LEGAL CONDITIONS AND THE ALLOCATION OF SLOTS AT POLISH AIRPORTS

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Abstract

The ever-growing imbalance between the demand for air transport and the availability of suitable airport infrastructure to meet this demand has made it necessary to establish rules governing the allocation of slots to air carriers at congested airports. Slots are allocated to ensure the efficient use of airport infrastructure and to maximise benefits for airlines and their passengers. The first part of the article examines the global guidelines in this area that are published periodically by the International Air Transport Association (IATA). A detailed analysis of the European Union (EU) aviation legislation that regulates access to airports which have insufficient runway and terminal infrastructure capacity then follows. The last part of this study is devoted to discussing legal and practical aspects of slot allocation at Polish airports. The results of the conducted analyses are presented in the summary and conclusions.

Key words: IATA, European Commission, airports, capacity crunch, airport slots, coordination of slots.

Introduction

The liberalisation of the Community air transport sector has led to the dynamic development of air passenger and cargo transport, which has brought many benefits to the societies and economies of EU Member States. However, with the rapidly growing demand for air traffic, difficulties have arisen in providing the required airport and airspace capacity. This has resulted in increased delays to air operations, generating costs for air carriers and congestion at airports, causing discomfort to passengers. The steady increase in air traffic also poses a threat to the safety of air operations and the environment.

The biggest problems of access to large European airports have been experienced by new air carriers. The reason for this situation has been, on the one hand, the exhaustion of infrastructure capacity at these airports and, on the other hand, the dominant position of national carriers, which already have rights to operate there. As a result, the growing gap between runway and ground-based infrastructure capacity and demand for air services has become the most constraining factor for air transport development.

In order to address the problem of capacity crunch and to make the best possible use of airports infrastructure, it has become necessary to allocate slots at congested airports to air carriers. To this end, the EU adopted a Regulation establishing uniform procedures for the allocation of slots at Community airports in 1993¹. In order to ensure fair access to congested airports for all air carriers concerned, the allocation of slots was regulated on a non-discriminatory and transparent basis, while respecting the rights acquired by carriers already using those airports. The model for Community regulations is the *Worldwide Slot Guidelines* (WSG), issued since 1974 by the International Air Transport Association (IATA)². Both the IATA guidelines used internationally as best practice and the EU rules on schedule coordination have evolved over the years. After Poland's accession to the EU, similar provisions were also adopted in the national legal order. The current regulations concerning the allocation of slots to air carriers and the resulting practices at Polish airports are the subject of analyses carried out for the purposes of this study.

Legal basis for slot allocation at airports

Worldwide standard for rules and procedures for the allocation and monitoring of airport slots

The global nature of air transport requires harmonised standards for the allocation of slots to air carriers at both the departure and destination airports on each route. IATA plays a regulatory role in the coordination of schedules on an international scale³. The tasks of this organisation include the annual publication of the *Worldwide Slot Guidance* (WSG) and the *Standard Schedule Information Manual* (SSIM), twice yearly for the summer and winter seasons slot conferences (SC), and the provision of training for coordinators, schedules facilitators and airlines. The *Worldwide Slot Guidelines*⁴ are developed by IATA in consultation with airlines, airport coordinators

¹ Council Regulation (EEC) No 95/93 of 18 January 1993 on common rules for the allocation of slots at Community airports (OJ L 14, 22.1.1993, p. 1).

² IATA - trade association for the world's airlines, supporting many areas of aviation activity and helping formulate industry policy on critical aviation issues. Membership - 287 airlines in 120 countries. Flights by IATA members represent 83% of total scheduled air traffic.

³ According to IATA, there are more than 200 slots-regulated airports worldwide, which account for about 43% of total traffic. This means that these airports have insufficient capacity to meet current demand from the aviation industry.

⁴ Worldwide Slot Guidelines (WSG), 10 ed., effective 1 August 2019, IATA, www.iata.org/wsg.

and facilitators, and the airport operators. This publication contains a set of standards that reflect best practice in slot management at coordinated airports and scheduled operations at scheduled facilitated airports. The document covers three thematic areas: policy, principles and process.

Part 1 (*Policy*) provides an introduction to airport coordination, describes the role of IATA in this area, classifies airports by capacity and examines the process of managing airport demand and capacity. This part of the document also looks at the role of airlines, airports, coordinators and schedules facilitators and coordination committees. The introductory section indicates that airport coordination is a means of managing airport capacity through the application of a set of principles contained in the WSG. This process consists of allocating scarce airport capacity to airlines and other aircraft operators in order to maximise efficiency in the use of airport infrastructure and to ensure the greatest possible benefits for as many users as possible.

Due to the ability of the airport infrastructure to accommodate demand, airports are classified by the competent authorities as follows:

- Level 1: airports where the capacity of the entire airport infrastructure is generally sufficient to satisfy users' needs on a permanent basis;

– Level 2: airports where there is a risk of capacity problems at certain times of the day, week or season. At level 2 airports, a schedules facilitator should be designated to facilitate the planned operation of airlines using or planning to use the airport;

- Level 3: airports where capacity is limited due to insufficient infrastructure. At level 3 airports, a coordinator should be appointed to assign slots to airlines and other aircraft operators using or planning to use the airport as a means to manage the declared capacity.

The categorisation of an airport should be made after a thorough demand and capacity analysis, with the airport operator or another competent body using generally recognised best practice methods. The analysis should be carried out in due time to allow an official statement of maximum available capacity, taking into account functional constraints at the airport (such as runway, apron, terminal, airspace and environmental constraints) for each season. The results of the analysis should be made available to all relevant stakeholders including, where applicable, the members of the coordination committee, well in advance of seasonal meetings.

Part 2 (*Principles*) sets out principles of schedule facilitation (at level 2 airports), principles of slot allocation (at level 3 airports) and principles of slot monitoring (see Table 1).

Table 1

The key principles for facilitating schedules	The key principles for slot allocation
at level 2 airports	at level 3 airports
 Facilitation of schedules should consist of a process of schedule adjustment agreed jointly by the airlines and the facilitator in order to avoid crossing the airport's coordination parameters. At level 2 airports, no slots are allocated, no historical priority concept and no series of slots. The facilitator should correct the lowest number of flights by the least amount of time needed to avoid exceeding the airport's coordination parameters. The airline or other aircraft operator must inform the facilitator of all planned flights before commencing operations at a level 2 airport and of all changes to planned operations. Certain types of flights (e.g. humanitarian or state flights and, in some cases, general and business aviation) may be exempt from tax or subject to special local procedures. Airlines and other aircraft operators must not intentionally operate flights at a significantly different time or in a significantly different manner from that agreed with the facilitator. 	Slots should only be allocated to airlines or

Selected key principles for facilitating schedules and for slot allocation

Source: IATA Worldwide Slot Guidelines, 10 ed., 2019, p. 62 and 65.

Coordinators should allocate the declared airport capacity on the basis of the following hierarchy of priorities: (1) a series of regular connections; (2) ad hoc services; and (3) other operations. The first priority for a slot is the historical slot requested as unchanged or with changes that do not affect the coordination parameters (e.g. flight number change). In the case of changes to historical slots that affect the coordination parameters (e.g. change in time), airlines and other aircraft operators should clearly indicate the extent of flexibility they are prepared to accept. If there are any proposed changes that cannot be allocated within the current flexibility range, the coordinator should reallocate unchanged historical slots to the airline or

other aircraft operator concerned. After allocating unchanged historical slots, the coordinator should create a pool of slots, including any newly created slots. 50% of the slots included in the pool for initial allocation must be allocated to new entrants, unless the requests of new entrants are less than 50%. Similarly, 50 % of the slots in the pool at initial allocation must be allocated to applications other than those of new entrants, unless such applications are less than 50 %. Where a 50/50 balance is not achievable in one season (e.g. where a very limited number of slots are available in the pool), the coordinator should correct this imbalance in the next equivalent season (or seasons if this is not possible) in order to ensure a fair allocation of the pool to both new and non-new entrants.

Part 3 (*Process*) provides a detailed description of the actions to be taken in the next steps of the worldwide coordination and facilitation process. All parties involved in the coordination process must be aware of the important dates and deadlines set out in the calendar of coordination activities, which is published by IATA for each season⁵, and take appropriate action. The slot planning process is an essential basis for airlines to plan operations at the world's busiest airports. Slots are allocated for the whole season. Initial slot allocation takes place in November for the next summer season and in June for the winter season. Every season, the International Air Transport Association organises a slot conference where airlines from all over the world meet with coordinators and agree on schedules within their network to obtain suitable slots. The number of slots per hour depends on the capacity of the runways, which controllers are able to manage continuously and safely without causing major delays. Other factors such as the configuration of runways and taxiways, the types of aircraft using the airport and the time taken up by the aircraft are also taken into account.

The *IATA Worldwide Slot Guidelines* (WSG) do not have binding legal force, but are used globally as good practices. They are of key importance to the aviation industry as the development of airport infrastructure capacity is not keeping pace with the increased demand for air travel.

Legal regulation of slot allocation in the European Union

The issue of slot allocation at congested European airports has been regulated at EU level since the 1990s. The first legal act laying down common rules for the management of slots⁶ at Community airports was Council Regulation (EEC) No. 95/93. The main objective of this Regulation was to create conditions to counteract the existing disparities between the availability of existing airport infrastructure and the demand for it, caused by dynamic development of air transport. In view of the

⁵ A calendar of coordination activities is provided in these guidelines and at www.iata.org/wsg.

⁶ This Regulation defines a slot as permission given by a coordinator to use the full range of airport infrastructure (necessary to operate an air service at a coordinated airport on a specific date) for the purpose of landing or take-off, as allocated by the coordinator.

changing political and economic situation, as well as the results of an assessment of the impact of the established rules on the operation of international air transport, the Regulation was further clarified and amended by Regulation (EC) No 793/2004⁷. The overall objective of the changes was to ensure optimal allocation and use of slots at congested airports and to promote and stimulate fair competition between air carriers, but without making substantial changes to the existing slot allocation system. The regulation introduced new provisions relating to new entrants and to market access, enforcement and the independence of the coordinator. Since the amendment of Regulation 95/93 in 2004, the following rules for slot allocation at EU airports are currently in force.

The idea of the slot allocation system, or so-called schedule coordination, is that if an airport is found not to have sufficient capacity, the EU Member State is obliged to designate it as coordinated⁸. The Member State then designates a coordinator for that airport. According to Article 4 of the Regulation, the EU Member State should ensure that a physical or legal person with detailed knowledge of air traffic planning coordination is appointed as airport coordinator after consulting the air carriers using the airport regularly, their representative organisations and airport authorities. The same coordinator may be appointed for more than one airport. In addition, the Member State should ensure that the coordinator performs its duties independently and that the coordinator itself acts in a neutral, non-discriminatory and transparent manner. Airports where there is a risk of airport capacity problems may be designated as schedules facilitated. At such airports, the Member State should designate a schedules facilitator, acting solely as an advisory body, to assist air carriers operating or intending to operate at the airport in question. The schedules facilitator should operate in an independent manner.

The coordinator's main tasks include: responsibility for the allocation of slots, monitoring the use of slots, participation in international conferences on scheduled air services as permitted by Community law and making the historical records of slots available to interested parties in respect of all operating carriers at a given airport. A coordination committee is appointed at the airport where the schedule coordinator has been appointed (Article 5). This coordination committee should be composed of air carriers using the coordinated airport regularly and their representative organisations, the airport operator concerned, the competent air traffic control authorities and representatives of general aviation using the coordinated airport regularly. The main

⁷ Regulation (EC) No. 793/2004 of the European Parliament and of the Council of 21 April 2004 amending Council Regulation 95/93/EEC on common rules for the allocation of slots at Community airports (OJ L 138, 30.4.2004, p. 50).

⁸ The determination of the status of an airport should be based on the results of a capacity analysis carried out on the basis of objective criteria and the projected volume of air traffic at that airport. The airport operator is required to carry out a capacity analysis and define coordination parameters, taking into account all relevant technical, operational and environmental constraints. The parameters should be provided to the airport coordinator in advance of the initial slot allocation for scheduling conferences.

tasks of the coordination committee is to make proposals or advise the coordinator or the Member State on any question relating to airport capacity and to mediate between all parties concerned on complaints about slot allocation.

In accordance with Article 7(3) of that Regulation, the schedules facilitator or coordinator, the managing body of the airport and the air traffic control authorities should exchange all information they require for the performance of their duties, including flight and slot data⁹.

For the purposes of applying this Regulation, two categories of air carriers have been introduced: those already authorised to operate from the most congested airports and new entrants applying to operate from Community airports¹⁰. That Regulation laid down rules on the use of slots by an air carrier for the period for which access to airport infrastructure is granted. The slot allocation process consists of the coordinator allocating of a series of slots from the pool to applicant carriers as permission to use airport infrastructure for the purpose of landing or take-off during a scheduling period. At the end of that period, they should be returned to the slot pool. The length of the series of slots is currently 5 slots (both winter and summer scheduling periods) requested by the air carrier for the same time on the same day of the week on a regular basis during the same scheduling period and allocated in this way.

Article 8 of the Regulation sets out the rules for the slot allocation process. According to these:

- a carrier is entitled to be allocated the same slots in the next appropriate period of operation at the airport concerned;
- where slot requests cannot be processed to the satisfaction of the air carriers concerned, priority should be given to the carriers operating regularly at the airport concerned;
- if a request for a slot cannot be met, the coordinator should inform the requesting air carrier of the reasons therefor and indicate the nearest alternative slot;
- by mutual agreement and confirmed by the scheduling coordinator, slots may be freely exchanged between air carriers.

Article 10 of the Regulation contains the key 'use-it-or-lose-it' principle, according to which air carriers must use at least 80 % of their slots in a given scheduling season (summer or winter) to take precedence over the same series of slots in a given season of the following year (so-called 'grandfather rights'). Otherwise, the slots allocated are returned to the pool and distributed to the other applicant carriers. Applications submitted after 31 January for the summer scheduling season or after 31 August for the winter scheduling season should not be taken into account for calculation purposes. This rule is intended to help ensure the regularity of air

⁹ It should be noted that this provision does not specify how such information is to be exchanged.10 It should be noted that fair sharing of slots is very difficult due to the operational, geographical and commercial requirements of air carriers' schedules, which are very different from each other. Therefore, the value of slots is different for different air carriers.

operations at coordinated airports. Only exceptional and unforeseen circumstances, such as a terrorist attack or epidemic, can lead to these rules being ignored.

Regulation No. 95/93 provides for the possibility of exchanging (transferring) slots between air carriers in order to improve the efficiency of their use. Slots placed in the pool should be distributed among the applicant air carriers. 50 % of these slots are first allocated to new entrants (unless their applications do not exceed 50%). The coordinator should treat the requests of new entrants and other carriers fairly, in accordance with the coordination rules. Where new entrants have particular problems in obtaining slots at an airport, it is the responsibility of the Member State to convene a meeting of the coordination committee in order to remedy the situation.

Air carriers that repeatedly and intentionally operate air services at times significantly different from the allocated slot that is part of a series of slots and thereby cause disruption at the airport may be deprived of that series of slots for the remainder of the scheduling period. The coordinator may decide to do so after having heard of the air carrier concerned and after issuing a single warning¹¹. The Regulation required Member States to introduce sanctions to prevent the abuse of slots to ensure better use of existing capacity. In addition, in order to improve the efficient use of scarce capacity, Member States were given more freedom to introduce their own rules and guidelines at congested airports. Member States should take appropriate measures, in accordance with their national law, to protect coordinators from claims for compensation relating to the exercise of their functions under the Regulation, except in cases of gross negligence or wilful misconduct.

In addition to the amendments made to Council Regulation 95/93 in 2004, it has been amended several times due to specific situations (in 2002, 2003, 2009 and 2020). Regulation (EC) No. 894/2002¹² was issued in connection with the terrorist attack on the USA on 11 September 2001. Because of this incident, the demand for air transport services drastically decreased. The Regulation ensured that carriers had the right to equivalent slots in the next scheduling season, despite their underutilisation in summer 2002 and winter 2002/2003 scheduling seasons, as they had in previous scheduling seasons. Another Regulation (EC) No. 1554/2003¹³ amending Regulation No. 95/93, was issued in connection with the warfare conducted in Iraq and the SARS epidemic. Both of these events reduced the demand for air transport services at the start of the summer 2003 scheduling season. The Regulation ensured that air carriers retained the right to the same slots during the summer 2004 scheduling

13 OJ L 221, 4.9.2003, p. 1.

¹¹ Airlines can only operate at a different time from the allocated slot if there is an operational delay independent of them, but this possibility is often abused by air carriers, especially at hub airports. An example is London Heathrow Airport, where air carriers repeatedly violate the night flight ban (11 p.m. to 6 a.m.). In order to prevent the use of slots in a way that differs significantly from that indicated at the time of allocation, the airport authorities have decided to look for an effective penalty for airlines breaking the core night. As a result, carriers taking off or landing at Europe's largest airport between 11 p.m. and 6 a.m. will have to pay several times the airport fee. **12** OJ L 142, 31.5.2002, p. 3.

season, despite their non-use in the last scheduling season. Regulation (EC) No. 545/2009¹⁴ was issued under the impact of the severe economic and financial crisis which caused a drop in air traffic volumes during the winter 2008/2009 and summer 2009 scheduling seasons. This Regulation ensured that unused slots during the summer 2009 scheduling season would not result in a loss of entitlement to the same slots during the winter 2010/2011 season.

The emergence of SARS-CoV-2 in early 2020 and its rapid spread has had a serious impact on airlines, leading to a significant drop in international air traffic¹⁵. In order to protect the rights acquired by air carriers in respect of slots that were not used during the coronavirus crisis, the European Commission proposed amending the 'use it or lose it' provision of Regulation (EEC) No, 95/93 in March 2020. The proposed measure is similar in scope and effect to previous amendments to Regulation (EEC) No. 95/93 made in response to other emergencies. The amended Regulation¹⁶ requires coordinators to consider slots allocated for the period 1 March 2020 to 30 June 2020 as having been used by the air carrier to which they were originally allocated for the purpose of assessing the use of grandfather rights.

The regulation of air carriers' access to congested airport infrastructure through slot management is a specific aspect of the provision of air services in the EU. The rules for the allocation of slots at EU airports set out in Regulation 95/93 have been significantly improved as a result of a number of different amendments made to the Regulation in 2004. Other amendments to the Regulation were made for a limited period of time in order to mitigate the impact of various factors that have affected the operations of EU air carriers.

Legal and practical aspects of slot allocation at polish airports

National provisions for the coordination of schedules

The basis for the national regulation of legal relations in civil aviation, including facilitation and coordination of flight schedules at Polish airports, is the Act of 3.07.2002 - Aviation law¹⁷. In accordance with Article 67 of this Act, the introduction and removal of coordination or the organisation of flight schedules at an airport

17 Act of 3 July 2002 - Aviation Law (Journal of Laws of 2019, item 1580 and 1495).

¹⁴ OJ L 167, 29.6.2009, p. 24.

¹⁵ According to ICAO forecasts, the overall reduction in international air passenger numbers in 2020 will be between 44% and 80% compared to 2019. For airports, an estimated loss of two fifths of passenger traffic and 45%, or more than USD 76 billion in airport revenues in 2020 compared to business as usual (by ACI). Source: *Effects of Novel Coronavirus (COVID-19) on Civil Aviation: Economic Impact Analysis*, Air Transport Bureau, Montréal, Canada, 29 April 2020.

¹⁶ Regulation (EC) 2020/459 of the European Parliament and of the Council of 30 March 2020 amending Council Regulation (EEC) No 95/93 on common rules for the allocation of slots at Community airports (OJ L 99, 31.3.2020, p. 1).

should be by administrative decision of the President of the Civil Aviation Authority (CAA). At the airport where the coordination of flight schedules has been introduced, the President of the CAA appoints and dismisses the coordinator in accordance with Regulation No. 95/93/EC. An entity applying for the function of coordinator must fulfil a number of conditions. The coordinator should, inter alia, have a university degree and knowledge or experience in the field of scheduling, be fluent in English and have no business relationship or dominance with any airport operator or air carrier. The activities of the coordinator are supervised by the President of the CAA The coordinator's activities should be assessed in particular in terms of their legality; non-discrimination, independence, neutrality and transparency of activities and the consistency of the disbursement of funds with the objectives arising from the coordinator's budget. The President of the CAA should dismiss a coordinator if the coordination of schedules has been abolished or if the coordinator no longer fulfils the conditions, fails to carry out his duties properly, disburses funds contrary to the objectives of the coordinator's budget. loses the permanent capacity to carry out coordination activities or resigns from his duties. The coordinator should also be dismissed by the President of CAA if the coordinator's budget is rejected three times for the same period. If it is impossible to perform coordination activities or if a coordinator is dismissed, the President of CAA may appoint a so-called substitute coordinator (it can be a coordinator or schedules facilitator appointed for another airport). The coordinator must act independently, neutrally, indiscriminately and transparently and carry out the tasks set out in Regulation No. 95/93. The costs of coordination of schedules at the airport should be covered by the schedule coordination fees paid to the budget of the coordinator.

The Act Aviation Law also specifies the detailed method for calculating and paying coordination and scheduling fees. The costs of coordination at the airport should be covered by coordination fees paid to the budget of the coordinator, which should be assessed by the airport managing body and air carriers and approved by the President of the CAA. The coordinator fees are paid by the air carriers and airport operators for which a coordinator has been appointed; 50% of the coordinator's budget is covered by the air carriers and the remaining 50% by the airport managing body. The draft budget should be approved by the President of the CAA by an administrative decision. If the coordination of schedules at an airport is removed and schedules organisation is introduced at the same time, the existing coordinator becomes the schedules facilitator.

At the request of the coordinator or the airport operator at which scheduling coordination has been implemented, the local air traffic flow management unit¹⁸

¹⁸ In accordance with Article 2(5) of Commission Regulation (EU) No. 255/2010 of 25 March 2010 laying down common rules on air traffic flow management (OJ L 80, 26.03.2010, p. 10, as amended) 'local air traffic flow management (ATFM) unit' means a flow management entity operating on behalf of one or more other flow management entities as the interface between the central unit for ATFM and an ATS unit or a group of such units.

should provide the applicant with the accepted flight plan for that aerodrome without undue delay, but no later than when the flight is to take place. The coordinator or the airport operator where the coordination of schedules has been implemented should ensure that the President of the CAA. competent air traffic control authorities and aircraft users have access to their flight plan. The airport operator in consultation with the coordinator or the schedules facilitator should, before each scheduling season. set the coordination parameters¹⁹, taking into account the provisions of Regulation No. 95/93, and transfer them to the coordinator or schedules facilitator. The Act in Article 67g also contains an authorisation for the Minister responsible for transport to issue a regulation on the coordination and organisation of flight schedules. On the basis of that provision, a Regulation of the Minister for Transport on the coordination and organisation of flight schedules was issued in 2006²⁰. The Regulation lavs down a detailed procedure for the appointment and dismissal of the coordinator and/or the schedules facilitator and detailed rules for development and approval the budget of the coordinator and the schedules facilitator. The Regulation also specifies a detailed method for calculating and paying coordination and scheduling fees and how to proceed if the organisation and coordination of schedules is cancelled.

In order to ensure consultation and proper representation of the interests of the parties at the airport where the coordination of schedules has been established, Article 67(3) of the Act Aviation Law provides for the establishment of a coordination committee. The Minister responsible for transport has been empowered by regulation to determine the detailed manner and procedures for the establishment and operation of these committees at airports. The Regulation of the Minister for Infrastructure of 30 April 2004 on this matter²¹, issued on the basis of Article 67 of the Act Aviation Law, regulates, in particular, the principles for the establishment, operation and cooperation of committees and organisations, as well as the cooperation and consultation of air carriers and their organisations on matters relating to the coordination of flight schedules at airports. The Regulation also introduces a special mechanism for the amicable settlement of any disputes concerning the allocation of slots. An air carrier or the airport operator may lodge a complaint with the mediation subcommittee or the coordination committee, the advisory body for scheduling coordination. If the dispute is not resolved, the President of the CAA may also be asked to mediate.

¹⁹ At Warsaw Chopin Airport, the declared coordination parameters consist of: capacity of airways, terminal capacity (document and security control) and environment.

²⁰ Regulation of the Minister of Transport of 27 June 2006 on the coordination and organisation of flight schedules (Journal of Laws of 2006 No. 112, item 768). In connection with the amendment of the provision authorising the issuance of this regulation by the Act of 14 December 2018 amending the Act Aviation Law and certain other acts (Journal of Laws of 2019, item 235), a new regulation is necessary. A draft of this legal act has already been prepared.

²¹ The Regulation of the Minister of Infrastructure of 30 April 2004 on the establishment and operation of committees and cooperation and consultations at the airport (Journal of Laws of 2004 No. 103, item 1087).

Practice of managing slots at Polish airports

The basis for all practices in the allocation of slots to air carriers at Polish airports is the result of previously presented EU and national legal regulations. Schedule facilitation for air carriers was first introduced in the 1990s, but the solutions adopted were inconsistent with Regulation 95/93, which was already in force in the EU at the time²². After Poland's accession to the EU, formal compliance of the national aviation law in this respect with the EU law was achieved only in mid-2006. However, in late October 2006, the President of the CAA issued a decision to abolish the organisation of flight schedules at the Warsaw Chopin Airport (WAW)²³ and to cancel the schedules facilitator of flights at that airport²⁴ due to the forecast reduction in air traffic and infrastructure load in the upcoming scheduling season. Up to the end of the first decade of the 21st century, there were no major problems with the capacity of Polish airports that would require the introduction of slots.

The decision to establish the coordination of flight schedules in Poland for the first time was taken by the President of the CAA in 2011. The coordination was in force at Warsaw Chopin Airport from 25 March 2012. The introduction of coordination at Warsaw Chopin Airport was aimed at better use of the airport capacity, as well as adapting air traffic to the established standards of permissible noise at night²⁵. At Poznan-Lawica Airport (POZ), Gdansk Lech Walesa Airport (GDN) and Wroclaw-Strachowice Airport (WRO). the coordination was introduced on time related to the UEFA EURO 2012 football tournament, i.e. from 1 June to 8 July 2012.

Currently, the year-round coordination of flight schedules (IATA level 3), in addition to Warsaw Chopin Airport, also takes place at Poznan-Lawica Airport (during the night hours, 22:00 - 06:00 LT) and, from the summer season 2020 onwards, at Krakow-Balice Airport (KRK). The company managing the slots at Warsaw Chopin Airport and Poznan-Lawica Airport is ACL International²⁶. By the decision of the President of CAA of 28 October 2019, the Polish Air Navigation Services Agency (PANSA) was appointed as the coordinator of flight schedules for Krakow-Balice

²² The coordinator of the times of air operations was the Timetable Department of LOT Polish Airlines SA (PLL LOT SA), the air carrier dominating the market air services on routes to/from Polish airports, which did not guarantee objectivity and impartiality.

²³ Decision of the President of the Civil Aviation Authority No. 65 of 27.10.2006 on the abolition of the organisation of flight schedules at Warsaw Frederic Chopin Airport.

²⁴ Decision of the President of the Civil Aviation Authority No. 66 of 27.10.2006 on the cancellation of the provisional organiser of flight schedules at Warsaw Frederic Chopin Airport.

²⁵ A particular reason for the introduction of schedule coordination was also the significant increase in air traffic forecast during the upcoming EURO 2012 European Football Championship. **26** Airport Coordination Limited (ACL) is an independent British organisation based in London which has been operating since 1992. The ACL provides schedule management services to 29 airports around the world. Eight of them have been coordinated, including Dublin, Dubai and Toronto airports. The ACL was also responsible for coordinating UK airports during the 2012 Olympic Games.

Airport. The practical aspects of schedule coordination will be discussed later in this article using the example of Warsaw Chopin Airport.

The execution of the flight operation at Warsaw Chopin Airport requires a prior slot from the coordinator of the flight schedules. The modalities and the way in which contacts between the airport operator ("Polish Airports" State Enterprise)²⁷ and the schedules coordinator should be established in a cooperation agreement. In particular, such agreement should specify how information on the introduction of air traffic restrictions at the airport should be communicated to the coordinator. The slot allocation process covers IFR and VFR operations, except for state aircraft, emergency landings and humanitarian flights. Slot applications should be sent during the coordinator's working hours (from 08:30 to 17:00 UK local time). During the hours 23:30-05:30 LT, there is core night silence. During this time, no flight operations may be planned, only aircraft operations not included in the slot allocation process, operationally delayed (for independent reasons), part of the series and diverted arrivals are allowed.

Since the beginning of the winter 2013/14 season, Warsaw Chopin Airport has been introduced the Quota Count system, which is used to coordinate flight schedules taking into account the acoustic parameters of aircraft and applicable environmental noise limits at night²⁸. The Quota Count (QC) point calculation method for night-time²⁹ operations provides for the allocation of points to air operations within the available limit of points, fixed for one night. Aircraft taking off and landing at Warsaw Chopin Airport receive a specified value of QC points between 0,13 and 16,00 depending on the acoustic parameters established on the basis of aircraft noise certificates provided by carriers. Aircraft are classified into individual classes on the basis of calculations made separately for take-offs and landings on the basis of measurement data contained in noise certificates. An example of an aircraft classification for the Quota Count system: A320 - arrival QC points: 0,13 - 0,50; departure QC points: 0,13 - 1,00; B737 - arrival QC points: 0,40 - 0,50; departure QC points: 0,40 - 0,80.

Based on the results of the calculations, the scoring table for aircraft operating at Warsaw Chopin Airport is created and updated by the airport operator. The sum of QC points for all operations planned during each night cannot exceed the value of the QC points limit set for a given scheduling season. The night QC point limit available for distribution of slots in each IATA scheduling season is declared by the Warsaw Chopin Airport operator as a coordination parameter. For the summer

29 The night time is defined in accordance with noise protection regulations as the period between 10 p.m. and 6 a.m. LT.

²⁷ The "Polish Airports" State Enterprise (Przedsiębiorstwo Państwowe "Porty Lotnicze" – PPL), as the operator of Warsaw Chopin Airport, has the exclusive right to make available the infrastructure located on its premises.

²⁸ All operators of civil aircraft operating to and from Warsaw Chopin Airport are required to submit a valid noise certificate for each aircraft operating to and from Warsaw Chopin Airport. See: https://www.acl-uk.org/airport-info-details/?aid=12

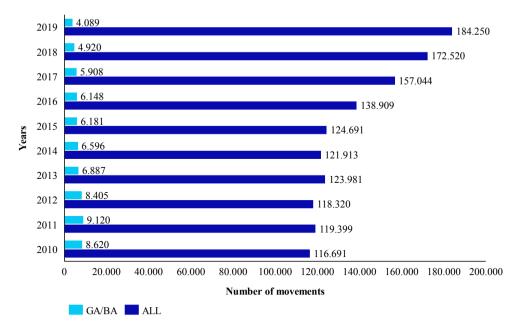
2019 scheduling season, a limit of 24 QC points was adopted. The value of the QC limit is verified periodically once a year. Regardless of the periodical verification, the value of the limit may be changed for a given scheduling season depending on the results of noise monitoring, as well as the obligations imposed on the airport operator resulting from legal acts or administrative decisions issued.

Warsaw Chopin Airport, the main airport in Poland, is used for various air operations (scheduled, non-scheduled, general aviation, cargo transport). The airport also provides services for increased air traffic during the organisation of various state and political events and celebrations as well as cultural, sports and business events³⁰. Moreover, the ambition of the Warsaw Chopin Airport is to play a leading role in Europe as a "hub for transfer", and this causes the traffic to be distributed not evenly, but in a "wave" manner (alternating between the arrival and departure peaks). This situation also results in increased demand for airport infrastructure. The current daily traffic limit is 560. In the summer 2020 scheduling season, the maximum capacity at 2 runways is 42 operations per hour³¹. After the expansion, the Warsaw Chopin Airport is to handle up to 50 take-offs and landings per hour. However, the problem is the environmental capacity, which is only 600 operations per day. In 2019, more than 184,000 air operations were performed at Warsaw Chopin Airport, including about 175,000 in scheduled air traffic, almost 6,000 charters, and 3,700 cargo operations. This was the largest number of operations at this airport so far (see Figure 1). The statistics shown in Figure 1 show that with the growth of air carriers' operations (scheduled and charter), the number of GA/BA aviation operations decreased. The need to limit the service of this type of air traffic results from the need to ensure safety in the conditions of existing infrastructure (technical and operational) restrictions of Warsaw Chopin Airport³².

30 Such events in recent years have included the UEFA Euro Tournament (2012), the European League Final Tournament (2015), the NATO Summit (2016) and the celebration of the 80th anniversary of the outbreak of World War II (2019). Special events and the associated increased infrastructure needs resulting from increased traffic of different types of operations and aircraft have a significant impact on the operational functioning of the airport. At Warsaw Chopin Airport, each such event is accompanied by special preparations in which experts from various specialties are involved. All this is to minimise the impact of additional operations on regular traffic and maintain the safety of operations and services at an acceptable level.

31 During the summer 2019 scheduling season, the number of scheduled regular and charter operations during the arrival and departure waves exceeded 35 per hour. In addition, there was general aviation traffic and occasional flights. This means that the capacity of Warsaw Chopin Airport is close to exhaustion during peak hours.

32 The application of restrictions only to general aviation, and not e.g. to scheduled traffic is legally justified. Article 67(2) of the Aviation Law allows an airport operator to vary the conditions of use of an airport in such a way as not to discriminate between users and to ensure that fair competition is maintained, in particular with regard to the types and characteristics of aircraft and the nature of the air operations.



Legend: All – air passenger traffic (scheduled, non-scheduled) and air cargo traffic; GA/BA - General Aviation/ Business Aviation

Source: Own preparation based on data from the "Polish Airports" State Enterprise.

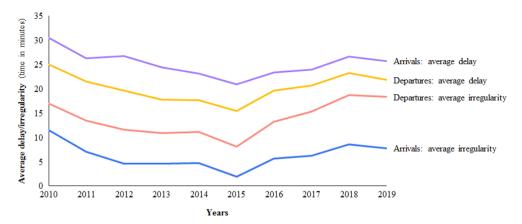
Figure 1. Volume of movements (arrival and departures) at Warsaw Chopin Airport 2010-2019

Slot allocation is one of many elements of the airport management process aimed at eliminating problems arising from insufficient airport infrastructure capacity. A measurable criterion for the efficiency of airport operations is the average time of delays and irregularities in arrivals and departures³³. However, it is necessary to distinguish between the causes of delays. In addition to delays caused by airport capacity shortages, there are also delays caused by failure to meet time standards for ground handling processes, operational or technical problems of air carriers, airspace capacity constraints and difficult weather conditions. On the basis of statistical data on average delay and irregularity of arrivals and departures at Warsaw Chopin Airport for the previous scheduling seasons, the impact of schedule coordination on the practical capacity of that airport³⁴ can be determined (see Figure 2). After

33 The average delay is the difference between the actual arrival (time the aircraft is at the stand) or the actual departure (time of taxiing, pushback) and the slot allocated by the coordinator. The minutes when the aircraft starts before the time or stops before the time allocated by the coordinator (i.e. the sum of these values is subtracted from the sum of the delays) should be taken into account when calculating the average irregularity. The average irregularity value should, therefore, always be lower than the average delay.
34 The practical capacity of an airport is the number of aircraft take-offs and landings (under established traffic conditions and continuous passenger and cargo handling) per unit of time for

which the average delay time will correspond to an acceptable average delay time.

the introduction of schedule coordination in 2012, up to 2015, there was a steady decrease in delays and irregularity despite some increase in operations (by 6 000). The highest punctuality of airport operations was recorded in 2015. From 2016 to 2019, there was a renewed growth trend of delays and irregularities, but during this period, the number of operations increased by as much as 60 000. It should be noted, however, that despite such a high volume of traffic, the level of delays and irregularity was lower than before the introduction of coordination at Chopin Airport. It can therefore be concluded that the negative effects of the increase in air traffic have been significantly reduced by the effective cooperation of the schedules coordinator with the airport operator, air carriers and air traffic services.



Legend:

Arrivals: average delay = average of AIBT-SIBT, provided that AIBT-SIBT > 0, calculated for all operations; average irregularity = average of all AIBT-SIBT values, calculated for all operations.

Departures: average delay = average of AOBT-SOBT, provided that AOBT-SOBT > 0, counted for all operations; average irregularity = average of all AOBT-SOBT values, calculated for all operations.

- AIBT Actual in block time (time an aircraft is stationary at the stand).
- SIBT Schedule in block time (Scheduled arrival time according to the airport slot based on SCR message at coordination level 3 and SSM message at coordination level 2, i.e. until 2012).

AOBT - Actual of block time (time when the aircraft leaves the stand).

SOBT - Schedule of block time (Scheduled departure time according to the airport slot based on SCR message at level 3 of coordination and based on SSM message at level 2 of coordination, i.e. until 2012).

Source: Own preparation based on data from the "Polish Airports" State Enterprise.

Figure 2. Average annual delay and irregularity of departures and arrivals at Warsaw Chopin Airport in 2010-2019

The slot allocation process is based on a pre-defined planning calendar. In this article, it will be analysed using the example of the winter 2019/2020 scheduling season. The first deadline was 22 April 2019. This is the so called SHL term³⁵,

35 SHL (Slot Historic List message) - standard message used by coordinators to inform airlines about the status of their historical slots.

when the allocation of historical slots begins, i.e. those used in the past, to which the line has kept its right-hand side according to the second rule. The time for the allocation of these permits expired on 9 May 2019. The coordinator also confirms the final parameters and prepares details of the free capacity. At least six months before the start of the season (in 2019 from 16 May to 6 June), airlines should send applications for slot allocation to the coordinator in a standardised message in SCR format³⁶. From 4 June onwards, carriers could start to make arrangements with the coordinators. Airlines will be informed of the slots allocated at the latest 12 days before the start of the forthcoming slot conference. This deadline date is called the SAL³⁷ and then the control body had to publish the initial slot allocation on the basis of the requests received. All changes after this date should take place at least three days before the conference.

IATA's slot conferences are held twice a year (June and November), about five months before the start of each season. Within 3 days, schedules are mainly adjusted through bilateral meetings between airlines and coordinators. The parties should hold discussions, offer alternatives to each other and exchange them in order to obtain acceptable slots. Until 15 July 2019, carriers were required to return permits which they had not planned to use, transfer or exchange. Since 31 August 2019, coordinators have been analysing the use of previously allocated slots as a basis for determining eligibility for historical priority. All cancellations made after that date will be treated as non-utilisation of the slots, unless justified by one of the specific reasons. These include: unforeseeable or unavoidable reasons (closure of the airport, weather conditions) over which the airline has no control and measures to prevent the carrier from operating flights as planned (e.g. strikes) - these reasons should be released for non-utilisation. The winter 2019/2020 season started on 27 October 2019.

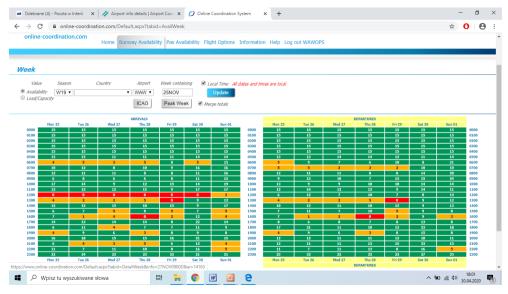
According to the report of the slot coordinator at Warsaw Chopin Airport, 90.1 thousand slots (both passenger and cargo) were allocated in the winter 2019/2020 season. This represents an increase of 2.4% compared to winter 2018/2019 season. At the same time, 18.2% more new slots were allocated compared to historical ones. The report of the ACL indicates that out of 3548 historical slots (on a weekly basis), 343 slots were withdrawn because they were not used, while a further 46 historical slots were not requested again by the carriers. The following lines, among others, lost their permits due to unused capacity: Adria Airways, Air Cairo, Belavia, Corendon, European Air Transport (DHL), Norwegian, Nouvelair Tunisie, Onur Air, Qatar Airways, Ryanair, SAS, Travel Service, Travel Service Poland and UIA. The highest demand for new slots was reported by LOT (527 operations per week), Wizz Air (136 operations per week) and Travel Service Poland (64 operations per week).

36 See: IATA SSIM, Chapter 6.

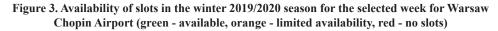
37 SAL (Slot Initial Allocation List message) - standard message used by coordinators and facilitators to inform airlines of the results of Initial Coordination at a Level 2 or Level 3 airport.

In total, the ACL allocated 4125 slots per week, 85% of which were allocated within the requested period.

Slots are allocated using the OCS-online system and are based on the times provided by the air carriers. However, after these initial arrangements, schedules are continuously modified by the airlines. All slot requests should be sent in SCR format to the coordinator on weekdays between 8:00 and 16:00 UTC. Outside coordinator's working hours (evenings, weekends, public holidays), the management of slots for delayed, accelerated, night and ad hoc operations is provided by the airport operator – the Warsaw Airport Operations Office (WAW OPS). This office acts as an intermediary in the process of obtaining a slot by introducing it into the OCS system for carriers who do not have access to OCS outside normal coordinator office hours.



Source: www.online-coordination.com



The rules for the allocation of airport slots are set out in *EPWA Local Rule 1* - *Procedures for the acquisition (allocation) of slots for night-time, delayed, accelerated and off-hours operations of the coordinator*. According to this document, all operations to or from Warsaw Chopin Airport must have a coordinator slot (ACL). Exceptions to this rule are aircraft operating state flights (STATE, HEAD, GARDA), emergency landings and humanitarian flights (HUM, HOSP, SAR). These operations are not covered by the obligation to apply for a slot, but use the capacity of the airport, so operators of state aircraft and humanitarian flights are required to report these operations to the coordinator in advance. In the case of delayed or accelerated operations, there is no obligation to request a new slot when a change in operating time is unscheduled and does not result in a postponement of the operating time to

one hour after 06:00 local time the following day. However, this is recommended as the information on the passenger information boards on departure and arrival times is slotted. Airport resources such as check-in, gate, conveyor belts and baggage drop-offs are also allocated according to slot times. It may happen that because of a delay to a given flight operation, the airport infrastructure is insufficient and this will lead to piling up at the check-in line. Where a delay results in a postponement of the time of operation to the next day, i.e. after 6:00 LT, the station manager, the authorised local agent or the ground handling agent must obtain a new slot. For ad hoc operations and General Aviation/Business Aviation (GA/BA), operators must already obtain a new slot for delays of more than 2 hours.

An important principle that stems from environmental constraints is the prohibition of intentional acceleration of departure/arrival to the extent that the operation is shifted to night time. A new slot is required to perform a night-time operation that was scheduled during the daytime. Many airlines or handling agents already have access to the OCS platform, so they are required to modify the previously allocated slot themselves. Air carriers that do not have access to OCS are required to apply for the grant/change/deletion of the slot in writing (in the SCR IATA format) to the appropriate email addresses.

In the case of planned or intentional delays in air operations (not due to independent reasons), the station manager, the local authorised representative or the ground handling agent is required to request a change of slot. Operations which are planned or intentionally delayed or not carried out by the carrier in accordance with the allocated slot cannot be carried out and are subject to financial penalties. The process of sanctions should be initiated by the coordinator in accordance with the Guidelines for dealing with suspected infringements referred to in Article 14(5) of Council Regulation (EEC) No 95/93. According to this document, after a single warning has been given, the President of the CAO has the right to take action and decisions in accordance with the powers conferred, in particular under the Aviation Law Act, the Act of 14 June 1960 - Code of Administrative Procedure³⁸, Regulation 95/93, the Act of 2 July 2004 on freedom of economic activity³⁹ and the Act of 17 June 1966 on enforcement proceedings in administration. The penalty for infringements may also be the loss of the slot granted in the previous scheduling season.

A coordination committee has been established at Warsaw Chopin Airport which supports the coordinator in an advisory capacity. The committee is composed of air carriers or their representatives, airport authorities and air traffic control authorities. The coordination committee meets twice a year before each scheduling season. The tasks of this committee should include advising on capacity increases, improving conditions at the airport, complaints about slots, monitoring methods, guidelines on slot allocation and problems encountered by new entrants. The activities of the coordination committee at an airport should bring considerable benefits, both to

³⁸ Journal of Laws of 2013, item 267 and of 2014, item 183.

³⁹ Journal of Laws of 2013, item 672, as amended.

the organisations associated within the committee and to airport managing bodies, inter alia, by providing a forum for consultation and agreement at the airport and by working together to optimise airport operations. Effective cooperation between stakeholders at airport level is essential to ensure optimal use of airport infrastructure and to improve service comfort not only for airport users but above all for passengers. Active cooperation between the airport operator and the committee is an appropriate way to improve airport operations and to eliminate existing obstacles and delays to air operations.

The system of coordination of schedules and periodic capacity reviews by the coordination committee is beneficial for airports and carriers as well as for passengers as it leads to increased capacity and efficiency at the airport. However, in view of the high number of infringements, involving the operation of air services at times significantly different from the allocated slots or the use of slots in a manner significantly different from that indicated at the time of allocation, action should be taken to improve compliance. Experience shows that the available sanctions are not effective, proportionate and sufficiently dissuasive. This is also due to the fact that airport slots do not comply with flight plans. It appears that an air carrier's flight plan should include a reference to the slot, which would make it possible to deny permission to air traffic control services to take off or land. In practice, the situation is that air carriers fly according to their flight plans without changing the slot, resulting in disruption at the airport. In order to improve the current situation at Warsaw Chopin Airport, the Network Manager⁴⁰ should be included in the coordination committee, which could reject the flight plan and request certain information from the schedules coordinator. It seems that cooperation between the flight coordinator and the Network Manager is the key to effective slot management.

Conclusions

Slots at coordinated airports represent a valuable operational and economic resource. The allocation of slots to individual air carriers at Polish airports is based on European and national legislation and on global standards described in the *IATA Worldwide Slot Guidelines*. Rules and principles for the coordination of schedules are used to manage available airport capacity and reduce the load on terminal and runway infrastructure during peak air traffic periods. Airport coordinators have a duty to make the best use of available slots and to provide a service to their airline customers. The alignment of the infrastructure load leads to reduced delays and

⁴⁰ The Network Manager should be an impartial and competent organisation established for the performance of tasks necessary for the execution of the network functions, including air traffic flow management. By decision of the EC, Eurocontrol was appointed as the Network Manager.

allows for more efficient operation of the entire airport. As a result, the benefits are all interested parties - airlines, airports and passengers.

Currently, slot allocation rules mean that airlines have to operate at least 80% of their slots in normal circumstances. Failure to do so means that the airline loses entitlement to these slots in the next equivalent season. However, in exceptional circumstances (e.g. a serious fall in demand due to the coronavirus epidemic in 2020), regulators can mitigate this requirement. This principle, also called "use it or lose it", was already suspended previously, for example after the terrorist attacks in 2001, the war in Iraq and the outbreak of SARS in 2003 and after the financial crisis in 2009. The temporary suspension of slot rules allows airlines to react flexibly to market conditions and helps the airline industry to overcome an unprecedented crisis in the history of air transport.

It is clear that the slot allocation mechanism does not create additional airport infrastructure capacity. The management of slots should be a temporary measure only, pending the implementation of long-term solutions to increase airport capacity through the development of airport infrastructure. Nevertheless, in practice, at large and attractive airports (hubs), where demand will always exceed infrastructure capacity, coordination of slots can be an effective instrument to manage scarce capacity. In view of the increasing demand for air transport, the EU Regulation on common rules for the allocation of slots needs further improvement in order to adapt existing airport capacity to all types of air transport (long-haul flights, regional connections, cargo etc.). A more efficient allocation of slots between air carriers in Europe should ensure an equal level of access to airport infrastructure for all operators and provide more growth opportunities for the airlines, which in turn will contribute to a faster development of air transport throughout the EU.

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