to users

Airlines and airports traffic statistics are essential for most respondents

■ Essential ■ Important (but not essential) ■ Not useful (but I am interested) ■ Not useful or interesting





Suggested Improvements

✚ New data collection:

- Up-to-date Bilateral Air Services Agreements (ASAs)
- Fuel consumption by a/c type
- CO2 emissions by air carrier
- Country breakdown on incidents and accidents
- Traffic statistics for General Aviation

✚ Additional information requested:

- ICAO training programmes schedule
- List of focal points in each DGCA

✚ General comments referred to improving the quality of data already available by:

- Completing and updating the missing data for airlines and airports (for consistency purposes)
- Providing the recent years for airlines data



✚ Data processing:

- Improve set up and layout of the websites, seen as old-fashioned and not user friendly
- Include pictures, graphs, etc..
- Send emails to users every time new data are available
- Install an online application that make calculation easier"



Layout and data processing

Current layout of the statistics site

ICAO Sec Menu		ICAO Web Site		ATB Web Site		Tuesday, 5 October 2010						
Traffic Summary - Commercial Air Carriers (All Services including All Freight)												
Based on data reported to ICAO												
State Air Carrier	Aircraft Kilometres (000)	Aircraft Departures	Aircraft Hours	Passangers Carried	Freigh Tonnes Carried	Passenger Kilometres Performed (000)	Seat Kilometers Available (000)	Pass Load Factor (%)	Tonne-Kilometres			Weight Load Factor (%)
									Performed		Available	
									Freight & Mail (000)	Total (000)		
ARGENTINA												
AEROLINEAS ARGENTINAS 												
All Services 2009 (Months reported: 6)												
International Scheduled	18,709	6,776	27,083	643,449	5,908	2,946,895	4,246,067	69	39,261	304,481	583,665	52
Domestic Scheduled	9,036	7,656	15,320	547,971	1,105	800,930	1,068,390	75	1,518	73,600	128,360	57
International Non-Scheduled	82	32	122	2,589	1	4,659	18,095	26	8	427	2,307	19
Domestic Non-Scheduled	23	16	38	2,241	0	4,138	5,261	79	0	373	699	53
Total 2009	27,850	14,480	42,563	1,196,250	7,014	3,756,622	5,337,813	70	40,787	378,881	715,031	53
State Air Carrier	Aircraft Kilometres (000)	Aircraft Departures	Aircraft Hours	Passangers Carried	Freigh Tonnes Carried	Passenger Kilometres Performed (000)	Seat Kilometers Available (000)	Pass Load Factor (%)	Tonne-Kilometres			Weight Load Factor (%)
									Performed		Available	
									Freight & Mail (000)	Total (000)		
ARGENTINA												
AUSTRAL 												
All Services 2009 (Months reported: 6)												
International Scheduled	12	5	18	362	0	1,102	1,803	61	0	99	204	49
Domestic Scheduled	14,187	13,320	24,648	1,219,002	2,259	1,427,791	2,154,827	66	2,616	131,117	235,050	56
International Non-Scheduled	46	22	72	2,276	0	5,043	7,267	69	0	455	770	59
Total 2009	14,245	13,347	24,738	1,221,640	2,259	1,433,936	2,163,897	66	2,616	131,671	236,024	56



The projected new ICAO data website

Welcome
How To
TOTAL All services
Freight services only
Operational Averages
Traffic Averages
Traffic per month
Year vs Last Year
More Year Analysis
Carrier vs Other Carr

2004
2005
2006
2007

Domestic Flights
International Flights
Scheduled flight
Non-scheduled flight

State

- ARGENTINA**
- ARMENIA
- AUSTRALIA
- AZERBAIJAN
- BAHRAIN
- BERMUDA
- BOSNIA & HERZEGOVINA
- BRAZIL
- BULGARIA
- CANADA
- CHILE
- CHINA
- COLOMBIA

Carrier

- AEROLINEAS ARGENTINAS
- AUSTRAL
- LADE
- 11TIME AIRLINE
- AVL OF THE MARSH IS.
- AB AIRLINES
- ABAETE
- ABAVIA
- ABERDEEN AIRWAYS
- ABS JETS
- ABSA
- ACES
- ACTIVE AIR
- ACVILA AIR-ROMANIAN

Total All Services

State	Carrier	Year	Flight Type	Flight Stage	Month	Aircraft Kilometers (000)	Aircraft Departures	Aircraft Hours	Passengers Carried	Freight Tonnes Carried	Passenger Kilometers (000)	Seat Kilometers Available (000)
ARGENTINA	AEROLINEAS ARGENTINAS	2009	Scheduled flight	Domestic Flights	6	9 036	7 656	15 320	547 971	1 105	800 930	1 068
			International Flights	6	18 709	6 776	27 083	643 449	5 908	2 946 895	4 246	
		Non-scheduled flight	Domestic Flights	6	23	16	38	2 241	0	4 138	5	
		International Flights	6	82	32	122	2 589	1	4 659	18		
	Sub-total	2009			6	27 850	14 480	42 563	1 196 250	7 014	3 756 622	5 337
	AUSTRAL	2009	Scheduled flight	Domestic Flights	6	14 187	13 320	24 648	1 219 002	2 259	1 427 791	2 154
			International Flights	6	12	5	18	362	0	1 102	1	
		Non-scheduled...	International Flights	6	46	22	72	2 276	0	5 043	7	
		Sub-total	2009			6	14 245	13 347	24 738	1 221 640	2 259	1 433 936
LADE	2009	Scheduled flight	Domestic Flights	6	627	1 189	1 743	13 700	0	14 345	26	
		Sub-total	2009			6	627	1 189	1 743	13 700	0	14 345

Passenger km Performed vs Seat km Available per State

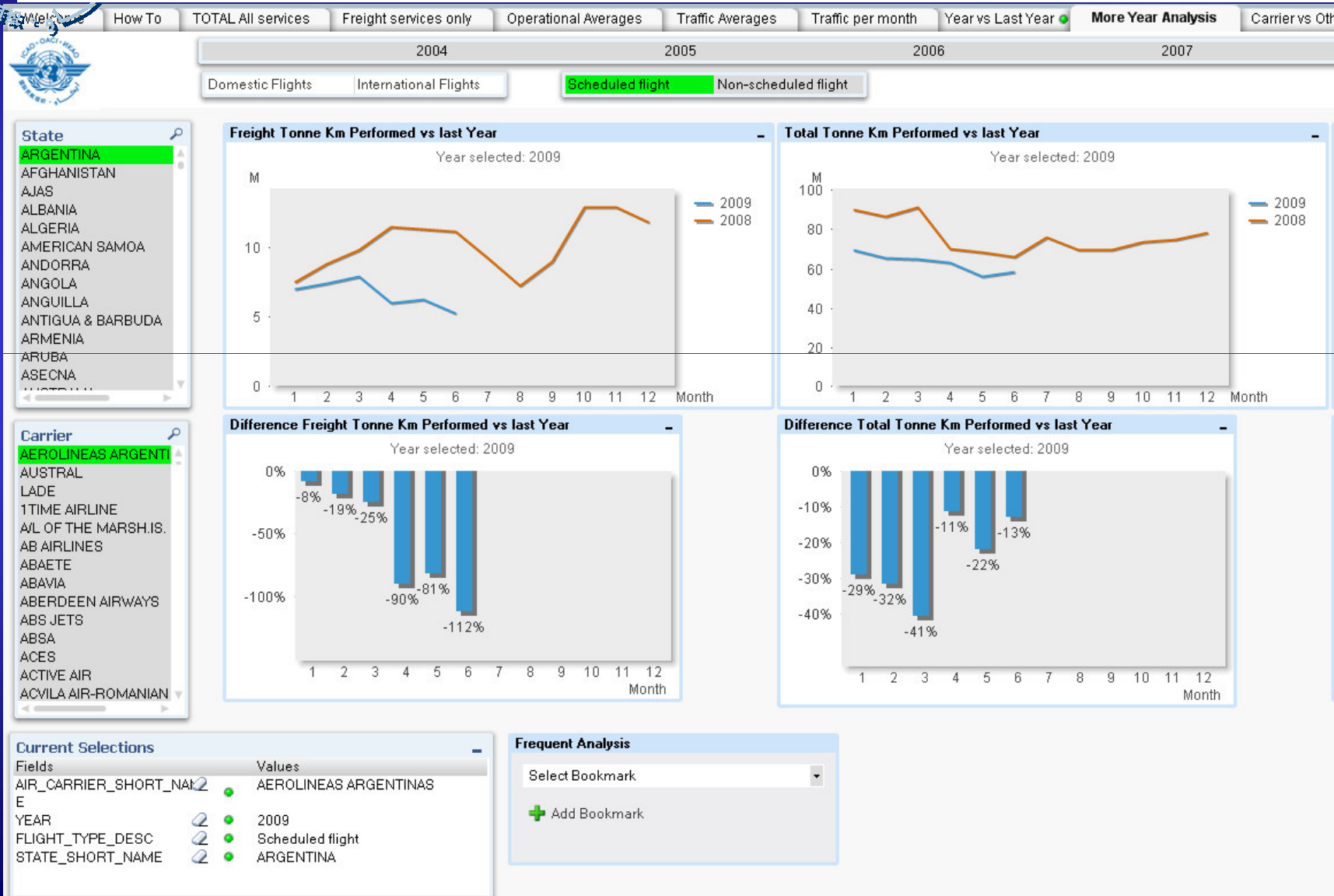
State	Pax Km Perf (M)	Seat Km Avail (M)
ARGENTINA	5 205	7 528

Load factor per Carrier

Carrier	Pax load factor	Weight load factor
ARGENTINA	69%	54%



Interactive and more user friendly





Statistics derived products

Indicators for monitoring purposes
such as Liberalization pace



Enhanced
transparency of
aviation policies

Forecasts & economic
analyses and studies



World Air Services Agreements DB

NEW RELEASE
SEPTEMBER 2010

World Air Services Agreements Web Database



Original text of over 2000 bilateral agreements

90 distinct provisions covered

Summary of the routes exchanged

A built-in search engine



*Unique Source of Information and Analysis
of Air Service Agreements*



Statistics ALL-IN-ONE



Order any of these products online at:
www.icao.int/store

ICAO

ICAO AIR TRANSPORT STATISTICS (ALL-IN-ONE)

THE NEW

- Contains:
 - Data are verified against other sources of air statistics
 - Are formatted to serve the needs of government and industry users
 - Are the only single source of complete air transport statistics
 - Are available now as electronic files only

- World Air Traffic Statistics

- Commercial Air Carriers Profile Statistics

- International Airports Profile Statistics



Aeronautical charges on-line

NEW PRODUCT

ICAO Aero **List of Airports and ANS charges in 187 States**



**Landing charges
Fuel charges
Environmental charges, etc..**

A competitive intelligence tool

A built-in search engine

Monthly updates



LET'S CELEBRATE TOGETHER THE FIRST WORLD STATISTICS DAY!

CIVIL AVIATION DATA SERVICES & STATISTICS

20.10.2010
World Statistics Day



Service • Professionalism • Integrity



20 .10 .2010 WORLD STATISTICS DAY

The ICAO logo is a circular emblem with a white background. It features a globe with latitude and longitude lines. Above the globe, the words "ICAO" and "OACI" are written in a stylized font, separated by a dot. Below the globe, the Chinese characters "国际民航组织" (International Civil Aviation Organization) are written in a similar stylized font, also separated by a dot. The entire logo is set against a dark blue background.

© ICAO All rights reserved.

This document and all information contained herein is the sole property of ICAO. No intellectual property rights are granted by the delivery of this document or the disclosure of its content. This document shall not be reproduced or disclosed to a third party without prior permission of ICAO. This document and its content shall not be used for any purpose other than that for which it is supplied.

The statements made herein are based on the mentioned assumptions and are expressed in good faith. Where the supporting grounds for these statements are not shown, ICAO will be pleased to explain the basis thereof.