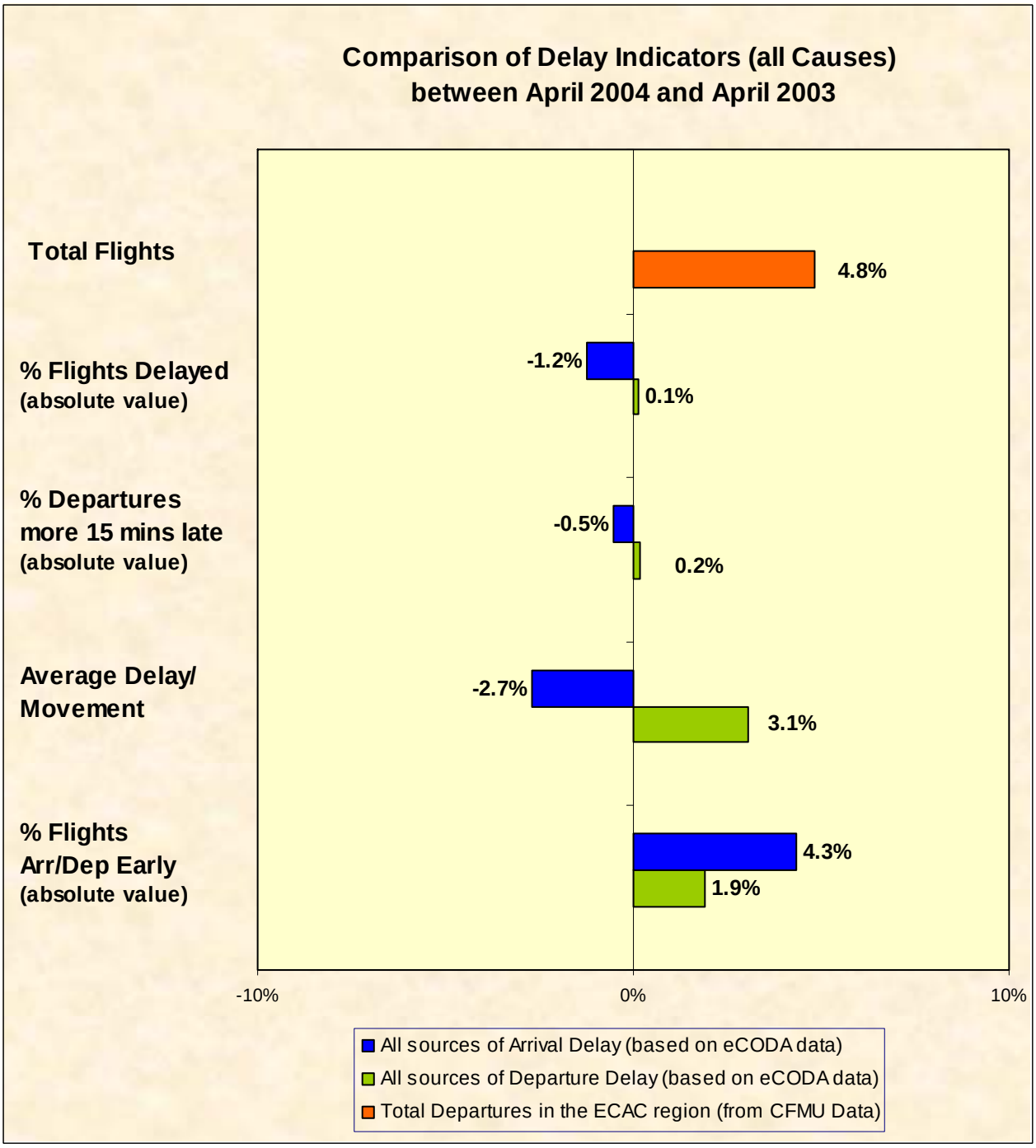
# Delays to Air Transport in Europe
# April 2004



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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

Departures in the ECAC region continued to increase in April, with a significant rise over 2003. The Average Delay per Movement, due to all causes of delay, for departure traffic, increased by three percent to seven and a half minutes. By comparison, arrivals had a decrease of almost three percent, to just eight minutes. ATFM delay fell significantly by twenty four percent, with the Average Delay per Movement falling by twenty seven percent to just one minute.

For the first four months of the year, traffic increased by three percent, with delayed flights due to all causes, staying the same for departures and falling by three percent for arrivals. The number of flights delayed by more than fifteen minutes rose by three and a half percent for departures and fell by half a percent for arrivals. On the plus side, compared with the same period of last year, seven percent of the flights left early and four percent landed early. Turning to delays, the Average Delay per Movement was just under ten minutes for departures and just over ten minutes for arrivals. Total ATFM delay fell by five percent, with the Average Delay per Movement falling by almost eight percent to one and a half minutes.

## TRAFFIC SITUATION FOR APRIL 2004[1]

When compared with April 2003, traffic throughout the ECAC region increased by five percent and although the total number of flights was slightly less than last month; with over seven hundred thousand flights, it was the highest April figure since 1996. Domestic traffic increased by less than one percent whereas International traffic rose by eight percent. Over ninety percent of the busier countries had an increase in International traffic, with the largest real increase in the United Kingdom, followed by France, Germany, Turkey and Spain and the largest real decrease in Cyprus. Turkey and the United Kingdom had the largest rises in domestic traffic while France and Germany had significant real decreases.

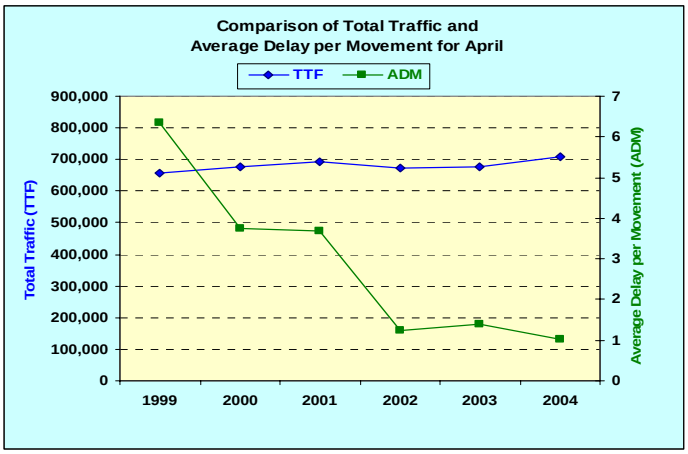
Among the busier airports (those with at least two thousand five hundred flights per month), more than eighty percent saw an increase in traffic, with twenty four percent having a double figure increase. The largest real increases were at Istanbul, London/Stansted, Paris/Orly, Athens and Vienna. At the other end of the scale, Nice, Cologne and Berlin had the largest decreases.

The busiest city pair in April was Madrid-Barcelona with around one thousand and eight hundred flights in each direction, but was nevertheless down six percent on last year. Milan/Linate-Rome was the only other pair with more than one thousand flights in each direction. Almost sixty percent of the busier pairs had an increase in the number of flights and thirty two percent of them had a rise of more than ten percent. Milan/Linate-Rome had the largest real increase and was followed by Stockholm-Gotenborg and Nice-Paris/Orly. At the other end of the scale, Cologne-Berlin and Barcelona-Madrid had the largest 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 APRIL 2004

Delays due solely to ATFM measures showed a significant decrease and were down twenty four percent on April last year. The Average Delay per Movement also fell by twenty seven percent to just one minute. ATC Capacity was responsible for half of all the ATFM delay and was followed by Airport Capacity (seventeen percent) and weather (fifteen percent).




Delayed flights decreased by eleven percent, with the percentage of flights delayed falling by one percentage point to just over six percent. Flights delayed by more than fifteen minutes decreased by twenty one percent, with flights delayed by more than one hour falling by seventy two percent.

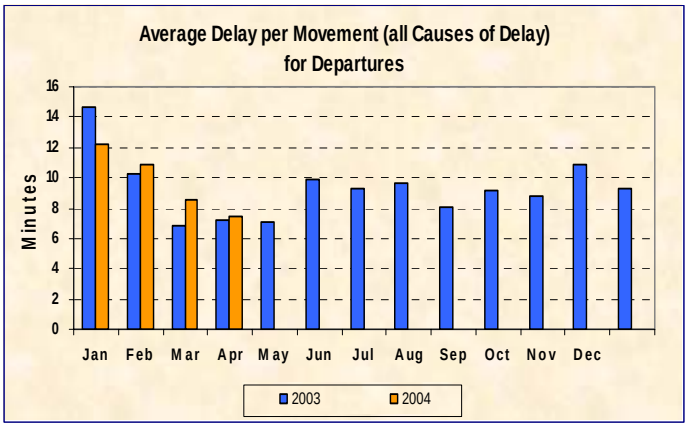
Not all ATFM delay was due to ATC: forty eight percent of the total ATFM delay in the ECAC region was caused by regulations put in place to protect airports. Compared with April 2003, the share of the delay due to these restrictions increased by four percentage points and the actual amount of the delay was down eighteen percent. The airports of Zurich, London, Barcelona and Rome were the most affected by airport-related regulations. Almost forty percent of the airport-related ATC delay was due to Airport Capacity, followed by Weather (thirty one percent) and ATC Capacity (fifteen percent).

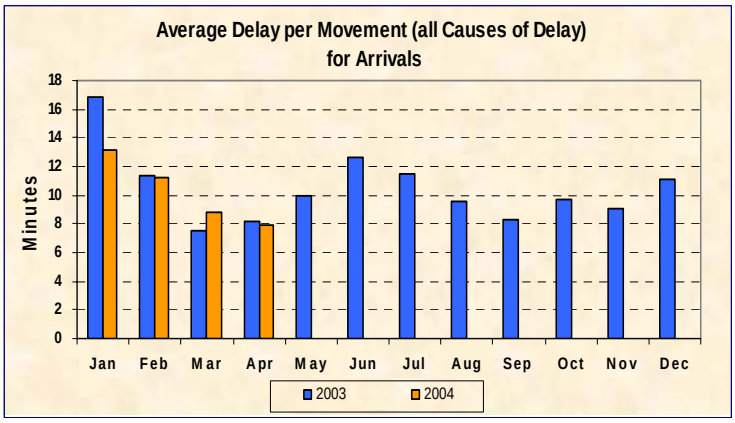
Based on the locations of the most penalising regulations, traffic (including overflights) using the airspace of the United Kingdom, Switzerland, France and Italy had the largest share of the ATFM delay. Between them, they accounted for almost sixty percent of the total ATFM delay in the ECAC region. Compared with April last year, Spain, Switzerland, Austria and Czech Republic had the largest increases, with Italy, France and Germany having the largest decreases.

When the traffic handled is taken into account (again including overflights), Switzerland, Italy the United Kingdom and Cyprus were the most penalising countries, but Switzerland was the only country with an Average Delay per Movement exceeding one minute. Compared with April last year, no country had an increase or a decrease of one minute or more; the Czech Republic had the largest rise and Italy the largest fall.

## eCODA DATA FOR APRIL 2004

The Average Delay per Movement for departure traffic, for all causes of delay, continued the seasonal downward trend since the beginning of 2004; however, with almost seven and a half minutes, this was an increase of three percent on April last year. Thirty five percent of flights were delayed on departure, with thirteen percent delayed by more than fifteen minutes. On the other hand, fourteen percent of flights departed before their scheduled time.




The Average Delay per Movement for arrival traffic, for all causes of delay, was eight minutes, also less than for the first three months of the year and a decrease of almost three percent on April 2003. Thirty four percent of flights were delayed on arrival, with fourteen percent delayed by more than fifteen minutes. On the other hand, thirty seven percent of flights landed before their scheduled time.

Among the busier airports, only four of them had an Average Delay per Movement of more than ten minutes, with Paris/Orly having the largest (thirteen minutes), followed by Prague, Rome and Paris/Charles de Gaulle. Compared with April 2003, more than one third of the airports had an increase in average delay of more than one minute. Amsterdam had the largest rise (five minutes) and was followed by Paris/Orly and Bristol. These increases were balanced by a significant decrease at Verona (fourteen minutes), followed by Belfast, Malaga and Rome. In all, a quarter of the airports had a decrease in average delay of more than one minute. As in the previous months, all the airports had a proportion of their flights departing before their scheduled time, with Alicante having the largest (forty percent) and Copenhagen the lowest (five percent).

As for the busier airports as destinations, traffic arriving at Prague had the largest Average Delay per Movement, with twenty two minutes and was followed by Verona (seventeen minutes), Bologna (fourteen minutes) and Seville (eleven minutes). Compared with April last year, forty one percent of the busier airports had an increase in average delay of one minute or more, with the largest (up six minutes) at Verona, followed by Seville, Vienna and Bologna. At the other end of the scale, there was a large decrease at London/Stansted (down fourteen minutes), followed by Belfast and Rome. Thirty one and a half percent of the airports had a decrease in average delay of more than one minute. As with departures, all the airports had a proportion of their flights landing before their scheduled time, with Belfast having the largest (sixty two percent) and Verona the lowest (twenty percent).

The most affected city pair, due to all causes of delay, was New York-London/Heathrow (eighteen minutes), followed by Paris/Charles de Gaulle-Prague (seventeen and a half minutes), Paris/Orly-Montpellier (sixteen minutes) and Rome-Madrid (fifteen minutes). Compared with April 2003, more than half of the city pairs had an increase in Average Delay per Movement, with thirty six percent having a rise of more than one minute. The largest increase was between New York-London/Heathrow (up fourteen minutes), followed by Barcelona-Ibiza, Paris/Orly-Montpellier and Santiago-Madrid. At the other end of the scale, forty six percent of the pairs had a decrease in average delay, with thirty two percent having a fall of one minute or more. The largest decrease was between Milan/Malpensa-Frankfurt (down nine minutes) followed by Aberdeen–London/Heathrow and Madrid-Brussels.

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, Miscellaneous, Aircraft & Ramp Handling, Airport Facilities, Passenger & Baggage and Technical & Aircraft Equipment categories. To offset these increases, there was a significant decrease in the ATFM Restrictions at Destination Airport, followed by Weather, Restrictions at Departure Airport and Flight Operations and Crewing (only those categories with more than one percent of the delay were taken into account).

Technical & Aircraft Equipment was the most penalising direct delay category, with eleven percent, followed by Passenger & Baggage, Aircraft & Ramp Handling and Airport Facilities. ATFM En-Route Demand Capacity, on the other hand, accounted for five and a half percent of the delay, a decrease of twenty two percent on April 2003.

## SUMMARY OF SIGNIFICANT EVENTS

- Weather conditions including fog, low cloud ceiling, wind and low visibility reducing arrival and departure rates for short periods.

- Technical problems including power failure at Southampton ACC; radar outages at Ljubljana, Brussels, Copenhagen and Villafranca ACCs; unreliable radar data at Zurich ACC; radar maintenance at Brindisi ACC; FPL processing failure in Italy reducing traffic level by sixty percent; ILS repair at Prague FIR; ATC evacuation at London/Heathrow.

- Staff issues at Copenhagen, Maastricht and London ACCs.

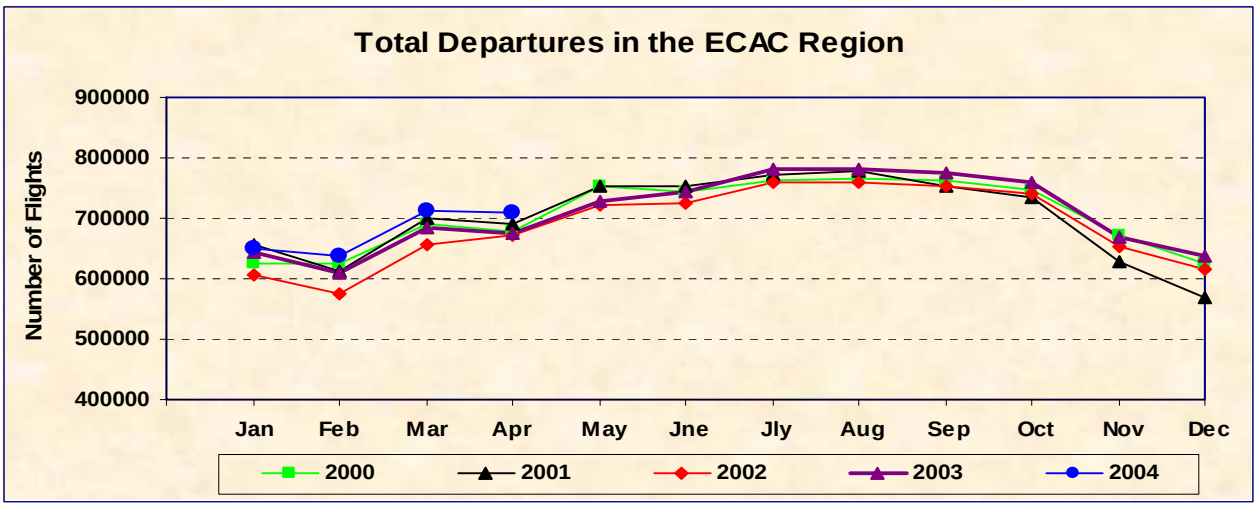
- Zero rate at Birmingham due to an aircraft accident; reduced capacity at Rome due to runway configuration.

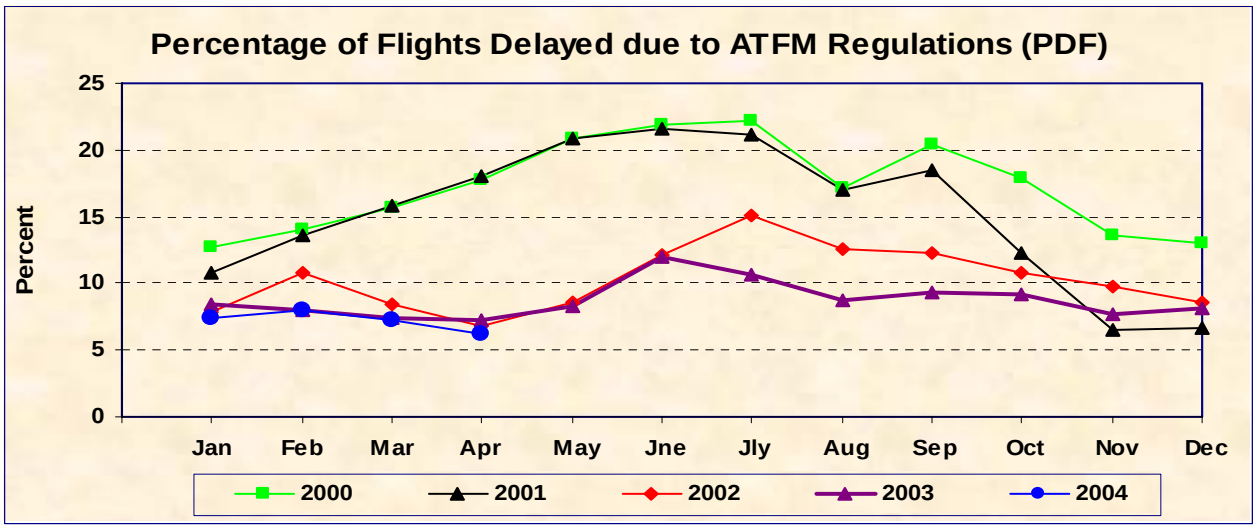
- Single runway operations at Gran Canaria and Milan/Malpensa due to work in progress.

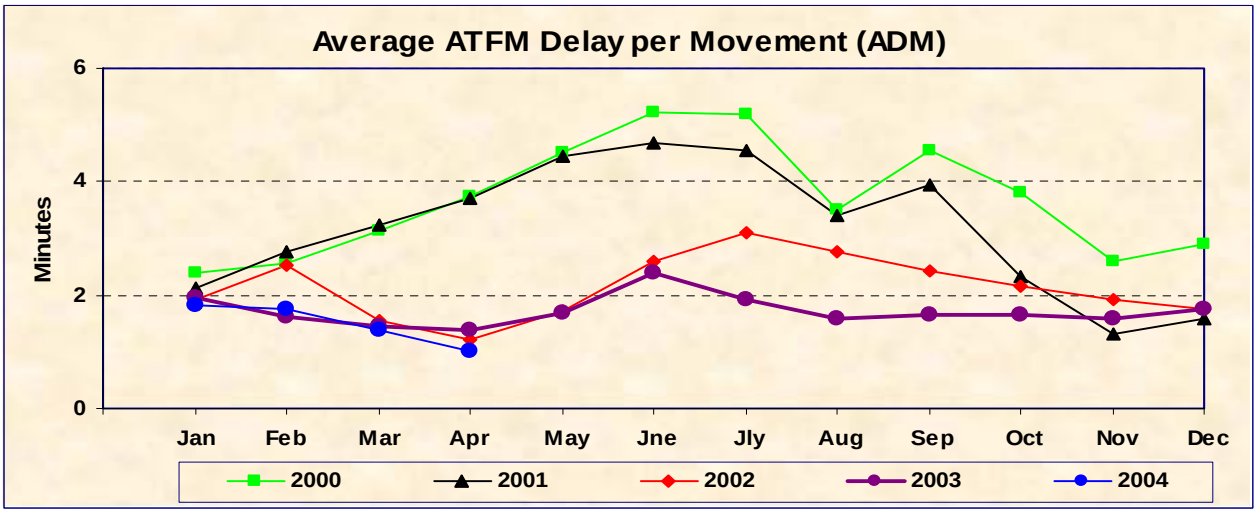
- Military activity at Bordeaux, Aix en Provence, Geneva, Munich and Belgrade ACCs.

- Other items included resectorisation within London ACC Clacton sectors; new equipment and procedures at Aix en Provence ACC reducing capacity; evaluation of operations in new ATC centre at Dublin; EU Accession Ceremony at Dublin; Motorcycle Grand Prix at Malaga, bomb removal at Bremen.

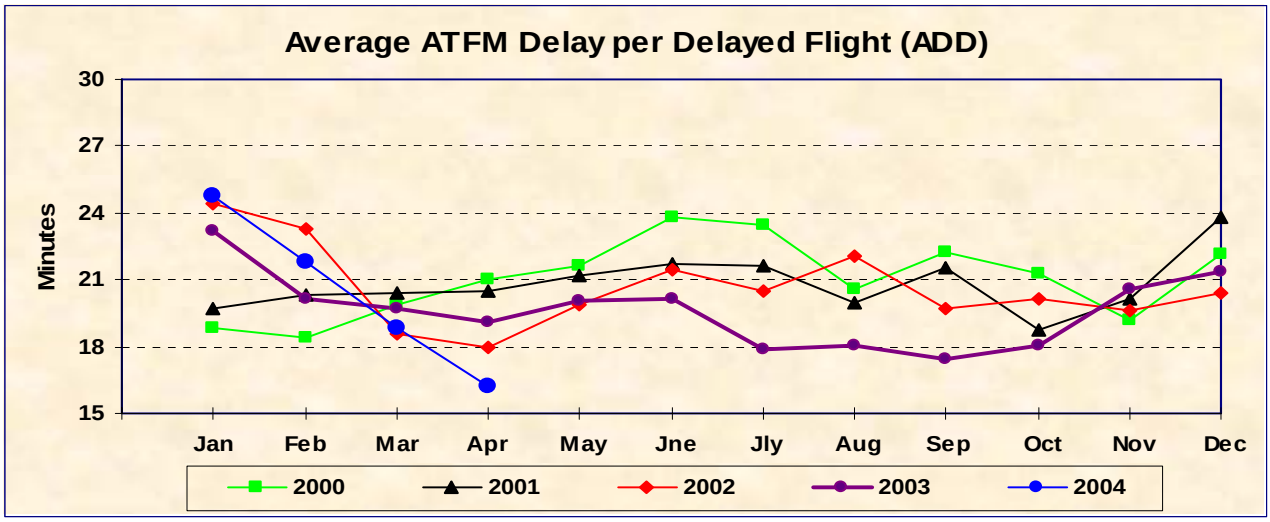
## 2. Year on Year Trends in Main Indicators

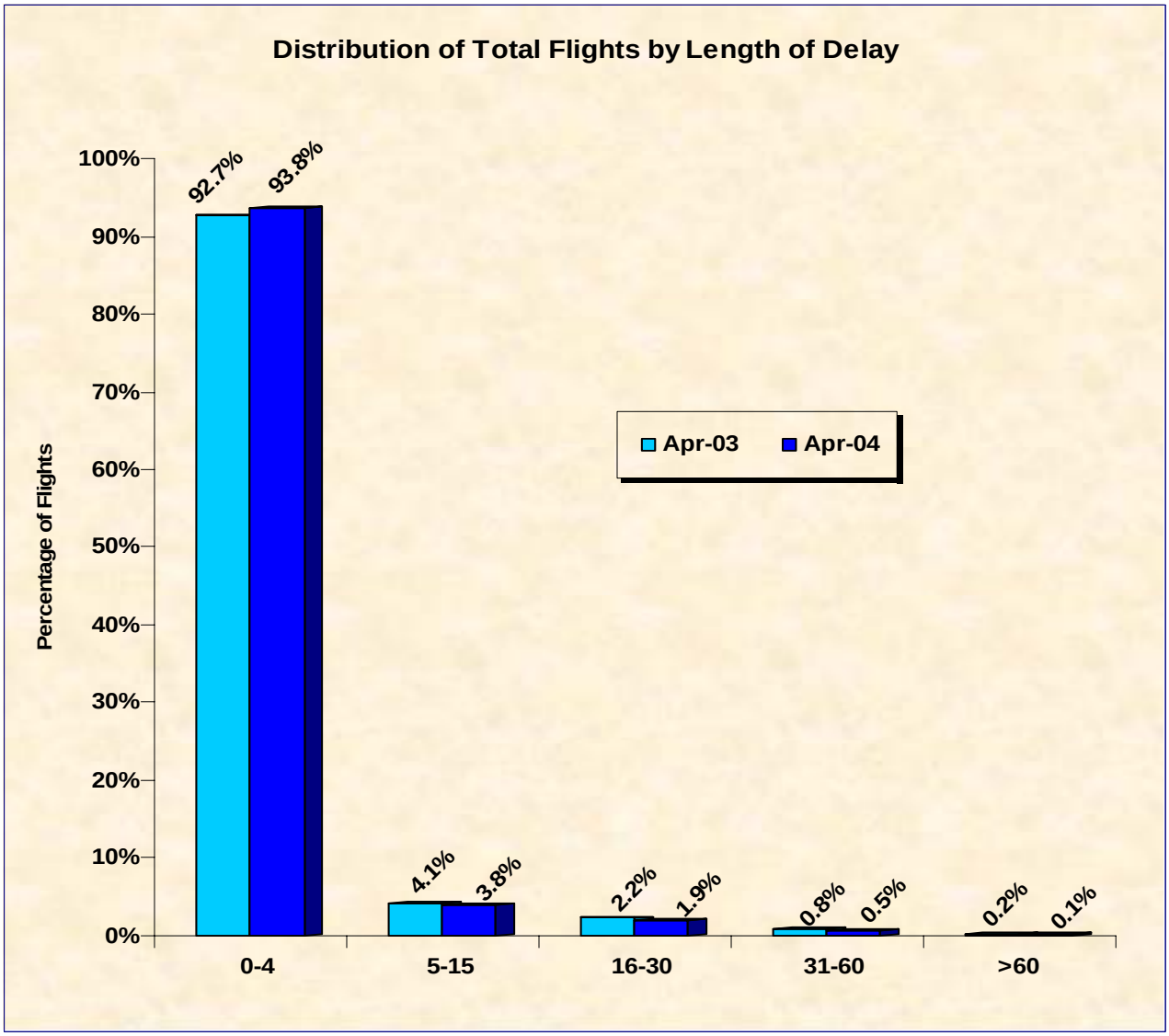


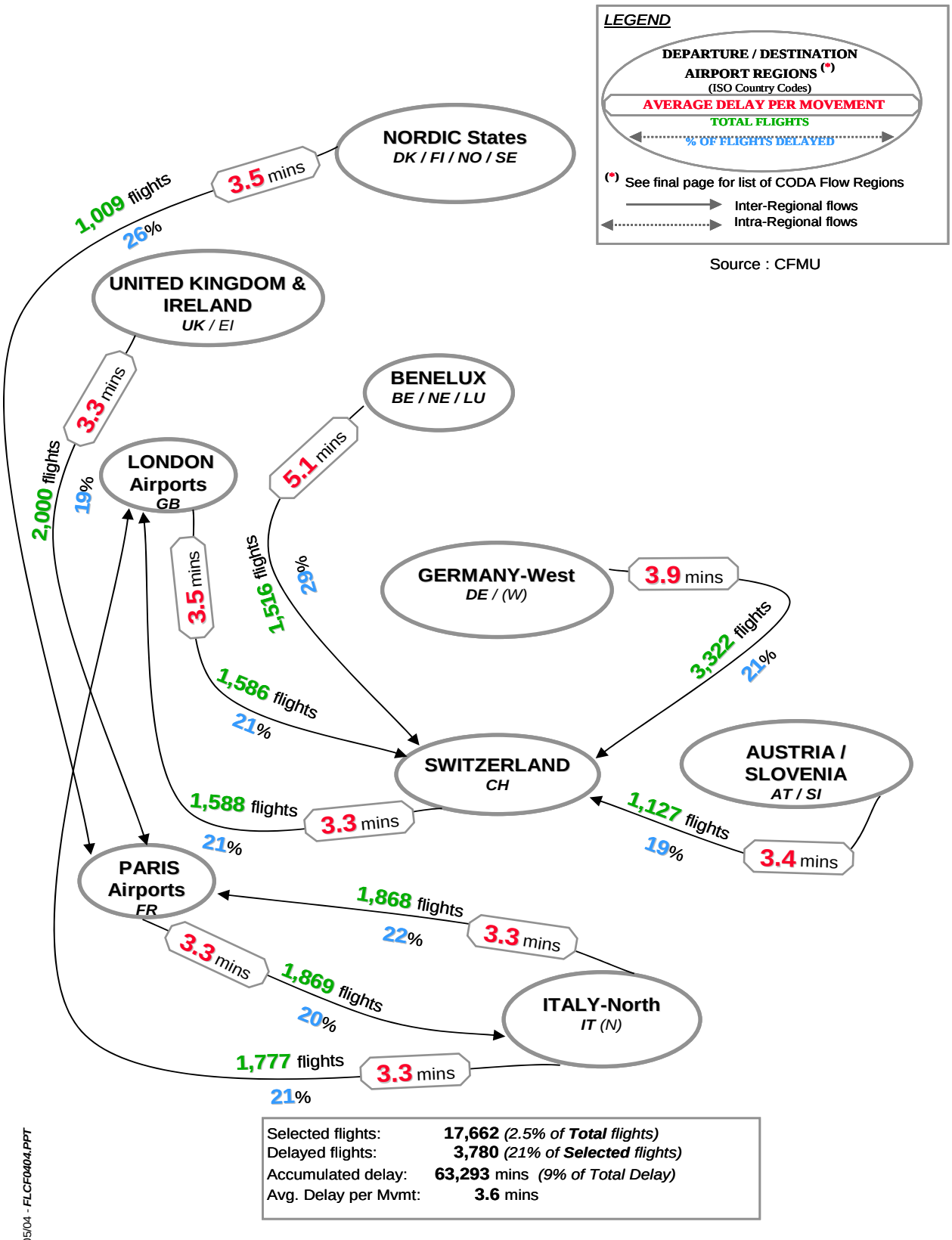

Source : CFMU ATFM Data




Source : CFMU ATFM Data

## 3. Most Affected Traffic Flows by CODA Regions




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

## 4. Most Affected and Most Dense Traffic Flows

### MOST AFFECTED TRAFFIC FLOWS (CFMU)

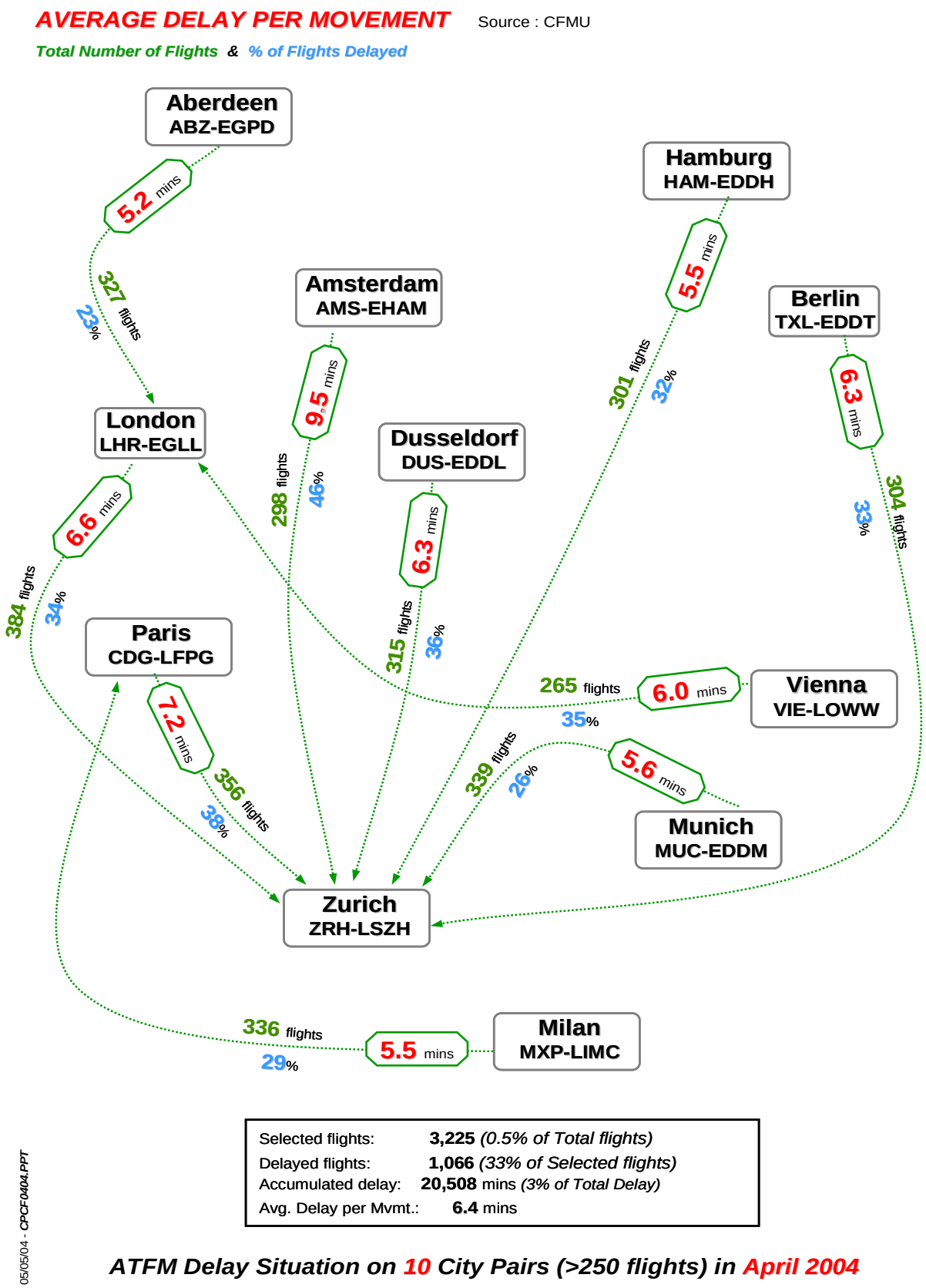
| Rank | Departure | Destination | TTF | TRF | TDF | PDF | TDM | ADD | ADM |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Benelux | Switzerland | 1,516 | 728 | 432 | 28.50 | 7,788 | 18.03 | **5.14** |
| 2 | Germany-West | Switzerland | 3,322 | 1,345 | 682 | 20.53 | 12,877 | 18.88 | **3.88** |
| 3 | London Airports | Switzerland | 1,586 | 555 | 329 | 20.74 | 5,592 | 17.00 | **3.53** |
| 4 | Nordic States | Paris Airports | 1,009 | 570 | 261 | 25.87 | 3,495 | 13.39 | **3.46** |
| 5 | Austria/Slovenia | Switzerland | 1,127 | 466 | 215 | 19.08 | 3,792 | 17.64 | **3.36** |
| 6 | Switzerland | London Airports | 1,588 | 613 | 336 | 21.16 | 5,267 | 15.68 | **3.32** |
| 7 | Paris Airports | Italy-North | 1,869 | 794 | 374 | 20.01 | 6,139 | 16.41 | **3.28** |
| 8 | Italy-North | Paris Airports | 1,868 | 974 | 411 | 22.00 | 6,083 | 14.80 | **3.26** |
| 9 | United Kingdom & Ireland | Paris Airports | 2,000 | 626 | 370 | 18.50 | 6,492 | 17.55 | **3.25** |
| 10 | Italy-North | London Airports | 1,777 | 693 | 370 | 20.82 | 5,768 | 15.59 | **3.25** |
| 11 | Benelux | France Southeast | 1,084 | 452 | 202 | 18.63 | 3,473 | 17.19 | **3.20** |
| 12 | Nordic States | London Airports | 2,118 | 768 | 380 | 17.94 | 6,159 | 16.21 | **2.91** |
| 13 | Germany-West | London Airports | 3,124 | 1,102 | 562 | 17.99 | 9,024 | 16.06 | **2.89** |
| 14 | London Airports | Italy-North | 1,781 | 713 | 322 | 18.08 | 5,128 | 15.93 | **2.88** |
| 15 | Italy-North | Other | 2,206 | 464 | 309 | 14.01 | 6,293 | 20.37 | **2.85** |
| 16 | Iberian Peninsula/Canaria | Italy-North | 1,157 | 298 | 183 | 15.82 | 3,146 | 17.19 | **2.72** |
| 17 | France Southeast | Benelux | 1,083 | 437 | 193 | 17.82 | 2,784 | 14.42 | **2.57** |
| 18 | Switzerland | Benelux | 1,511 | 611 | 272 | 18.00 | 3,805 | 13.99 | **2.52** |
| 19 | Benelux | Italy-North | 1,775 | 734 | 302 | 17.01 | 4,403 | 14.58 | **2.48** |
| 20 | Italy-North | Benelux | 1,811 | 658 | 310 | 17.12 | 4,442 | 14.33 | **2.45** |
| **Totals** | | | **35,312** | **13,601** | **6,815** | **19.30** | **111,950** | **16.43** | **3.17** |

### MOST DENSE TRAFFIC FLOWS (CFMU)

| Rank | Departure | Destination | TTF | TRF | TDF | PDF | TDM | ADD | ADM | ADM-Rank |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Nordic States | Nordic States | **60,659** | 1,074 | 435 | 0.72 | 7,713 | 17.73 | 0.13 | 29 |
| 2 | United Kingdom & Ireland | United Kingdom & Ireland | **29,628** | 1,878 | 884 | 2.98 | 13,875 | 15.70 | 0.47 | 19 |
| 3 | Iberian Peninsula/Canaria | Iberian Peninsula/Canaria | **26,618** | 1,471 | 580 | 2.18 | 8,339 | 14.38 | 0.31 | 23 |
| 4 | Germany-West | Germany-West | **21,063** | 1,870 | 884 | 4.20 | 13,694 | 15.49 | 0.65 | 18 |
| 5 | Greece/Cyprus | Greece/Cyprus | **10,679** | 32 | 19 | 0.18 | 315 | 16.58 | 0.03 | 33 |
| 6 | Other | Other | **10,495** | 67 | 38 | 0.36 | 689 | 18.13 | 0.07 | 30 |
| 7 | Italy-North | Italy-South/Malta | **9,431** | 1,138 | 644 | 6.83 | 14,128 | 21.94 | 1.50 | 4 |
| 8 | Italy-South/Malta | Italy-North | **9,416** | 833 | 501 | 5.32 | 12,304 | 24.56 | 1.31 | 8 |
| 9 | London Airports | United Kingdom & Ireland | **9,331** | 1,089 | 515 | 5.52 | 7,539 | 14.64 | 0.81 | 16 |
| 10 | United Kingdom & Ireland | London Airports | **9,328** | 2,104 | 1,102 | 11.81 | 19,900 | 18.06 | 2.13 | 2 |
| 11 | Other | London Airports | **8,153** | 173 | 92 | 1.13 | 1,409 | 15.32 | 0.17 | 28 |
| 12 | London Airports | Other | **8,132** | 1,254 | 694 | 8.53 | 10,050 | 14.48 | 1.24 | 9 |
| 13 | Italy-South/Malta | Italy-South/Malta | **7,934** | 696 | 407 | 5.13 | 11,562 | 28.41 | 1.46 | 5 |
| 14 | Other | Germany-West | **7,798** | 269 | 125 | 1.60 | 1,659 | 13.27 | 0.21 | 26 |
| 15 | Germany-West | Other | **7,789** | 1,166 | 649 | 8.33 | 10,183 | 15.69 | 1.31 | 7 |
| 16 | Balearics/Spain East | Iberian Peninsula/Canaria | **7,667** | 1,064 | 427 | 5.57 | 7,072 | 16.56 | 0.92 | 14 |
| 17 | Iberian Peninsula/Canaria | Balearics/Spain East | **7,611** | 1,305 | 630 | 8.28 | 10,595 | 16.82 | 1.39 | 6 |
| 18 | Turkey | Turkey | **7,475** | 0 | 0 | 0.00 | 0 | 0.00 | 0.00 | 35 |
| 19 | Paris Airports | Other | **7,055** | 1,048 | 511 | 7.24 | 7,317 | 14.32 | 1.04 | 11 |
| 20 | Other | Paris Airports | **7,022** | 399 | 118 | 1.68 | 1,525 | 12.92 | 0.22 | 25 |
| 21 | Germany-East/Czech Rep | Germany-West | **6,403** | 601 | 302 | 4.72 | 4,766 | 15.78 | 0.74 | 17 |
| 22 | Balearics/Spain East | Balearics/Spain East | **6,368** | 524 | 295 | 4.63 | 6,604 | 22.39 | 1.04 | 12 |
| 23 | Germany-West | Germany-East/Czech Rep | **6,361** | 456 | 170 | 2.67 | 2,697 | 15.86 | 0.42 | 20 |
| 24 | Central Europe | Central Europe | **5,501** | 29 | 14 | 0.25 | 306 | 21.86 | 0.06 | 31 |
| 25 | Benelux | Other | **5,219** | 836 | 388 | 7.43 | 5,631 | 14.51 | 1.08 | 10 |

**Source: CFMU ATFM Data**

## 5. Most Affected City Pairs



## 6. Most Affected and Most Dense City Pairs

### MOST AFFECTED CITY PAIRS (CFMU)

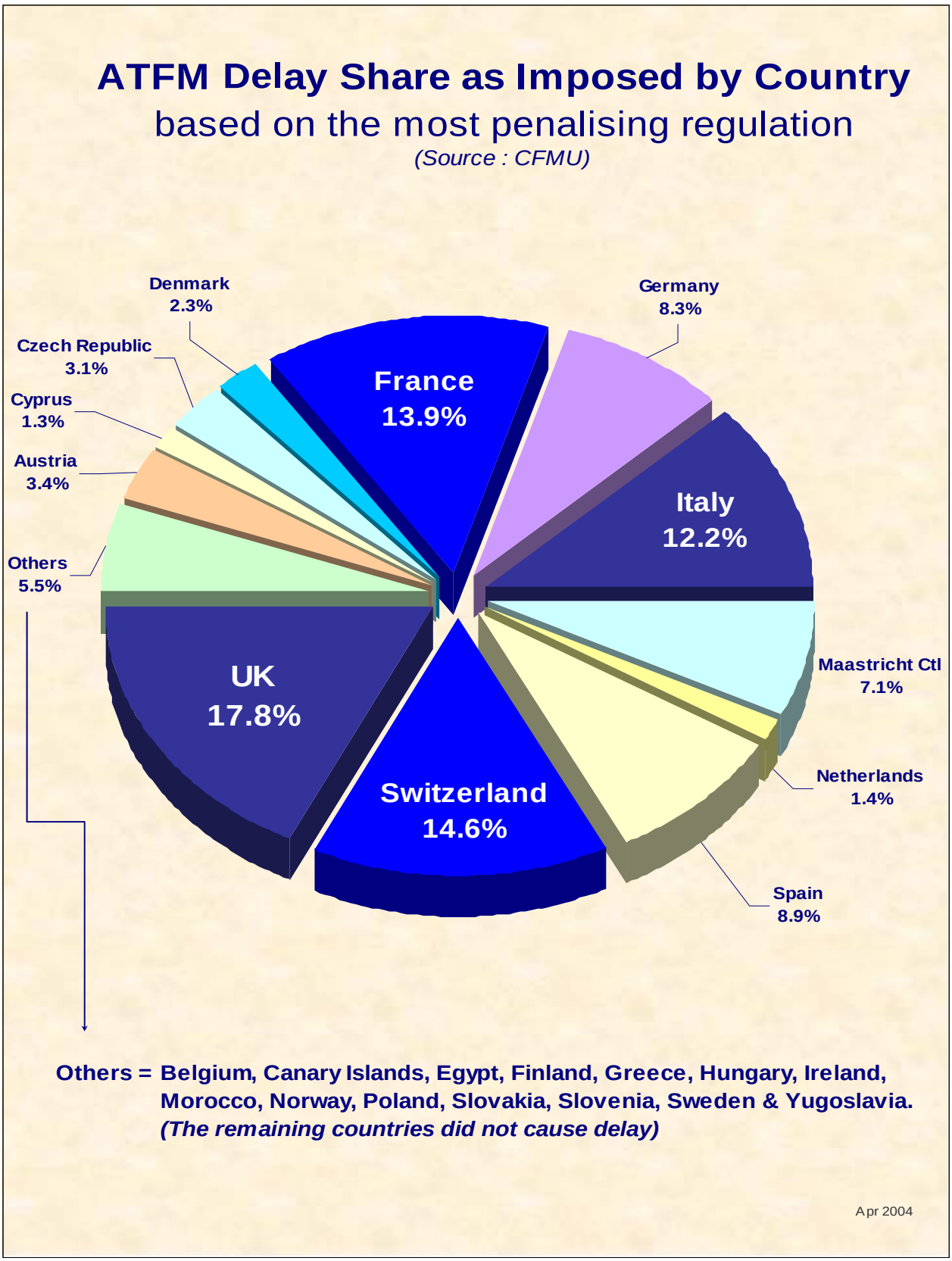
| Rank | Departure | Destination | TTF | TRF | TDF | PDF | TDM | ADD | ADM |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Amsterdam | Zurich | 298 | 192 | 137 | 45.97 | 2,819 | 20.58 | **9.46** |
| 2 | Paris/Charles-De-Gaulle | Zurich | 356 | 224 | 137 | 38.48 | 2,552 | 18.63 | **7.17** |
| 3 | London/Heathrow | Zurich | 384 | 230 | 131 | 34.11 | 2,549 | 19.46 | **6.64** |
| 4 | Berlin-Tegel | Zurich | 304 | 184 | 99 | 32.57 | 1,918 | 19.37 | **6.31** |
| 5 | Dusseldorf | Zurich | 315 | 220 | 113 | 35.87 | 1,986 | 17.58 | **6.30** |
| 6 | Vienna | London/Heathrow | 265 | 146 | 92 | 34.72 | 1,578 | 17.15 | **5.95** |
| 7 | Munich | Zurich | 339 | 170 | 89 | 26.25 | 1,913 | 21.49 | **5.64** |
| 8 | Hamburg | Zurich | 301 | 162 | 95 | 31.56 | 1,667 | 17.55 | **5.54** |
| 9 | Milan/Malpensa | Paris/Charles-De-Gaulle | 336 | 200 | 97 | 28.87 | 1,830 | 18.87 | **5.45** |
| 10 | Aberdeen | London/Heathrow | 327 | 128 | 76 | 23.24 | 1,696 | 22.32 | **5.19** |
| 11 | Edinburgh | London/Heathrow | 579 | 226 | 139 | 24.01 | 2,981 | 21.45 | **5.15** |
| 12 | Vienna | Zurich | 381 | 222 | 109 | 28.61 | 1,956 | 17.94 | **5.13** |
| 13 | Oslo/Gardermoen | London/Heathrow | 260 | 121 | 67 | 25.77 | 1,295 | 19.33 | **4.98** |
| 14 | Frankfurt | London/Heathrow | 526 | 265 | 160 | 30.42 | 2,597 | 16.23 | **4.94** |
| 15 | Geneva | London/Heathrow | 300 | 151 | 91 | 30.33 | 1,472 | 16.18 | **4.91** |
| 16 | Dublin | London/Heathrow | 573 | 251 | 152 | 26.53 | 2,770 | 18.22 | **4.83** |
| 17 | Zurich | London/Heathrow | 384 | 198 | 101 | 26.30 | 1,759 | 17.42 | **4.58** |
| 18 | Copenhagen/Kastrup | London/Heathrow | 354 | 177 | 98 | 27.68 | 1,607 | 16.40 | **4.54** |
| 19 | Berlin-Tegel | Paris/Charles-De-Gaulle | 252 | 143 | 77 | 30.56 | 1,045 | 13.57 | **4.15** |
| 20 | Stockholm/Arlanda | London/Heathrow | 339 | 146 | 82 | 24.19 | 1,361 | 16.60 | **4.01** |
| **Totals** | | | **7,173** | **3,756** | **2,142** | **29.86** | **39,351** | **18.37** | **5.49** |

### MOST DENSE CITY PAIRS (CFMU)

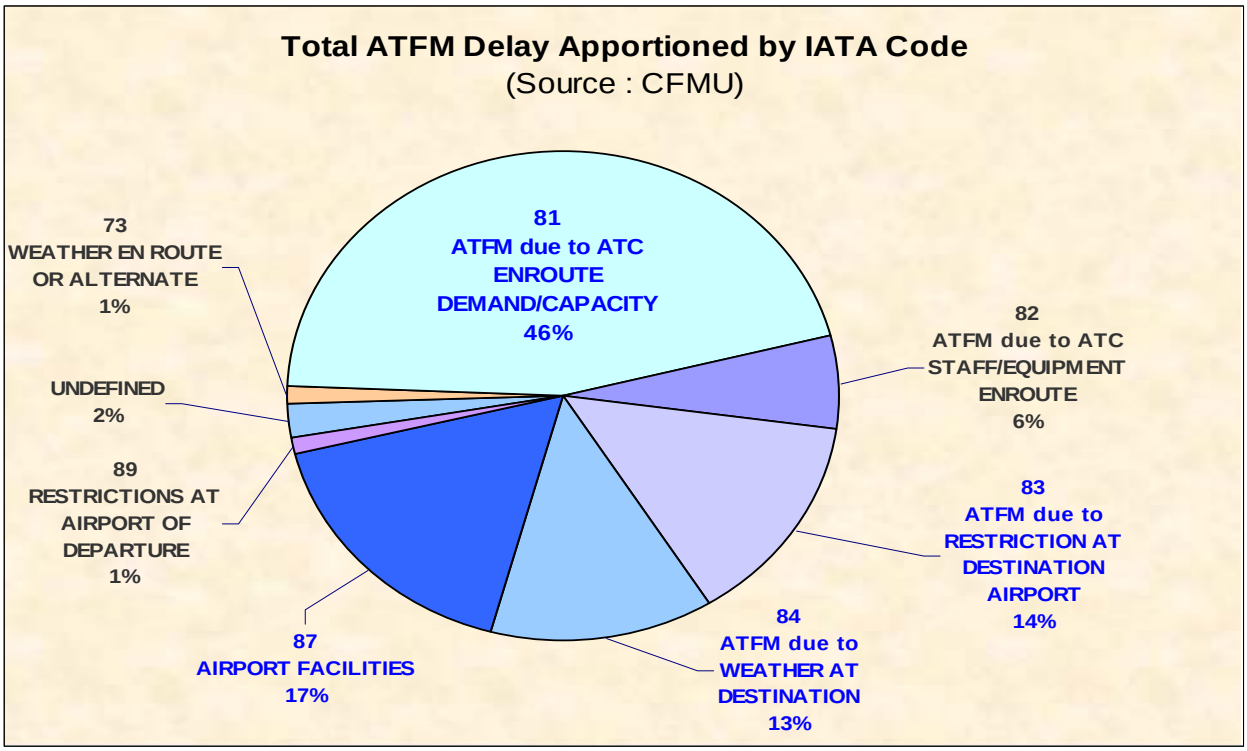
| Rank | Departure | Destination | TTF | TRF | TDF | PDF | TDM | ADD | ADM | ADM-rank |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Madrid/Barajas | Barcelona | **1,790** | 457 | 221 | 12.35 | 3,774 | 17.08 | 2.11 | 5 |
| 2 | Barcelona | Madrid/Barajas | **1,783** | 480 | 169 | 9.48 | 2,808 | 16.62 | 1.57 | 7 |
| 3 | Milan/Linate | Rome/Fiumicino | **1,214** | 267 | 159 | 13.10 | 3,101 | 19.50 | 2.55 | 3 |
| 4 | Rome/Fiumicino | Milan/Linate | **1,202** | 18 | 6 | 0.50 | 552 | 92.00 | 0.46 | 20 |
| 5 | Barcelona | Palma De Mallorca | **886** | 33 | 31 | 3.50 | 860 | 27.74 | 0.97 | 10 |
| 6 | Toulouse/Blagnac | Paris/Orly | **838** | 44 | 22 | 2.63 | 286 | 13.00 | 0.34 | 22 |
| 7 | Paris/Orly | Toulouse/Blagnac | **835** | 26 | 11 | 1.32 | 181 | 16.45 | 0.22 | 25 |
| 8 | Palma De Mallorca | Barcelona | **833** | 213 | 100 | 12.00 | 2,029 | 20.29 | 2.44 | 4 |
| 9 | Paris/Charles-De-Gaulle | London/Heathrow | **820** | 306 | 159 | 19.39 | 2,595 | 16.32 | 3.16 | 2 |
| 10 | London/Heathrow | Paris/Charles-De-Gaulle | **818** | 170 | 79 | 9.66 | 1,213 | 15.35 | 1.48 | 8 |
| 11 | Madrid/Barajas | Palma De Mallorca | **749** | 14 | 12 | 1.60 | 222 | 18.50 | 0.30 | 23 |
| 12 | Athens | Makedonia | **744** | 12 | 7 | 0.94 | 97 | 13.86 | 0.13 | 27 |
| 13 | Makedonia | Athens | **742** | 0 | 0 | 0.00 | 0 | 0.00 | 0.00 | 31 |
| 14 | Palma De Mallorca | Madrid/Barajas | **733** | 129 | 48 | 6.55 | 543 | 11.31 | 0.74 | 14 |
| 15 | Paris/Orly | Nice | **727** | 56 | 20 | 2.75 | 334 | 16.70 | 0.46 | 19 |
| 16 | Nice | Paris/Orly | **725** | 72 | 33 | 4.55 | 463 | 14.03 | 0.64 | 15 |
| 17 | Amsterdam | London/Heathrow | **724** | 276 | 130 | 17.96 | 2,479 | 19.07 | 3.42 | 1 |
| 18 | London/Heathrow | Amsterdam | **723** | 45 | 23 | 3.18 | 320 | 13.91 | 0.44 | 21 |
| 19 | Den Helder/De Kooy | Unknown | **668** | 0 | 0 | 0.00 | 0 | 0.00 | 0.00 | 32 |
| 20 | Unknown | Den Helder/De Kooy | **654** | 0 | 0 | 0.00 | 0 | 0.00 | 0.00 | 33 |
| 21 | Helsinki-Vantaa | Stockholm/Arlanda | **652** | 0 | 0 | 0.00 | 0 | 0.00 | 0.00 | 34 |
| 22 | Fuerteventura | Las Palmas | **644** | 7 | 5 | 0.78 | 89 | 17.80 | 0.14 | 26 |
| 23 | Las Palmas | Fuerteventura | **640** | 5 | 2 | 0.31 | 17 | 8.50 | 0.03 | 30 |
| 24 | Stockholm/Arlanda | Helsinki-Vantaa | **628** | 25 | 8 | 1.27 | 74 | 9.25 | 0.12 | 28 |
| 25 | Paris/Charles-De-Gaulle | Frankfurt | **613** | 137 | 74 | 12.07 | 1,015 | 13.72 | 1.66 | 6 |

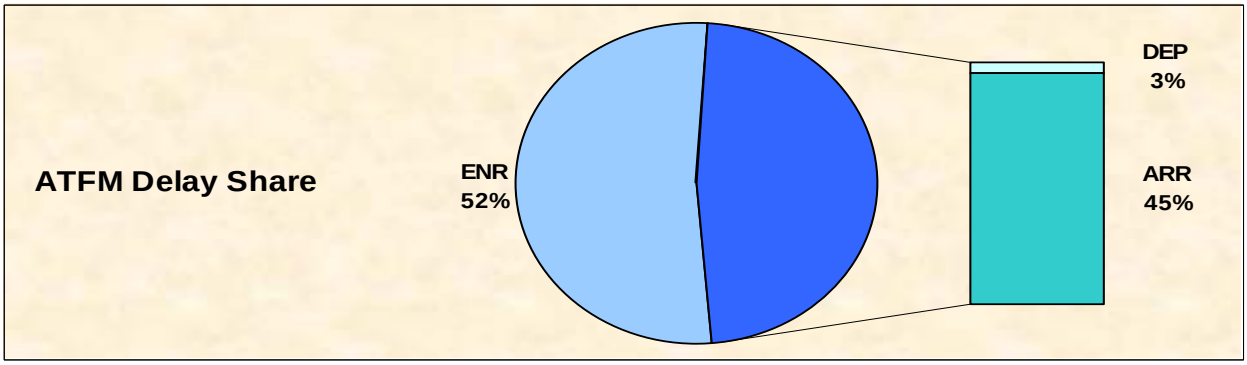
**Source: CFMU ATFM Data**

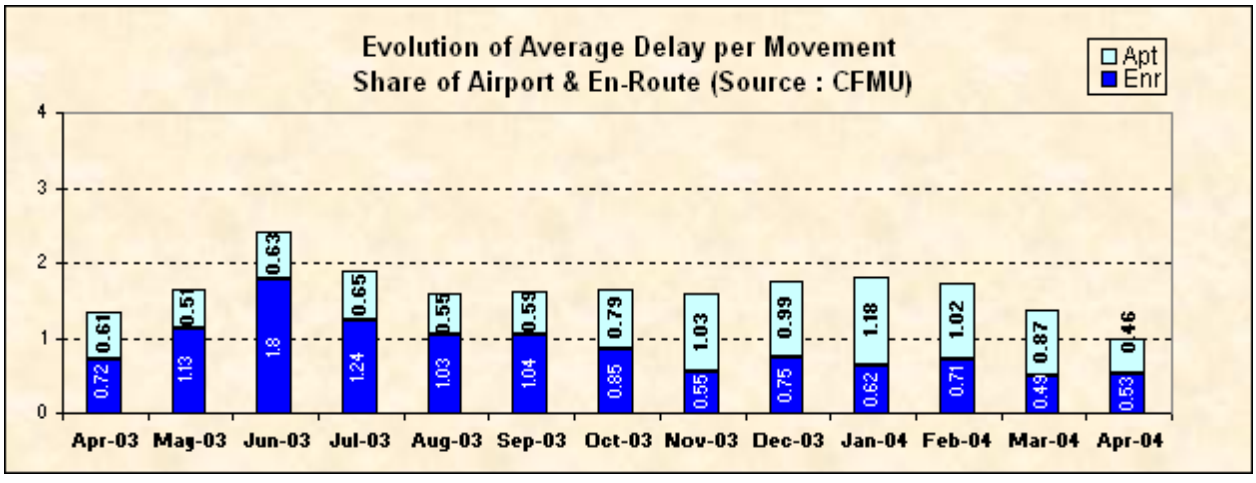
## 7. ATFM Delay Share by Country



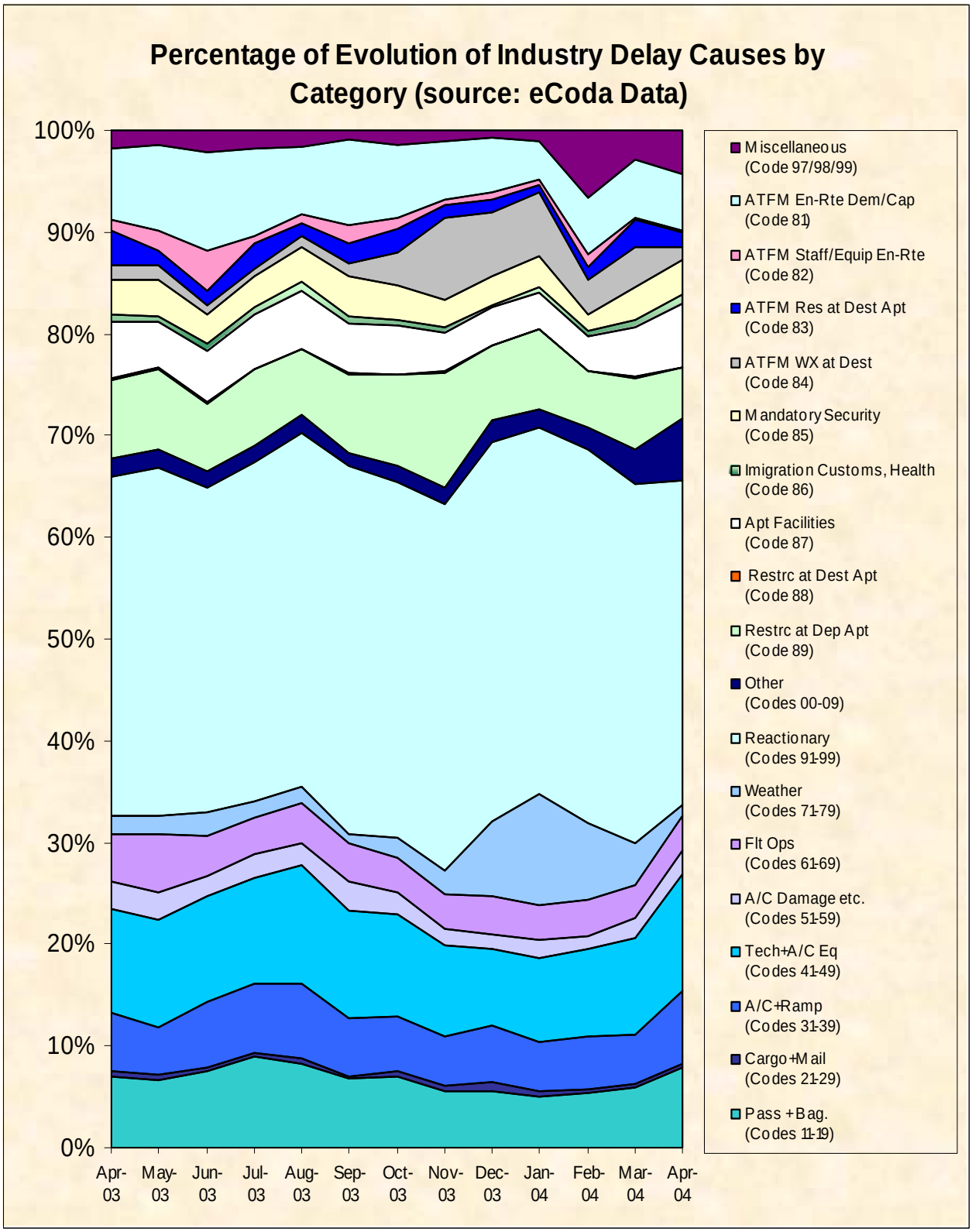
## 8. Reasons for ATFM Delay



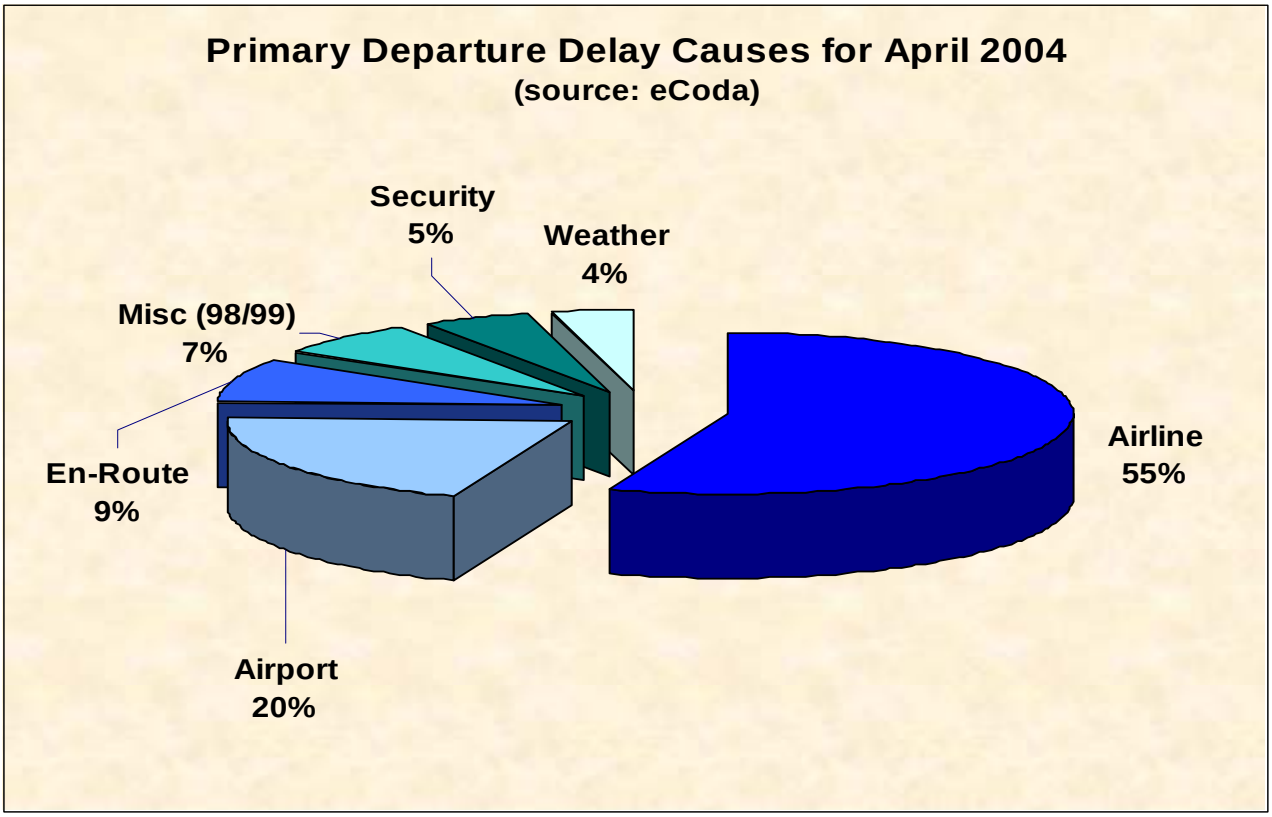



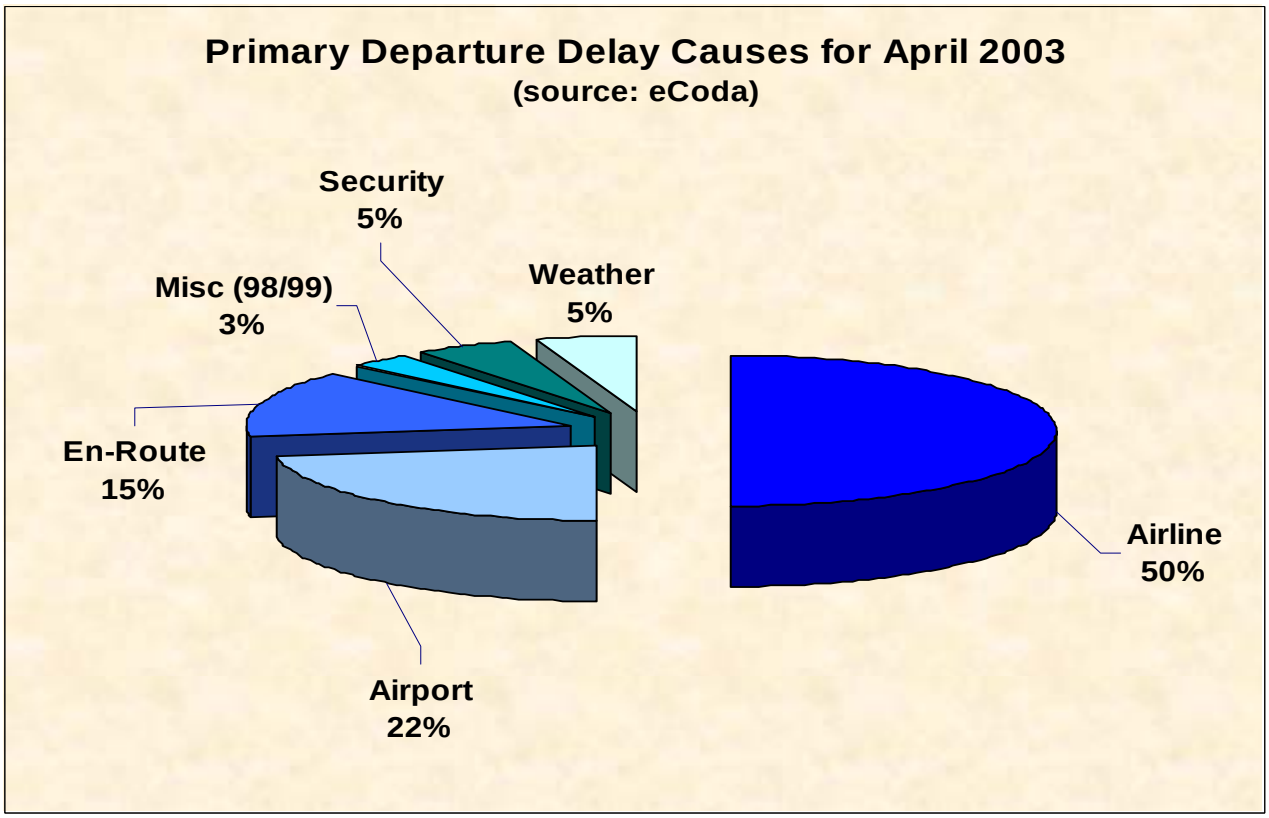



## 9. Consolidated Evolution of Industry Delay Causes by Category



## 10. Primary Departure Delay Causes



## 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 |