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IMPACT ASSESSMENT

Accompanying the document

**Proposal for a Regulation of the European Parliament and of the Council
on common rules for the allocation of slots at European Union airports (Recast)**

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*This report commits only the Commission's services involved in its preparation and does not
prejudge the final form of any decision to be taken by the Commission*

1. SECTION 1: PROCEDURAL ISSUES AND RESULTS FROM CONSULTATION OF INTERESTED PARTIES

1.1. Identification

Lead DG: DG MOVE

Agenda planning/WP reference: 2011/MOVE/007

Proposal for amendment of Council Regulation 95/93 on common rules for the allocation of slots at Community airports (“Slot Regulation” here afterwards)¹

1.2. Organisation and timing

1. Work on the impact assessment started in summer 2010. Meetings of the Impact Assessment Steering Group (IASG), comprising representatives from the Directorates-General COMP, ENTR, MOVE and from the Legal Service and the Secretariat-General were held on 16.07.2010, 19.08.2010, 19.11.2010, 7.03.2011, 14.03.2011 and 23.03.2011. In addition, written comments were also received from DG CLIMA and DG JUST.

1.3. Consultation and expertise

1.3.1. Consultation process

2. Following the 2004 revision of the Slot Regulation² (considered by the Commission to be the first step of a more comprehensive reform³), on January 23, **2007**, the Commission launched **a consultation exercise to obtain stakeholders' comments on the operation of the Slot Regulation**. The 2007 Commission Communication on the application of the Regulation (COM(2007)704) was based on this feedback and it concluded that several problems in the implementation of the Slot Regulation exist.
3. A **stakeholders' hearing** was organized by the Commission on January 29, **2008**. On the basis of the input received, communication COM(2008)227⁴ was adopted. In this communication, after giving guidance on several aspects of the Slot Regulation⁵,

¹ Consolidated version of the Slot Regulation is available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1993R0095:20090630:EN:PDF>

² Regulation (EC) No 793/2004 of the European Parliament and of the Council of 22 July 2003 amending Council Regulation (EEC) No 95/93 of 18 January 1993 on common rules for the allocation of slots at Community airports, OJ L 138, 30.04.2004, p. 50.

³ Amended proposal for a Regulation of the European Parliament and of the Council amending Council regulation (EEC) No 95/93 of 18 January 1993 on common rules for the allocation of slots at Community airports (presented by the Commission pursuant to Article 250 (2) of the EC Treaty), COM (2002) 623 final.

⁴ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the application of Regulation (EEC) No 95/93 on common rules for the allocation of slots at Community airports, as amended.

⁵ Guidance has been provided on the assessment of the independence of the slot coordinators, the transparency of slot data, new entry, local guidelines, exchange of slots (secondary trading) and consistency between slots and flight plans.

- the Commission stated that it will continue to monitor the functioning of the Slot Regulation and will consider whether it is necessary to make a proposal to amend it.⁶
4. On 3 September 2010, the Commission launched an online comprehensive public consultation⁷, the objective of which was to evaluate the current operation of the Slot Regulation and to elicit stakeholders' comments on a detailed list of policy options which could be addressed through the revision of the Slot Regulation.⁸ A summary of the consultation was published on Europa website⁹.
 5. A second stakeholders' hearing was organized on 29 November 2010 to which 16 Member States and representatives of each of the relevant stakeholders groups participated.¹⁰
 6. It follows from the above that the Commission's minimum standards of consultation are respected.

1.3.2. *Result of the consultation*

7. Air carriers declare themselves broadly satisfied with the functioning of the current Slot regulation and consequently, most respondents within this group do not support the amendments suggested in the consultation exercise. The fact that the slot allocation system in effect regulates access to some of the most popular airports in the world explains the sensitivity of the issue, in particular for airlines. This is reflected in a degree of anxiety and reluctance concerning the possible revision of the Slot Regulation. The position of airlines therefore needs to be regarded in this light. The different airline segments agree on this general position and do not provide different views from within the sector (low-cost, network, charter, etc.), although these might emerge once the European Commission presents its ideas further. Where respondents were supportive of amendments they often highlight alternative approaches, frequently at a Member State or local level, which would not need amendment to the Slot Regulation. Several airlines highlight that the most important issue is the shortage of airport capacity, which changes to the Slot Regulation would not address.
8. Airports and airport associations more frequently identify areas for change and are therefore more likely to identify benefits in some of the options raised in the consultation. This also applies, to a lesser extent, to the coordinators, although they either express no opinion on, or oppose the most radical options for revision to the Slot Regulation (auctions and withdrawal of grandfather rights). There is more divergence amongst the Member State and 'other' respondents, although these

⁶ Moreover, following the inauguration of the Community Observatory on Airport Capacity on 4 November 2008, all stakeholders participating to this forum were encouraged to express their view on slot issues. The report of the Working Group 2 ("Gate to gate") of the Observatory on the matter listed the main problems to be studied (2009).

⁷ The consultation remained open from September 3 until 4 November 2010, respecting the minimum standard of eight weeks. 81 contributions were received and individually acknowledged. Among the respondents were 11 Member States, 38 airlines or airlines associations, 12 airports or airports associations and 6 slot coordinators.

⁸ The consultation plan, the questionnaire and the results of the consultation were discussed with the IASG.

⁹ http://ec.europa.eu/transport/air/studies/airports_en.htm. The summary is included in section 8 of the Study on possible revisions to the Slot Regulation, Steer Davies Gleave, 2011.

¹⁰ The conclusions of the stakeholders' hearing were published on DG MOVE's website (http://ec.europa.eu/transport/air/events/2010_11_29_airports_en.htm).

stakeholders are more supportive of amendments to the Slot Regulation than the airlines.¹¹ All oppose the most radical change (withdrawal of grandfather rights).

1.3.3. *External expertise*

9. The constant monitoring by the Commission of the functioning of the Slot Regulation has been accompanied by several external studies, the results of which are available on the Commission website.¹²
10. While taking into account the results of the stakeholders' consultation, the Commission services decided in 2010 to undertake a thorough qualitative and quantitative evaluation of the current situation (2006-2010).¹³ The latter study concluded that the efficient use of airport capacity in Europe is today hindered by a number of problems. Most of the problem description in the present impact assessment relies on the data gathered and analysed by the consultant and validated by the Commission services (see annex 2).

1.4. **Consultation of the Impact Assessment Board**

11. Following the submission of a draft report to the Impact Assessment Board (IAB) on 15 April 2010 and the written procedure on the assessment of the report, the IAB sent its opinion on 23 May 2011. The comments of the IAB were duly taken into account and the main modifications were the following:

- a paragraph of whether the compliance has been a problem was added;
- detailed explanations of the evaluation of the operational objectives were added;
- detailed explanations on the methodology and the main assumptions for the assessment of the impacts were transferred from the annexes in the core text of the impact assessment report;
- more details on the calculation of the net economic benefits for the changes to 80-20 rule were included;
- explanations on why the CO₂ emissions per passenger increase for all options were added;
- more extensive references to input received from different stakeholders were provided;
- more details on the future evaluation arrangements, including references to timing, substance and responsible actors were added.

¹¹ France, Italy, Belgium, Finland and one other Member State - which chose not to reveal its identity - oppose almost any changes to the Slot Regulation, whereas the UK, Sweden, Poland and Greece support more of the possible changes.

¹² Amongst others: the Study to assess the effects of different slot allocation schemes, National Economic Research Associates (NERA), 2004 and the Study on the impact of the introduction of secondary trading at Community airports, Mott MacDonald, 2006. The results of these are available at http://ec.europa.eu/transport/air/studies/airports_en.htm.

¹³ Study on possible revisions to the Slot Regulation, Steer Davies Gleave, 2011 (available at http://ec.europa.eu/transport/air/studies/airports_en.htm).

2. SECTION 2: POLICY CONTEXT, PROBLEM DEFINITION, AND SUBSIDIARITY

2.1. Policy context

12. Largely inspired by IATA Worldwide Scheduling Guidelines, the Slot Regulation establishes a set of rules for the allocation of slots at EU airports.¹⁴ Its objective is to ensure that access to congested airports is organized through a system of fair, non-discriminatory and transparent rules for the allocation of landing and take-off slots so as to improve the utilisation of airport capacity and to enhance competition. It was adopted shortly after the third "aviation package" which created the EU internal market in aviation. Since 1993 the Slot Regulation has received technical improvements in 2004 (see annex 3).
13. The main features of the current slot allocation system are the following. Member States shall designate an airport as coordinated if a thorough capacity analysis proves that, at a specific airport, there is a significant shortfall in capacity.¹⁵ A second step is for the Member State to appoint an airport coordinator. The coordinator is in charge of allocation of airport slots i.e. the permission to use the full range of airport infrastructure (runways, terminal facilities etc.) necessary to operate an air service at a coordinated airport on a specific date and time. In allocating slots, the coordinator is obliged to act in an independent, neutral, non-discriminatory and transparent manner. No charge is to be levied for the allocation of an airport slot. The Slot Regulation does not apply to airports that are not congested and where airlines can operate without a slot being allocated.
14. Slots are allocated for the summer scheduling season or for the winter scheduling season.¹⁶ If an air carrier has used a series of slots¹⁷ for at least 80% of the time during the season, it will be entitled to the same series of slots in the next scheduling season ("historical slots", "grandfathered rights" or 80-20 rule). If the threshold is not reached the slots go to the slot pool for allocation. After calculating all the historical slots, the coordinator allocates the slots which are in the pool (unused slots, slots returned to the pool, new slots). 50% of the pool slots are first allocated to new entrants.¹⁸
15. There are currently 89 fully coordinated airports located in the States in which the Slot Regulation applies (the EEA Member States plus Switzerland).¹⁹ Of these airports, 62 are coordinated year-round, and 27 are coordinated seasonally. These

¹⁴ See annex 1 for the glossary explaining the terminology used by the Slot Regulation.

¹⁵ An airport with potential for congestion at certain periods only will be designated as schedules facilitated. For the sake of simplicity we will not present the schedules facilitation procedure. Please see Annex 1 on glossary.

¹⁶ For instance, for summer 2011 slots were allocated in November 2010. The slot allocation is a planning tool for the airport capacity. The airport slot is different from the ATFM slot. The ATFM slot is an Air Traffic Flow Management measure established to reduce demand to the level of the Air Traffic Control capacity and to smooth out traffic flows, thus making full use of the available Air Traffic Control capacity. Departure slots are issued directly to aircraft operators by the Eurocontrol Central Flow Management Unit and in accordance with the relevant procedures. They are allocated in terms of calculated take – off times (CTOT).

¹⁷ A slot series means at least five slots for the same time on the same day of the week regularly in the same scheduling period and allocated in that way or, if that is not possible, allocated at approximately the same time. For instance a slot allocated each Monday at 8.00 am for at least 5 consecutive weeks represents a series of slots.

¹⁸ See the glossary in annex 1 for a definition of the new entrant.

¹⁹ See annex 4. References in this study to 'EU' may be taken to include the EEA countries and Switzerland.

airports include some at which demand substantially exceeds capacity at all times, such as London Heathrow and Paris Orly, and also others at which overall demand does not significantly exceed capacity, but where capacity is scarce during certain peak periods. 18 Member States have at least one coordinated airport and therefore must appoint a coordinator.

16. As explained above, the Slot Regulation was introduced at a time when the European air transport market was still dominated by a small number of traditional national carriers. Nowadays there is much more competition and at the same time airport congestion is worsening. In this context, even if the slot allocation was structured as an administrative system, at UK airports (London Heathrow in particular) a grey market on slots had emerged by the 1990s. As those airports were becoming more and more congested, airlines were willing to pay other airlines for their slots, meaning that a financial value could be attributed to slots for the first time. Today, slots can be sold between airlines at significant prices (in 2008 Continental Airlines paid US\$209 million for four daily slot pairs at Heathrow). This evolution was recognised by the Commission in the 2008 Communication²⁰.
17. In contrast to Europe, access to most airports in the US is not regulated, with airlines being expected to plan their movements in a way that minimises delays for their passengers. However, slot allocation has been regulated at a small number of congested airports. At these airports, the primary allocation and the trading of slots are governed by different pieces of legislation dating from 1968 to 2000. Secondary trading was introduced by the 1985 Buy/Sell rule currently applied only at Washington National airport and slot leases are taking place also at the other airports. In October 2008 the Federal Aviation Authority proposed new rules to address congestion at New York Airports, in the form of auctions. Nevertheless the proposal was cancelled due to litigation over competent authority to proceed to auctions.

2.2. Problem definition

18. In 2009 EU airports handled over 750 million air passengers, of which 480 million were travelling on flights within the EU, amounting to a third of the world market. The 15 biggest airports in Europe handled more than half of the overall traffic in Europe. There are 5 EU airports (London Heathrow, Paris Charles De Gaulle (CDG), Frankfurt, Madrid and Amsterdam) in the top 25 airports in the world measured by the total number of passengers handled. These figures provide some idea of the importance of the largest airports in terms of passenger numbers. It should be remembered that these largest airports cannot be seen in isolation: problems at these airports have a significant knock-on effect, notably in cases of delays, for all feeder airports which depend on connections to these congested hubs, and for Europe's connections to other world regions, which are so important for Europe's growth and competitiveness.
19. The 15 largest airports in Europe experience congestion at different levels. Demand currently exceeds capacity throughout most or all of the day at six European airports (London Heathrow, London Gatwick, Paris Orly, Milan Linate, Düsseldorf and Frankfurt). These 6 airports alone handled 200 million passenger movements in 2009. Demand also exceeds capacity during peak hours at a number of other airports (Amsterdam Schipol, Madrid Barajas, Munich, Paris CDG, Rome Fiumicino, and Vienna). The baseline scenario illustrates the extent to which airport congestion is worsening (section 2.4).

²⁰ COM (2008)227.

20. In light of the shortage of capacity at critical airports and its spill over effect on the mobility of European citizens, building new runways and airport infrastructure is the obvious answer. However, the impact of infrastructure on the environment and on land planning is a growing concern. In addition, the current economic crisis reasserts the importance of putting budget accounts into a long-term sustainable path. More cost-effective solutions would have to be found to tackle congestion than relying on expanding 'hard' infrastructure.
21. In this context, **any option ensuring a more efficient use of existing capacities and allowing a resource-efficient aviation system has to be contemplated.** Clearly, slot allocation cannot generate additional capacity: it cannot provide the same benefits as additional runway or terminal capacity. Moreover slot allocation cannot solve the many difficult issues created by a lack of capacity such as how to adequately cater for air links for Europe's regions from capacity-constrained airports, or providing congested hubs with enhanced connections to all world regions. Enhanced slot allocation schemes will never satisfy these important needs. Slot allocation, however, can be an effective tool for managing scarce capacity.
22. The main problem to be addressed is therefore the sub-optimal allocation and use of airports slots. **In this airport-constrained situation experienced for many years, a number of elements tend to show that the current EU slot allocation system is not optimal.**
23. The evaluation of the implementation of the current Slot Regulation²¹ underlined the existence of several drivers causing sub-optimal allocation and use of airport slots, which could fall into two main categories: on the one hand, the difficulties created in the context of the current EU 'administrative' system, and, on the other hand, the difficulties created by the fact that the system has precisely been built as an administrative system, ignoring the benefits of market-based mechanisms. It has to be stressed that the underlying drivers are not of similar importance, the second driver being more far-reaching than the first one.
24. Given the important role played by the largest airports in EU, this IA report will concentrate on a sample of airports to describe the problem and assess the expected impacts of the proposed initiative. As explained in further detail in Annex 2, these 15 airports have been chosen on the basis of objective criteria, notably the fact that they are coordinated, experience high passenger flows and level of congestion and are representative from a geographical point of view.
- 2.2.1. *The current administrative system is neither complete nor fully implemented*
25. The lack of independence of the slot coordinator and reduced transparency of slot data could affect a neutral and non-discriminatory process of slot allocation and therefore impede the new entry on the market. Moreover the fact that airlines that are returning late the slots held without intention to be used reduces the number of slots that could be allocated to airlines wishing to operate and then ensure efficient use of slots. As the slot allocation is not sufficiently aligned with the progress achieved via Single European Sky in air traffic management, it impedes the efficient use of air and ground space. Finally the current 80-20 rule and the definition of a series of slots are not ambitious enough regarding the use of airport capacity. All these problematic areas impede also the existence of a fair and non-discriminatory framework for

²¹ Impact assessment of revisions to Regulation 95/93, Steer Davies Gleave, 2011. The consultant was asked to proceed first to an evaluation of the current regulation. Thus the consultant covered the period 2006-2010 and it concluded with a list of problems in the implementation of the Slot regulation.

competition to be exercised as capacity is blocked or because the allocation of slots and the monitoring of their use are not done in a neutral, transparent and non-discriminatory way.

Full independence of slot coordinators is not sufficiently guaranteed to ensure optimal slot allocation

26. In some Member States, **aspects of how the coordination system is structured could be interpreted as limiting the independence of the coordinator**. The slot coordinator is sometimes part of the national airport management company or seconded from a national airline. Moreover there is no guarantee of independence vis-à-vis the Member State. **The system of financing of coordination activities is different all over Europe** (see annex 6). The fact that in some cases the slot coordinator's budget is totally or mainly financed by one single and interested party could be considered as hampering, at least theoretically, its independence. The coordinator should be an actor whose status and activity mean that its independence is beyond any doubt. Any potential influence from any interested body (airlines, airports, Member State) could affect the neutral and non-discriminatory process of slot allocation. All airlines have to receive non-discriminatory treatment from the coordinator.

Transparency level is not sufficient to guarantee optimal slot allocation

27. Article 4(8) of the current Slot Regulation requires that, on demand by interested parties, the coordinator must provide interested parties with certain specific data (historical slots, requested slots etc.). The only specification of how the information should be provided is that it should be “in written form or in any other easily accessible form”.²²
28. In the stakeholder consultation, most airlines believed that the information provided by coordinators was sufficient, but several considered that **the level and quality of information provided varied between coordinators**. Several airlines believed that more information was required on actual coordination parameters (in particular keeping that information up to date), local rules and sanctions systems. Moreover the current Regulation does not prescribe the provision of information on on-the-day slot availability data or slot monitoring.
29. Furthermore, the evaluation of the current Slot Regulation and the 2009 annual reports of slot coordinators²³ proved that **the latter are not keeping slot data for several years** which makes it impossible for the Commission or the national competition authorities to analyse the evolution of demand and capacity over a certain period.

Late slot hand-back is not sufficiently discouraged

30. Article 10(3) of the Slot Regulation states that slots have to be returned to the coordinator by 31 January (for the summer season) or 31 August (for the winter

²² To meet this, two methods of information exchanges have been adopted by coordinators: Standard Schedules Information Manual (SSIM) format for communications regarding slots; and via their own or shared websites (www.euaca.org and www.online-coordination.com).

²³ According to Article 4(5) of the Slot Regulation, the coordinator shall submit on request to the Commission an annual report activity, concerning in particular, the application of Articles 8a and 14, as well as any complaints regarding the application of Articles 8 and 10 submitted to the coordination committee and the steps taken to resolve them. The 2009 annual reports were received by the Commission in autumn 2010.

season) if they are not to be taken into account for the 80/20 calculation. These dates are the Slot Return Deadline (SRD). The late hand back of slots (slot not returned at the SRD and held without the intention to be operated) is not explicitly sanctioned by the current Slot Regulation.

31. **Evidence shows that airlines normally request more slots than they really need²⁴ and that a significant percentage of slots are returned too late to be allocated to another carrier.²⁵** This aspect has an important impact on the efficiency of the slot allocation system and increases the workload for both coordinators and airline scheduling teams.

Misuse of slots is not sufficiently discouraged

32. **The types of slot misuse for which sanctions can be imposed vary significantly between Member States** as to the behaviours sanctioned or the frequency of sanctions.²⁶ Additionally the monitoring of slot use is approached differently according to the Member State.²⁷ Finally several types of misuse are not covered by the Slot Regulation (for instance, one-off offences, although they can cause significant problems for airport or air traffic operations).

In its current form, the Slot Regulation is not fully compatible with the reform of European air traffic control (Single European Sky)

33. The first Single European Sky package of legislation (SES I)²⁸ was adopted just a few months after the revision of the Slot Regulation in 2004, which meant that an opportunity to update the latter one in order to take into account the developments of the SES was lost. The second Single European Sky package (SES II)²⁹ followed in 2009 and this package has clear implications for airport capacity and the slot allocation process. Chief among these are the performance scheme, under which airports, air navigation service providers as well as airspace users are subject to specific measures to monitor and improve performance³⁰ and the network

²⁴ Even at some airports with relatively limited congestion, such as Amsterdam Schiphol and Rome Fiumicino, the number of slots initially allocated in response to carrier requests significantly exceeds the number still held by airlines by the SRD. See annex 7.

²⁵ European Union Airport Coordinators Association (EUACA) provided analysis, undertaken for Manchester airport, which shows that over 7% of slots requested for the peak hour and allocated for the peak hour were ultimately cancelled. Whilst it was possible to improve some other slot offers, some capacity remained unused as a result. See annex 7.

²⁶ See annexes 8 and 9.

²⁷ See annex 9.

²⁸ Regulation (EC) No 549/2004 of 10 March 2004 laying down the framework for the creation of the single European sky (the framework Regulation), OJ L 96, 31.3.2004, p. 1; Regulation (EC) No 550/2004 of 10 March 2004 on the provision of air navigation services in the single European sky (the service provision Regulation), OJ L 96, 31.3.2004, p. 10; Regulation (EC) No 551/2004 of 10 March 2004 on the organization and use of the airspace in the single European sky (the airspace Regulation), OJ L 96, 31.3.2004, p. 20; and Regulation (EC) No 552/2004 of 10 March 2004 on the interoperability of the European air traffic management network (the interoperability Regulation), OJ L 96, 31.3.2004, p. 26.

²⁹ Regulation (EC) No 1070/2009 of the European Parliament and of the Council of 21 October 2009 amending Regulations (EC) No 549/2004, (EC) No 550/2004, (EC) No 551/2004 and (EC) No 552/2004 in order to improve the performance and sustainability of the European aviation system, OJ L 300, 14.11.2009, p. 34.

³⁰ Commission Regulation (EU) No 691/2010 of 29 July 2010 laying down a performance scheme for air navigation services and network functions and amending Regulation (EC) No 2096/2005 laying down common requirements for the provision of air navigation services, OJ L 201, 3.8.2010, p. 1. An independent performance review body monitors and assesses the performance of the system. It develops

management function³¹, which comprises European route network design and central (traffic) flow management.

34. Practical examples from the ash cloud crisis and the snow crisis in relation to slots showed that the **European Union is not fully prepared to deal adequately with these types of situations**. The slot management during these crisis showed that no instrument is in place to deal with the management of airport capacity in order to deviate traffic to airports which are neither coordinated nor schedules facilitated but that suddenly become congested.
35. Additionally, although the Slot Regulation allows for *ex ante monitoring of the consistency of flight plans and airport slots*, this only happens regularly in France, Germany and at Madrid and Palma de Mallorca airports – other Member States, and Spain at its other airports, rely on *ex post* imposition of sanctions, where this is necessary.³² This is caused by the lack of clarity of the text regarding the role of the different entities involved (airports, air traffic management activities, coordinators). The lack of consistency between flight plans and slots is therefore impeding the efficient use of air and ground space.
36. Lastly, from 2015 airports will be fully included in the performance scheme provided for in SES II. It is therefore necessary to update the slot allocation system.

80-20 rule and the definition of the series of slots are not ensuring optimal slot allocation and use

37. The Slot Regulation requires that, for historic precedence (grandfathering) to be obtained or retained, a series of slots must be used at least 80% of the time. A series of slots must contain at least 5 slots; therefore, for a series of 5 slots, at least 4 slots must be used. **This so called 80-20 rule allows for 20% of the airport slots and therefore of the airport capacity to remain unused**. Even if slot utilisation is high at the most congested airports,³³ over 10% of slots allocated still remain not used. In addition, at some airports (see example of Gatwick airport or Palma de Mallorca airport in annex 10), short series of slots (more than 5 slots but less than 10) with historic rights can also result in inefficient capacity utilisation. This is mainly due to the fact the short series of slots block capacity in IATA summer peak and prevent year-round services operating. They cause fragmentation in the allocation of slots: if an airline has historic rights to a short series in high season, it prevents others from obtaining a series of slots lasting throughout the season. For instance, in the summer season, the longest series of slots could contain around 30 slots (each Monday of each week of the season at 8.00). If one air carrier has historic slots for a short series covering only July/August, it means that another carrier can only operate in the off-peak weeks (March to June and September to October). This is not commercially

indicators for the various performance areas and proposes Community-wide targets (delay, cost reduction, shortening of routes). The Commission approves the performance targets and passes them on to the national supervisory authorities. These authorities organise wide consultations, notably with airspace users, to agree on proposals for national/regional targets consistent with the network-wide targets.

³¹ Commission Regulation (EU) No 677/2011 of 7 July 2011 laying down detailed rules for the implementation of air traffic management (ATM) network functions and amending Regulation (EU) No 691/2010, *OJ L* 185, 15.7.2011, p. 1–29. . Network management function helps service providers and users find optimal gate-to-gate solutions from a European network perspective, complementing performance regulation.

³² See annex 9.

³³ See annex 10.

interesting. Airlines do not ask for fragmented series of slots and capacity remains unused outside the peak period.

38. Within the first driver, whereas compliance has not been identified as a driver per se, several problematic areas described in the IA report are nonetheless related to compliance issues. The fact that full independence of slot coordinators is not sufficiently guaranteed is caused by a lack of compliance by the Member States, as they have an obligation to ensure independence safeguards. The same goes for misuse of slots not being sufficiently discouraged, for a lack of consistency between flight plans and slots and, to a certain extent, to transparency of slot data. These problematic areas, as well as the related compliance aspects, are in fact caused by a lack of clarity of the current rules and consequently different interpretations. The difficulty to enforce these rules determined the Commission to adopt the 2007³⁴ and 2008 Communications³⁵ by which efforts were made to ensure a uniform and efficient implementation.

2.2.2. *The legal framework is no longer adapted to the evolution of the aviation market*

39. **Due to the fact that the slot allocation has been built as an administrative system, it ignores the benefits of market-based instruments.** Hence there is no EU framework for secondary trading, even if it takes place at some airports, and the new entry on the market is not sufficiently addressed by the current Regulation.

The absence of an EU-wide framework for secondary trading hampers optimal slot allocation

40. The Slot Regulation allows exchanges of slots between airlines, but is not explicit as to whether these can be accompanied by monetary or other considerations. In addition, whilst the Slot Regulation does not specifically allow buying and selling of slots, it does not explicitly prohibit this either. The Commission announced in 2008³⁶ that it did not intend to pursue infringement proceedings against States which allowed secondary trading in slots provided this was undertaken in a transparent manner.
41. In this context, the main method by which buying, selling and leasing of slots occur is through ‘fake’ or ‘artificial’ exchanges in order to meet the requirements of the current provisions of the Slot Regulation. In order to undertake a purchase of a slot, the purchasing carrier applies for a valueless slot (such as a slot at 0400h) which can be freely obtained from the coordinator through the pool. This is exchanged for the slot that it wishes to purchase. The selling carrier then nominally acquires the valueless slot, but does not operate it.
42. Annex 11 summarises the current position with secondary trading at the sample airports. Secondary trading primarily occurs at London Heathrow and, to a lesser extent, London Gatwick. At both airports secondary trading seems to offer benefits in terms of capacity utilisation. It is not entirely clear whether secondary trading occurs at other EU airports, but the slot coordinators have identified that ‘fake exchanges’ have occurred at Frankfurt, Düsseldorf and Vienna. These are likely to be accompanied by consideration, although such consideration is not necessarily monetary, and some of the air carriers involved denied that there had been any payments. Whilst the UK coordinator can provide a list of all slot trades taking place at London airports, there is no information on possible contractual constraints in the

³⁴ COM(2007)704.

³⁵ COM(2008)227.

³⁶ COM(2008)227.

form of covenants which may dictate to the buyer how such slots can be used. This makes it difficult for the Commission or national competition authorities to analyse possible competition concerns. Moreover, secondary trading is not permitted at certain airports (including Paris Orly, and the Spanish airports).

43. Annex 11 shows also the trends in market concentration, measured using a Herfindahl-Hirschman Index, on a sample of the larger routes from Heathrow in terms of passenger numbers.³⁷ It demonstrates that the route-specific impact of trading is mixed. Trading has enabled more competition on some long haul routes, such as the route to New York. However, secondary trading has contributed to a reduction in competition on some short haul routes as airlines have withdrawn and either sold slots or redeployed them to other routes.
44. To conclude, **there are two main problems regarding the secondary trading and both of them are driven by the lack of clarity and legal certainty of the framework: there is no uniform framework for secondary trading all over the EU and when it takes place there are no safeguards to ensure transparency or undistorted competition.**

Barriers to new entry and expansion

45. New entrants are confronted with two types of barriers: there are limitations both on the access to the market and on the expansion of their businesses.

Barriers to new entry

46. The system of historical preference³⁸ means that it is very difficult for new entrants to challenge the dominant position of the traditional incumbent airlines at the most congested airports. At these airports, the mobility (turnover) of slots is very low.
47. The Slot Regulation requires that 50% of pool slots be allocated to new entrants. Both coordinators and airlines indicated in the consultation that the new entrant rule is not often invoked, mainly as the available pool slots are not at interesting times or because they want to avoid the operational constraints attached to new entrant pool slots³⁹.
48. The main problem with the ineffectiveness of the new entrant rule is connected with empty or almost empty slot pool (with or without secondary trading being in place). This is apparent at the most congested airports, particularly Heathrow, where it is unusual for daily series of slots or peak hour slots to be available through the pool.⁴⁰
49. Dominant carriers are reluctant to give up slots and they are impeding access to the market by hoarding or babysitting slots. The report by the European Competition

³⁷ The Herfindahl index is a common measure of market concentration, taking into account market shares and the number of competitors. The higher the index, the greater the degree of market concentration is.

³⁸ An air carrier having operated its particular slots for at least 80% during the summer/winter scheduling period is entitled to the same slots in the equivalent scheduling period of the following year (so called grandfathered rights). Consequently, slots which are not sufficiently used by air carriers are reallocated (so called "use-it-or-lose-it" rule or 80-20 rule).

³⁹ Article 8a(3) of the Slot regulation prescribes that slots allocated to new entrant may not be transferred to another carrier or to another routes, or exchanged for a period of two equivalent scheduling periods (which corresponds to two years).

⁴⁰ Data shows that at Heathrow airport pool slots allocated under the new entrant rule represent only 0.4% of total slots. At Paris Orly and at Paris Charles de Gaulle the figures are 0.6% and respectively 0.7%. See Annex 14 on the proportion of slots allocated to new entrants.

Authorities on slot trading⁴¹ identified as a potential problem the fact that airlines are holding slots, even though they cannot use them profitably, with the primary objective of preventing other airlines from entering the market or from expanding (slot hoarding). These airlines could alternatively proceed to babysitting, by leasing slots to other airlines, but here also competition concerns could arise: the lessor could restrict the use of the slots by the lessee, it could choose to lease the slots only to airlines that are not considered to be strong competitors, it could ask for excessive prices etc.

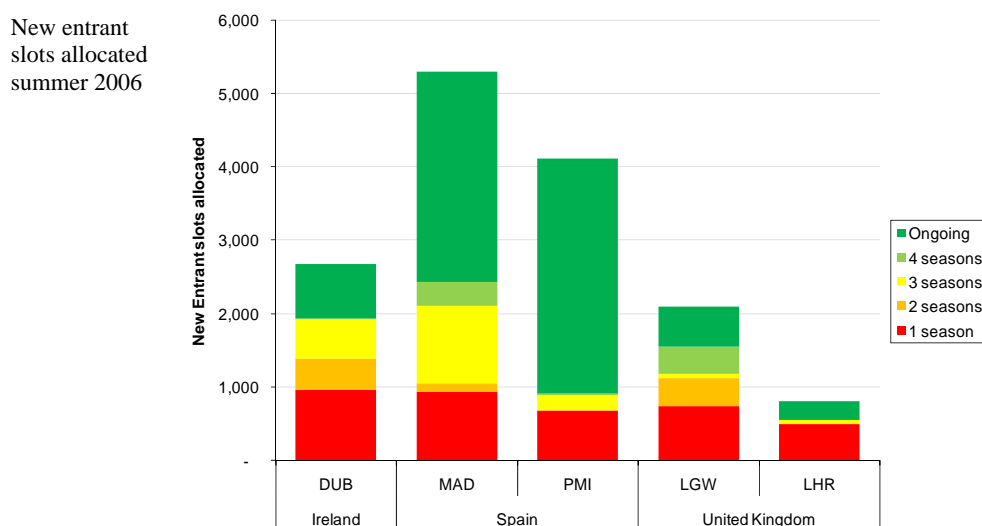
50. To conclude, **there are several barriers to new entry and these are caused by an empty or almost empty slot pool** due to the importance of the demand, the grandfathered rights and to the fact that slots are hoarded or babysitted and therefore not returned to the pool.

Barriers to expansion of businesses

51. The definition of 'new entrant' as set out in Article 2(b) is very restrictive (see also the glossary in annex 1), which in practice means that only carriers with a small presence at the airport could qualify as new entrants. As a consequence, slots tend to be awarded to a **proliferation of carriers, rather than to a larger carrier that may be in a stronger position to offer effective competition to the main incumbent.**⁴² The mobility of slots is very low, also because secondary trading is not authorized in many airports.⁴³

52. Evidence shows that the potential impact of the new entrant rule on market concentration at congested airports is limited as many of the new entrant slots are not retained. Figure 2 shows, for several airports, the length of time for which entrants retained the new entrant slots allocated during summer 2006. The majority of the slots allocated to new entrants during this period are no longer operated by these airlines.

FIGURE 1 RETENTION OF NEW ENTRANT SLOTS



⁴¹ *Progress Report of the air traffic working group on slot trading*, European Competition Authorities, 17 June 2005; *Competition issues associated with the trading of airport slots*, A paper prepared for DG TREN by UK Office for Fair Trading and Civil Aviation Authority, June 2005.

⁴² See Annex 15 on allocation of pool slots at Paris Orly since 2002.

⁴³ Annex 13 on slot mobility shows that during summer 2007 – summer 2010, at the most congested airports, there has been limited change in the allocation of slots.

Conclusion

53. The analysis above has shown that **the safeguards for a neutral, transparent and non discriminatory slot allocation are not always in place**. Moreover, allocated airport slots are not necessarily used because **the existing legislation is not completely implemented or because the framework is not complete**. These two issues are further aggravated by the fact that the current legal framework **is no longer adapted to the current market conditions, hampering thereby competition between operators**. Consequently, the allocation and use of slots is sub-optimal in the context of scarce airport capacity.

2.3. Parties affected by the problem

54. The problems identified obviously affect airports as airport capacity is not efficiently or fully used. But they also affect airlines as access to congested airports is limited and they cannot obtain the slots which are inefficiently used by other airlines. This is caused by the fact that there are no pool slots, secondary trading is not in place or is not transparent or they don't qualify as new entrants. Moreover airlines are confronted with different interpretations by slots coordinators or different sanction schemes across EU. Finally the airlines are confronted with a lack of information on slot data. The lack of clarity of some provisions of the Slot Regulation has led coordinators to have different interpretations and hence they also lack legal certainty on the correct implementation of the Regulation. Finally, consumers are affected as they are confronted with suboptimal levels of competition, services and prices.

2.4. Effects of non action

55. The Commission has carried out an analysis of possible future developments in a scenario at unchanged policies, the so-called 'baseline scenario'.
56. As already explained, it is important to note that the Slot Regulation has an impact at airports only to the extent that demand exceeds capacity and that the problematic areas identified should be analyzed in this context. Therefore the most important element of the baseline scenario for the impact assessment is the trend in demand and capacity for each of the sample airports.
57. The 2008 EUROCONTROL study 'Challenges of Growth'⁴⁴ predicted that in the future, airport capacity would not match demand at a large number of European airports, and therefore congestion would significantly worsen. It is true that this study was undertaken before the impact of the downturn in traffic caused by the economic crisis was fully realised. Indeed, the number of flights operated in 2010 is 14% lower than it might have been if traffic had continued to increase on the pre-2008 trend. Whilst at the time of writing there are now clear signs of recovery, the most recent EUROCONTROL forecast⁴⁵ indicates that around five years of growth has been lost due to the effects of the financial crisis. To sum up, the congestion that was forecast in 2008 has merely been "delayed" by 5 years.
58. Demand currently exceeds capacity throughout most or all of the day at six European airports (London Heathrow, London Gatwick, Paris Orly, Milan Linate, Düsseldorf

⁴⁴ Eurocontrol (2008): Challenges of growth.

⁴⁵ Eurocontrol (2010): Long-term forecast 2010-2030.

and Frankfurt). Demand also exceeds capacity during peak hours at a number of other airports. A major expansion was undertaken at Frankfurt airport, including a new runway, and as a result Frankfurt will probably have sufficient capacity to accommodate most demand for the period covered by this impact assessment (2011-2025).⁴⁶ Limited expansion is also expected at Düsseldorf and Gatwick but demand will continue to exceed capacity throughout the day at these airports. By the end of this period, it appears likely that demand will also exceed capacity through most or all of the day at Paris CDG. In addition, no expansion in capacity is planned at Heathrow, Orly or Linate, and therefore the gap between demand and capacity will grow further at these airports. Congestion will also worsen at some other key European airports including Amsterdam Schiphol⁴⁷.

TABLE 1 FORECAST AIRPORT CONGESTION

Airport	2010	2017	2025	Capacity assumptions
Amsterdam Schiphol	Demand exceeds capacity during part of day	Demand exceeds capacity during part of day	Demand exceeds capacity during part of day	Assumes annual movement cap raised to 510,000 in November 2010 but no further increase
Dublin	Sufficient capacity most or all day	Sufficient capacity most or all day	Sufficient capacity most or all day	Second runway built when needed
Düsseldorf	Demand exceeds capacity most or all day	Demand exceeds capacity most or all day	Demand exceeds capacity most or all day	Assumes a 10% increase in capacity in 2015 but no further increase
Frankfurt	Demand exceeds capacity most or all day	Sufficient capacity most or all day	Demand exceeds capacity during part of day	New runway (2011) and terminal (2015) allow increases from 83 to 126 movements/hour
London Gatwick	Demand exceeds capacity most or all day	Demand exceeds capacity most or all day	Demand exceeds capacity most or all day	Assumes no new runway but increase of 2-3 movements/hour on current runway
London Heathrow	Demand exceeds capacity most or all day	Demand exceeds capacity most or all day	Demand exceeds capacity most or all day	Assumes no third runway, or mixed mode, or relaxation of annual movement cap.
Madrid Barajas	Demand exceeds capacity during part of day	Demand exceeds capacity during part of day	Demand exceeds capacity during part of day	Assumes ATC improvements increase capacity from 98 to 120 movements/hour by 2020 (increase phased in from 2014)
Milan Linate	Demand exceeds capacity most or all day	Demand exceeds capacity most or all day	Demand exceeds capacity most or all day	Assumes no amendment to Bersani Decree
Munich	Demand exceeds capacity during	Sufficient capacity most or	Demand exceeds	Assumes third runway operational by

⁴⁶

Explanation on the period covered by this impact assessment is given in annex 2.

⁴⁷

See annex 5.

	part of day	all day	capacity during part of day	2017
Palma de Mallorca	Sufficient capacity most or all day	Sufficient capacity most or all day	Sufficient capacity most or all day	Assumes additional capacity added when required
Paris CDG	Demand exceeds capacity during part of day	Demand exceeds capacity during part of day	Demand exceeds capacity most or all day	Assumes increase from 114 to 120 movements/hour by 2015, but no further increase (e.g. fifth runway)
Paris Orly	Demand exceeds capacity most or all day	Demand exceeds capacity most or all day	Demand exceeds capacity most or all day	Assumes no relaxation of annual slot cap
Rome Fiumicino	Demand exceeds capacity during part of day	Demand exceeds capacity during part of day	Demand exceeds capacity during part of day	Assumes improved ATC allowing 100 movements/hour but no new runway
Vienna	Demand exceeds capacity during part of day	Demand exceeds capacity during part of day	Demand exceeds capacity during part of day	Assumes third runway operational in 2020, initially allowing 80 movements/hour increasing to 90 movements/hour by 2025

Source: Impact assessment of revision to Regulation 95/93, Steer Davies Gleave, 2011.

59. In general, where there are issues with the operation of the current Slot Regulation, such as late hand back of slots and low utilisation at certain airports, these are likely to continue at the current level. Where airport congestion is expected to get worse, over time the problems which have been identified with the Slot Regulation will have more impact, and options which address these problems will have greater benefits. In contrast, at airports where capacity is expanded, such as Frankfurt, the impact will be reduced.
60. There would still be problems related to lack of clarity of the current Slot Regulation as no solution is offered. If no update of the Slot Regulation is done in order to ensure consistency with the Single European Sky and as the implementing rules on performance and network management will soon be applied, the discrepancy between the two will become more important.
61. Secondary trading will continue to take place only at London airports and the estimate of slots traded will be 3% (the average percentage for the last three years at Heathrow). For the other airports, no indication has been given that secondary trading would be introduced.
62. The baseline scenario shows that by 2025, only 0.3% of slots will be allocated through the pool at Heathrow, while at Orly it will reach 1.1%. This shows that barriers to entry will continue to be a problem as slots will not be available through the pool.
63. As no aggregate data exists on slot hoarding or slot babysitting, it is not possible to forecast how this problem will evolve in the future but it can be assumed that both phenomena would continue to exist.
64. Assumptions made and modelling of the baseline scenario for the 6 sample airports are described in Annex 16.

2.5. Does the Union have the right to act?

65. The necessity to act at European level in relation to slot allocation was recognized in 1993 with Council Regulation (EEC) 95/93 of 18 January 1993. **Slot Regulation is essential to the proper functioning of air transport.** It responds to the objective Articles 90 and 91 of the Treaty on the Functioning of the European Union (TFEU).
66. According to Article 4 of the TFEU, and without prejudice to Article 3(2) of the same treaty and to the Court of Justice of the European Union's case law, EU action regarding slot allocation, as part of the common air transport policy, has to be justified. In the present case, it is therefore necessary that the subsidiarity principle set out in Article 5(3) of the Treaty on the European Union is respected. This involves assessing two aspects.
67. Firstly, it has to be assessed if the objectives of the proposed action could not be achieved sufficiently by Member States in the framework of their national constitutional system, the so-called necessity test. In the present case, **this justification centres on the need to ensure that uniform and efficient rules exist all over Europe** in order to provide all operators with a level playing field.
68. Secondly, it has to be considered whether and how the objectives could be better achieved by action on the part of the EU, the so-called “test of European added value.” **In achieving a true internal market for air transport**, the EU's added-value should consist of implementing measures that take into account the situation of different airports while, at same time, **ensuring that the competition between operators is not hindered.** Any individual action at the Member State level would have the potential to prejudice the functionality of the internal market.

3. SECTION 3: OBJECTIVES

3.1. General objective

69. Europe aims at an efficient, competitive aviation system, offering a network of global connectivity where citizens can safely and securely fly at affordable rates. Airports play a crucial role in the aviation chain. Their well-functioning and efficiency is a key economic parameter for their airline clients and for businesses that work close cooperation with them. They are central for the successful delivery of the Single European Sky reform. As recognised in the Declaration adopted at the Bruges Aviation Summit in October 2010,⁴⁸ to achieve this, there is a need to reform EU rules to foster the competitiveness of European airports (and eliminate capacity bottlenecks), so that the efficiency of each link in the aviation transport chain (e.g. airports, carriers, other service providers) is improved to give travellers and companies more value for money. This role has been recognised in the White Paper – Roadmap to a Single European Transport Area,⁴⁹ which has identified a better use of existing airport capacity through enhanced slot allocation system as one of the actions needed to create the Single European Transport Area.
70. **In this context, the general objective of the proposed initiative is to ensure an optimal allocation and use of airport slots in congested airports.** This will lead to a better use of airport capacity in the context of a worsening congestion and an increasing gap between demand and airport capacity. The Slot Regulation is

⁴⁸ A meeting which brought together high level figures from the world of aviation in order to discuss challenges facing the sector. <http://www.eutrio.be/european-aviation-summit>

⁴⁹ COM (2011)144 final.

therefore an essential element of the common air transport policy to attain Treaties' goals like common rules applicable to international transport to or from the territory of a Member State or passing across the territory of one or more Member States.⁵⁰

3.2. Specific objectives

71. Based on the problem and related root causes summarised in point 53 above, the general objective can be translated into more specific objectives:

SO1. Ensure a strengthened and effectively implemented slot allocation and use.

This objective will aim at ensuring that common EU rules are clear and fair for any interested party and that they are better implemented. Moreover it will aim at completing the current administrative system by ensuring that slots are used effectively and that the slot allocation process is integrated in the Single European Sky.

SO2. Enhance fair competition and competitiveness of operators. This objective will aim at stimulating effective and undistorted competition to help ensure that passengers are offered the best possible travel options, which will in turn help maintain and improve the sector's competitiveness.

3.3. Operational objectives

The mentioned specific objectives can at their turn be translated in operational objectives. For SO1, these objectives include the following: reduce late hand back, increase slot utilisation, and reduce slot misuse. For SO2, they include: increase number of competitors with a stable slot portfolio, increase number of passengers transported and number of flights operated within the same airport capacity and enlarge slot pool. We have excluded the quantification of the operational objectives because, imposing a quantified target for a specific problem to be solved cannot be achieved as each airport has a different level of congestion and therefore the impact is not uniform⁵¹.

72. The Commission would evaluate the implementation of the revised Regulation 4 years after its adoption by the European Parliament and the Council. The operational objectives would be evaluated on the basis of the monitoring indicators presented in section 7 of the IA report. This exercise will allow the Commission to assess the first impacts of the (revised) policy at congested EU airports and to refine, on the basis of data on the results of the new Regulation, the operational objectives. On the basis of this analysis, the European Commission would assess to what extent quantified operational objectives can be defined, and would monitor indicators every two years. This information will appear in the published evaluation report.

3.4. Consistency of the objectives with other goals

73. Measures designed to meet the objectives will be in compliance with relevant fundamental rights and principles as embodied in the Charter of Fundamental Rights of the European Union. In particular, the measures aimed at enhancing competition

⁵⁰ Article 91(1)(a) of the Treaty on the Functioning of the European Union) and establishing an internal market (Article 3(3) of the Treaty on European Union.

⁵¹ For example, an operational objective of a 20% reduction in late hand back of slots at London Heathrow is irrelevant, late hand back there not being an issue due to the high value of the slots.

and competitiveness of operators will take due account of the need to respect the freedom to conduct a business (Art. 16).

74. A better use of existing airport capacity through a more efficient slot allocation system contributes to the overall objective of the Sustainable Development Strategy regarding sustainable transport: ensure that our transport system meets society's economic, social and environmental needs whilst minimising their undesirable impacts on the economy, society and the environment.

4. SECTION 4: DESCRIPTION OF POLICY PACKAGES

4.1. Possible types of EU intervention

75. In a first step, the Commission has first envisaged possible interventions at EU level to address the problem identified above.

76. **The first possible EU intervention could consist in repealing the current Regulation.** This would mean that the only applicable code for the allocation of slots in EU would be the IATA Worldwide Slot Guidelines, which, being an industry code, do not have the force of law. All stakeholders have agreed that the Slot Regulation has dramatically improved the process of slot allocation in Europe, and the amendments in 2004 have been a further step in ensuring a neutral and non-discriminatory allocation process. National legislation, in case of repeal of the Slot Regulation, would add considerable complexity to the system given the high degree of market integration of aviation in Europe; it is almost inevitable that there would be conflicts between such national legislation and key parts of the aviation acquis, such as Regulation 1008/2008 on operation of air services in the Community.⁵² There would be specific danger that discriminatory provisions could conflict with Member States' Treaty obligations. In view of the serious risk of fragmentation of the internal market that would result, this possibility has not been pursued further.

77. Another alternative policy option would be to provide **guidance material** to supplement the existing, unchanged Regulation. Such guidance would necessarily be soft law of non-binding nature, which would entail a number of enforcement problems. But, most importantly, many of the key drivers leading to sub-optimal slot allocation could simply not be addressed: **any guidance would conflict with the existing text of the Slot Regulation.** For example, it would be impossible to give guidance on the 'new entrant rule' to help the emergence of effective competition because such guidance would conflict with the relevant provision of the Slot Regulation. The same applies to the 80-20% rules set in stone in the current Slot Regulation: setting a more ambitious rule of 85-15% through guidance would be impossible. As explained, the existing slot allocation scheme was conceived as an administrative system: introducing market-based mechanisms to optimize slot allocation through guidance is irreconcilable with the current Slot Regulation (introducing EU wide-rules for secondary trading; withdrawal of slots/auctioning; auctioning of new capacity etc. can simply not be addressed through guidance). It is worth recalling that in its 2008 Communication the Commission tried to give guidance on several aspects of the Regulation but the evaluation of the implementation of the current rules showed that it did not succeed.

⁵² Regulation (EC) No 1008/2008 of the European Parliament and of the Council of 24 September 2008 on common rules for the operation of air services in the Community, OJ L 293, 31.10.2008, p. 3–20.

78. In this context, the only valid new EU intervention should take the form of a revision of the Slot Regulation.

4.2. Identification of possible policy measures

79. The stakeholders' consultation and the 2011 study allowed identifying a broad set of individual measures having the potential to address the three drivers above. The following process was applied for generating from these possible policy measures the policy packages that will be analysed in later parts of the present report:

- Identify the policy measures which can be discarded on the basis of a first, preliminary assessment (see Annex 18). These policy measures were proposed in the stakeholder consultation or in the 2011 study but were discarded at an early stage of the impact assessment for not bringing sufficiently high benefits in comparison to their costs.
- Draft a list of retained policy measures;
- Package those measures into policy options constituting viable policy alternatives for achieving the objectives.

80. The table below provides a mapping between the retained policy measures and the problems identified above.

TABLE 2 POLICY MEASURES

<i>Problematic areas identified in the problem definition</i>	<i>Policy measures</i>	<i>Content of policy measures</i>
<i>Driver 1: The current administrative system is neither complete nor fully implemented</i>		
<p><i>Full independence of slot coordinators is not sufficiently guaranteed to ensure optimal slot allocation</i></p> <p><i>Transparency level is not sufficient to guarantee optimal slot allocation</i></p>	<p>Strengthen independence of slot coordinators and transparency of slot data</p>	<p>This measure would aim at an organisational and functional independence of the coordinator: the coordinator would have to be a separate entity and keep its own accounts and budget. It would introduce also clear rules on the financing of the coordination activities by requiring it to be shared between airlines and airports, without excessive reliance on one single party. Division between airports should be dependent on cost of coordination and division between airlines should be dependent on number of slots operated. The Member States would have the obligation to ensure that the coordinator is sufficiently funded as a last resort.</p> <p>This measure would also strengthen and/or extend the requirements placed on coordinators regarding data. The measures undertaken would be to require coordinators to place slot/schedule data in an online database and to publish other data online, such as overall slot allocation data, capacity parameters, local guidelines and an annual report. The coordinators would be also required to keep data for longer time periods (at least 5 years). The coordinators would be also asked to submit to the Commission annual reports of their activity.</p>
<p><i>Late slot hand-back is not sufficiently discouraged</i></p> <p><i>The misuse of slots is not sufficiently discouraged</i></p>	<p>Ensure correct use of slots</p>	<p>This measure would include the introduction of slot reservation fee and/or penalties, and on the other hand seeks to improve and strengthen the role of the coordinator in the application of Article 14, by introducing a broader definition for misuse of slots, by introducing sanctions for giving misleading information, by allowing coordinator to withdraw series of slots even before 20% of the season has passed if there is information that the series will not be used or by ensuring that the coordinator is adequately informed about enforcement of sanctions.</p> <p>The slot reservation fee will be an advanced payment of the airport charges, which would not be refundable if the carrier did not operate the service or if the slot was handed back after the Slot Return Deadline. This would be offset by a reduction in airport charges so as to be financially neutral for airlines which fly their allocated slots. The slot reservation fees would be introduced by the airport managing body, after consultation with the coordinator and the coordination committee. The coordinator would provide the information to the airport necessary to facilitate collection of these fees.</p>
<p><i>Slot allocation is insufficiently aligned with progress achieved in the context of the Single European Sky</i></p>	<p>Integrate the slot allocation in the Single European Sky</p>	<p>The coordinators would fully cooperate with the Network Manager by providing slot data necessary to ensure the functioning of the European Network. This slot data would cover also airports that are neither coordinated nor schedules facilitated, but are considered by the Network manager as being of relevance to the planning of the European Network. Also, by clarifying the role of the coordinators in the implementation of the consistency between flight plans and slots, it would be ensured that the airspace capacity and ground capacity are both utilised efficiently. Moreover, the possibility to take into account future performance standards at airports would require consistency between the performance targets and the slot coordination parameters of the airports.</p>
<p><i>80-20 rule and the definition of the series of slots are not ensuring optimal slot allocation and use</i></p>	<p>Improve slot utilisation</p>	<p>The instruments proposed would aim to increase the utilisation threshold necessary for historic rights to a series of slots above the current level of 80% (to 85% or 90%) and to increase also the minimum number of slots in a series above the current level of 5 (to 10 for the Winter season and to 15 for the Summer season).</p>

<i>Problematic areas identified in the problem definition</i>	<i>Policy measures</i>	<i>Content of policy measures</i>
<i>Driver 2: The legal framework is no longer adapted to the evolution of the aviation market</i>		

<i>The absence of an EU-wide framework for secondary trading hampers optimal slot allocation</i>	Define an EU regime for secondary trading	<p>The measure obliges Member States to allow secondary trading at all EU airports to be conducted under a single and uniform legal framework. It would also address transparency and competition concerns by</p> <ul style="list-style-type: none"> -prohibiting restrictive covenants (clear prohibition on conditions attached to slot transactions which were anti-competitive such as requirements not to operate on particular routes, or to sell the slots to specific third parties) and -by enhancing pre- and post-trade transparency (the coordinator would ensure that there is a mechanism available for airlines to publicly advertise their willingness to purchase, lease or give up slots; additionally the airlines would be obliged to communicate to the coordinator the details of the slot trade or lease; aggregate data on the slot trades and leases would be published by the coordinator).
<i>Barriers to new entry and expansion</i>	Improve primary allocation	<p>Three sets of possible measures have been identified:</p> <p>1. Withdrawing of slots and auction of a proportion of slots each year. This measure consists of withdrawing 10% of historic (grandfathered) slots only at airports with a high level of congestion and where new entry is severely restricted. The withdrawn slots would be then auctioned. The measure would apply at any coordinated airport where:</p> <ul style="list-style-type: none"> - the number of slots allocated from the pool was less than 2% of the number of slots allocated on the basis of historic precedence, on average over four scheduling periods; and - initial requests for slots exceed capacity for at least 8 hours per days; and - it is not expected within the next 3 years that capacity would be expanded sufficiently to accommodate demand. <p>Slots allocated in the auction would be allocated for 10 years.</p> <p>The State concerned would design the auction mechanism but this would be subject to approval by the Commission. When an auction is used, Article 10(6) (priority to new entrants) would not apply.</p> <p>2. Revision of the new entrant rule. This measure would modify the definition of a new entrant by increasing the number</p>

		<p>of slots that an air carrier may hold at an airport whilst still being considered a new entrant:</p> <ul style="list-style-type: none">- the number of frequencies that can be operated by a new entrant on an intra-EU route would be increased to be equivalent to 4 rotations, to offer more credible competition with incumbent airlines- new entrant priority could also be obtained for a specific number of frequencies on non-EU routes up to 2 rotations per day. <p>3. Auctions for new capacity. In cases where new capacity is created at a specific airport (e.g. thanks to a new terminal, runway or operating methods) or a significant number of new slots become available (for example due to the bankruptcy of a carrier), this measure would allow the Member State to allocate slots by an auction mechanism. The decision to hold an auction would be subject to consultation with the airport managing body and the coordination committee. The design of the auction mechanism would also be subject to approval by the Commission. When an auction is used, Article 10(6) (priority to new entrants) would not apply.</p>
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4.3. Identification of policy packages

81. None of the policy measures taken in isolation presented above can achieve the objective of optimal slot allocation. In order to address the sub-optimal allocation and use of slots, the Commission proposes three policy packages besides the baseline scenario. All three policy packages are capable of reaching on a standalone basis the two specific objectives set out in section 3 above.
82. The first policy package (PP1) proposed includes measures meant to **improve the effectiveness of the slot allocation and use within the constraints of the current administrative system**. Improving independence and transparency of slot coordinators leads to a non-discriminatory allocation of slots and therefore to the facilitation of new entry on the market and, thereby, stimulate competition between operators. In addition, PP1 makes sure that allocated slots are used. Finally by integrating the slot allocation in the Single European Sky, PP1 will strengthen the current slot allocation system.
83. The second policy package (PP2) consists of more ambitious package of measures entailing a substantial revision of the Slot Regulation. It aims primarily at **introducing market-based mechanisms in slot allocation at all congested EU airports, together with amendment to the new entrant rule and the 80-20 rule and the series of slots**. This second policy package is **built on the foundations of the first policy package** and adds a number of key market-based measures. The reason why we are integrating PP1 in PP2 is twofold. First of all, there is no conflict between the measures: they are complementary and non conflictive. But, most importantly, the foundations of PP1 are of key importance for the functioning of market-based measures: in a system where financial considerations are at stake, it is for example imperative to guarantee the independence of the slot coordinator and the transparency of information.
84. This package will include a uniform framework for secondary trading, amendment of the new entrant rule, auction for new capacity and an increased slot utilisation threshold together with an increase of the series length.
85. **The third package (PP3) is the most ambitious policy package**. It is built on PP2, and its market based instruments, and, in addition, would require the withdrawal of slots held by carriers to be allocated to the highest bidders through auctioning.

TABLE 3 POLICY PACKAGES

	<i>Policy Package 1 (PP1)</i>	<i>Policy Package 2 (PP2)</i>	<i>Policy Package 3 (PP3)</i>
Content of Policy Packages	<ul style="list-style-type: none"> - Strengthen independence and transparency - Ensure correct use of slots - Integrate the slot allocation in the Single European Sky 	Same as PP1	Same as PP1
		<ul style="list-style-type: none"> - Secondary trading with transparency and competition safeguards - Revision of the new entrant rule -Auctions for new capacity - Improve slot utilisation 	Same as PP2
			<ul style="list-style-type: none"> - Withdrawal of slots and auctions at the most congested airports

5. SECTION 5: ANALYSIS OF IMPACTS

86. This section provides the qualitative and quantitative assessment of the impacts of each of the policy packages described. A more detailed quantitative assessment has been undertaken for each package for which the qualitative assessment concluded that there was reasonable possibility that the option would have important impacts and that they could be quantified. For the reasons set out in annex 2, impacts have been quantified for a sample of six airports (Düsseldorf, London Gatwick, London Heathrow, Paris Orly, Madrid and Vienna), and then extrapolated to give an assessment for all coordinated airports.⁵³ The revision of the new entrant rule was evaluated also using the case study of potential expansion of Heathrow⁵⁴, while auctions for new capacity were analyzed only in this specific case.
87. As stated earlier, this sample was chosen as it provides a useful cross section of the congestion profiles found at coordinated airports generally. The period covered by the impact assessment is 2012-2025, period considered relevant for modelling impacts on medium term. All packages are assumed to take effect in 2012, except the

⁵³ Greek airports in have been excluded, as these airports are generally small airports on islands and because we were not able to find any information at all (even passenger numbers) upon which to make the extrapolation.

⁵⁴ See annex 17.

measures evaluated using a case study of potential expansion of Heathrow, which is assumed to take place in 2017.

88. When analyzing the impacts of PP3, the report will focus only on the additional impacts of the measure of withdrawal and auctioning without addressing again the measures contained by PP2. Similarly, the analysis of PP2 will focus on additional impacts to the ones already analyzed in PP1. This assessment of the policy packages below is made as net changes compared to the baseline scenario as requested by the 2009 Impact Assessment Guidelines.

5.1. Methodology and assumptions for the assessment of impacts

89. The approach undertaken was to estimate the operational impact of each policy package for each of the 6 airports modelled, in terms of impact on the number of passengers carried, flights operated, and average flight length; and then to calculate economic, social (employment) and environmental impacts as multipliers on these. EU-wide impacts are based on an extrapolation from the 6 airports modelled.
90. The approach to calculating the operational impact is largely different for each policy package due to the variety of the measures proposed. To sum up, it either uses evidence from what has actually happened where policies have been tried (e.g. from secondary trading at Heathrow and Gatwick, slot reservation fees at Dusseldorf); otherwise estimates based on analysis of the slot and air traffic data held for the 6 modelled airports.
91. Withdrawal and auction of slots has not been tested at any major airport anywhere, so for the assessment of the impacts, we have developed both 'high' and 'low' scenarios. In the high negative impacts scenario, the negative impacts of withdrawal and auctions are at the maximum that we believe to be reasonably likely, while in the low negative impacts scenario, they are set at the minimum. For the calculation of the operational impacts, the same assumptions as for secondary trading are considered with the difference that the number of transactions is significantly greater and there is no calculation of airlines' willingness to give up slots.

5.2. Impacts on the use of airport capacity

Policy Package 1

92. Strengthening the role of the coordinator in the application of Article 14 (enforcement) would make more effective the administrative process for slot allocation by discouraging abuse. It would also allow sanctions to be imposed for all forms of slot misuse and by ensuring that the coordinator is adequately informed about enforcement. Therefore it would improve the use of capacity.
93. Majority of airlines emphasized the need for coordinators to be independent from other organisations and the benefits this brings, and no stakeholders highlighted disadvantages arising from increased independence. No carriers expressed clear support for legislative changes, although easyJet would support 'additional measures' to ensure the independence of the coordinators.
94. Ensuring the correct use of slots through slot reservation fees and penalties for late hand back would significantly reduce the amount of wasted capacity (capacity allocated to operators that do not intend to use it). There is a much stronger argument for slot reservation fees at the most congested airports as late hand back affects to a larger extent the airport capacity. Compared to slot reservation fees, penalties for late hand back would be easier to be introduced, as they would receive support even among airlines and they would be imposed only on airlines that repeatedly and intentionally handed back slots late.

95. Slot reservation fees and penalties introduced together will eliminate up to 62.5% of late hand back.⁵⁵ Consequently, it is estimated that **PP1 will achieve an increase in the number of flights operated (by 0.3% at EU level**, and by 0.8% at the six modelled airports), which leads to an **increase in the number of passengers** that can be transported (by **0.4% per year at EU level** and by 0.7% at the modelled airports).⁵⁶
96. While airports are largely in favour of slot reservation fees, air carriers argue that these fees would simply result in higher airport charges and therefore higher operating costs; could cause problems for airlines' cash flow; and that the risks inherent in the aviation business, such as downturns in demand, bad weather and other factors leading to cancellations, should be shared between airlines and airports. Many airlines supported the possibility of penalties being available for late hand back.
97. Under PP1, slot coordinators would collect data on airline schedules which, as part of Single European Sky, would be useful to the Network Manager in planning the European route network. Collection of data for airports other than those that are coordinated or schedules facilitated could facilitate emergency short-term coordination of these airports. This would help planning for major events (for instance Olympic Games), when an adjacent airport is closed, or during exceptional circumstances such as the volcanic ash crisis or the snow crisis in December 2010. In addition, the consistency between flight plans and slots could be improved by clarifying the provisions of Article 14(1) and by giving a strengthened role to the coordinator. Last but not least, airports will be part of the Single European Sky performance scheme. It is necessary to ensure an optimal link between the performance targets and the parameters of the slot coordination. An improved cooperation between interested parties through the slot coordination committee is envisaged.
98. Airlines and airports disagree on the role that slot coordinators might have in the Single European Sky and the obligation to submit information on their operations on other airports than those coordinated or schedules facilitated. Some airports agreed nevertheless that coordinators would need to work closely with the Network Manager to make best use of available capacity.

Policy package 2

99. The main benefit of EU-wide rules on secondary trading would be at congested airports where it is not currently in operation. The estimated results of secondary trading at each airport from the sample are shown in Annex 20. The impacts are largest at Düsseldorf and, particularly, at Orly, where the number of passengers will increase by 13.3% in 2025⁵⁷. Impacts are much lower at Heathrow and Gatwick because it is assumed that there would already be secondary trading at these airports in the baseline scenario.
100. Stakeholders were divided on the issue of formalizing secondary trading, but the conclusions of the stakeholders' hearing (2010) emphasized that there is no uniform

⁵⁵ We have assumed that the implementation of penalties for late hand back as well as slot reservation fees would eliminate 25% of the *remaining* late hand back not removed by slot reservation fees, and therefore the net impact would be to eliminate up to 62.5% of late hand back.

⁵⁶ Detailed estimate of impacts for PP1 is shown in annex 19.

⁵⁷ Annual average of 7.6% for the period 2012-2025. Secondary trading would continue to have impacts on aircraft size and the type of flight. Experience showed that secondary trading led to a shift towards bigger aircrafts operating on longer routes.

framework in EU. Most airlines believe that no further transparency about trades was required, and of those that argued that there should be more transparency considered that confidential and commercial information, such as the price that had been paid, should not be released.

101. The main impact of a change to the new entrant rule would occur in case of new capacity being made available. For example, in case of new capacity at Heathrow, passenger numbers would be around 270,000 higher during the first year if the new entrant rule was revised. The new entrant rule will have less impact on the allocation of pool slots, because slots would rarely be allocated from the pool at the most congested airports.
102. The stakeholders, except the majority of airlines who did not express any view, supported the general proposal of amending the new entrant rule.
103. The results of the auctions of the new capacity are shown in annex 20,⁵⁸ compared to the result of an administrative allocation with the current new entrant rule. The auction delivers a 10.4% increase in passenger numbers in 2017, compared to 8.8% for an administrative allocation with the existing new entrant rule.
104. Increasing the utilisation threshold would have a positive impact on capacity utilisation at congested airports. The main benefit of this measure is that the number of flights that would be operated at capacity constrained airports would increase, albeit by relatively small numbers, and carriers that did not make full use of their slots would have to give them up so they could be used by other carriers (see annex 20).
105. Most of airlines argued that 80-20 rule had been effective and allowed for sufficient flexibility to respond to unforeseen circumstances and to reduce the needless operation of unprofitable services. Therefore airlines considered that increasing the utilisation ratio could result in losing their slots from only two weather- or technical related cancellations. However some (low-cost or business aviation) airlines were in favour as it would make more difficult for large airlines and alliance to hold unused slots and would therefore increase the return of slots to the pool for the use of new entrants. Most of airports were in favour of an increase in the usage threshold beyond the current 80%.
106. If the threshold was increased to 90%, there is a risk that some series of slots, especially the short ones, would be withdrawn due to cancellations that occur for reasons outside airlines' day-to-day control, causing fragmentation of airlines' schedules. Analysis of operating statistics demonstrates, however, that this risk is negligible if the threshold is increased to 85% (see analysis of economic impacts). This measure would produce more benefits if it is accompanied by extension of the minimum length of a series (see annex 20).
107. To conclude, due to combined impacts of the different policy measures, **PP2** will lead to **an increase of 1.6% passengers per year at EU level**, corresponding to an increase of **23.8 million passengers per year**.

Policy Package 3

108. Withdrawal and auctioning would in theory lead to the most efficient use of airport slots and therefore of airport capacity because slots would be allocated to airlines that value them most. As explained, secondary trading has typically led to larger aircraft sizes, and a change in type of flights towards long haul. If slots were withdrawn and

⁵⁸ The impacts of this measure were assessed only in the scenario of introducing a mixed mode at Heathrow in 2017.

auctioned, these changes would apply to a much larger number of slots (in this scenario, 10% per year instead of an average of 3.3% per year due to secondary trading). PP3 would lead to a shift to larger aircraft and long haul destinations and consequently more passengers transported within the same constrained capacity. The measure will lead to an increase in passenger numbers by 2.6-3.9% at Heathrow and 12.4-13% at Orly in 2021, once all slots have been withdrawn and auctioned.

109. This package would indeed achieve the objective of the more efficient use of airport capacity by increasing the number of passengers. At airports such as Paris Orly and Düsseldorf the option could lead to important net benefits in the most positive scenario.
110. At EU level, **PP3** will lead to an **increase of 1.9-2% passengers** that travel by air, corresponding to **27.3-28.7 million passengers per year**. However as the measure of withdrawal and auctioning has never been implemented in the past it is difficult to ascertain its impacts. The positive impacts obtained in the low negative scenario have to be balanced against the risk that the option could dramatically affect the airlines businesses by increasing substantially their operating costs (see assessment of economic impacts).
111. Almost all airlines opposed any policy option aiming at introducing auctions or withdrawal. The main argument invoked by airlines was that it would be very difficult to implement as an airline would need to simultaneously secure matching slots at for each point of a route, which would mean that the auction would have to take place in parallel at every European airport and be followed by a separate process to optimise slots. It would also disadvantage the EU-based carriers as they would be forced to be the highest bidder at their home base in order to grow. Slots from the pool would end up with carriers with the 'deepest pockets'. Only a few airports were in favour of auctions. Almost all stakeholders, except one Member State, were not in favour of withdrawing slots. The main reason invoked was that the withdrawal would jeopardize the need for stability for the airlines and could lead to schedule fragmentation.

Conclusion on the use of airport capacity

112. In the light of above, while the impacts of PP1 on the use of airport capacity are rather limited, PP2 and PP3 can lead to important benefits in the efficient use of airport capacity. PP2 will achieve an increase of 1.6% in passengers per year (23.8 million passengers) whereas PP3 will lead to an increase of 1.9%-2.0% (27.3-28.7 million passengers). PP3 appears then to have the most important positive impacts on the utilisation of airport capacity.

5.3. Economic impacts

113. The economic benefits are defined as a multiplier on impacts on number of passengers, with differential rates for long haul (€2/passenger) and short haul (€3/passenger), on the basis of multipliers from published research. The values used are based on the methodology followed by UK Department for Transport.⁵⁹ This methodology is conservative and uses values at the lower end of the range (compared to €30 by US FAA estimates or €140 by Oxford Economics for the aviation industry), because marginal benefits from additional passengers from expansion at a congested airport are as likely to be less than the average benefits per passenger, since they are more likely to be leisure travellers than business travellers. The

⁵⁹ Department for Transport, Adding capacity at Heathrow Airport, Impact assessment, January 2009.

methodology only takes into account user benefits (e.g. in terms of reduction in costs to passengers, more frequent flights) which can be more easily monetised. It does not include an estimate of broader economic benefits to society, such as wider impacts on international trade in services and goods, increased foreign direct investment, and increased cross-border labour activity, since it is difficult to ascribe a value to such benefits.

114. The analysis does not include costs/benefits to airlines except where there are specific negative impacts on airlines - e.g. due to scheduling becoming less efficient, or changes to administrative costs. It does not include 'wider economic benefits' e.g. impacts on trade and agglomeration benefits (benefits from business being based in similar locations).

5.3.1. *Impacts on competition and competitiveness of operators*

Policy Package 1

115. PP1 reduces the risks of discriminatory slot allocation, by ensuring that coordinators have an organisational separation from any interested party and that they have sufficient funds to operate independently. With respect to greater transparency of the slot-related information and independence of the coordinators, it is not possible to quantify the benefits but to qualify them. PP1 could facilitate applications for slots particularly by new entrants, and hence improved allocation of slots. Moreover, as slot coordinators are the most important actors in the process of slot allocation, their role will become essential in the context of implementing the policy options aiming at changing the philosophy of the current administrative process.
116. Due to the increase in number of passengers and flights induced by better use of slots (slot reservation fees, late hand back), **PP1 will achieve net economic benefits of €1,032.5 million net present value for the total period 2012-2025 for all coordinated airports.**⁶⁰

Policy package 2

117. The benefits of secondary trading being extended to all EU airports are far greater than the benefits of any of the other measure evaluated for the study. Across all coordinated airports **this option generates annual economic benefits of over €300 million.**⁶¹
118. The changes in the market share of each airline/flight type are shown in Annex 20. The analysis shows that secondary trading could have a particularly significant impact on overall market share at Orly. Low cost carriers currently have around 13% of slots at Orly, which we estimate might increase to 19% by 2025 without secondary trading, but 34% if secondary trading is introduced.⁶²

⁶⁰ See annex 19.

⁶¹ See annex 20.

⁶² However, it should be emphasised that these results depend on the assumption that Air France is willing to sell slots at Orly; similarly, it is assumed that Lufthansa is willing to sell slots at Düsseldorf. This appears to be in their economic interests, as short haul network carrier services are usually not very profitable; neither airport is their main hub and therefore the slots are not necessary to 'feed' their long haul networks; and their aircraft sizes are quite low, indicating other airlines are likely to place a higher value on the slots. In addition, the fact that in recent years Air France has not expanded at Orly might imply that it would be willing to give up slots: since 2003, less than 2% of the 106 new daily slot pairs at Orly have been allocated to Air France Group carriers. This would also be consistent with the experience from Gatwick, where British Airways has sold or leased out large numbers of slots.

119. At general EU level, the quantifiable impacts of amending the new entrant rule are very small, because few slots are allocated through the new entrant rule, and the characteristics of operations with new entrant slots are not substantially different from the characteristics of operations with other slots. The impacts are strengthened by the measure increasing the slot utilisation threshold as it will enlarge the slot pool. At London Gatwick airport, the net economic impacts are expected to be around € 8.164 million net present value for the total period 2012-2025. In the specific case study of new capacity at Heathrow airport,⁶³ the net economic benefits would be around €1 billion net present value for the total period 2017-2025.
120. In the specific case of auctioning of new capacity, 25% more economic benefits would be obtained compared to the benefits obtained by applying the new entrant rule. This equals to €187 million net present value for the total period 2017-2025.
121. Increasing the slot utilisation threshold would have relatively significant impacts at large, congested airports such as London Gatwick, Paris Orly, Düsseldorf, Paris CDG, Rome Fiumicino and Zurich, and also Frankfurt and Munich, particularly before the new runways are opened at these airports.⁶⁴ There could also be a significant benefit at Milan Linate.
122. Increasing the slot utilisation threshold from 80% to 85% or 90% would mean that more passengers would be carried, since airlines have a strong incentive to operate flights in order to ensure that slots are not withdrawn the following season. This is reflected in the economic benefits as indicated in the impacts table, in the shape of extra passengers transported. However the net economic benefits are very different for the two threshold values.
123. For the 85% threshold, the net economic benefits are positive (€58.1 million at the 6 modelled airports and €184.7 million at EU level). It is unlikely that any withdrawal of slots could arise solely due to flights being cancelled beyond airlines control. That is to say, there would be little risk that airlines would lose slots as a result of being forced to cancel flights due to reasons beyond their control (e.g. weather conditions, technical problems). There would, therefore, be no additional costs for airlines, so net economic benefits equal economic benefits.
124. Increasing the threshold to 90% has more impact on utilisation and therefore the economic benefits are more important: €36 million. However, the net economic benefits are negative at the 6 modelled airports (-€11.9 million) and next to zero at EU level, as it is likely that a number of slots would be withdrawn for reasons beyond airlines' direct control. At those airports where demand for slots exceeds capacity, this leads to costs for airlines in the following season, since they would consequently be unable to utilise their crews and aircraft optimally.
125. Increasing the minimum length of a series together with the threshold to 85% would imply economic net benefits of €1,020 million at EU level for the period 2012-2025, while together with the threshold increased to 90%, the economic net benefits would be of €790.4 million.

However, these airlines might nonetheless decide not to sell slots if it enabled competitors to strengthen their position.

⁶³ As explained, we evaluated the measure of revising new entrant rule also in the context of potential expansion of Heathrow airport.

⁶⁴ At London Heathrow, the impacts of these options are low because there is already a very high percentage of slot utilisation (95%).

126. To conclude, by combining the impacts of the different policy measures, **PP2 will generate net economic benefits of around €5,300 millions for the total period 2012-2025.**

Policy Package 3

127. If withdrawal and auctions are introduced, the air transport service offer could better match consumer demand, leading to increased passenger volumes and lower fares. Nonetheless, as explained in Annex 21, withdrawal of slots and auctions may create practical problems which risk being so severe at some airports that they would reduce the used capacity of the air transport system and reduce the efficiency of airline operations, by increasing the resources (staff and aircraft) that would be needed to deliver a given level of capacity. Since withdrawal of grandfather rights has not been tested at any congested airport, it is not clear to what extent these problems would occur or to what extent airlines would be able to surmount them. Applying withdrawal and auction of slots only at a very small number of the most congested airports (such as Heathrow and Orly only) would limit some of these negative impacts, by avoiding the need to coordinate inter-dependent auctions at multiple airports.
128. At Heathrow, if withdrawal of grandfather rights had any impact on the efficiency of airline operations, the disadvantages arising from this would be likely to offset the benefits from the auctions. In contrast, at Orly, these disadvantages would be significantly less, because almost the only constraint on capacity is the administrative annual slot cap, and therefore airlines should be able to make whatever use is most efficient of the slots that they obtain through the auction, without significant other constraints. Therefore, withdrawal of grandfather rights may generate net economic benefits at Orly. In detail, the estimated results of withdrawal and auctions at Heathrow and Orly are shown in Annex 21 (scenario with lower negative impacts and scenario with higher negative impacts).
129. As to the impacts on competition, the measure will make easier for new entrants to obtain slots, if they have sufficient financial resources. Also holders of large volumes of slots may have an advantage as it will be easier to reallocate existing slots within their existing portfolios to replace withdrawn slots. Therefore main incumbent are likely to have an advantage in the auction.
130. As the policy measure of the withdrawal was considered to be introduced only at a limited number of airports, the economic benefits of secondary trading at the other airports would partially offset the important operating costs for airlines at those selected (in our report, two) airports. **Therefore at EU level the net economic benefits would vary between €2,807 million and €5,000 million in the most positive scenario for the total period 2012-2025.**

5.3.2. Impacts on operating costs and conduct of businesses

Policy Package 1

131. Where an airport decided to introduce a slot reservation fee, some costs might be incurred in administering this, but these should be minimal as it would be collected through the standard system of airport charges. According to the 2011 study the one-off costs will be **€15,000 and the ongoing costs will be €4,000 per coordinated airport.**
132. There are **no operating costs for airlines besides the** costs for providing data to slot coordinators for the level 1 airports which should be minimal, as airlines already

provide extensive slot/schedule data to coordinators or other parties (such as airports, booking systems etc).

133. Finally, by integrating slot allocation in the Single European Sky and by better managing major disturbances to air travel, airlines could avoid additional costs that they may incur in case of delay or cancellation of flights.

Policy package 2

134. Besides the **costs related to payment for slots**, carriers would face some additional costs – primarily **legal costs**. Carriers would only incur these costs where the trade was of net benefit to them taking into account these costs, and therefore by definition these costs would be less than the net benefits.
135. Under normal circumstances, **amending the new entrant rule should not generate any costs** as the allocation of slots to new entrants and other airlines is part of the regular activity of the coordinator.
136. **The auction in case of new capacity would generate costs both for the organising authority and participating airlines**. These would be lower than the costs of withdrawal and auctioning (there would only be one auction; slots would not be withdrawn). There would be **no operating costs for airlines**.
137. Increasing the slot utilisation **threshold to 90% would lead to important operating costs for airlines** and they would almost totally offset the economic benefits (see annex 20). **There are no operating costs if the threshold is set at 85%.**

Policy Package 3

138. Withdrawal of grandfather rights might make airline schedules less efficient. Airlines might not be able to obtain slots through auctions to enable flights to take off and land at times which maximise utilisation and minimise turnaround times. This will lead to reduced aircraft and crew utilisation and hence increase costs per flight. Withdrawal will lead to **substantial operating costs for airlines: between €08.1 and €2.7 billion for the total period 2012-2025 at EU level.**

5.3.3. Impacts on different types of airlines

139. PP1 does not set out specific impacts related to the type of airline. A strengthened independence and transparency would benefit all operators. The measures on ensuring the correct use of slots or the integration of the slot allocation in the Single European Sky are not expected to have differentiated impacts on airlines.
140. Regarding PP2 and PP3, the impact on different types of airlines would vary considerably from an airport to another due to the differences in the level of congestion but also in the type of traffic or services offered. Therefore it is difficult to ascertain a general conclusion, at EU level, of the impacts on the different categories of airlines.
141. The modelling of impacts at the six sample airports showed, for instance, the changes in market share. As explained before (under section 5.2.1 and developed in annex 20), the types of changes vary from an airport to another. PP2, and mainly the introduction of secondary trading, would have a bigger impact at Orly airport, Dusseldorf airport or Gatwick airports as low cost's market share will grow considerably. However the impact is less important at Heathrow or Madrid. Consequently, PP2 would probably lead to a reduction in the share of network carriers at these airports while at Heathrow their market share could increase.
142. Withdrawing of slots could affect more the airlines with small slot portfolio because they do not have the same flexibility as network carriers might have to redistribute their services.

143. Paying for slots through auctions might prompt some airlines with low profit margins not to bid for slots, but this would be consistent with the objective of economically efficient use of capacity.

5.3.4. *Impacts on consumers*

144. As more passengers can travel for a given level of capacity available, PP1 will lead to a **greater mobility of passengers** (more passengers accommodated within the same capacity constraint) and a **slight reduction in air fares** at these airports (by -0.2% per year for period 2012-2025).

145. There is also a **slight increase in frequencies and destinations** served as a result of slightly more flights from major airports. There will be also a **slight reduction in cancellations** as airlines will have more incentives to operate every flight. Consequently there will be also a **small increase in delays** due to increasing number of flights.

146. As PP2 increases capacity offered from an airport, and hence the number of people that can travel, **overall fares would be reduced by 0.8%** at EU level, mainly due to secondary trading.

147. The effect is likely to vary significantly between routes: if short haul flights are withdrawn because the slots are utilised for long haul instead, there could be significant increases in fares on some short haul routes, even though overall fares at the airport would fall. The price paid for a slot on the secondary market should have no impact on fares: when setting fares for individual flights, airlines would not recover the price of the slot from fares charged for a specific route. The pressure made by competitors and the fact that secondary trading increases capacity offered from an airport and hence the number of people that travel would normally lead to a reduction in the fares.

148. PP2 could lead to a **possible slight reduction in destinations** served, because regional airlines will sell slots to operators of more profitable longer-distance services or because new entrants would prefer to add flights to the routes on which they have already some flights from the airport. Also, by increasing the slot utilisation threshold, PP2 could lead to a **possible reduction of some seasonal services**, for example high peak services to holiday resorts.

149. There will be also a **slight reduction in cancellations** as airlines will have more incentives to operate every flight. Consequently there will be also a **small increase in delays** due to increasing number of flights.

150. PP3 will also **encourage the mobility of passengers** by increasing the number of passengers to be transported within the same capacity and **by increasing the frequencies on long haul routes**. There will be nevertheless a **reduction in short distance and regional destinations and frequencies**, as regional airlines would not be able to pay as much for slots as operators of more profitable longer-distance services. There would be also a **slight improvement in punctuality and reliability** of airlines as, by purchasing slots, airlines may be less likely to cancel flights.

5.3.5. *Administrative burdens on businesses*

151. Within PP1, the requirement for slot coordinators to publish information on demand and capacity online, and to produce annual reports, would lead to **administrative costs of €200,024 of which €4,265 is administrative burden at EU level**.

152. If half of the 325 airports in the EU (plus Norway, Iceland and Switzerland) which have some scheduled traffic and are currently neither coordinated nor schedules facilitated, were designated as Network Airports by the Network Manager, the total

cost of data collection **would be around €2.2 million per year**. This is an administrative cost and approximately 80% (€1.8 million) would be an administrative burden as most coordinators do not already undertake this activity.

153. The only administrative costs related to PP2 are the costs for ensuring pre and post transparency for secondary trading. The costs for the coordinator in creating a website such as this should be small. We estimate an **administrative cost of €39,058 on average per year** during the impact assessment period, of which €5,152 would be administrative burden, as most coordinators do not offer a website such as this yet. The costs of implementing post-trade transparency would be minimal. We estimate **EU-wide administrative costs per year of €64,188 of which €57,769 would be administrative burden**.

154. PP3 will not lead to additional administrative burden beyond that of PP2.

5.3.6. *Public authorities*

155. PP1, and consequently PP2, could incur **some costs associated with establishing organisational separation for the slot coordinator** (separate office and support facilities), although these would be low (see annex 19). The **costs related to the monitoring of the coordination funds are minimal** (see annex 19).

156. PP3 would incur additional costs for public authority organising the auctions. These costs could amount to around €3 million (set up costs) for each airport and then a further €1.5 million per year⁶⁵ (see annex 21). These costs could presumably be recovered from participants in the auctions.

5.3.7. *Third countries*

157. Enhancing the independence of the coordinators and the transparency of the slot data will lead to an increasing trust of non-EU airlines in the slot allocation system and could consequently strengthen the economic relations between countries. Attention needs to be paid to the specific measure under PP1 on slot reservation fees that could be questioned by third countries airlines on the basis of international air services agreements. However if the slot reservation fees are revenue neutral for airlines operating as well as for airports, as we proposed, the risk is minimal.

158. In addition to these benefits, PP2 **will impact positively the relations with third countries**, as it will increase the opportunities for non-EU carriers to enter congested EU airports.

159. The consistency of PP3 on withdrawal and auctioning with some air services agreements **could be questioned by third countries operators**.

5.3.8. *EU budget*

160. In principle, none of the policy packages envisaged in the impact assessment report has a direct impact on the EU budget.

Conclusion on economic impacts

161. PP2 and PP3 are by far achieving the most important economic benefits. PP3 obtains the most important economic benefits. Nevertheless, PP2 obtains €5,300 millions net economic benefits whereas PP3 only achieves between €2,800 and 5,000 millions net economic benefits due to larger operating costs for airlines and direct implementation costs for airlines and authorities.

⁶⁵ Based on the estimations carried out by the US Federal Aviation Authority on the costs of auctions supposed to be introduced at New York airports.

162. Both PP2 and PP3 will make it easier for new entrants to obtain slots, if they have financial resources. In case of new capacity, PP2 will allow for an allocation of slots through a revised new entrant rule (i.e. without paying for slots) or through an auction.
163. PP3 will have the biggest impact on the operating costs for airlines, while for PP1 they are minimal and for PP2 they exist only in case of setting the slot utilisation threshold to 90%.
164. For all packages, there will be an increase in the mobility of passengers as more passengers will be transported within the same capacity constraints. There will be a slight increase in the reliability of airlines as fewer flights will be cancelled and a slight decrease in punctuality as congestion increases. PP2 and PP3 will have the same impact on fares i.e. -0.8% compared to -0.3% for PP1.
165. The most important administrative burdens will be generated by PP3 as it cumulates the administrative burden of PP1 and PP2. Overall the administrative burden is mainly due to PP1.
166. All packages will lead to costs for the public authorities, the most important being related to PP3.

5.4. Social impacts

5.4.1. *Employment*

167. PP1 will lead to more flights to be operated and hence more passengers that can be transported. This leads to an increase of **airport employment by 3,100 FTEs⁶⁶** as **annual** aggregate average for the period 2012-2025 for all the coordinated airports. The **airlines employment** will increase by **5,100 FTEs** per year. In total 8,200 FTEs will be created.
168. Under PP2, **airport** employment will increase by almost **16,400 FTEs** per year and **airlines** employment by **45,600 FTEs** per year. In total 62,000 FTEs will be created.
169. PP3 will lead to significant additional airline employment to be created: an increase of **17,300-17,900 FTEs for airport employment** and **55,200-56,700 FTEs for airline employment** (annual average for 2012-2025). In total between 72,500 and 74,600 FTEs will be created. This is mainly for non-EU airlines and therefore would generally not be EU residents, but employment also increases amongst EU airlines.

5.4.2. *Regional accessibility*

170. **PP1 has no impacts on regional accessibility.**
171. Due to introduction of secondary trading at EU level, **PP2 could have a negative impact on regional accessibility**, because airlines operating regional flights may decide to sell these slots to airlines wishing to operate more profitable long haul services. Nevertheless the impact is expected to be limited based on the experience at London Heathrow and given that the trend of changing from short haul to long haul routes is already undergoing. Regional accessibility could also be ensured through the imposition of public service obligations.
172. **The negative impact of PP3 on regional accessibility could be more important** as airlines are unlikely to buy slots at auction for flights to regional airports. For instance, at Orly flights with regional aircraft will reduce by 7% in 2021 (once all slots are auctioned) and by 3% at Heathrow. Nevertheless, regional accessibility could also be ensured by public service obligations.

⁶⁶ Full time employment.

Conclusion on social impacts

173. PP3 achieve the most important increases in employment numbers but it also lead to the most important negative impacts on regional accessibility. PP2 leads to an important increase in employment and limited impacts on regional accessibility. PP1 has no impact on regional accessibility and it leads to less important positive impacts on employment.

5.5. Environmental impacts

174. **In all policy packages, total CO2 emissions are increasing more than passengers transported. This is due mainly to the expected shift towards larger aircraft operated for longer haul routes.**

175. For short-haul traffic we expect that there would be a shift towards the use of larger aircraft and high-speed rail, which are more efficient than smaller aircraft, leading to a reduction in emissions per passenger for this traffic. However, this will be more than compensated by an increase in long-haul traffic, which is likely to displace some short-haul traffic at certain airports (largely due to secondary trading in slots). Although aircraft serving long haul routes are more efficient on a per passenger kilometre basis, overall emissions per passenger, as indicated in the table, would increase, due to the longer distances flown. Therefore, it is likely that the increase in emissions would be greater than the growth in passengers.

176. The new traffic mix is consistent with the need, expressed in the White Paper-Roadmap to a Single European Transport Area, to optimise the use of airport capacity by enhancing the (high speed) rail to absorb the medium distance traffic and consequently "reserve" the airport capacity for long haul travel. The projected increase in CO2 emissions in this Impact Assessment does not consider the objective of the above mentioned White Paper of using 40% of low carbon sustainable fuels by 2050 for aviation and therefore contribute to the overall target of a reduction of 60% of emission on all transport modes by 2050. This is due to two main reasons. Firstly, the goals of the White Paper were unknown at the time and were not included in the calculations of our impact. Secondly, the impacts for this report are modelled for 2012-2025, while the targets of the White Paper are established for 2050.

177. As more flights will be operated, PP1 will lead to an increase in CO2 emissions. For the 6 airports modelled the impact is of additional 275 000 tones CO2 per year and at **EU level to 842 000 tones CO2 per year** for the period 2012-2025.

178. PP2 would lead to flights being generally operated with larger aircraft carrying more passengers, meaning that CO₂ emissions would increase (by around 0.14% of overall EU emissions). This represents almost **7,000,000 tones CO2 per year** for 2012-2025.

179. With PP3, flights will generally be operated with larger aircraft carrying more passengers, meaning that CO₂ emissions would increase (by around 0.17% of overall EU emissions). This represents between **8,500,000 and 8,775,000 tones CO2 per year**.

180. Nevertheless, due to the inclusion of aviation CO₂ emissions in the general EU emissions trading system (ETS) from 2012, there should be no growth in total CO₂ emissions attributable to the different policy packages. A policy package that produces a higher level of aviation CO₂ emissions would lead to higher demand from aviation for emissions allowances in the ETS (made up of CO₂ reductions in other areas) rather than higher overall CO₂ emissions (aviation and non-aviation sectors), since net aviation emissions will be within the overall ETS cap. Some impact on the price of the emissions allowances could be expected as a result. However, the size of

the market for such allowances is currently around 2 billion tonnes. An additional 8.775 million tonnes of emissions (the maximum expected impact) is less than 0.44% of this market, so the impact can be described as negligible. There are also non-CO₂ climate impacts of aviation (from nitrogen oxides, water vapour, sulphate, soot particles and cirrus cloud effects) and these would also increase by around 3.3%, and would not fall under the ETS cap. There remains scientific uncertainty about the net climate impact of these effects, but some estimates suggest that, without taking into account the cirrus cloud effects, the total climate impact of aviation could be around two times higher than the impact of CO₂ alone.

181. Finally, by optimising the use of existing capacity, the policy packages are allowing for more passengers to be accommodated and transported within the same capacity constraints and **therefore without building or expanding airports, whose impact on environment could be more important.**

Conclusion on environmental impacts

182. PP3 and PP2 would produce more negative impacts on environment than PP1.

5.6. Impacts on simplification of existing legislation

183. The impact of all policy packages on the simplification of existing legislation is expected to be limited. By clarifying rules on the independence of the slot coordinators, transparency of slot data and correct use of slots, PP1 has a limited positive impact on the simplification of the current rules.

5.7. Compliance aspects

184. By clarifying rules, PP1 will contribute to a better implementation of the existing rules by public authorities (States, civil aviation authorities) and by slot coordinators. PP1 would improve the independence of coordinators, and help to ensure both the correct use of slots and the consistency of flight plans with slots (this last measure as part of the need to integrate the slot allocation in the Single European Sky). Hence PP1, and consequently also PP2 and PP3, would address the compliance issues mentioned in paragraph 38. The cases of misuse of slots will be clearly defined and therefore easier for air carriers to act according to the rules.
185. PP3 and to a lesser extent PP2 (in case of 90% threshold is retained) imply important operating costs for air carriers. PP2 does not imply important compliance costs (in case the 90% threshold is not retained). Nevertheless, as the Slot Regulation is directly applicable in the Member States and therefore enforceable by national jurisdictions or European Commission, we do not expect specific compliance problems regarding the implementation of the new measures. Nevertheless there is a risk related to enforcing transparency of secondary trading.⁶⁷
186. The administrative burden is limited for all policy packages and therefore it should not lead to compliance issues.

⁶⁷

The text would have to be carefully drafted so as to prevent airlines from circumventing rules on disclosure, by having two contracts, one of which was a contract for the transfer of the slots (which would be disclosed), and another which included the other conditions, but which was dependent on the first contract being implemented. The coordinator would have no way of knowing that undisclosed commercial conditions had been agreed separately. Unlike competition authorities, the coordinator does not have the powers, capability or resources necessary to investigate transactions and force disclosure of documents. Therefore, the rules would have to make it clear what sort of information, albeit minimal, would have to be obligatorily communicated to the coordinator.

6. SECTION 6: COMPARING THE OPTIONS

187. The policy packages will be assessed against the following criteria:
- **effectiveness** – the extent to which options achieve the objectives of the proposal;
 - **efficiency** – the extent to which objectives can be achieved at least cost;
 - **coherence** – the extent to which options are coherent with the overarching objectives of EU policy, and the extent to which policy options are likely to limit trade-offs across the economic, social, and environmental domain.
188. While the impacts of PP1 on the use of airport capacity are rather limited, PP2 and PP3 could lead to important benefits in the efficient use of airport capacity. PP2 would achieve an increase of 1.6% in passengers per year (23.8 million passengers) whereas PP3 would lead to an increase of 1.9%-2.0% (27.3-28.7 million passengers) at EU level. PP3 would appear then to have the most important positive impacts on the utilisation of airport capacity.
189. PP2 and PP3 would by far achieve the most important economic benefits. PP3 would obtain the most important economic benefits. Nevertheless, PP2 would obtain €5,300 millions net economic benefits whereas PP3 would only achieve between €2,800 and 5,000 millions net economic benefits due to larger operating costs for airlines and direct implementation costs for airlines and authorities.
190. Both PP2 and PP3 would make it easier for new entrants to obtain slots, if they have financial resources. In case of new capacity, PP2 would allow for an allocation of slots through a revised new entrant rule (i.e. without paying for slots) or through an auction.
191. PP3 would have the biggest impact on the operating costs for airlines, while for PP1 they are minimal and for PP2 they exist only in case of setting the slot utilisation threshold to 90%.
192. For all packages, there would be an increase in the mobility of passengers as more passengers would be transported within the same capacity constraints. There would be a slight increase in the reliability of airlines as fewer flights would be cancelled and a slight decrease in punctuality as congestion increases. PP2 and PP3 would have the same impact on fares i.e. -0.8% compared to -0.3% for PP1.
193. The most important administrative burdens would be generated by PP3 as it cumulates the administrative burden of PP1 and PP2. Overall the administrative burden would be mainly due to PP1.
194. All packages would lead to costs for the public authorities, the most important being related to PP3.
195. PP3 would achieve the most important increases in employment numbers but it would also lead to the most important negative impacts on regional accessibility. PP2 would lead to an important increase in employment and limited impacts on regional accessibility. PP1 would have no impact on regional accessibility and it would lead to less important positive impacts on employment.
196. PP3 and PP2 would produce more negative impacts on environment than PP1.
197. The summary of the quantified impacts of the different policy packages and their combinations is shown in the table below.

TABLE 4 ASSESSMENT OF IMPACTS

Option/measure	Airport	Pas-sengers (%)	Flights (%)	Pas-sengers (millions)	Airline operating costs (€ millions)	Direct implementation costs (€ millions)	Economic benefits (€ millions)	Net economic benefits (€ millions)	Employment (000s FTEs)		Fares (%)	CO2 emissions (000 tonnes)
									Airport	Airline		
A. Strengthen independence and transparency	Total EU-wide	n/a	n/a	n/a	n/a	8.7	n/a	n/a	0.0	0.0	0.0%	0
B. Slot reservation fees	Total EU-wide	0.3%	0.2%	3.7	0.0	4.7	868.7	864.0	2.5	4.4	-0.2%	719
C. Penalties for misuse of slots	Total EU-wide	0.1%	0.1%	1.5	0.0	19.4	352.7	333.3	1.0	1.5	-0.1%	254
PP1 (A+B+C)	Total EU-wide	0.4%	0.3%	4.5	0.0	29.5	1,053.2	1,032.5	3.1	5.1	-0.2%	842
D. Secondary trading	Total EU-wide	1.2%	0.0%	14.4	0.0	24.7	3,139.7	3,115.1	9.9	34.3	-0.6%	5,140
E. Revise new entrant rule	Total EU-wide	0.0%	0.0%	0.5	0.0	0.0	124.9	124.9	0.4	0.6	0.0%	102
	Heathrow, with mixed mode	0.2%	0.0%	0.2	0.0	0.2	22.9	23.1	0.1	0.9	-0.2%	138
F. Auctions for new capacity	Heathrow, with mixed mode	1.6%	0.0%	1.3	0.0	0.6	187.6	187.1	0.9	5.8	-1.5%	919
G. Increase utilisation threshold to 85%	Total EU-wide	0.1%	0.0%	0.8	0.0	0.0	184.7	184.7	0.5	0.9	0.0%	150
H. Increase utilisation threshold to 90%	Total EU-wide	0.2%	0.1%	2.3	535.8	0.0	536.2	0.4	1.6	2.6	-0.1%	431
I. Extend minimum length of series	Total EU-wide	0.3%	0.2%	3.6	0.0	0.0	876.3	876.3	2.6	4.7	-0.2%	768
PP2 (PP1+D+E+G+I)	Total EU-wide	1.6%	0.2%	23.8	0.0	75.7	5,354.7	5,279.0	16.4	45.6	-0.8%	6,988
J. Withdrawal of grandfather rights and auctions	Heathrow	2.6% - 3.9%	-0.3% - -1.4%	1.1 - 1.8	708.1 – 2,003.3	25.4	227.6 - 386.1	-347.4 - -1,801.1	0.8 - 1.3	9.8 - 11.3	-1.2% - -2.0%	1,827
	Orly	12.4% - 13.0%	-0.3% - 0.0%	2.8 - 2.9	0.0 – 695.4	20.2 - 20.8	611.7 - 636.9	-104.6 - 616.7	2.0	4.4 - 4.5	-8.4% - -8.7%	611 - 624
PP3 (PP2+J)	Total EU-wide	1.9% - 2.0%	0.2%	27.3 – 28.7	708.1 – 2,698.7	113.6 – 119.2	5,620.0 – 5,804.3	2,807.6 – 4,976.9	17.3 – 17.9	55.2 – 56.7	-0.8%	8,523 – 8,775

Note: Financial values presented as net present values of costs/benefits 2012-2025. Non-financial values (passengers, emissions etc.) presented as annual average values 2012-2025. PP2 and PP3 do not include impacts of the two scenario tests relating to introduction of mixed mode at Heathrow airport as it is not clear that this will happen during the period covered by the impact assessment.

Source: Impact assessment of revision to Regulation 95/93, Steer Davies Gleave, 2011. Total EU-wide means all coordinated airport (except Greek airports).

6.1. Effectiveness

198. PP1 guarantees the achievement of Specific Objective 1 (ensure a strengthened and effectively implemented slot allocation and use). PP1 has a medium effectiveness in achieving the Specific Objective 2 (Enhance fair competition and competitiveness of operators). Competition will be enhanced thanks to improved transparency of slot data and strengthened independence of the slot coordinators. Introduction of a slot reservation fee and penalties for late hand back will lead to a greater number of flights being operated within the capacity constraints and thus have a positive impact on the utilisation of capacity.
199. PP2 will have a strong positive impact on competitiveness and competition as secondary trading will facilitate market entry and expansion. PP2 would help to ensure that slots will be allocated to the airlines that place highest value on them and hence will utilise them more efficiently. Secondary trading together with auctions for new capacity will also increase the number of passengers per aircraft. The combination of measures will thus lead to a maximization of the use of capacity at congested airports.
200. Compared with PP2, PP3 would not be as effective in fulfilling the second specific objective, since withdrawal and auctions would disrupt airlines' scheduling and increase operating costs. Therefore PP2 would be more effective in achieving the objective of enhancing competition and competitiveness.

6.2. Efficiency

201. PP1 contains effective measures accompanied by low implementation or administrative costs and contribute efficiently to the specific objectives SO1.⁶⁸
202. PP2 implies substantial costs mainly related to the introduction of secondary trading (€75.7 million) but they are offset by the important economic benefits obtained.⁶⁹ Therefore PP2 can be considered as introducing efficient measures.
203. PP3 implies high implementation costs,⁷⁰ whilst not achieving significantly higher benefits than PP2. PP3 has slightly bigger benefits in term of passengers and economic benefits, but they are offset by the high implementation costs, which lower the net overall economic benefits. Therefore PP3 appears to be less efficient than PP2.

6.3. Coherence

204. All policy packages would be coherent with the overarching objectives of EU policy.
205. The analysis seems to indicate that PP1 presents a limited trade-off between the different types of impacts. PP2 presents an important trade-off between impacts on the use of airport capacity and economic impacts, on one hand, and environmental impacts, but this should be assessed in the framework of the ETS Regulation. PP2 also presents a limited trade-off between the impacts on the use of airport capacity and the regional accessibility.
206. PP3 presents an important trade-off between the impacts on the use of airport capacity and the economic benefits (particularly the impacts on operating costs). The trade-off between economic and environmental impacts should be assessed in the

⁶⁸ See comments at paragraphs 124-126 and 140-142 of the present report.

⁶⁹ See comments at paragraphs 127-130 and 143-144 of the present report.

⁷⁰ See comments at paragraph 131 of the present report.

same context as for PP2. The trade-off between the impacts on the airport capacity and the social impacts (regional accessibility) is limited.

6.4. Preferred option

207. From an effectiveness point of view, PP2 seems the most attractive. Indeed, it offers the highest potential level of achievement of all specific goals, while PP3 cannot attain the most efficient result for SO2. PP1 achieves completely only the specific objectives SO1.
208. Moreover, as shown by the analysis of coherence between the different policy packages, even if PP2 presents important trade-offs between the impacts on the use of airport capacity, the positive economic and social impacts on the one hand side, and the environmental impacts on the other, the trade-offs are less important than for PP3. In terms of coherence, PP1 ranks highest.
209. Finally, PP3 is also the most costly in terms of airline operating costs and direct costs, while PP1 is the cheapest and the easiest to implement.
210. In view of the above **the recommended package is PP2** as the benefits obtained are far greater than the costs. It aims at strengthening the administrative system of slot allocation improved by market-based mechanisms that can correct its deficiencies. The system would provide for strengthened independence of coordinators, improved transparency, more opportunities for new entrants and specific measures to improve slot utilisation.

7. SECTION 7: MONITORING AND EVALUATION

211. The Commission would properly evaluate the implementation of the Slot Regulation 4 years after its adoption by the Council and the Parliament. The evaluation will be done by the Commission in close cooperation with Member States, national competition authorities, slot coordinators, airports and air carriers, on the basis of the monitoring indicators presented in Table 5. The evaluation report would be communicated to the Council and the Parliament. The evaluation will cover the implementation of all dispositions of the Slot Regulation.
212. In addition, the Commission would constantly monitor a set of core transport indicators which are already available. These indicators would be used to measure to what extent the policy option adopted would achieve the specific objectives.

TABLE 5 MONITORING INDICATORS

Specific objective	Indicators	Source of data
1. Ensure a strengthened and effectively implemented slot allocation and use	- number of complaints received by the Commission	- Annual reports of slot coordinators
	- organisational and financial independence of slot coordinators	- EUACA (European Union Airport Coordinators Association) combined data base
	- opinion of stakeholders on the way the slot allocation is working	- Questionnaire to be sent to different stakeholders (Member States, air carriers, airports, slot coordinators) three years after the adoption of the Slot Regulation
	- number of slots requested/allocated/operated/returned to the pool/misused/withdrawn/late hand back	
	- slot utilisation	
	- cooperation between the Network manager and the slot coordinators	
2. Enhance competition and competitiveness of operators	- evolution of the market concentration	- Questionnaire to be sent to different stakeholders (Member States, air carriers, airports) three years after the adoption of the Slot Regulation
	- number of pool slots allocated to new entrants	- Annual reports of slot coordinators
	- retention of slots by new entrants	
	- number of slot trades/leases	
	- number of passengers	
	- number of flights	
	- size of aircraft	
	- babysitted slots	
- slot hoarding		