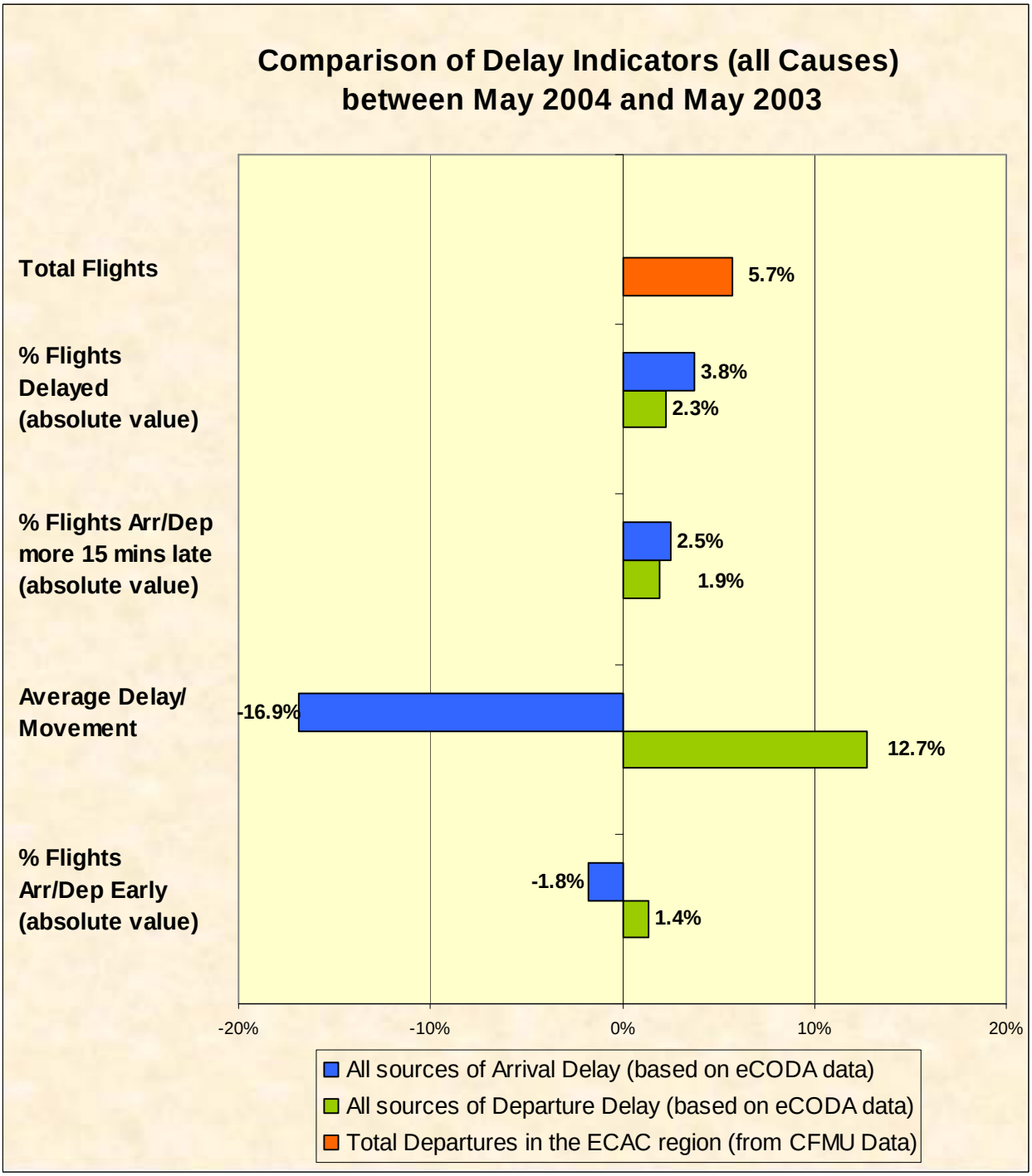
Delays to Air Transport in Europe
May 2004



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FOREWORD

This report represents an overview of the delay situation in the European Civil Aviation Conference Area. It is based on delay data supplied by the CFMU and airline data from eCODA, and has been prepared by the Central Office for Delay Analysis (CODA), a service of the European Air Traffic Management Programme (EATMP).

The report consists of an overview of the reporting period, a summary of the main delay effects, and a series of charts and graphics, which illustrate the main characteristics of the reporting period. A glossary of terms and abbreviations used throughout the report is given in Annex 2.

In this report the definition of the CFMU ATFM departure delay is based on the difference between the scheduled off-block time and the calculated off-block time, taking into account slot time and estimated taxi time. Airline data from eCODA is based on real recorded delays.

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1. SUMMARY OVERVIEW

When compared with May 2003, traffic increased by 6%. The Average Delay per Movement, due to all causes of delay, for departure traffic increased significantly and was up 13% on May 2003 to reach 8 minutes. By comparison, arrivals had an important decrease of 17%, to just over 8 minutes. ATFM delay on the other hand decreased by 11%; with the Average Delay per Movement falling by almost 16% to 1.5 minutes.

For the first five months of the year, traffic increased by 3.5%, with delayed flights due to all causes increasing by 8% for departures and by 7% for arrivals. The number of flights delayed by more than fifteen minutes was up 12% for departures and 9% for arrivals. Turning to the delays, the Average Delay per Movement was just over 9 minutes for departures and almost 10 minutes for arrivals. Total ATFM delay fell by 6.5%, with the Average Delay per Movement falling by 10% to just over 1.5 minutes.

TRAFFIC SITUATION FOR MAY 2004[1]

Departures throughout the ECAC region increased by six percent and with almost seven hundred and seventy thousand flights, it was the highest May figure since 1996. Domestic traffic increased by one and a half percent while International traffic rose by eight percent. Eighty five percent of the busier countries had an increase in International traffic, with the largest real increase in Germany, followed by France, Turkey, the United Kingdom and Spain. At the other end of the scale, Cyprus, The Former Yugoslav Republic of Macedonia and the Canary Islands had the largest real decreases. Turning to the domestic traffic, the United Kingdom, France, Greece and Spain had the largest rises whereas Germany, Italy, Sweden and the Canary Islands had the largest falls.

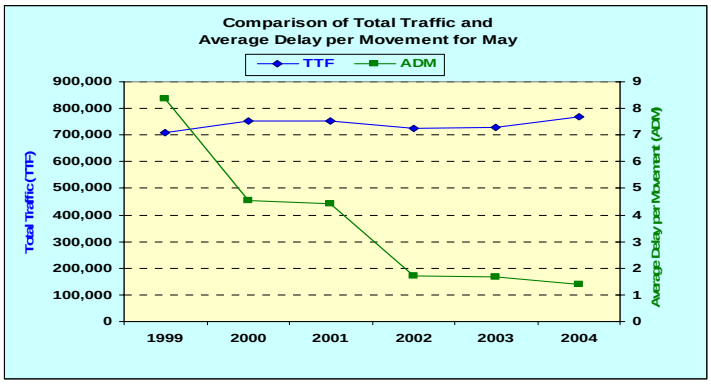
More than eighty percent of the busier airports (those with at least two thousand five hundred flights per month) saw an increase in traffic, with twenty nine percent of them having a double figure increase. The largest real increases were at Paris/Orly, Antalya, Paris/Charles de Gaulle, and Vienna. At the other end of the scale, Birmingham, Naples and Cologne/Bonn had the largest real decreases.

Again, Madrid-Barcelona was the busiest city pair with almost two thousand flights in each direction, which was up two percent on May last year. Milan/Linate-Rome was the only other pair with more than one thousand flights in each direction. Sixty four percent of the busier pairs (those with more than two hundred and fifty flights per month) had an increase in the number of flights, with thirty five percent having a rise of ten percent or more. Paris/Orly-Nice had the largest real increase and was followed by Toulouse-Paris/Orly and Gotenborg-Stockholm, whereas Cologne/Bonn-Berlin and Barcelona-Palma had the largest real decreases.

[1] The analysis was based on the CFMU database which contains details on all IFR flights in the ECAC region.

ATFM DELAY SITUATION FOR MAY 2004

Delays due solely to ATFM measures decreased by eleven percent when compared with May 2003. The Average Delay per Movement fell by sixteen percent to just over one minute. ATC Capacity accounted for half of all the ATFM delay and was followed by Airport Capacity (fifteen percent) and Weather (thirteen percent).



Delayed flights increased by one percent, with the percentage of flights delayed falling by half a percentage point to just eight percent. Flights delayed by more than fifteen minutes decreased by four percent, with flights delayed by more than one hour falling by fifty seven percent.

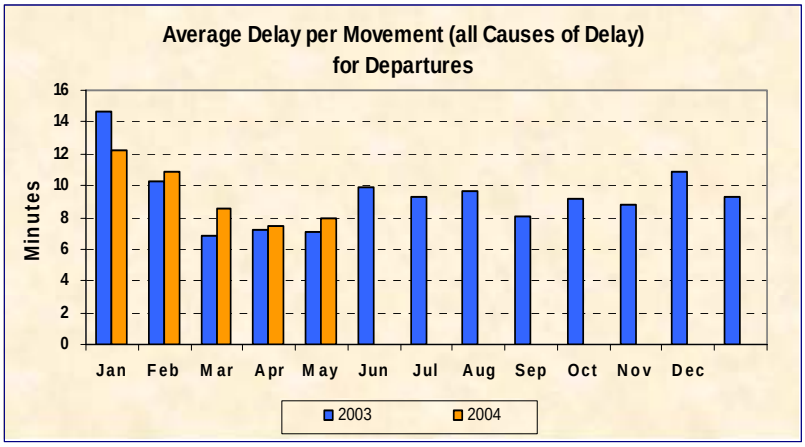
Not all ATFM delay was due to ATC; forty three percent of the total ATFM delay in the ECAC region was caused by regulations put in place to protect airports. Compared with May 2003, the share of the delay due to these restrictions increased by eleven percentage points and the actual amount of the delay rose by twenty two percent. The airports of Zurich, London, Paris, Rome, Barcelona, Vienna and Frankfurt were the most affected by airport-related regulations. Airport Capacity accounted for one third of the airport-related ATC delay and was followed by Weather (twenty seven percent) and ATC Capacity (fifteen percent).

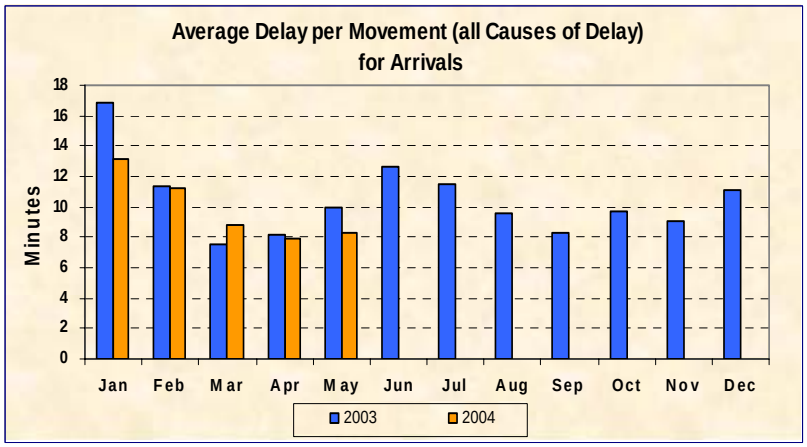
Based on the locations of the most penalising regulations, traffic (including overflights) using the airspace of France, Switzerland, the United Kingdom, Maastricht, Germany and Italy had the largest share of the ATFM delay. Between them, they accounted for sixty five percent of the total ATFM delay in the ECAC region. Compared with the same month last year, Austria, Ireland and Maastricht had the largest increases whereas France, Italy, Germany and the United Kingdom had the largest decreases.

When the traffic handled is taken into account (again including overflights), Ireland, Switzerland, Maastricht and Austria were the most penalising countries, but Ireland and Switzerland were the only countries with an Average Delay per Movement exceeding one minute. Compared with May 2003, with a rise of almost two minutes, Ireland had the largest increase and was followed by Austria, Cyprus and Poland. At the other end of the scale, France was the only country with a decrease of one minute and was followed by Italy, Greece and the United Kingdom.

eCODA DATA FOR MAY 2004

The Average Delay per Movement, for departure traffic and for all causes of delay, was slightly higher than last month at eight minutes; an increase of thirteen percent on May last year. Thirty six percent of flights were delayed on departure, with fourteen percent delayed by more than fifteen minutes. On the positive side, fourteen percent of flights departed before their scheduled time.





The Average Delay per Movement, for arrival traffic, for all causes of delay, was just over eight minutes; though higher than last month, this was, however, a decrease of seventeen percent on May 2003. Thirty five percent of flights were delayed on arrival, with fifteen percent delayed by more than fifteen minutes. On the positive side, thirty five percent of flights landed before their scheduled time.

Twenty five percent of the busier departure airports (those with at least nine hundred flights per month) had an Average Delay per Movement of more than ten minutes. Rome/Fiumicino was the most affected airport (for both departures and arrivals) with an average delay of twenty minutes and was followed by East Midlands, Dublin, London/Stansted and Milan/Linate. Compared with May 2003, more than half of the airports had an increase in average delay of more than one minute. The largest rise was at Rome/Fiumicino (up ten minutes), followed by Milan/Linate, East Midlands and Dublin. These increases were offset by a significant decrease at Alicante (down eleven minutes) followed by Prague and Malaga. As in the previous months, all the airports had a proportion of their flights departing before their scheduled time, with Alicante having the largest (thirty five percent) and Copenhagen the lowest (four percent).

Looking at the busier destination airports, traffic arriving at Rome/Fiumicino and East Midlands had the largest Average Delay per Movement, with eighteen minutes and were followed by Milan/Linate and Turin. Compared with May 2003, forty five percent of the busier airports had an increase in average delay of more than one minute, with the largest at Milan/Linate (up seven minutes), followed by Rome/Fiumicino, Seville and Vienna. On the other hand, there was a large decrease at Venice (down twelve minutes), followed by Bristol, London/Stansted and Prague. Again, all the airports had a proportion of their flights landing before their scheduled time, with Bristol and Belfast (both with fifty three percent) having the largest and Amsterdam (sixteen percent) the lowest.

The most affected city pair, due to all causes of delay, was Aarhus-Copenhagen with an average delay of thirty one minutes and was followed by Paris/Charles de Gaulle/Prague (twenty minutes), Turin-Rome/Fiumicino and Rome/Fiumicino-Milan/Linate (both with nineteen minutes). Compared with May 2003, three quarters of the pairs had an increase in Average Delay per Movement, with fifty eight percent of them having a rise of one minute or more. The largest increase was between Aarhus-Copengagen (up thirty minutes), followed by Rome/Fiumicino-Linate and Madrid-Seville. At the other end of the scale, seventeen percent of the pairs had a decrease of more than one minute, with the largest fall between Barcelona-London/Heathrow (down seven minutes).

An analysis of the delay causes and categories, grouped by IATA codes, shows that thirty seven percent of them had an increase in delay share, with the largest rises in the Others and Miscellaneous categories, followed by Aircraft & Ramp Handling categories. To balance these increases, there were significant decreases in Weather and Flight Operations & Crewing categories (only those categories with more than one percent of the delay were taken into account).

With ten percent share of the delay, Technical & Aircraft Equipment was the most penalising direct delay category and was followed by Others and ATFM En-Route Demand Capacity (with six percent share of the delay which was twenty four percent down on May last year).

SUMMARY OF SIGNIFICANT EVENTS

- Weather conditions including strong winds, thunderstorms, fog and low visibility reducing arrival and departure rates for short periods.

- Technical problems including frequency problems at Geneva, Athens and Munich ACCs; radar maintenance at Marseille, Cagliari and Catania ACCs; frequency problems at Belgrade ACC; radar failure at Ljubljana ACC; ILS problems at London/Heathrow and Prague ACCs; ground movement radar unserviceable at Goteborg; computer failure at Copenhagen ACC; Santiago closed due to power failure.

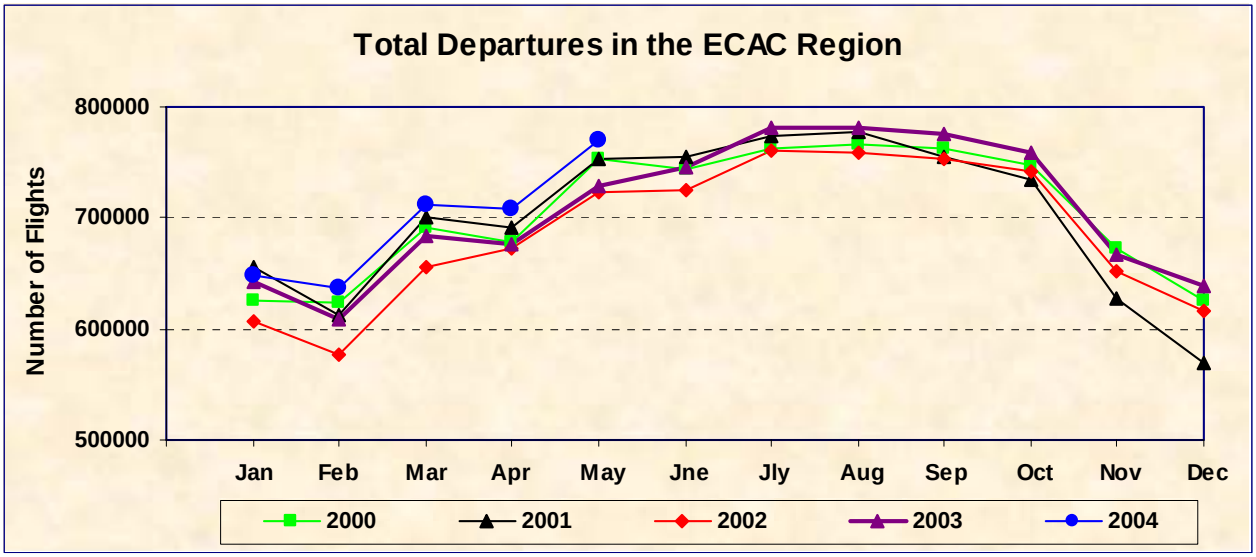
- Staff issues including industrial actions at Faro, Cannes and Paris airports.

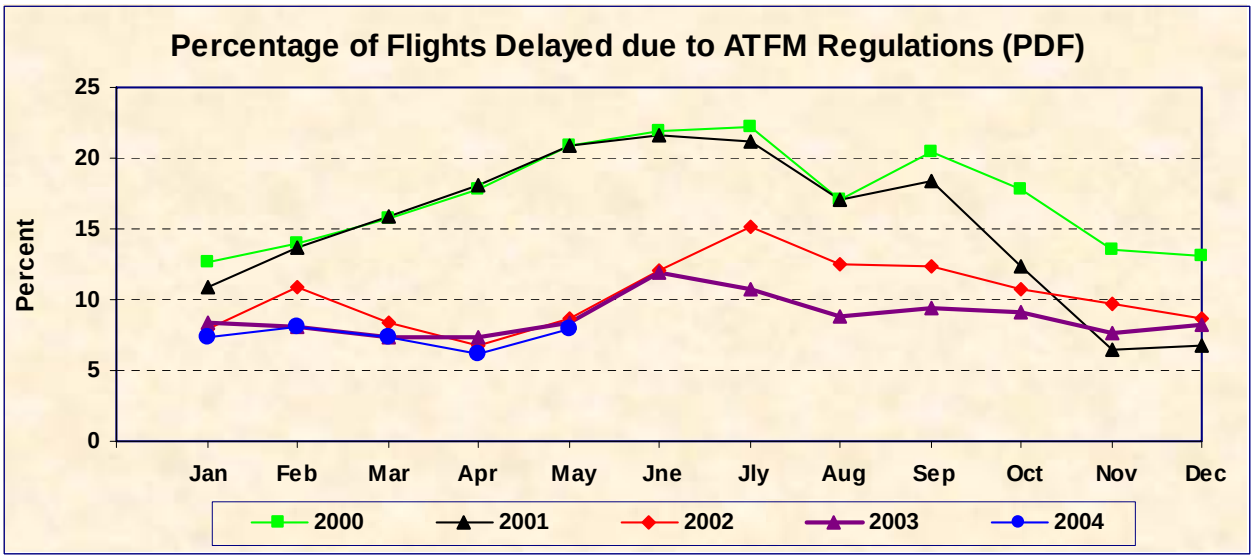
- Work in Progress at Rome and Padova; single runway operations at Milan/Malpensa, Prague and Barcelona; disabled aircraft blocking runway at Naples; blocked runway at Kerkira; closed runway at Warsaw.

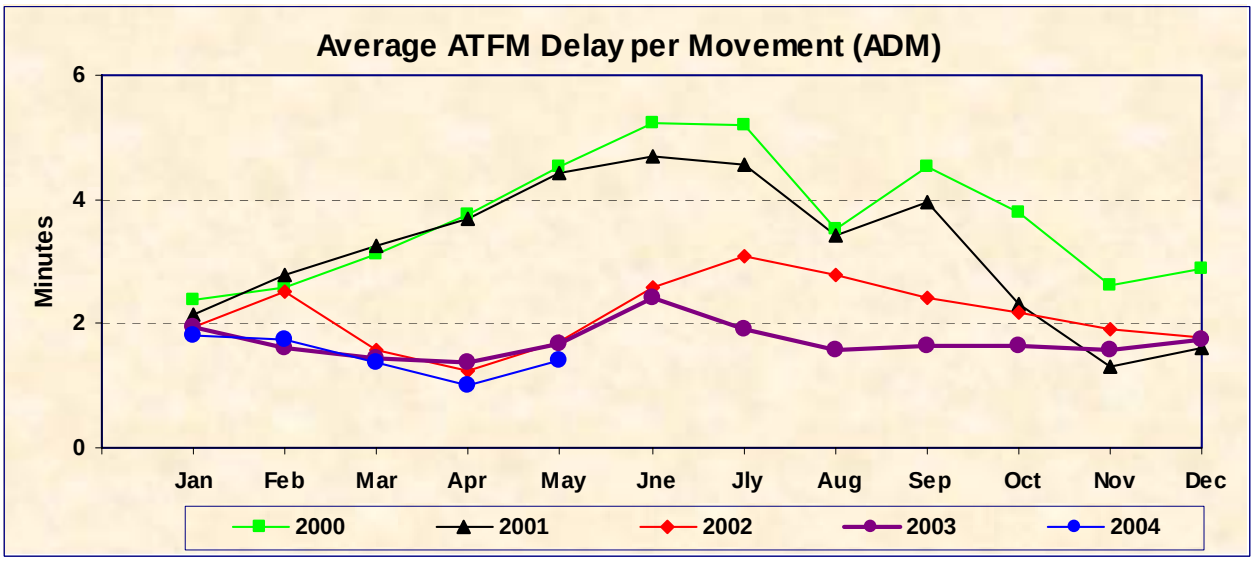
- Military activity at London and Rome/Ciampino; military flying display at Malaga.

- Other items included new sectorisation involving Maastricht West Sector; environmental restrictions at Zurich; reduced capacity at Dublin due to EU Accession Ceremony; motorcycle grand prix at Malaga; airshow at Berlin; UEFA Cup Final at Gothenburg; Dublin moved to new operations room.

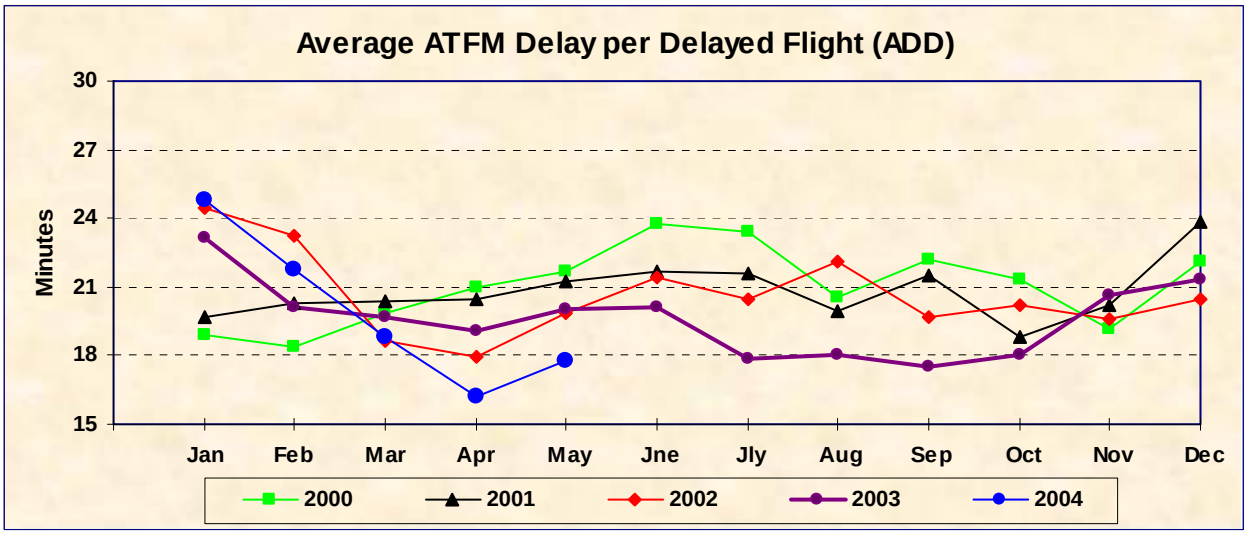
2. Year on Year Trends in Main Indicators

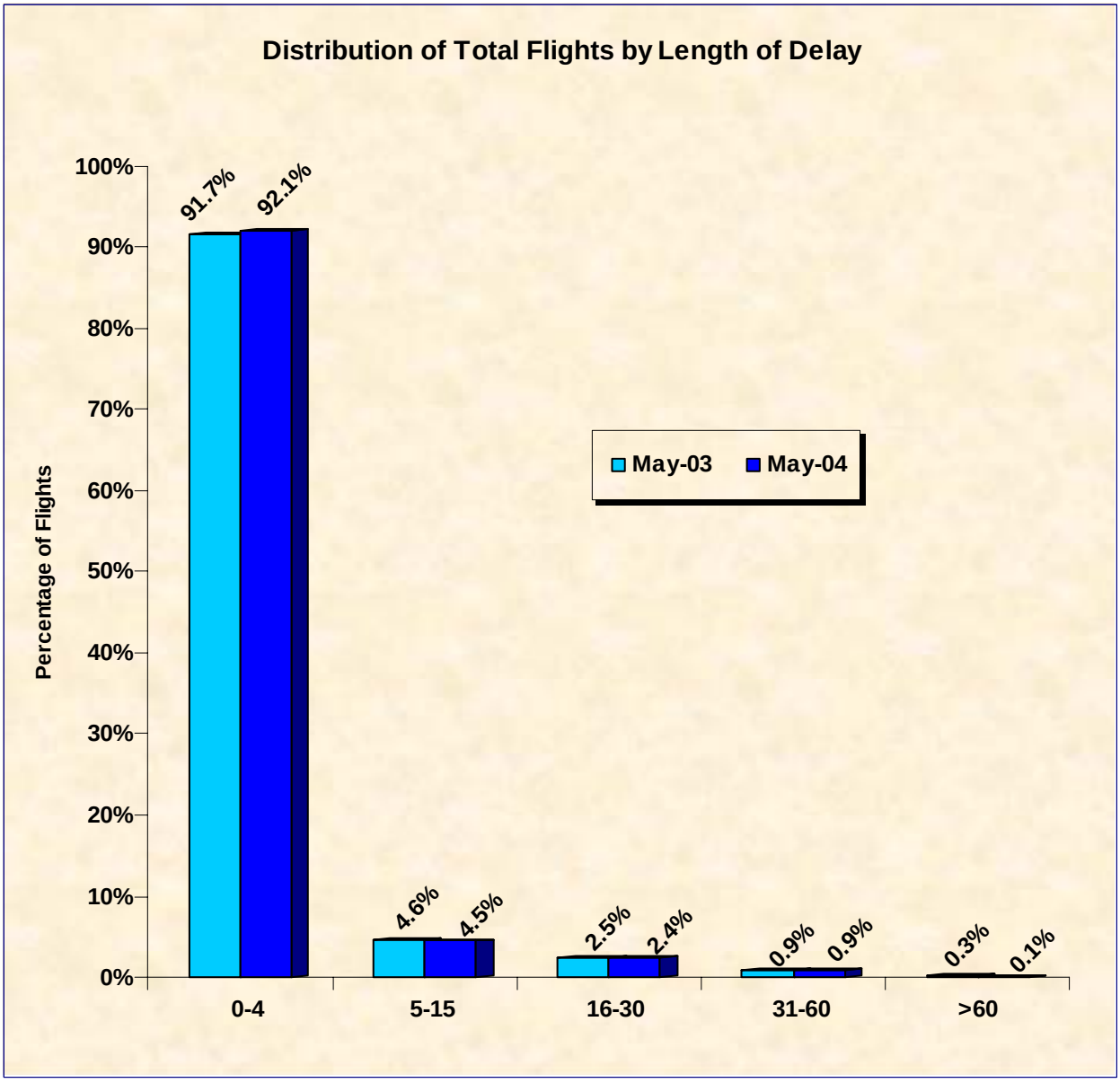






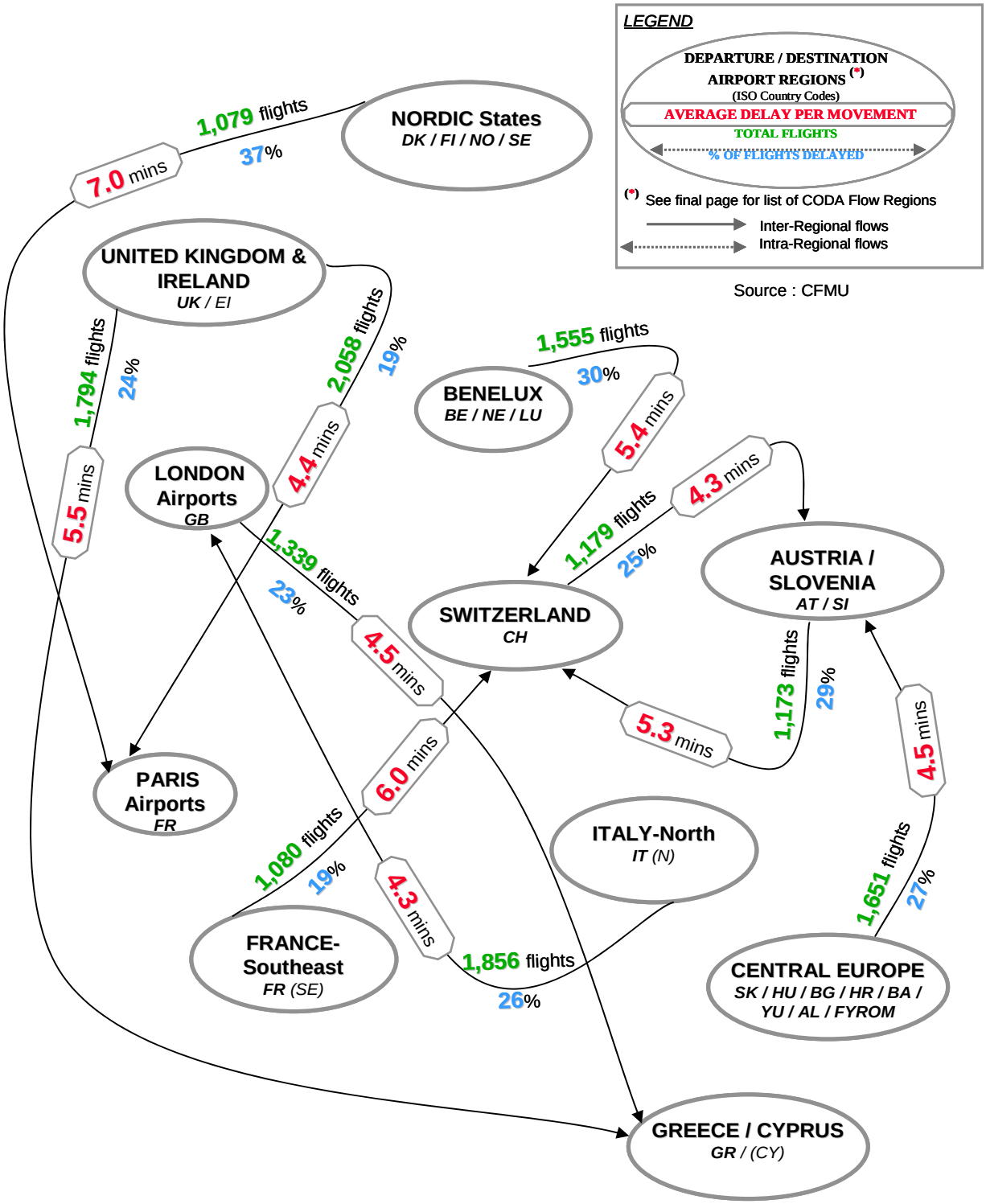
Source : CFMU ATFM Data





Source : CFMU ATFM Data

3. Most Affected Traffic Flows by CODA Regions



Selected flights:	**14,764** *(2% of **Total** flights)*
Delayed flights:	**3,777** *(26% of **Selected** flights)*
Accumulated delay:	**74,127** mins *(7% of Total Delay)*
Avg. Delay per Mvmt:	**5** mins

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ATFM Delay Situation on 10 Regional CODA Traffic Flows (>1,000 flights) in May 2004

4. Most Affected and Most Dense Traffic Flows

MOST AFFECTED TRAFFIC FLOWS (CFMU)

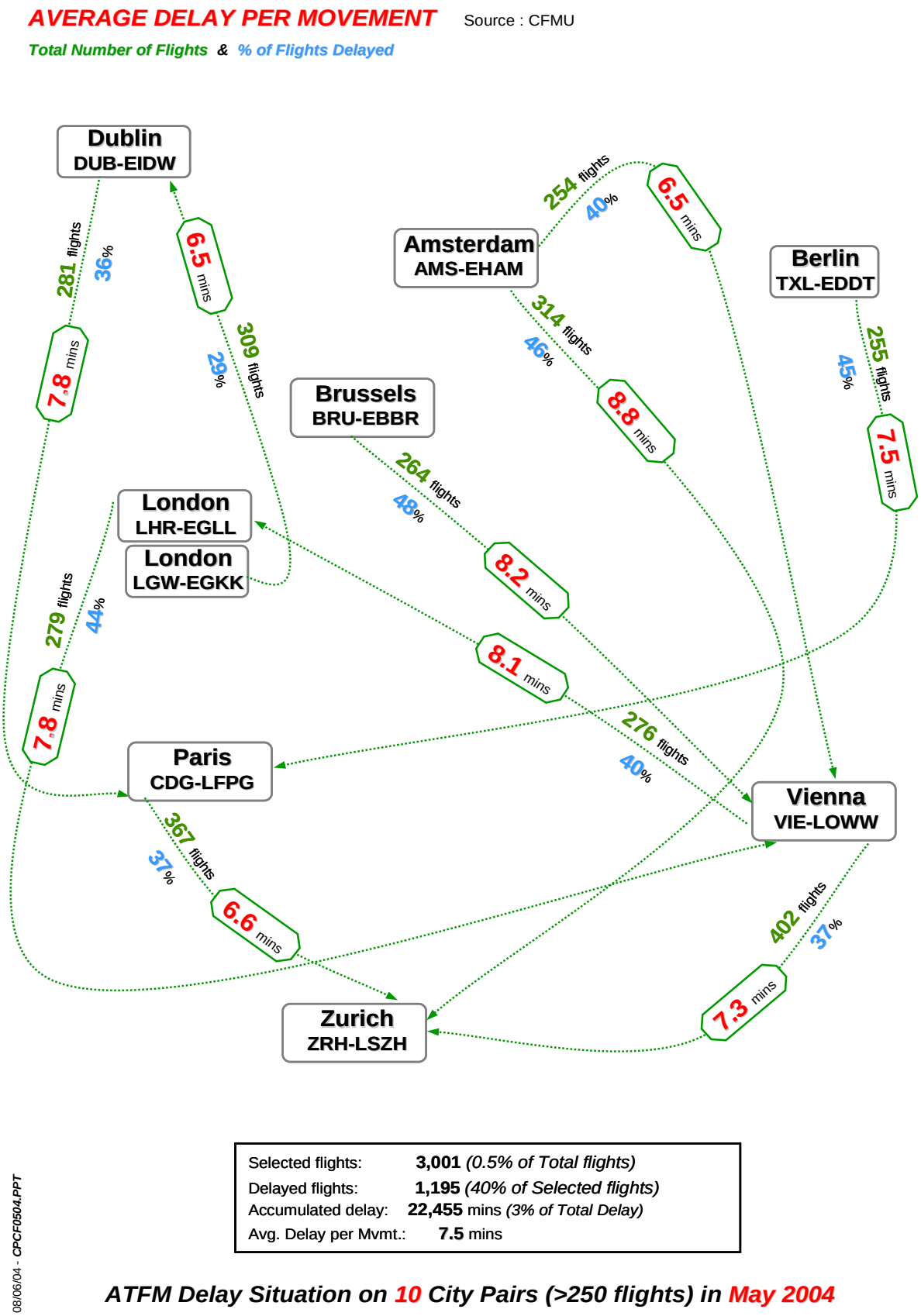
Rank	Departure	Destination	TTF	TRF	TDF	PDF	TDM	ADD	ADM
1	Nordic States	Paris Airports	1,079	678	403	37.35	7,570	18.78	**7.02**
2	France Southeast	Switzerland	1,080	390	209	19.35	6,464	30.93	**5.99**
3	United Kingdom & Ireland	Greece/Cyprus	1,794	679	429	23.91	9,920	23.12	**5.53**
4	BENELUX	Switzerland	1,555	767	470	30.23	8,481	18.04	**5.45**
5	Austria/Slovenia	Switzerland	1,173	614	342	29.16	6,246	18.26	**5.32**
6	Central Europe	Austria/Slovenia	1,651	747	443	26.83	7,431	16.77	**4.50**
7	London Airports	Greece/Cyprus	1,339	528	305	22.78	5,988	19.63	**4.47**
8	United Kingdom & Ireland	Paris Airports	2,058	641	401	19.48	8,981	22.40	**4.36**
9	Switzerland	Austria/Slovenia	1,179	498	294	24.94	5,085	17.30	**4.31**
10	Italy-North	London Airports	1,856	925	481	25.92	7,961	16.55	**4.29**
11	Italy-North	Paris Airports	1,811	927	414	22.86	7,764	18.75	**4.29**
12	London Airports	Italy-North	1,856	976	471	25.38	7,815	16.59	**4.21**
13	BENELUX	France Southeast	1,160	517	258	22.24	4,682	18.15	**4.04**
14	Germany-West	Greece/Cyprus	1,937	508	322	16.62	7,713	23.95	**3.98**
15	Germany-West	Switzerland	3,569	1,398	737	20.65	13,861	18.81	**3.88**
16	Germany-West	France Southeast	1,550	628	294	18.97	5,622	19.12	**3.63**
17	Germany-West	London Airports	3,291	1,336	674	20.48	11,898	17.65	**3.62**
18	BENELUX	Greece/Cyprus	1,087	372	176	16.19	3,853	21.89	**3.54**
19	France Southeast	Germany-West	1,574	645	317	20.14	5,555	17.52	**3.53**
20	London Airports	Switzerland	1,487	527	296	19.91	5,088	17.19	**3.42**
Totals			**34,086**	**14,301**	**7,736**	**22.70**	**147,978**	**19.13**	**4.34**

MOST DENSE TRAFFIC FLOWS (CFMU)

Rank	Departure	Destination	TTF	TRF	TDF	PDF	TDM	ADD	ADM	ADM-Rank
1	Nordic States	Nordic States	**61,858**	960	430	0.70	8,523	19.82	0.14	32
2	United Kingdom & Ireland	United Kingdom & Ireland	**30,348**	3,339	1,937	6.38	38,653	19.96	1.27	11
3	Iberian Peninsula/Canaria	Iberian Peninsula/Canaria	**26,742**	1,287	460	1.72	8,128	17.67	0.30	27
4	Germany-West	Germany-West	**21,948**	2,645	1,318	6.01	21,229	16.11	0.97	18
5	Greece/Cyprus	Greece/Cyprus	**11,862**	567	372	3.14	11,588	31.15	0.98	17
6	Other	Other	**11,061**	59	35	0.32	680	19.43	0.06	33
7	Italy-North	Italy-South/Malta	**10,094**	1,464	841	8.33	18,382	21.86	1.82	6
8	Italy-South/Malta	Italy-North	**10,078**	915	434	4.31	8,976	20.68	0.89	21
9	London Airports	United Kingdom & Ireland	**9,519**	1,302	800	8.40	14,447	18.06	1.52	8
10	United Kingdom & Ireland	London Airports	**9,496**	2,190	1,271	13.38	24,512	19.29	2.58	2
11	Other	London Airports	**8,558**	195	112	1.31	2,116	18.89	0.25	29
12	London Airports	Other	**8,472**	1,027	539	6.36	7,849	14.56	0.93	20
13	Italy-South/Malta	Italy-South/Malta	**8,447**	823	417	4.94	9,494	22.77	1.12	13
14	Other	Germany-West	**8,191**	301	141	1.72	2,166	15.36	0.26	28
15	Germany-West	Other	**8,163**	1,551	728	8.92	10,822	14.87	1.33	10
16	Balearics/Spain East	Iberian Peninsula/Canaria	**8,098**	1,012	375	4.63	5,187	13.83	0.64	23
17	Iberian Peninsula/Canaria	Balearics/Spain East	**8,054**	1,834	826	10.26	13,718	16.61	1.70	7
18	Turkey	Turkey	**7,731**	0	0	0.00	0	0.00	0.00	35
19	Paris Airports	Other	**7,126**	1,215	608	8.53	9,798	16.12	1.37	9
20	Other	Paris Airports	**7,116**	373	131	1.84	2,708	20.67	0.38	26
21	Germany-East/Czech Rep	Germany-West	**6,973**	795	396	5.68	6,663	16.83	0.96	19
22	Germany-West	Germany-East/Czech Rep	**6,954**	770	336	4.83	5,484	16.32	0.79	22
23	Balearics/Spain East	Balearics/Spain East	**6,785**	644	313	4.61	6,826	21.81	1.01	16
24	Central Europe	Central Europe	**6,023**	170	71	1.18	1,245	17.54	0.21	31
25	France North	France North	**5,958**	79	28	0.47	296	10.57	0.05	34

Source: CFMU ATFM Data

5. Most Affected City Pairs



ATFM Delay Situation on 10 City Pairs (>250 flights) in May 2004

6. Most Affected and Most Dense City Pairs

MOST AFFECTED CITY PAIRS (CFMU)

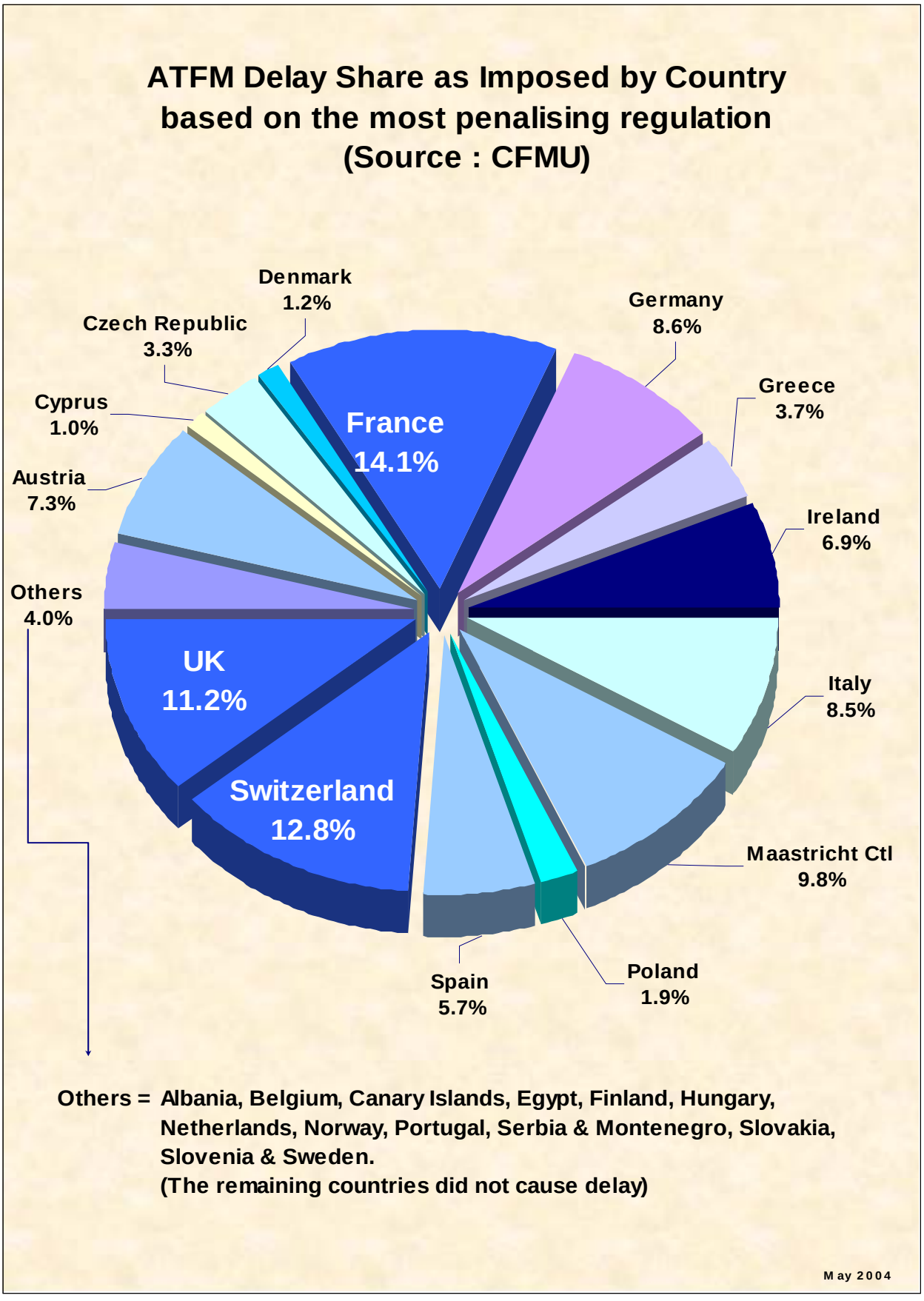
Rank	Departure	Destination	TTF	TRF	TDF	PDF	TDM	ADD	ADM
1	Amsterdam	Zurich	314	197	143	45.54	2,767	19.35	**8.81**
2	Brussels	Vienna	264	176	127	48.11	2,153	16.95	**8.16**
3	Vienna	London/Heathrow	276	177	111	40.22	2,226	20.05	**8.07**
4	Dublin	Paris/Charles-De-Gaulle	281	149	102	36.30	2,183	21.40	**7.77**
5	London/Heathrow	Vienna	279	179	123	44.09	2,166	17.61	**7.76**
6	Berlin-Tegel	Paris/Charles-De-Gaulle	255	175	114	44.71	1,926	16.89	**7.55**
7	Vienna	Zurich	402	247	150	37.31	2,935	19.57	**7.30**
8	Paris/Charles-De-Gaulle	Zurich	367	229	134	36.51	2,419	18.05	**6.59**
9	Amsterdam	Vienna	254	141	102	40.16	1,663	16.30	**6.55**
10	London/Gatwick	Dublin	309	132	89	28.80	2,017	22.66	**6.53**
11	London/Heathrow	Zurich	394	242	141	35.79	2,549	18.08	**6.47**
12	Paris/Charles-De-Gaulle	Dublin	278	131	81	29.14	1,745	21.54	**6.28**
13	Prague/Ruzyne	Paris/Charles-De-Gaulle	317	188	114	35.96	1,896	16.63	**5.98**
14	Vienna	Frankfurt	358	173	126	35.20	2,087	16.56	**5.83**
15	Dublin	London/Heathrow	588	308	185	31.46	3,425	18.51	**5.82**
16	Berlin-Tegel	Zurich	313	160	85	27.16	1,786	21.01	**5.71**
17	Munich	London/Heathrow	339	189	98	28.91	1,929	19.68	**5.69**
18	Munich	Zurich	345	163	87	25.22	1,957	22.49	**5.67**
19	Dusseldorf	Zurich	360	228	128	35.56	2,033	15.88	**5.65**
20	Milan/Malpensa	Paris/Charles-De-Gaulle	349	200	101	28.94	1,906	18.87	**5.46**
Totals			**6,642**	**3,784**	**2,341**	**35.25**	**43,768**	**18.70**	**6.59**

MOST DENSE CITY PAIRS (CFMU)

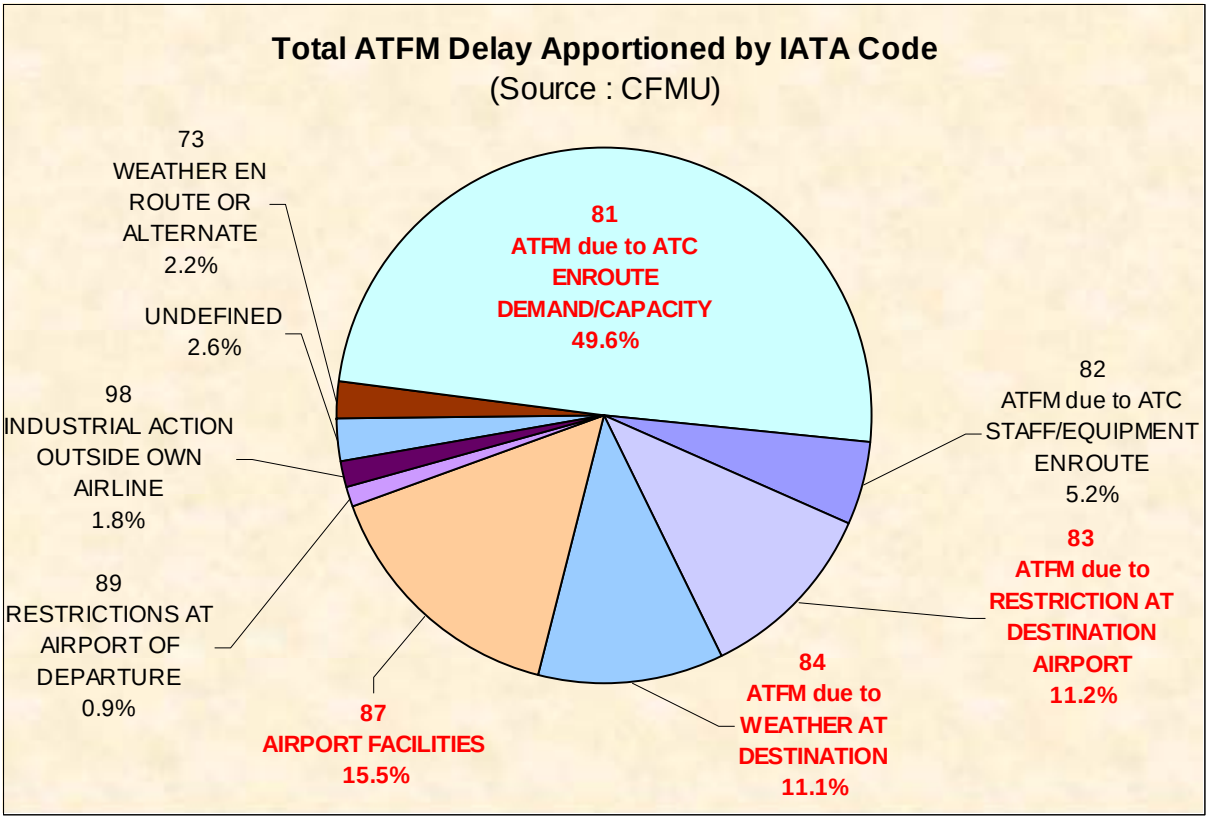
Rank	Departure	Destination	TTF	TRF	TDF	PDF	TDM	ADD	ADM	ADM-rank
1	Barcelona	Madrid/Barajas	**1,982**	548	190	9.59	2,658	13.99	1.34	12
2	Madrid/Barajas	Barcelona	**1,957**	689	319	16.30	5,454	17.10	2.79	4
3	Rome/Fiumicino	Milan/Linate	**1,279**	32	15	1.17	199	13.27	0.16	23
4	Milan/Linate	Rome/Fiumicino	**1,272**	328	189	14.86	3,898	20.62	3.06	2
5	Barcelona	Palma De Mallorca	**894**	24	8	0.89	119	14.88	0.13	25
6	London/Heathrow	Paris/Charles-De-Gaulle	**831**	162	78	9.39	1,652	21.18	1.99	7
7	Paris/Charles-De-Gaulle	London/Heathrow	**830**	238	119	14.34	2,213	18.60	2.67	6
8	Toulouse/Blagnac	Paris/Orly	**827**	15	4	0.48	57	14.25	0.07	28
9	Paris/Orly	Toulouse/Blagnac	**824**	34	13	1.58	145	11.15	0.18	22
10	Palma De Mallorca	Barcelona	**819**	253	111	13.55	2,394	21.57	2.92	3
11	Makedonia	Athens	**780**	0	0	0.00	0	0.00	0.00	30
12	Athens	Makedonia	**776**	157	104	13.40	2,471	23.76	3.18	1
13	Madrid/Barajas	Palma De Mallorca	**749**	38	22	2.94	346	15.73	0.46	18
14	Paris/Orly	Nice	**742**	106	24	3.23	219	9.13	0.30	21
15	Nice	Paris/Orly	**741**	46	20	2.70	450	22.50	0.61	16
16	Amsterdam	London/Heathrow	**735**	236	109	14.83	1,967	18.05	2.68	5
17	London/Heathrow	Amsterdam	**735**	44	23	3.13	333	14.48	0.45	19
18	Palma De Mallorca	Madrid/Barajas	**726**	134	60	8.26	743	12.38	1.02	14
19	Dusseldorf	Munich	**707**	137	74	10.47	1,109	14.99	1.57	9
20	Munich	Dusseldorf	**699**	130	61	8.73	971	15.92	1.39	11
21	Berlin-Tegel	Munich	**696**	88	39	5.60	626	16.05	0.90	15
22	Munich	Berlin-Tegel	**688**	39	17	2.47	246	14.47	0.36	20
23	Helsinki-Vantaa	Stockholm/Arlanda	**682**	10	7	1.03	98	14.00	0.14	24
24	Hamburg	Munich	**680**	164	63	9.26	817	12.97	1.20	13
25	Munich	Hamburg	**668**	149	62	9.28	938	15.13	1.40	10

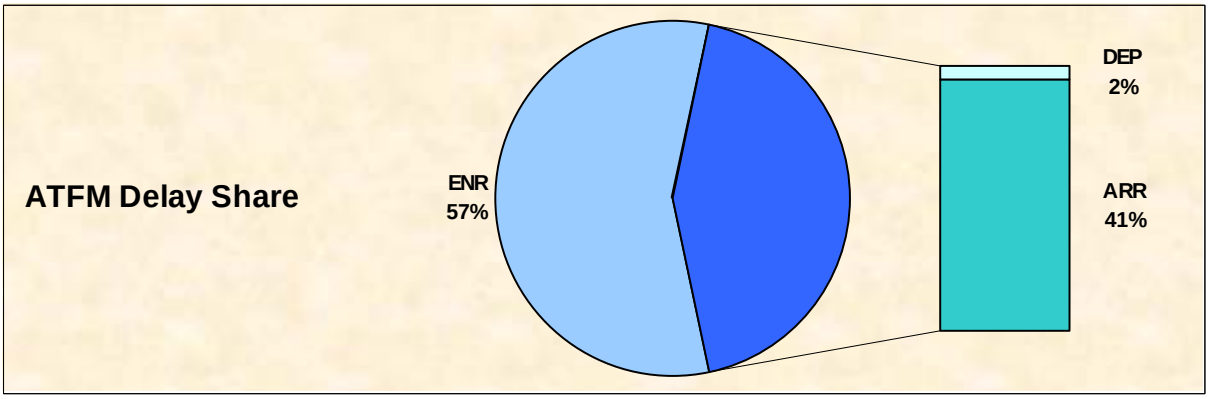
Source: CFMU ATFM Data

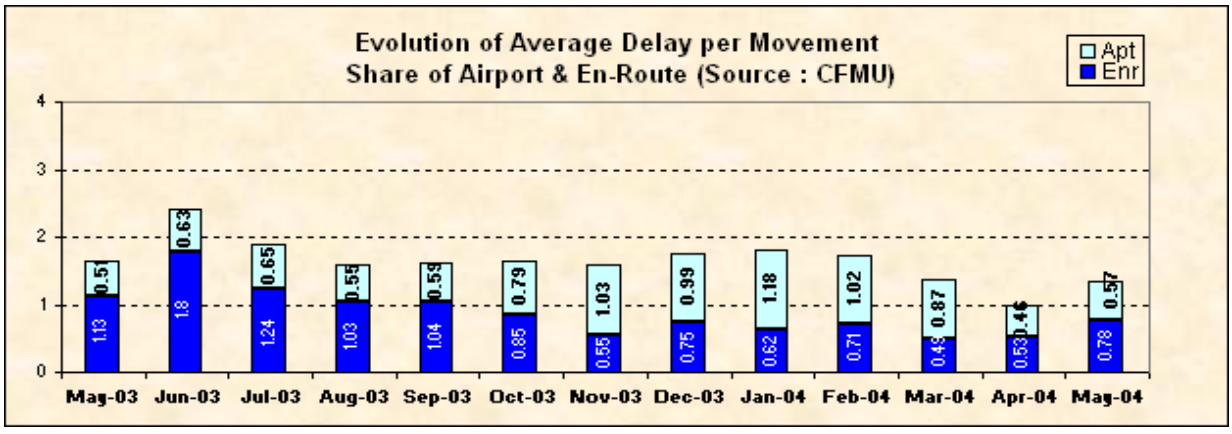
7. ATFM Delay Share by Country



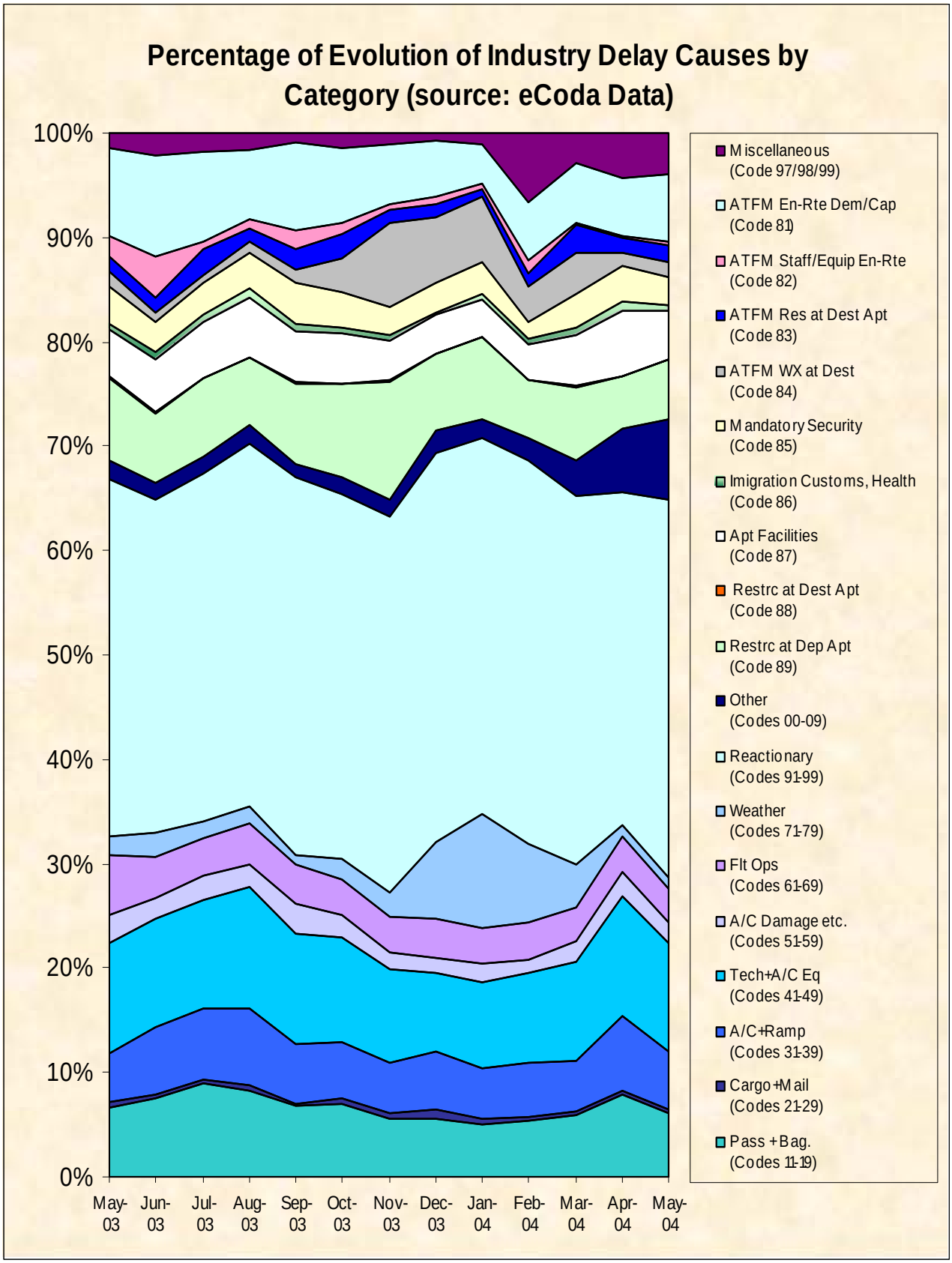
8. Reasons for ATFM Delay



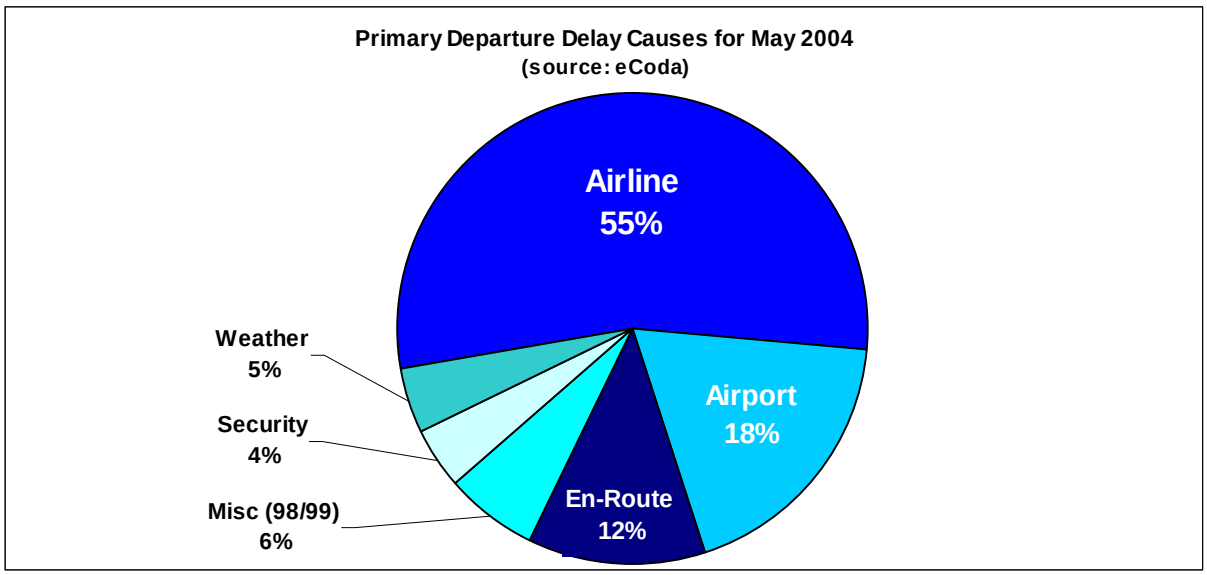


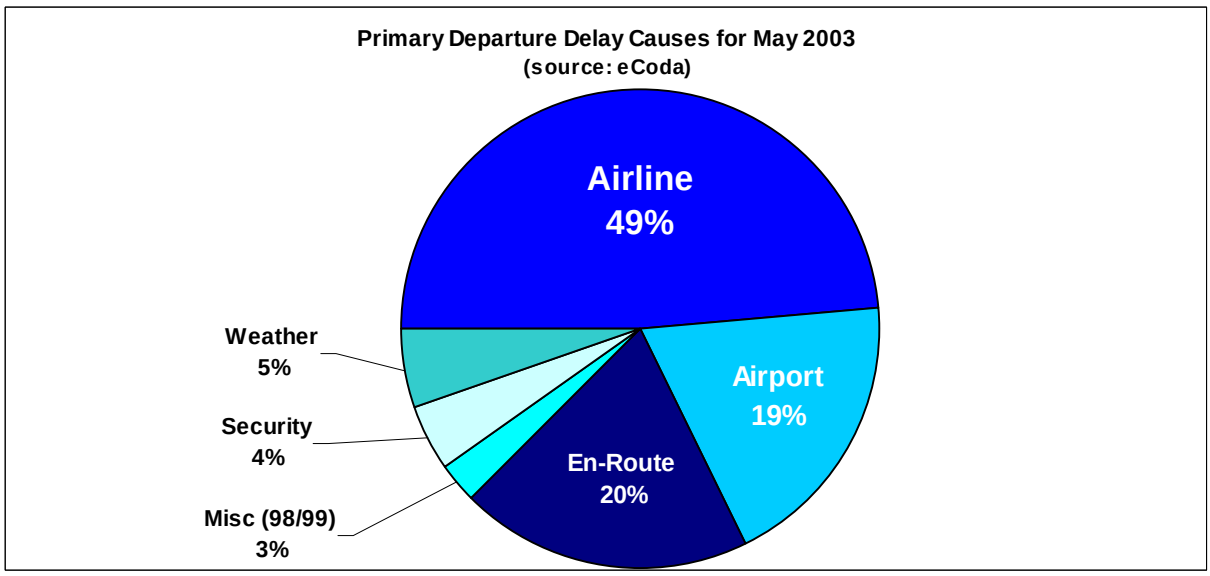


9. Consolidated Evolution of Industry Delay Causes by Category



10. Primary Departure Delay Causes





eCODA Cause	Description	IATA Code
Airline	Passengers + Baggage	11-19
	Cargo + Mail	21-29
	Aircraft + Ramp Handling	31-39
	Technical + Aircraft Equipment	41-49
	Aircraft Damage and Ops Computer Failure	51-59
	Flight Operations	61-69
	Other Airline-Related Causes	Others
Airport	ATFM due to Restriction at Destination Airport	83
	Immigration, Customs, Health	86
	Airport Facilities	87
	Restriction at Destination Airport	88
	Restriction at Airport of Departure, with or without ATFM	89
En-Route	ATFM due to ATC En-Rte Demand Capacity	81
	ATFM due to ATC Staff/Equipment En-Route	82
Misc	Miscellaneous	98-99
Security	Mandatory Security	85
Weather	Weather	71-79
	ATFM due to Weather at Destination	84

Definition of CODA Flow Regions (Annex 1)

Glossary of Terms and Abbreviations (Annex 2)

Delay Parameter Abbreviations

TTF	Total Flights
TRF	Total Regulated Flights
TDF	Total Delayed Flights
PRF	Percentage of Regulated Flights
PDF	Percentage of Delayed Flights
TDM	Total Delay in Minutes
ADM	Average Delay per Movement
ADR	Average Delay per Regulated Flight
ADD	Average Delay per Delayed Flight

Glossary of Terms

AEA	Association of European Airlines
ATFM	Air Traffic Flow Management
ATS	Air Traffic Services
CFMU	Central Flow Management Unit
CODA	Central Office for Delay Analysis
EATMP	European Air Traffic Management Program
ECAC	European Civil Aviation Conference
EDAS	European Delay Analysis System
ERA	European Regions Airline Association
EURACA	European Air Carrier Assembly
IACA	International Air Carrier Association
IATA	International Air Transport Association

Standard IATA Delay Codes (Annex 3)

Others

00-05 AIRLINE INTERNAL CODES
06 (OA) NO GATE/STAND AVAILABILITY DUE TO OWN AIRLINE ACTIVITY
09 (SG) SCHEDULED GROUND TIME LESS THAN DECLARED MINIMUM GROUND TIME

Passenger and Baggage

11 (PD) LATE CHECK-IN, acceptance after deadline
12 (PL) LATE CHECK-IN, congestions in check-in area
13 (PE) CHECK-IN ERROR, passenger and baggage
14 (PO) OVERSALES, booking errors
15 (PH) BOARDING, discrepancies and paging, missing checked-in passenger
16 (PS) COMMERCIAL PUBLICITY/PASSENGER CONVENIENCE, VIP, press, ground meals and missing personal items
17 (PC) CATERING ORDER, late or incorrect order given to supplier
18 (PB) BAGGAGE PROCESSING, sorting etc.

Cargo and Mail

21 (CD) DOCUMENTATION, errors etc.
22 (CP) LATE POSITIONING
23 (CC) LATE ACCEPTANCE
24 (CI) INADEQUATE PACKING
25 (CO) OVERSALES, booking errors
26 (CU) LATE PREPARATION IN WAREHOUSE
27 (CE) DOCUMENTATION, PACKING etc *(Mail Only)*
28 (CL) LATE POSITIONING *(Mail Only)*
29 (CA) LATE ACCEPTANCE *(Mail Only)*

Aircraft and Ramp Handling

31 (GD) AIRCRAFT DOCUMENTATION LATE/INACCURATE, weight and balance, general declaration, pax manifest, etc.
32 (GL) LOADING/UNLOADING, bulky, special load, cabin load, lack of loading staff
33 (GE) LOADING EQUIPMENT, lack of or breakdown, e.g. container pallet loader, lack of staff
34 (GS) SERVICING EQUIPMENT, lack of or breakdown, lack of staff, e.g. steps
35 (GC) AIRCRAFT CLEANING
36 (GF) FUELLING/DEFUELLING, fuel supplier
37 (GB) CATERING, late delivery or loading
38 (GU) ULD, lack of or serviceability
39 (GT) TECHNICAL EQUIPMENT, lack of or breakdown, lack of staff, e.g. pushback

Technical and Aircraft Equipment

41 (TD) AIRCRAFT DEFECTS.
42 (TM) SCHEDULED MAINTENANCE, late release.
43 (TN) NON-SCHEDULED MAINTENANCE, special checks and/or additional works beyond normal maintenance schedule.
44 (TS) SPARES AND MAINTENANCE EQUIPMENT, lack of or breakdown.
45 (TA) AOG SPARES, to be carried to another station.
46 (TC) AIRCRAFT CHANGE, for technical reasons.
47 (TL) STAND-BY AIRCRAFT, lack of planned stand-by aircraft for technical reasons.
48 (TV) SCHEDULED CABIN CONFIGURATION/VERSION ADJUSTMENTS.

Damage to Aircraft & EDP/Automated Equipment Failure

51 (DF) DAMAGE DURING FLIGHT OPERATIONS, bird or lightning strike, turbulence, heavy or overweight landing, collision during taxiing
52 (DG) DAMAGE DURING GROUND OPERATIONS, collisions (other than during taxiing), loading/off-loading damage, contamination, towing, extreme weather conditions
55 (ED) DEPARTURE CONTROL
56 (EC) CARGO PREPARATION/DOCUMENTATION
57 (EF) FLIGHT PLANS

Flight Operations and Crewing

61 (FP) FLIGHT PLAN, late completion or change of, flight documentation
62 (FF) OPERATIONAL REQUIREMENTS, fuel, load alteration
63 (FT) LATE CREW BOARDING OR DEPARTURE PROCEDURES, other than connection and standby (flight deck or entire crew)
64 (FS) FLIGHT DECK CREW SHORTAGE, sickness, awaiting standby, flight time limitations, crew meals, valid visa, health documents, etc.
65 (FR) FLIGHT DECK CREW SPECIAL REQUEST, not within operational requirements
66 (FL) LATE CABIN CREW BOARDING OR DEPARTURE PROCEDURES, other than connection and standby
67 (FC) CABIN CREW SHORTAGE, sickness, awaiting standby, flight time limitations, crew meals, valid visa, health documents, etc.
68 (FA) CABIN CREW ERROR OR SPECIAL REQUEST, not within operational requirements
69 (FB) CAPTAIN REQUEST FOR SECURITY CHECK, extraordinary

Weather

71 (WO) DEPARTURE STATION
72 (WT) DESTINATION STATION
73 (WR) EN ROUTE OR ALTERNATE
75 (WI) DE-ICING OF AIRCRAFT, removal of ice and/or snow, frost prevention excluding unserviceability of equipment
76 (WS) REMOVAL OF SNOW, ICE, WATER AND SAND FROM AIRPORT
77 (WG) GROUND HANDLING IMPAIRED BY ADVERSE WEATHER CONDITIONS

ATFM + AIRPORT + GOVERNMENTAL AUTHORITIES

AIR TRAFFIC FLOW MANAGEMENT RESTRICTIONS

81 (AT) ATFM due to ATC EN-ROUTE DEMAND/CAPACITY, standard demand/capacity problems
82 (AX) ATFM due to ATC STAFF/EQUIPMENT EN-ROUTE, reduced capacity caused by industrial action or staff shortage, equipment failure, military exercise or extraordinary demand due to capacity reduction in neighbouring area
83 (AE) ATFM due to RESTRICTION AT DESTINATION AIRPORT, airport and/or runway closed due to obstruction, industrial action, staff shortage, political unrest, noise abatement, night curfew, special flights
84 (AW) ATFM due to WEATHER AT DESTINATION

AIRPORT AND GOVERNMENTAL AUTHORITIES

85 (AS) MANDATORY SECURITY
86 (AG) IMMIGRATION, CUSTOMS, HEALTH
87 (AF) AIRPORT FACILITIES, parking stands, ramp congestion, lighting, buildings, gate limitations, etc.
88 (AD) RESTRICTIONS AT AIRPORT OF DESTINATION, airport and/or runway closed due to obstruction, industrial action, staff shortage, political unrest, noise abatement, night curfew, special flights
89 (AM) RESTRICTIONS AT AIRPORT OF DEPARTURE WITH OR WITHOUT ATFM RESTRICTIONS, including Air Traffic Services, start-up and pushback, airport and/or runway closed due to obstruction or weather[2], industrial action, staff shortage, political unrest, noise abatement, night curfew, special flights

Reactionary

91 (RL) LOAD CONNECTION, awaiting load from another flight
92 (RT) THROUGH CHECK-IN ERROR, passenger and baggage
93 (RA) AIRCRAFT ROTATION, late arrival of aircraft from another flight or previous sector
94 (RS) CABIN CREW ROTATION, awaiting cabin crew from another flight
95 (RC) CREW ROTATION, awaiting crew from another flight (flight deck or entire crew)
96 (RO) OPERATIONS CONTROL, re-routing, diversion, consolidation, aircraft change for reasons other than technical

Miscellaneous

97 (MI) INDUSTRIAL ACTION WITH OWN AIRLINE
98 (MO) INDUSTRIAL ACTION OUTSIDE OWN AIRLINE, excluding ATS
99 (MX) OTHER REASON, not matching any code above

SOURCE: Provisional list composed by IATA

[2] Restriction due to weather in case of ATFM regulation only, else refer to code 71 (WO)

Correlation between IATA Delay Codes and the CFMU Reasons for Regulation (Annex 4)

CORRELATION BETWEEN IATA DELAY CODES AND THE CFMU REASONS FOR REGULATION

CFMU				IATA	
REASON FOR REGULATION	CODE	REGULATION LOCATION	EXAMPLE	CODE	DELAY CAUSE
ATC Capacity	C	D	*Demand exceeds the capacity*	89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		E		81	ATFM due to ATC ENROUTE DEMAND/CAPACITY
		A		83	ATFM due to RESTRICTION AT DESTINATION AIRPORT
ATC Ind Action	I	D	*Controllers' strike*	89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		E		82	ATFM due to ATC STAFF/EQUIPMENT ENROUTE
		A		83	ATFM due to RESTRICTION AT DESTINATION AIRPORT
ATC Routeings	R	E	*Phasing in of new procedures*	81	ATFM due to ATC ENROUTE DEMAND/CAPACITY
ATC Staffing	S	D	*Illness; traffic delays on the highway*	89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		E		82	ATFM due to ATC STAFF/EQUIPMENT ENROUTE
		A		83	ATFM due to RESTRICTION AT DESTINATION AIRPORT
ATC Equipment	T	D	*Radar failure; RTF failure*	89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		E		82	ATFM due to ATC STAFF/EQUIPMENT ENROUTE
		A		83	ATFM due to RESTRICTION AT DESTINATION AIRPORT
Accident/Incident	A	D	*RWY23 closed due accident*	89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		A		83	ATFM due to RESTRICTION AT DESTINATION AIRPORT
Aerodrome Capacity	G	D	*Lack of parking; taxiway closure; areas closed for maintenance; demand exceeds the declared airport capacity*	87	AIRPORT FACILITIES
		A		87	AIRPORT FACILITIES
De-Icing	D	D	*De-icing*	89	RESTRICTIONS AT AIRPORT OF DEPARTURE
Equipment non-ATC	E	D	*Runway or taxiway lighting failure*	87	AIRPORT FACILITIES
		A		87	AIRPORT FACILITIES
Ind Action non-ATC	N	D	*Firemen's strike*	98	INDUSTRIAL ACTION OUTSIDE OWN AIRLINE
		A		98	INDUSTRIAL ACTION OUTSIDE OWN AIRLINE
Military Activity	M	D	*Brilliant Invader; ODAX*	89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		E		82	ATFM due to ATC STAFF/EQUIPMENT ENROUTE
		A		83	ATFM due to RESTRICTION AT DESTINATION AIRPORT
Special Event	P	D	*European football cup; Heads of Government meetings*	89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		A		83	ATFM due to RESTRICTION AT DESTINATION AIRPORT
Weather	W	D	*Thunderstorm; low visibility; X winds*	89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		E		73	WEATHER EN ROUTE OR ALTERNATE
		A		84	ATFM due to WEATHER AT DESTINATION
Other	O	D	*Security alert*	89	RESTRICTIONS AT AIRPORT OF DEPARTURE
		E		81	ATFM due to ATC ENROUTE DEMAND/CAPACITY
		A		83	ATFM due to RESTRICTION AT DESTINATION AIRPORT