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CONSULTATION PAPER

on a Community Air Passenger Report on service quality indicators



Please submit all comments on this paper by 16 February 2001

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EXECUTIVE SUMMARY

The European Commission¹ has recently launched a comprehensive policy on the protection of passengers in the European Union. The final aim of this policy is to stimulate air transport operators to improve the quality of their services and, when this does not occur, to penalise them so that the existence of a competitive market can reward those performing better.

One of the pillars of this policy is the publication of consumer reports on the quality of the service provided to air passengers in a suitable form to support and drive their choices.

The need for such reports also stemmed from political pressures of the institutions of the European Community² by reasons of the delays in air traffic and the congestion in European airspace. This suggested the need to impose on carrier operators the regular publication of indicators and statistics on punctuality so as to inform air passengers on the quality of air transport services they use.

The Commission will therefore propose legislation to establish the publication of indicators on service quality on a mandatory basis by imposing obligations on operators to provide reliable data to build up statistics.

The main features of the reporting system will include:

- focussing on indicators of service quality including, in the first instance, flight punctuality, flight cancellations, denied boarding because of overbooking, loss and damage of baggage and complaints filed by passengers; other items of service quality might be covered at a second stage;
- the extension of the reporting system to all carriers operating within the European Union, along routes having a significant load of traffic;
- the regular publication of the statistics on a city pair basis and aggregate format allowing comparison between different operators;
- the selection of a suitable entity to operate the acquisition and processing of data and the publication and distribution of statistics.

¹ From here below quoted as “Commission”

² From here below quoted as “Community”

A INTRODUCTION

1. Today's national, European and global economies depend increasingly on air transport services, which in turn depend on ancillary services at airports and for air traffic control. In the European Community, following the process of liberalisation, air transport has reinforced its orientation to rely on a complex net of operators where each one ideally contains within it all the decision-making powers required. Under these conditions, the quality of the final service offered by European carriers to passengers strongly relies on the performance of all actors in the chain.
2. The creation of a competitive market has certainly contributed to an increase of the quality of services. The public nature of these services has also prompted the establishment of a regulatory framework to protect the interest of users. There is today a general perception that the quality of air transport services is deteriorating. Increasing delays in air traffic are spotted as the main symptom. This originated a debate at Community level on how to better protect passengers.
3. The Community reply to requests from general public and travellers for improved quality of service has been presented in a recent Communication on the protection of air passengers³. Three major streams of actions have been identified:
 - the strengthening of the respect of existing rights of passengers and the reinforcement of obligations for air carriers;
 - the promotion of voluntary commitments by airlines and airports to improve service quality; and
 - increased awareness of passengers on the performance of different carriers on different routes by means of the publication of an air passenger report that extends beyond punctuality to include other indicators of service quality.
4. As to the policy on the protection of passengers' rights, the Commission has already launched a campaign to inform passengers of their existing rights under Community law. A charter of passengers' rights has been displayed in airports and the campaign is to be extended.
5. With regard to the air passenger report, the availability of information on the quality of services is essential to support and drive the choices of passengers, particularly in respect of services of public nature, such as air transport. It is therefore necessary to improve public confidence by giving to passengers a clear indication about the real performance of the system so that they are aware of what they can expect when they buy a ticket for flying within the Community.

³ Communication from the Commission to the Council and the European Parliament on the protection of passengers in the European Union (COM(2000) 365 final of 21.6.2000)

6. In particular, as far as flight punctuality is concerned, there is an individual responsibility of each actor to deliver its service in a safe, effective, expeditious and orderly manner to prevent disruptions which may propagate from one operator to another. Moreover, despite the competitive environment, which tends to privilege individual rather than collective objectives, there is a collective responsibility to passengers for all operators to deliver a service of best quality.
7. In the wake of the alarming situation of congestion in air traffic, the Commission launched at the end of 1999 the “Single Sky” initiative⁴. It is recognised that responsibility for air traffic delays is shared, although today one half of these are due to the congestion in the airspace by reasons of the inefficiency of the current European air traffic management system. Carrier operators and airports are equally responsible for the other half. A High Level Group was established to find solutions to today’s air traffic problems. Its work concluded by the end of October 2000 by proposing actions to improve the quality of European air transport, with the final objective of safe air travel with on time arrival throughout Europe. While these actions will target problems at source, the performance of the system shall also become more transparent by means of the definition and publication of appropriate indicators addressing the different operators involved in air transport chain.
8. Passengers’ dissatisfaction is not limited to delays. Complaints about air transport services have increased in recent years in areas of airline service quality other than punctuality, such as baggage handling and denied boarding. These complaints not only indicate that the quality of airline service does not always reflect consumer needs and expectations but also a lack of information to passengers on the performance of different operators, that would allow them to make informed choices before buying their tickets.
9. Statistics on air transport are also being collected by Eurostat within the framework of the draft European Parliament and Council Regulation proposed by the Commission in 1995⁵, which is currently implemented by Member States on a voluntary basis. Data collection for the Community Air Passenger Report will be compatible with the existing arrangements for Community statistics on air transport.
10. To this purpose, it is proposed to establish a Community Air Passenger Report on service quality indicators, along the lines described in the following chapters. This paper describes the scope and content of such a report and aims at substantiating its establishment on a mandatory basis by means of appropriate legislative instruments.

⁴ Communication from the Commission to the Council and the European Parliament on the creation of the single European sky (COM(1999) 614 final of 1.12.1999)

⁵ Proposal for a Council Regulation (EC) on statistical returns in respect of carriage of passengers, freight and mail by air (COM(95) 353 final of 18.9.1995)

B GENERAL REQUIREMENTS OF THE REPORTING SYSTEM

11. The main objective of the Community Air Passenger Report is to assist air passengers and more generally consumers with information on the quality of services provided by air transport operators, in terms of punctuality and other service quality indicators. To this purpose, it is necessary to organise suitable mechanisms of data collection, acquisition, processing, publication and distribution.
12. The intention of putting statistics on the performance of different operators, including airlines and airports, in the public domain is twofold:
 - providing clear and simple information on the quality of the air transport services so that passengers could make an informed choice of the services which they buy; this choice to be selective needs adequate information across airports and airlines;
 - encouraging the parties concerned (airlines, airports and air traffic services) to improve their performance, in particular by optimising the planning and operational processes. It is believed that the publication of service quality indicators would increase the pressure on various operators so that they assume their own responsibility in delivering the most efficient service.
13. The publication will illustrate the situation of service quality to serve the need for transparency of passengers. The selection of airlines and airports to be subject to the publication of indicators and the format and periodicity of such a publication should reflect the opportunity for passengers to compare alternative services both within air transport and between air transport and other modes of transport.
14. The area of applicability of the reporting system should be proportional and avoid any extension to services in cases where the level of traffic does not justify spending resources on the collection, processing and publication of information, therefore leaving eventually to private and public operators the responsibility to organise them on a voluntary basis. To identify such an area, three thresholds are proposed in terms of level of traffic with regard to carrier operators, airports and routes (city-pairs). They will be established by analysing the published schedules, such as the Schedules and Carrier databases produced by OAG (Office Airlines Guide). Reporting airlines and qualifying airports and city-pairs will be identified periodically in accordance with these thresholds.
15. With regard to carriers, it is proposed to select those accounting for a minimal capacity, e.g. at least 2,000,000 of yearly available seats with reference to flights operated between and within the Member States of the European Community (therefore including domestic traffic). This selection would bring to an indicative sample of 35 reportable carriers. All flights (intra-Community and domestic) operated by such carriers between airports as specified at point 15 and along routes as specified at point 16 will be subject to the reporting system.
16. With regard to airports, it is proposed to select those accounting for at least 3,000,000 of yearly passenger movements. This selection would bring to an indicative sample of 50 reportable airports.

17. With regard to routes (intra-Community and domestic), the supply of services is illustrated in the following table in terms of number of city pairs served by one or more carriers and corresponding average yearly available seats per city-pair. It is proposed to adopt a significant threshold, such as 300,000 yearly available seats (return route) (150,000 for one-way route). All city-pairs above this threshold and involving airports as specified at previous point 16 would be included in the reporting system. This selection would bring to an indicative sample of 250 reportable city-pairs.

Number of carriers and average yearly available seats per city-pair⁶

Number of carriers	Average yearly available seats	City-pairs
1	97,474	1144
2	360,667	339
3	604,567	142
4	980,564	47
5	1,288,260	18
6	3,713,506	7
7	752,024	1

18. More aggregate statistics should be provided for charter operators. In this case, the comparison by city-pair might not be relevant given the number of resort destinations and the volume of traffic along the related routes as well as the reference period (months). To qualify the inclusion in the reporting system, a carrier should have operated a total of at least 100 flights and/or on 10 or more routes during the summer period (from April to October). The period of reference will be the summer period.
19. With regard to the geographical coverage of the system, it is proposed to include all Community Member States and to consider its eventual extension to the EEA area (provided that the selection criteria do not exclude this area), to Switzerland, or possibly to all European States. In the light of experience there will be a consideration on whether there is any benefit to extend the reporting system to transcontinental flights.
20. Operators should make available the necessary raw information to be gathered at airports and then filed to a central entity in the proper format. In most cases, this information is already provided automatically from the communication systems and then downloaded into databases. When this opportunity is not available the raw data has to be recorded manually. Sources of data should guarantee the reliability and timeliness of information needed to publish indicators. Data should be provided with reference to a monthly period to allow the publication of monthly reports.

⁶ Source: OAG/REED January 2000
Filters: Non-stop operational passenger services with traffic rights

21. A central entity will be responsible for the acquisition and processing of information. It will be selected on the basis of criteria of efficiency, ability to carry out this task and of independence of operators.
22. Guidelines should define precisely the definitions and instructions for data reporting. They should specify the standard required of the data, in terms of accuracy and completeness of the information provided. They also should consider the need to minimise additional data collection and reporting costs to operators. All stages of the reporting process (data collection, acquisition, storage, processing and dissemination) should be subject to adequate procedures to ensure its integrity. Control and sanction mechanisms should be provided for to ensure that information provided satisfies such integrity.
23. Operators should report to the central entity in the form and manner set forth in accounting and reporting guidelines issued by the Commission. All reports should be filed within 15 days of the end of the month for which data are reported. The Commission will also determine the means of transmission of the raw data.
24. The modality and form of publication of indicators and their visual presentation to public will depend upon areas of service quality. With regard to flight punctuality, statistics should be reported by city pairs. When city pairs include airport systems (e.g. more than one airport in the same catchment area) the publication of punctuality indicators should detail airport pairs. For each city pairs, statistics should rank operators by their performance. Aggregate statistics by airlines and airports shall also be provided, in particular with regard to other areas of service quality.
25. With regard to the dissemination of statistics, these should be made available at airports for public consultation. They should also be made available on a web site. Finally, they might indeed be integrated into the CRS and sent to travel agencies and tour operators so that consumers can make an informed choice at the time they reserve tickets. The impact of the reporting system on consumers and operators will be assessed on regular basis.
26. The implementation of the reporting system requires an adequate legislative framework. It is proposed to enforce the system by means of a Regulation. This is justified by the requirement to come to a uniform and consistent approach and dispose of a single source of reliable, objective and cost-effective statistics. The high percentage of international flights subject to the reporting system, as compared to the domestic traffic, supports the need for a central initiative. The subsidiary role of States may play in the provision of the control and sanction mechanisms.

C REPORTING ON FLIGHT PUNCTUALITY

27. For passengers, air traffic delays represent the most detrimental consequence of air traffic congestion and punctuality is an essential requirement of transport. While citizens experience several situations of congestion in their daily life, especially in relation to travelling, they perceive more negatively delays occurring in public rather than private transport, also due to their inability to anticipate these delays in their daily programmes. Under these circumstances, passengers may also get frustrated by the lack of clear information about the performance of the air transport system and by the fact that each operator tends to discharge its responsibility by indicating casual factors beyond its control.
28. A study carried out in 1997 on the establishment of a Community Punctuality Reporting System proved the technical and economic feasibility of setting up a Community Punctuality Reporting System (see Annex I). The existing delay monitoring schemes in operation within Europe (see Annex II) do not provide for a sufficient level of detail of delays to enable a publication by carrier, on a city-pair basis.
29. Several factors drive the choice of air passengers, among them the purpose of travel and time constraints. With regard to the latter, the choice is mainly influenced by the time at which the traveller has to get to destination. It is therefore proposed to focus the reporting system on arrival punctuality. In addition to that, the knowledge of departure punctuality would give an indication of the performance of the air transport system in the pre-flight phases where flight departures can be rescheduled due to airspace congestion or other operational factors.
30. With regard to the definition of indicators, actual times vary in relation to the different phases of the journey (such as the time the wheels touch the runway on landing, the time aircraft arrive on blocks, the time the passengers exit the airport). Since one of the term of comparison has to be the scheduled time of arrival as published by airlines, it is proposed, in the first instance, to refer to arrival at gates (on-blocks) as the second term of comparison, thus including eventual delays occurring on the ground during taxiing. The same applies to departures where scheduled time of departure and departure at gates (off-blocks) will be considered.
31. This approach does not fully consider the handling agent component because further delays might occur during the transfer to or from the aircraft from or to the terminal building. However, the aircraft component, which remains the key part of the journey, is adequately covered. A feasibility study on the inclusion in the reporting system of the service quality of the ground component (handling agent, airport) will be launched in 2001. This analysis will advise on how to extend the scope of the reporting system to all the components of a flight so as to provide for further indicators regarding the punctuality of the ground component (arrival to the passenger gates, delivery of baggage).
32. It is proposed to consider the flight late when it arrives at the gate 15 minutes or more after its published arrival time. A flight is therefore on time when it arrives less than 15 minutes after its published arrival time.

33. Airlines selected according to the criteria drawn up at previous chapter B should submit the following data set for all routes as identified at previous point 17:
- the airline and the flight number;
 - the date of scheduled flight;
 - the airports of origin and destination;
 - the published arrival and departure time for each scheduled operation of the flight;
 - the actual arrival and departure time for each scheduled operation of the flight.
34. With regard to reporting on flight punctuality, two main indicators should be considered:
- on-time performance, that is the percentage of scheduled operations of a specific flight that an airline operates on-time;
 - amount of delay that is the difference between actual and published times (when this equals or exceeds 15 minutes).

D REPORTING ON OTHER INDICATORS OF SERVICE QUALITY

35. Crucial as punctuality is, it is not the only criteria by which passengers judge the quality of services offered. They also require good information on other aspects to make informed choices; they should be in a position to choose airlines that offer a good level of service and to penalise others that perform less well, by taking their custom elsewhere.
36. Additional statistics should therefore cover the number of cancellations of flights, denied boarding because of overbooking, loss and damage to baggage and the complaints filed by passengers. Other items of service quality might be covered at a second stage.
37. With regard to cancellations of flights, statistics would indicate the number of flights, which are not operated but listed in the computer reservation system of an airline within seven calendar days of the scheduled departure.
38. With regard to denied boarding, statistics would indicate the number of passengers who hold confirmed reservations and are denied boarding from a flight because it is oversold. These figures include only passengers whose oversold flight departs without them; they do not include passengers affected by cancelled, delayed or diverted flights.
39. With regard to baggage handling, statistics would be based on the number of reports each operator receives from passengers concerning lost, damaged, delayed or pilfered baggage.
40. With regard to complaints from passengers, statistics would be based on the number of reports filed with operators regarding complaints against such operators in relation to the quality of various areas of service, such as ticketing, boarding, fares.
41. Like the data on flight delays these statistics have to be filed to the central entity in charge with the publication within 15 days of the end of the month to which the information applies.
42. Operators selected according to the criteria drawn up at previous chapter B should submit the following data set on a monthly basis:
 - the number of cancelled flights;
 - the number of mishandled-baggage reports filed;
 - the number of passengers who hold confirmed reservations and are denied boarding;
 - the number of complaints filed by passengers.
43. Indicators should consider the relative performance of operators, that is the ratio between the frequency of the above-mentioned events and the total number of flights operated.

E CONCLUSIONS

44. In the United States the Department of Transport has published a monthly consumer report for some time. The department requires the larger airlines to submit information on non-stop schedule of flights between twenty-nine major airports within the country, (the airlines however voluntarily provide data on all domestic flights, which is published). The report covers punctuality by airline, both overall and by origin and destination of the flight; it also identifies the flights with the worst record, on the same basis. In addition, the report gives other indicators of the performance of each airline: baggage mishandled, passengers overbooked and complaints filed with the Department of Transport. It ranks the reporting airlines according to each indicator, so helping passengers to make informed choices.
45. With regard to Europe, the situation of chronic congestion in recent years has originated a deterioration of the flight punctuality, which seriously affects the quality of air travel with great inconveniences for passengers.
46. These also suffered from the lack of transparent information on the performances of air transport, in terms of punctuality and other aspects of the quality of service, such as baggage handling and flight booking.
47. It is now important that the satisfaction of clients regains focus as a central requirement of air transport. A concrete step towards improved respect for passengers, it is to inform them adequately on the quality of the services they buy. The establishment of a Community Air Passenger Report has such an objective.
48. The Commission believes that similar reports would greatly benefit passengers in the Community. The Commission will therefore undertake to draw up a legislative text, in the form of a Regulation, to secure the implementation of the Community Air Passenger Report on service quality indicators, along the lines described in the previous chapters.

ANNEX I

FEASIBILITY STUDY ON THE ESTABLISHMENT OF A SYSTEM FOR REPORTING FLIGHT PUNCTUALITY

1. The Commission launched at the end of 1996 a feasibility study on the establishment of a Community Punctuality Reporting System⁷. The study⁸ investigated the practicability and outlined the features of a system aimed at enabling the regular publication of punctuality statistics for airlines and airport operating within the European Union. This information would be primarily directed to passengers to inform them of the quality of the services provided, and enable them to compare and plan their travel accordingly.
2. The study reviewed the current punctuality reporting system used in the United States to determine the features of that system, its financial and operational implications. It also reviewed similar systems used within the European Union by local administrations, associations, airlines and airport operators. The study then evaluated the technical and financial possibilities and obstacles which would be faced in the establishment of a Community Punctuality Reporting System. Finally it produced a first outline of a feasible solution including initial specifications for the data treatment.
3. The introduction of the reporting system in US took place following the market liberalisation when increasing competition between airlines in the domestic market brought to a deterioration of the quality of their service in terms of major delays due to unrealistic flight scheduling.
4. The US Department of Transport (DoT) set up a monitoring system that covered not only on-time performance data but also other aspects of service quality such as mishandled baggage and overbooking. A system for on-time performance statistics data collection and reporting was then created leading to the publication of punctuality indicators for major airlines operating domestic flights. Statistics were expressed in terms of percentages of reported flights arriving and departing on time by carrier, by airport and by period of time.
5. The marginal cost of collecting and reporting the data had been very small for airlines since the same data were already monitored for internal purposes. The main cost had been the development of the software to set up the programme within the DoT, the single central technical assistance office collecting, analysing and publishing the statistics.

⁷ A contract has been awarded to IATA in December 1996 following a call for tenders. The final report was delivered in September 1997.

⁸ Aviation Information & Research Department of IATA "Community Punctuality Statistics Reporting System Study for EC DGVII" Final Report – London, September 1997

6. The publication of punctuality indicators improved the situation and acted as a balance against marketing and cost cutting pressures. It also reinforced the competitiveness between airlines as it gave marketing advantages to those best performing. The consequent decrease of delays improved operational safety by reducing the occurrence of perturbed situations. Nevertheless, the system became a marketing tool used in advertising campaigns and, in many cases, schedules have been padded with additional minutes to ensure on-time arrivals. Given the structure of statistics, airlines criticised that they could lead to unfair and meaningless comparisons between carriers operating in different environmental conditions; and to a lack of understanding of their meaning by general public.
7. No major impact was observed for airports given the particular conditions existing in US (the majority of airport based operations are leased out to individual carriers). No clear information has been reported on possible influence on passengers purchasing decisions; a punctuality indicator was at disposal for their informed choice in the CRS but no indication was available on how the information was used.
8. In Europe, the only system similar to the US one is currently operated in UK, where the Civil Aviation Authority collect information by airports to publish summary data on delays. Other systems are operated in France and the Netherlands. The French system⁹ cover 16 airports and produces aggregate statistics on the amount of delays and their causes according to the standard delay codes established by IATA. This information is also available on internet (www.dgac.fr).
9. In addition to that, a considerable number of organisations in Europe collect data on flight punctuality, including airline organisations (AEA, ERA and IATA), the CFMU and airports. However, the comparison of these data is not always possible because of the disparity in the type, source and scope of information being collected. Moreover, this information is elaborated and used primarily for strategic planning and the identification of bottlenecks and major constraints. Aggregate statistics are produced broken down by areas, corridors and airports.
10. The study proved the technical and economic feasibility of setting up a system for reporting flight punctuality. It confirmed that the existing delay monitoring schemes in operation within Europe do not provide for a sufficient level of detail of delays to enable a publication by carrier, on a city-pair basis. Therefore, the best option would be for a new delay and punctuality statistics data collection to be carried out centrally. Guidelines should define precisely the definitions and instructions for data reporting. They should consider the possibility to minimise additional data collection and reporting costs to air operators and airports.
11. Raw information to initiate a system similar to the American one is available. Data are available within air operators, airports and the CFMU. The amount of resources required for the collection, analysis and publication of punctuality statistics has to be considered at two levels: the reporting agencies which send data (airlines, airports) and the collection agency which analyse and publish them.

⁹ “Barometre des retards du Transport Aérien” – Comuta - DNA

12. With regard to data reporting and in order to reduce such resources, it seems appropriate ensuring compatibility between the data requested and that already collected by the various organisations, thus minimising any additional cost to air operators and airports. The same applies to data storage and analysis in relation to the existing database systems.
13. The study recommended that the results should be published on a monthly basis with the additional option of quarterly and annual summaries; and on a city pair basis covering both scheduled and possibly non-scheduled airlines. The publication could be made centrally or by individual countries. The benefits and disadvantages of three different scenarios were examined. They included a system reported by Member States on an individual basis or utilising a new common scheme; and systems managed by central organisations.
14. The study also highlighted the opportunity to monitor other service items. In addition to on-time performance, the reporting system may in fact cover cancellations of flights, denied boarding because of overbooking, loss and damage to baggage.

ANNEX II

EUROPEAN DELAY ANALYSIS SYSTEM

1. The main initiative in the field of delay analysis undertaken at European level refers to the Central Office for Delay Analysis (CODA) which was set up as part of the European Delay Analysis System (EDAS), decided by the ECAC Ministers of Transport in 1994. EDAS consists principally of:
 - A recommended level of delay monitoring based on the model in a guidelines document¹⁰.
 - The Central Office for Delay Analysis (CODA), managed and operated by EUROCONTROL for the collection and processing of delay data from a number of sources.
 - In-depth analyses, where assessment by CODA or other sources indicate that a bottleneck or major constraint exists, in order to instigate remedial action as necessary.
 - The EDAS Advisory Group (EDAG) with representatives from States, Airports, and Airspace users' organisations.
2. CODA comprises a team with access to data and analysis tools which has, since January 1997, produced regular delay reports which are circulated to national administrations and interested parties in the air transport industry. There are several sources of data for these reports. Delay data are provided by the Central Flow Management Unit of EUROCONTROL. The Association of European Airlines and members of the International Air Transport Association supply current delay data, which provide a breakdown of delay by causes categorised according to the international IATA delay codes. In addition, data are received from some charter airlines, national administrations and airports.
3. The database is used to compare and contrast the delay situation as reported by different agencies, and to examine differences where they occur, with the aim of producing a balanced and impartial view of air transport delays in Europe. The output is categorised by regions and flows, to allow the identification of congested areas.
4. The quantity and range of data supplied by all sources is continually being extended, to improve the reliability and the breadth of analysis in the regular reports. Airline data based on automatically recorded times, together with planning and schedule parameters, will be received direct from airlines, which will allow the identification and analysis of delay occurring after departure and the incidence of arrival delay and its consequential effect. Co-ordinated activity is under way in the Airports Council International to record and collate airport delay data, which will be processed through CODA.

¹⁰ "ECAC Guidelines on monitoring and analysis of delays at airports" – Final release – Edition 2.0 – October 1996

5. CODA produces a standard report each month. These reports are made available on the EUROCONTROL Agency web site (www.eurocontrol.be), and the full reports are printed and circulated in hard copy. In addition, seasonal and annual reports are published. CODA also responds to ad-hoc requests for analysis of specific delay issues, and produces special reports when appropriate. As a result of the development of delay analysis and reporting processes, an agreed set of standard delay indicators has been developed. These indicators are widely used and understood in the industry.

6. The system was set up as part of the strategy to counter the effects of infrastructure congestion rather than to provide detailed information on delays and airline punctuality in suitable form for consumers. However, the availability of data collections and surveys on a wide set of information would facilitate the establishment of a reporting system, particularly for flight punctuality, since airlines and airports would have already in place the mechanisms to provide the relevant data.