The aim of this publication is to provide an overview of the situation of EU airports within the general context of the aviation sector. By discussing past and future trends in capacity, the analysis seeks to illustrate the existing and emerging challenges facing EU airports, at a time of increased international competition. It also presents the key elements of EU airport policy.
EXECUTIVE SUMMARY

Air transport in Europe, which historically has been developed by or under the control of national authorities, has been undergoing profound change in recent decades as passenger numbers soar and destinations and connections multiply. Liberalisation of the internal market for aviation in the late 1990s boosted the competitiveness of the aviation sector in the EU, leading to new services, new players, new organisation of air services and wider access to air transport.

Airports, which are key players in the aviation value chain and a vital part of civil aviation infrastructure, have consequently seen their role evolve in recent years. Initially publicly owned and managed, and charged with ensuring access and contributing to territorial development, airports now have specific commercial objectives, and compete to attract and retain traffic. European airports differ in terms of size and role, with some competing to develop point-to-point and transfer traffic, expand their route and airline portfolio, and reduce their reliance on established hub carriers.

The major challenges facing airports are congestion and their ability both to deal with future air traffic growth and to maintain high quality standards, at a time of increased competition from third-country players. Indeed, on present trends, many European airports are unlikely to be able to accommodate more flights in future years. Another important issue for airports is their profitability and their related ability to fund the investment in infrastructure needed to cope with increasing demand.

Promoting the efficiency of EU airports is therefore important if the EU is to avoid bottlenecks and a looming capacity crunch, and can play a key role in enhancing the competitiveness of the European aviation sector as a whole, and boosting the attractiveness of EU airports and their connectivity with other parts of the world.

The EU has consistently recognised the importance of airports as part of air transport policy in its overall transport strategies, and in specific strategies such as the December 2011 airports package. Over the years, it has adopted specific regulatory measures such as legislation on airport slots, ground handling services and airport charges, which form the core of EU airport policy.

While some legislative proposals are still pending, such as the revision of the Slot Regulation or the SES2+ package, the Commission presented a new aviation strategy in December 2015. Designed to strengthen the competitiveness and sustainability of the entire EU air transport value chain, it covers initiatives affecting or designed for airports, such as an assessment of the need to review ground handling services, and the airport charges directives.

The European Parliament has adopted a number of resolutions covering air transport as a whole, as well as airport-related issues. It has called for the development of an EU airport network including, first, the EU’s major airports and, second, a network of local, provincial and regional airports. Referring in its November 2015 resolution on aviation to 'the loss of competitiveness of EU airlines and airports vis-à-vis subsidised third-country carriers and airports', the EP called for 'a proactive policy to ensure a level playing field on ownership', and once again highlighted the importance of the EU’s small and regional airports for regional connectivity. The EP is now examining the recently adopted aviation strategy.
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<tr>
<td><strong>Airport:</strong> According to the 2009 Directive on airport charges, an airport is defined as 'any land area specifically adapted for the landing, taking-off and manoeuvring of aircraft, including the ancillary installations which these operations may involve for the requirements of aircraft traffic and services, including the installations needed to assist commercial air services'.</td>
</tr>
<tr>
<td><strong>Air traffic management (ATM):</strong> The 2004 Framework Regulation on the SES defines ATM as 'the aggregation of the airborne and ground-based functions (air traffic services, airspace management and air traffic flow management) required to ensure the safe and efficient movement of aircraft during all phases of operations'.</td>
</tr>
<tr>
<td><strong>CF:</strong> Cohesion Fund</td>
</tr>
<tr>
<td><strong>ECA:</strong> European Court of Auditors</td>
</tr>
<tr>
<td><strong>ERDF:</strong> European Regional Development Fund</td>
</tr>
<tr>
<td><strong>Groundhandling:</strong> Groundhandling services consist of all ground-based aviation-related activities carried out for individual airlines at airports. According to the 1996 Directive, groundhandling services cover 11 categories of services (ground administration and supervision; passenger handling; baggage handling; freight and mail handling; ramp handling; aircraft services; fuel and oil handling; aircraft maintenance; flight operations and crew administration; surface transport; and catering services).</td>
</tr>
<tr>
<td><strong>ICAO:</strong> International Civil Aviation Organization. Founded in 1944, the ICAO is a United Nations specialised agency whose purpose is to manage the administration and governance of the Convention on International Civil Aviation (Chicago Convention). ICAO works with the Convention’s 191 Member States and other stakeholders on international civil aviation Standards and Recommended Practices (SARPs) and policies in support of a safe, efficient, secure, economically sustainable and environmentally responsible civil aviation sector. The European Union (EU) is an ad-hoc observer in many ICAO bodies.</td>
</tr>
<tr>
<td><strong>LCC:</strong> Low-cost carriers</td>
</tr>
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<td><strong>SES:</strong> Single European Sky</td>
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<td><strong>SESAR:</strong> Single European Sky ATM Research (SESAR) is the technological pillar of the SES. It seeks to modernise and harmonise ATM systems through innovative technological and operational solutions.</td>
</tr>
<tr>
<td><strong>TEN-T:</strong> Trans-European transport network</td>
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1 Introduction

Air transport in Europe has been undergoing profound changes in recent decades, with soaring passenger traffic and an increasing number of destinations and connections. While the liberalisation of the internal market for aviation in the late 1990s made the EU's aviation sector more competitive, leading to new services, new players, a new way of organising aviation services, and wider access to air transport, substantial changes have also taken place more recently at global level, with the emergence of new competitors from third countries.

Increased demand for travel, which is expected to grow significantly in future years, irrespective of which scenario is used for projections; coupled with increased competition from other world players, is therefore placing a strain on all players in the aviation chain, including airports.

Airports are essential for the aviation sector, since they link airlines with their passengers and freight customers, and provide a network of connections within the EU and with the rest of the world. They are also essential for the delivery of the Single European Sky because, together with air traffic management, they form the infrastructure for civil aviation. As highlighted in a 2011 Commission communication, 'capacity in the air will be pointless if airport capacity does not remain aligned with ATM capacity'. European skies and airports, especially major European hubs, are confronted with growing congestion. If nothing is done, there is a risk that travellers will face delays and cancellations on an unprecedented scale, and that a large share of the potential demand for flights will go unmet, while congestion costs could increase by as much as 50% by 2050.

Boosting the efficiency of EU airports is therefore important if the EU is to avoid bottlenecks and a looming capacity crunch, enhance the competitiveness of Europe's entire aviation sector, and increase the attractiveness of EU airports and their connectivity with other parts of the world. It is also essential because air transport as a whole has become a key sector of the European economy. According to data and sources provided in the Commission Working Document accompanying the recently published Aviation Strategy for Europe, the sector directly employs between 1.4 million and 2 million people and, if the sector's multiplier effects are taken into account, supports between 4.7 and 5.5 million jobs (including indirect and induced impacts). The air transport sector's direct contribution to EU GDP is €110 billion, or €300 billion if indirect and induced impacts are included. Furthermore, airlines transport about 40% of the value of Europe's exports and imports, and carried 842 million passengers in Europe in 2013.

2 Background

2.1 Changes in structure and services

The EU airport industry has changed substantially over the last two decades, in response to the liberalisation of the internal market for aviation. While air transport has historically been developed by or under the control of national authorities, and dominated by monopolistic national carriers and publicly owned and managed airports, the role of airports has changed in recent years. Initially responsible for ensuring accessibility and territorial regional development, airports now have specific
commercial objectives and compete to attract and retain traffic. Major European airports in particular compete to draw point-to-point and transfer traffic, grow their route and airline portfolios, and reduce their reliance on established hub carriers.

European airports have different roles depending on their size and the specific markets they target. Some try to attract additional passengers by expanding their catchment area or by acting as hubs for major carriers; others focus on specific customer groups. This is the case, for instance, for low-cost airports specialising in point-to-point services covering short-haul destinations operated by low-cost carriers (LCC), or for city airports targeting, and primarily used by, business passengers. To cater for these developments, many former military or general aviation airports have been transformed into civil aviation airports, a trend driven by the emergence of LCC. The rise of LCC has thus brought about substantial changes in the EU air transport landscape, affecting airports in turn. While only 1.5% of passenger seats were sold by LCC and 65% by incumbent air carriers in 1992, in 2011 LCC exceeded the market share of incumbent air carriers for the first time (42.2% versus 42.4%). In terms of supply, in 2015 LCC represented 48% of total seat capacity.

Airports' strategies and roles are thus closely related to airlines' strategies for developing their market share and network. To expand their list of possible destinations, airlines can opt for either hub-and-spoke\(^1\) or point-to-point operations, a decision driven by many factors such as passenger market, slot availability at airports and code-sharing strategies. In addition, airlines increasingly seek to form alliances and to gain access to partners' hubs. This is a trend which is particularly relevant for the international air transport sector, in the context of increased competition from non-European airlines, and is related to the negotiation of bilateral air service agreements with the EU. By way of example, Middle Eastern carriers have the potential to offer competitive connections to the Middle East and Asia-Pacific region or southern Africa via their hubs located outside Europe.

### 2.2 Growing traffic

Reflecting the substantial growth in air traffic that has taken place in recent decades, European airports have had to deal with a significant increase in passenger traffic, as evidenced by numerous indicators. While the number of passengers carried by EU airlines has grown constantly since the 1970s, it was the liberalisation of the intra-EU aviation market in particular that boosted traffic growth. The number of scheduled weekly seats available within the EU increased 152% in 13 years (from 5.5 million in 1992 to 13.9 million in 2015); the number of intra-EU routes saw a 303% increase (from 874 routes in 1992 to 3,522 in 2015); while the number of extra-EU routes increased by 165% (from 988 in 1992 to 2,621 in 2015). From 348 billion pkm\(^2\) in 1995, air passenger transport reached 530 billion pkm in 2005 and 583 billion pkm in 2013, amounting to an increase of 67.4% between 1995 and 2013.

Focusing specifically on airports, passenger volumes at EU airports grew by 23% between 2004 and 2013. With around 842 million passengers carried in Europe in 2013,

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1. ICAO defines the hub-and-spoke system used in air transport as ‘an operational system in which flights from numerous points (the spokes) arrive at and then depart from a common point (the hub) within a short time frame, so that traffic arriving from any given point can connect to flights departing to numerous other points.

2. Passenger-kilometre (pkm) is a unit of measurement corresponding to the following: one passenger transported a distance of one kilometre.
Europe's share of global scheduled passenger traffic amounts to 27%, or almost a third of worldwide traffic.

This overall trend masks the diverse nature of EU airports, which differ in both size and role. Table 1 shows the annual figures for the different categories of airport in the EU, based on the number of passengers carried each year. The number of airports transporting larger volumes of passengers (i.e. 5 million+ passengers) seems to have remained relatively stable.

Table 1 – Number of airports by number of passengers carried per year (EU)

<table>
<thead>
<tr>
<th>Category</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 10 million</td>
<td>31</td>
<td>30</td>
<td>27</td>
<td>27</td>
<td>29</td>
<td>28</td>
<td>29</td>
</tr>
<tr>
<td>5 to 10 million</td>
<td>29</td>
<td>31</td>
<td>26</td>
<td>29</td>
<td>32</td>
<td>32</td>
<td>31</td>
</tr>
<tr>
<td>1 to 5 million</td>
<td>92</td>
<td>94</td>
<td>99</td>
<td>100</td>
<td>98</td>
<td>98</td>
<td>95</td>
</tr>
<tr>
<td>500 000 to 1 million</td>
<td>43</td>
<td>39</td>
<td>37</td>
<td>36</td>
<td>33</td>
<td>36</td>
<td>36</td>
</tr>
<tr>
<td>100 000 to 500 000</td>
<td>116</td>
<td>116</td>
<td>111</td>
<td>109</td>
<td>109</td>
<td>113</td>
<td>108</td>
</tr>
<tr>
<td>15 000 to 100 000</td>
<td>81</td>
<td>90</td>
<td>91</td>
<td>101</td>
<td>63</td>
<td>92</td>
<td>40</td>
</tr>
</tbody>
</table>


Another set of data, focusing exclusively on EU airports with fewer than 5 million passengers per year, shows that the trend in traffic disproportionately benefited larger regional airports, i.e. those with a traffic volume of between 1 million and 5 million passengers per year; the latter saw their market share increase from 74.1% in 2004 to 83% in 2013. Meanwhile, airports with between 200 000 and 1 million passengers per year, and airports with fewer than 200 000 passengers per year, attracted 14.9% and 2.1% of passenger traffic respectively in 2013. This was down from 22.6% and 3.3% respectively in 2004. The distribution of airports by size in 2004 and 2013 shows that the proportion of airports with between 1 and 5 million passengers increased from 28.0% to 35.0% per year. The share of airports with between 200 000 and 1 million passengers per year fell from 35.4% to 32.9%, while the proportion of smaller airports decreased from 36.6% to 32.1%.

2.3 Air transport and airport connectivity

Another key issue is airport connectivity. The International Civil Aviation Organization (ICAO), while conceding that there is no single definition of air connectivity, sees it as an indicator of network concentration and of 'the ability of the network to move a passenger from one point to another with the lowest possible number of connections and without an increase in fare, focusing on, from a commercial perspective, minimum connecting times with maximum facilitation ultimately resulting in benefits to air

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3 The data do not cover the full spectrum, since they do not include airports that had fewer than 15 000 passengers per year.

4 The majority of airports in the EU are small regional airports, with 60 per cent serving fewer than 1 million passengers annually.

5 Passengers carried 'do not include direct transit passengers (i.e. transit passengers who stay on board and continue their flight with the same flight number)'. Airports are grouped according to passenger volumes in the reference year.

6 The data on EU airports with fewer than 5 million passengers per annum presented in a European Parliament policy department study were provided by ACI Europe.
transport users’. Airport operators who are primarily interested in reducing congestion at passenger terminals are, together with aircraft operators, interested in increasing connectivity, since it results in more business opportunities. Airlines’ practices and business models can affect connectivity, and with it the role that airports play within this framework.

### Different types of airport connectivity and how to measure it

**Figure 1 – Airport connectivity**

![Diagram showing different types of airport connectivity](image)


Airport connectivity has traditionally been measured by ‘top 10’ lists of destinations and flight frequencies, broken down by geographical area. The growing importance attached to connectivity has led to the emergence of several connectivity indices designed to capture the different elements affecting connectivity, such as the IATA Connectivity Index, or the World Bank Air Connectivity Index.

Airports Council International (ACI) Europe has produced a comprehensive model – the SEO NetScan model – to assess airport connectivity, covering the number and quality of direct and indirect connections via other airports, as well as quality as judged by individual airlines, airline alliances, airports, and the travelling public. The model distinguishes between the following types of connectivity:

- **Total connectivity**: the sum of direct and indirect connectivity;
- **Direct connectivity**: the direct connections provided by one airport to other destinations;
- **Indirect connectivity**: the indirect connections provided by one airport to other destinations via an intermediate hub airport;
- **Hub connectivity**: the connections provided through a hub airport between two other airports. The connectivity channelled through hub airports is called **onward connectivity**.

According to ACI Europe’s Airport Industry Connectivity Report, the key developments over the last 10 years include the following:

- Between 2004 and 2014, total connectivity increased across Europe by 38%, with EU airports recording a 27% increase, and European airports located outside the EU a 107% increase. These results are in line with the trend in passenger volumes over the same period, and are mainly driven by growth in indirect connectivity. The report also reveals that, notwithstanding the above-mentioned differences in connectivity growth, the connectivity of EU airports

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7 The objective of this report is to show how connectivity in the European airport industry has developed over a 10-year period (2004-2014), providing various levels of aggregation, as well as individual airport connectivity figures for over 400 airports in 44 countries, collectively handling 95% of Europe’s commercial air traffic.
Airports in the EU

has a solid foundation, and is still four times higher than the connectivity of non-EU airports.

- Most of this growth predates the 2008 financial crisis, however. Many airports, particularly EU airports, experienced a drop in connectivity from 2008, and had yet to return to their pre-crisis direct connectivity levels. The airports that had recovered most strongly from the crisis were the largest airports and hubs (those with more than 25 million passengers per year).

- Between 2004 and 2014, European airports of all sizes\(^8\) saw their connectivity increase while their overall market share remained stable. It was the smallest airports – those with fewer than 5 million passengers per year – that experienced the highest growth rate, due to the development of low-cost carriers and closer integration with larger hub airports.

- Most indirect connections out of Europe are still channelled via EU hubs, although the latter have seen their share decrease by 10% over the last 10 years. EU hubs have faced tougher competition with hubs in Turkey, the Gulf, and to some extent North America. Frankfurt, Amsterdam and Paris Charles de Gaulle remain the top three European hubs in terms of onward connectivity, although they saw their collective market share decrease. Meanwhile, Istanbul-Atatürk, Moscow-Sheremetyevo and Dubai have all entered the top 20 list over the same period.

The 2015 ACI Europe report lists a number of positive results for the EU in terms of airport connectivity, particularly direct connectivity (considered to be more valuable as it implies shorter travel times), which increased by 4.3% compared to 2014. However, this is still slightly below the 2008 levels of direct connectivity, and only a minority of EU airports have reached their pre-crisis levels. EU growth in 2015 was mostly directed towards mature markets. Direct connectivity to North America increased by 5.8%, while intra-European connectivity increased by 4.3%.

This section has focused on connectivity vis-à-vis other parts of the world, to assess the situation of EU airports in the global air transport system. An analysis focusing specifically on intra-EU connectivity, particularly in central, eastern and south-eastern Europe (CESE), and related connectivity indices (one for business and one for leisure), was carried out for the Commission and published in 2014.

### 2.4 The economics of airports

An important issue for airports, especially in the context of increased competition and congestion, is their profitability and their ability to fund the infrastructure investment needed to cope with increased demand.

According to a discussion paper on ‘Airports in the Aviation Value Chain’, prepared for the International Transport Forum at the OECD, the economic sustainability of an industry is dependent on its ability to cover the cost of operations and provide a reasonable return on investment, in order to be able to renew capital. This has to be achieved not only overall, but also by each sector within the value chain.

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\(8\) The [ACI size categories](https://www.aci.aero/en) of European airports are as follows: Group I covers airports with more than 25 million passengers per year; Group II airports with between 10 and 25 million passengers per year; Group III those with between 5 and 10 million, and Group IV those with fewer than 5 million passengers per year.
Figure 2 – The Commercial Aviation Value Chain

The different segments of this value chain are shown in Figure 2 and divided into two groups. Upstream are the aircraft manufacturers, leasing firms and other sources of financial capital; segments related to aviation infrastructure, including airports, air navigation service providers and other service suppliers, such as ground services or insurance providers; while downstream are the distribution of airline 'products', i.e. passengers and cargo. Airlines appear in the middle of this value chain, since, according to the paper's authors, they are simultaneously its weakest and most important link.

Over the past decade, airlines have achieved lower rates of return for their shareholders than other segments in the aviation value chain, such as aircraft manufacturers, airports, air navigation services providers (ANSPs), global distribution systems (GDSs), travel agents and freight forwarders. Airports, while achieving somewhat better financial returns than airlines, are still, according to a McKinsey study, the second-lowest earners in the value chain, and face specific difficulties, not least the fact that they are barely able to cover their capital costs. In 2011, airports represented the second largest sector (after airlines) in terms of capital investments. Worldwide, airlines invested US$587 billion, while airports invested some US$436 billion, representing 36% of the aviation value chain's capital, even though they account for around only 7-10% of airline costs.

ACI Europe Economics' 2014 report contains an analysis of European airports' revenues and costs, and examines the issue of profitability. For 2013, the analysis reveals that airports are heavily reliant on non-aeronautical activities (40% of revenue if groundhandling is excluded) and depend on aeronautical activities for 60% of their revenue. Aeronautical revenues are primarily derived from charges for runway use, aircraft parking and terminal facilities, paid for by both passengers and airlines, while non-aeronautical revenues come from retail concessions, property income or rent, car parking, food and beverages, car rental concessions, and advertising. According to ACI Europe Economics, for airports, non-aeronautical activities (or commercial activities) are essential for financing their ongoing operations and for airport expansion. The revenue associated with non-aeronautical activities also compensates for limited aeronautical income.

On the costs side, the ACI analysis reports a substantial decrease in operating costs in real per-passenger terms (down 7.5%). In 2013, operating expenses were 13.9% lower than 2008 levels, a result ACI regards as impressive, considering the volume of
regulatory costs related to safety and security, for example, which are difficult to avoid.

**Figure 3 – Aeronautical revenues versus operating and capital costs in 2013**

The comparison in Figure 3 of aeronautical revenues versus operating and capital costs in 2013 shows that the direct financial contribution of airlines to total airport costs amounts to only 16%. Revenues collected from aeronautical activities fall short of the amount needed to cover airports' operating expenses by over €3 billion, while revenues from airport charges fail to cover airports' capital costs.

In terms of profitability, European airports recorded a 36.1% increase in their net profits in 2013, earning €3.6 billion after tax: a positive result which, according to ACI, may be attributed to ongoing efforts to control operating costs, reduced capital investment in previous years, and a reduction in interest costs. Behind these overall results, the data in Figure 4 show that certain categories of airports, especially small airports, are finding it difficult to cover their costs and generate profits. This is especially true of airports that have little pricing power, no real ability to generate non-aeronautical revenues, and high fixed capital and operating costs. While the overall profitability of the global airport industry is generated by 20% of airports, 67% of all airports are loss-making, with the latter figure rising to 80% in the case of airports with fewer than 1 million passengers per year. In the EU, 60% of all airports made a loss in 2014, or 77% of airports with fewer than 1 million passengers per year.

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9 According to the ACI Europe Economics Report 2014, the breakdown of operating costs at European airports (covered by the report) in 2013 is as follows: personnel (39.4%), contracted services (22.2%); other (10.0%); general and administrative (7.2%); communications, energy and waste (6.8%); maintenance (5.7%); leasing, renting and concessions (3.8%); material, equipment and supplies (3.4%); and insurance, claims and settlement (1.6%). Capital costs comprised: depreciation and amortisation (61%), interest costs (34%), and other (6%).
Figure 4 – Percentage of loss-making airports by size, in million passengers per annum (mppa), 2013


2.5 Future trends in capacity

One of the major challenges facing European airports is their ability to deal with future air traffic growth. According to a Eurocontrol report, the number of flights is projected to be 50% higher in 2035 than in 2012. However, airport capacity is expected to increase by just 17% by 2035. As a consequence, around 1.9 million flights will be lost under the most likely scenario, representing approximately 12% of demand in 2035, or an estimated 120 million passengers who will be unable to fly. Furthermore, under the same scenario, many airports in Europe will reach the limits of their capacity by 2035, with some 20 airports handling over 150,000 departures per year – a volume of traffic currently handled by only eight airports in Europe.

Overall, traffic is likely to be more concentrated across the whole airport network: under the most likely scenario, the top 10 airports will account for around 31% of all departures in 2035, as opposed to 23% in 2012. A number of airports, notably in eastern and southern Europe, will join the top 25 in Europe, and will outpace some of the current busiest airports in terms of number of departures.

Congestion at European airports will also result in more delays: the Eurocontrol report notes that once capacity limits have been reached, congestion at airports will increase quite rapidly, putting extra pressure on the network.

According to a ‘fast growth’ scenario, it is estimated that around 4.4 million flights will be lost in 2035 as a result of insufficient airport capacity, corresponding to 20% of 'unconstrained demand'. Under two other scenarios based on slower rates of traffic growth, the number of flights lost will be 1 million and 0.2 million respectively.

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10 The Eurocontrol 2013 forecast is based on an updated set of capacity figures covering 108 airports. The sample of actual and future capacity data covers traffic at European airports representing 83% of all European flights in 2012.

11 The reference to 'unconstrained demand' in the Eurocontrol report refers to a demand 'not constrained' by airport capacity, considered essentially as a supply-side limit.
The mismatch between capacity and demand will not be spread evenly across Europe. Turkey, for example, is expected to face an excess of demand for arrivals and departures at its airports of almost 30% by 2035, under the most likely scenario, while countries from eastern Europe such as Bulgaria, Hungary and Romania will each face excess demand of around 17 to 22% under the same scenario.

Any comparison with the results of the previous Eurocontrol forecast in 2010 should be treated with caution, because of a change in the sample used as well as the significantly lower estimate for capacity expansion used; the previous forecasts used the figure of 40% (over 155 airports), whereas this most recent forecast uses 17% over the next 20 years (across 108 airports). The reasons given for this variation include the tough economic context, leading to a lack of revenue, difficulties obtaining finance, and growing resistance to infrastructure projects. Moreover, the fall in traffic volume between 2009 and 2012 relieved pressure on airport capacity, prompting some airports to scale back plans for expansion.

Regardless of the scenario used, all figures\textsuperscript{12} point to a looming capacity crunch. This is a major challenge, considering that the majority of flight delays are already caused by problems on the ground rather than in the air, and that on present trends many European airports will be unable to accommodate more flights, at a time when they face increasing global competition.

3 EU policy

3.1 Introduction

As key players in the aviation chain, EU airports were affected by the liberalisation of the EU aviation market that was carried out gradually with the adoption of three packages of measures,\textsuperscript{13} in 1987, 1990 and 1993, covering air carrier licensing, market access and fares. Airports were subsequently affected by the expansion in the 2000s of EU air transport policy into other areas, such as safety, security, air traffic control, consumer rights and the environment. In 2008, the European Commission simplified the legal framework for the internal air transport market (Regulation 1008/2008\textsuperscript{14}), by updating and modernising certain key policy approaches. Pricing freedom was confirmed for air services within the EU and extended to air services to third countries on the basis of reciprocity, in line with bilateral agreements.

Specific regulatory measures to ensure fair access to airports and airport services have been adopted and updated over the last two decades. These include Regulation\textsuperscript{15}.

\textsuperscript{12} The figures are only an indication of the expected trends. They may change as airports develop and adapt to future demand. However, they further illustrate the airport capacity challenge identified in previous studies.

\textsuperscript{13} The packages embraced the following: the first ‘package’ (1987) covered intra-EU traffic, and limited the right of governments to reject the introduction of new fares and gave some flexibility concerning seat capacity sharing; the second ‘package’ (1990) further opened up the market, allowing in particular greater flexibility over fares and capacity-sharing. It also allowed all EU carriers to carry an unlimited number of passengers or cargo between their home country and another EU country; the third ‘package’ (1993) completed the process by allowing, in April 1997, the freedom to provide ‘cabotage’ i.e. ‘the right for an airline of one Member State to operate a route within another Member State’. National authorities retained the ability to impose public service obligations on routes which are key for regional development. Fare and rate-setting was also fully deregulated.

\textsuperscript{14} Regulation 1008/2008 on common rules for the operation of air services in the Community.
95/93\textsuperscript{15} on common rules for the allocation of slots at Community airports, the purpose of which is to ensure that, where airport capacity is scarce, the available landing and take-off slots are used efficiently and distributed in an equitable, non-discriminatory and transparent manner; Directive 96/67\textsuperscript{16} on access to the groundhandling market at Community airports, which gradually opened groundhandling services up to competition; and Directive 2009/12\textsuperscript{17} on airport charges, which laid down the basic principles for the levying of airport charges paid by air carriers for the use of airport facilities and services.

In parallel with moves to set up a single air transport market, the EU adopted legislation on state aid and competition in the air transport sector: in 2005 the Commission adopted guidelines on the financing of airports and start-up aid for airlines departing from regional airports, which specified the conditions under which certain categories of state aid for airports and airlines could be declared compatible with the internal market (these supplemented the 1994 Aviation Guidelines, which chiefly dealt with the restructuring of flag carriers, and social aid for the benefit of Union citizens). The 2005 Guidelines were replaced in 2014 by new Guidelines on state aid for airports and airlines.

While EU legislation on slots, ground handling services and airport charges is central to EU airport policy, airports are also essential elements of the SES initiative and the SESAR programme. The expansion of EU air transport policy into other areas such as safety, security, air traffic control, consumer rights and the environment has also led to the adoption of legislation covering or affecting airport facilities and services in these related fields.

3.2 Airports in EU transport strategies, or strategies for airports.

The EU has consistently recognised the importance of airports in air transport policy, through both general transport and aviation-specific strategies.

In 2001, the Commission published a white paper\textsuperscript{18} highlighting the need to rethink airport capacity and usage to cope with traffic growth. In particular, it called for measures to be taken on slot allocation, airport charges, intermodality with rail, and for the development of environmental rules to find alternative measures to restricting operators at airports.

In 2007, the Commission adopted an action plan\textsuperscript{19} for airport capacity, efficiency and safety in Europe, whereby the Commission committed to developing five key actions: making better use of existing airport capacity; taking a consistent approach to air safety operations at aerodromes; promoting 'co-modality', i.e. the integration and collaboration of modes of transport; improving the environmental capacity of airports in terms of noise management and the planning framework for new airport infrastructure; and developing and implementing cost-effective technological solutions.

\textsuperscript{15} Regulation 95/93.
\textsuperscript{16} Directive 96/67.
\textsuperscript{17} Directive 2009/12.
\textsuperscript{18} COM(2001) 370 final.
\textsuperscript{19} COM(2006) 819 final.
The most recent European transport strategy, the 2011 'Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system', identified the connection of all core network airports to the (ideally, high-speed) rail network by 2050 as one of its ten major goals. It also highlighted a wide range of initiatives, including the revision of the Slot Regulation to favour the more efficient use of airport capacity; the clarification and improvement of the conditions for entering and providing quality services, including groundhandling; the development of an approach for dealing with future capacity problems and, as far as pricing and taxation are concerned, a number of initiatives between 2016 to 2020 to internalise the costs of local pollution and noise at airports.

Following the white paper, the Commission adopted an Airports Package in December 2011, which included a Communication on 'Airport policy in the European Union – addressing capacity and quality to promote growth, connectivity and sustainable mobility', and three legislative proposals on slots, groundhandling services and noise.

### 3.2.1 Slots

Defined in the 1993 Regulation as 'the scheduled time of arrival or departure available or allocated to an aircraft movement on a specific date at an airport', an airport 'slot' means permission to use runways and terminals to operate a flight to or from a congested airport on a specific date and at a specific time. The granting of a slot at a given airport implies that 'the airline may use the entire range of infrastructure necessary for the operation of a flight at a given time (runway, taxiway, stands and, for passenger flights, terminal infrastructure').

The slot allocation mechanism is governed by the 1993 Regulation (which has been amended several times), and can be seen as a planning tool whose purpose is to ensure, where airport capacity is scarce, that available landing and take-off slots are used efficiently and distributed in an equitable, non-discriminatory and transparent way to allow for optimal use of airport capacity.

Under current rules, slots in the EU are allocated solely by independent coordinators for summer or winter scheduling seasons. If an air carrier has used a series of slots for at least 80% of the time during a given season, it will retain it in the next corresponding season (such a convention going by the names 'historical slots', 'grandfather rights' or the '80-20 rule'). Otherwise, the slots go back into the slot pool for allocation. Half (50%) of the pool slots are first allocated to new entrants. Consequently, slots which are under-used by air carriers are reallocated (known as the 'use it or lose it' rule). The 'use it or lose it' rule has, however, been temporarily suspended on a number of occasions, for example following the events of 11 September 2001; during the Iraq war; and the SARS epidemic in 2003; and in 2009 in response to the economic crisis and its impact on air carriers.

At the time of the proposal, in 2011, there were a total of 89 fully coordinated airports in countries where the Slot Regulation applied (the European Economic Area plus Switzerland), with 62 airports coordinated all year round, and 27 coordinated on a seasonal basis. This includes airports where demand substantially exceeds capacity at

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22 A Member State must designate an airport as coordinated if the analysis of capacity shows that it is experiencing a significant capacity shortfall.
all times (e.g. Paris Orly and London Heathrow), as well as others which only face capacity issues during certain peak seasons.

Conceived at a time when the European air transport market was still dominated by a small number of traditional national carriers, the current rules are deemed to be inadequate in view of current and future traffic, and the fact that the EU's busiest airports are unlikely to see any major capacity or infrastructure upgrades. Such improvements are being held back for financial reasons (see above), and by growing public concern, especially regarding their environmental impact in terms of noise, pollution and land planning. Current rules are also blamed for preventing the optimal use of the scarce capacity available at busy airports, with the 'grandfather clause' seen as effectively leaving capacity unused, and allowing airlines to avoid selling their underused slots to other airlines that could make better use of them. Another criticism is that the current rules do not facilitate entry into the market by new players, since airlines try to hold onto their slots, meaning that pool slots are often only available for less attractive flight times.

The Commission proposal\(^23\) to review the Slot Regulation includes the following elements:

- **Introducing the possibility of a secondary trade in slots.** To boost slot mobility, the proposal would see airlines authorised to buy and sell slots, enabling them to adapt their slot portfolios according to their needs. The 1993 Regulation did not ban the trading of slots, but nor did it provide for it, which led to inconsistency across the EU (secondary trading exists in the UK, for instance, but it is banned in Spain).

  The existing rule on new entrants would be changed to facilitate competition between viable new players and the dominant carrier. The proposal also seeks to avoid the allocation of slots to a larger number of airlines (schedule fragmentation) unable to transform them into lasting services.

- **Making the slot-allocation process more transparent and strengthening the independence of slot coordinators.** This proposal would provide for stricter criteria to ensure that coordinators are independent, and enhance cooperation between them. Based on progress made, the Commission could propose the creation of a European coordinator responsible for allocating slots at all EU airports.

- **Integrating slot allocation with the reform of the European air traffic management system (Single European Sky),** by involving the European Network Manager in the slot-allocation process. The Commission would be able to request that a capacity analysis be carried out at a given airport, and subsequently issue recommendations to a Member State in cases where it considers that the capacity assessment does not take account of the European network.

- **Amendment of the '80-20' rule, definition of a series of slots and use of an airport charge system to discourage the late return of slots to the pool.** To optimise use of existing capacity, airlines would only be granted priority for the allocation of a given slot for the next scheduling season ('grandfather rights') if

\(^23\) COM(2011) 827 final.
they have used at least 85% (rather than 80%) of their allocated series of slots. In addition, the minimum number of weekly slots required for priority allocation for the next season would be increased in order to reduce the fragmentation of the slot structure at airports. Certain exceptions are allowed, for example for charter carriers, or to take account of the special characteristics of regional airports. The proposal would authorise airports to use an airport charge system to discourage air carriers from belatedly returning slots to the pool.

The EP adopted24 its first reading position on the proposal in December 2012, in which it introduced a number of additional measures designed to strengthen the independence of slot coordinators across Europe, and make slot allocation more transparent. It also rejected the proposals to raise the slot series usage rate to 85% and increase the minimum number of weekly slots for priority allocation. However, Parliament supported penalties for the late hand-back of slots by airlines. The proposal is currently awaiting the Council’s first reading position.

3.2.2 Groundhandling

Groundhandling activities, which have traditionally been carried out by airport operators or airlines, are now increasingly being provided by specialised companies. The 1996 Directive that provided for the gradual opening up and harmonisation of access to the groundhandling market is based on the freedom of 'self-handling', i.e. the possibility for airlines to self-handle at each commercial airport, regardless of its volume of traffic; and on the freedom of 'third party handling', i.e. the possibility for groundhandling providers to provide services to third parties at airports with more than 2 million passengers, or more than 50 000 tonnes of freight per year. However, the Directive also includes a number of restrictions for certain categories of services (baggage handling, ramp handling, fuel and oil handling, and freight and mail handling).

While, according to various evaluations, the 1996 Directive was successful in opening up the market, leading to an increase in service providers and a general decrease in groundhandling prices, capacity constraints, together with the Single European Sky initiative, have further highlighted the need to integrate airports into a 'full system, gate-to-gate' approach. According to statistics cited in the 2011 proposal, 70% of delays are generated by turnarounds at airports. Optimising and integrating all phases of a flight, including groundhandling, would therefore reduce delays, costs and environmental impact, and improve safety.

The 2011 proposal25 thus aimed to enhance the efficiency and overall quality of groundhandling services for users (airlines) and end-users (passengers and freight forwarders) at EU airports. Although the Council adopted a general approach on the proposal on 22 March 2012,26 and the EP adopted its first reading position on 16 April 2013, with no agreement in sight the proposal was withdrawn by the Commission in March 2015.27 The Commission, however, is still looking at ways of improving the functioning of the groundhandling market and the application of the existing Directive. In March 2015, it organised a meeting with Member State representatives and stakeholders to take stock of the groundhandling market, and to identify a way forward.

24 2011/0391 (COD).
27 2011/0397(COD).
3.2.3 Noise

With a growing number of people in the EU affected by noise pollution from or around airports, noise-related operating restrictions have been put in place by Member States at most large European airports. However, although the previous Directive\textsuperscript{28} required Member States to balance the need for noise protection for people who live near an airport against the possible impact that such restrictions may have on air traffic, there are still many inconsistencies between countries concerning the extent of such restrictions.

To promote a consistent approach to implementing noise abatement measures, ICAO adopted a set of principles (a 'balanced approach' on noise management), in which it invited its Contracting States:

- to bring about the optimum local combination of the following four elements: (1) reducing noise at source (by using quieter aircraft), (2) making the best use of land (plan and manage the land surrounding airports); (3) introducing operational noise abatement procedures (by using specific runways, routes or procedures); and (4) imposing noise-related operating restrictions (e.g. a night ban or phasing out of noisier aircraft);
- to select the most cost-effective range of measures;
- 'not to introduce noise-related operating restrictions, unless the authority is in a position, on the basis of studies and consultations, to determine whether a noise problem exists and having determined that an operating restriction is a cost effective way of dealing with the problem'.

One of the purposes of the 2011 legislative proposal on noise\textsuperscript{29} is to ensure consistency in the way noise-related operating restrictions are implemented, better reflecting ICAO's 'balanced approach'. This should make the process of setting noise-related restrictions at airports more transparent, preventing international disputes where third country carriers are affected by noise abatement measures at EU airports. The proposal to repeal Directive 2002/30 focuses on the assessment process, but does not stipulate any noise-quality objectives, which will remain linked to existing national and local rules.

In the course of the negotiations, in particular in its first-reading position,\textsuperscript{30} the EP pushed for local authorities to retain powers to decide on noise-related measures independently, and rejected the proposal to give the Commission the right of scrutiny. Parliament also called for information about operating restrictions to be made available free of charge, and be made quickly accessible to people living near airports, and called for the inclusion of public-health considerations and public involvement.

The Regulation ultimately adopted recognises health aspects and the importance of accounting for them in a consistent manner whenever any decision is taken on noise abatement objectives. It says that health aspects should be assessed in accordance with the legislation on the evaluation of noise effects (Directive 2002/49). Regarding noise assessment and information for residents, the competent authorities should ensure that noise nuisances are regularly assessed, and if the evaluation shows that

\textsuperscript{28} Directive 2002/30.

\textsuperscript{29} COM(2011) 828 final.

\textsuperscript{30} 2011/0398 (COD).
new restriction measures may be needed, that the process of consultation with interested parties (which may take the form of a mediation process) should be substantive and organised in a timely manner. The competent authorities should also ensure that information on operating restrictions is updated free of charge, and that it is quickly accessible to people living near airports and to local authorities. When it comes to the right of scrutiny, the competent authorities should give the Member States, the Commission and relevant interested parties six months’ notice before introducing any operating restriction. After receiving appropriate notice, the Commission may review the process for introducing operating restrictions, either on its own initiative or at the request of a Member State.

The adopted Regulation\(^{31}\) will enter into force on 13 June 2016. This Regulation should only apply to those Member States that have an airport that registers over 50 000 civil aircraft movements per calendar year, and to aircraft engaged in civil aviation.

### 3.2.4 Airport charges

Another important piece of legislation is Directive 2009/12 on airport charges. Paid by airport users\(^{32}\) (i.e. airlines) for the use of airport facilities, these charges relate to the landing, take-off, lighting and parking of aircraft, as well as to processing of passengers and freight. Airport charges are levied on airlines, but their cost is ultimately paid for indirectly by passengers and freight customers via ticket prices and freight forwarding fees.

Whilst the share of airport charges in airlines' total costs varies according to the type of carrier and the airport served, airport charges are also linked to the level of service offered to passengers. Their level may have a determining role in airlines' decisions about which routes to fly, particularly in the case of low-cost and short-haul operations.

Even when airports are privately owned, airport charges must still comply with the regulatory requirements set by the authorities and are, in many cases, governed by national authorities. They can, however, be used as management tools, and adapted in order to increase the use of infrastructure or to reduce the environmental impact of aviation.

Directive 2009/12 applies to all airports in the European Economic Area and Switzerland with more than 5 million passenger movements per year, and to at least the largest airport in each Member State: around 70 EU airports, together accounting for almost 80% of all EU passenger traffic.\(^{33}\) The objectives of the Directive are: to provide greater transparency about how airport charges are calculated; to ensure that airports do not discriminate among airlines in the application of airport charges (unless duly justified); to establish regular consultation between airports and airlines; and to establish an independent supervisory authority in each Member State charged with settling disputes between airports and airlines over airport charges, and overseeing the Directive's implementation.

The principle of non-discrimination among airport users when applying airport charges is one of the key elements of the Directive. However, as stipulated in Article 3, it does not prevent 'the modulation of airport charges for issues of public and general interest,'

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\(^{31}\) Regulation 598/2014.

\(^{32}\) Report on the application of the Airport Charges Directive.

\(^{33}\) This group covers different types of airports, from medium-sized airports important to their respective regions to the largest hub airports in the EU serving international destinations.
including environmental issues. The criteria used for such a modulation shall be relevant, objective and transparent'.

In May 2014, the Commission published a report on the application of the Airport Charges Directive. While underlining that it is too early to draw any final conclusions on the impact of the Directive – it was only in early 2013 that notification of the full transposition of the Directive was received from all Member States – the report explains that, according to market players, the main positive effects are increased transparency in the determination of airport charges at the largest European airports; better consultation between airports and airlines; and the establishment of independent supervisory authorities in each Member State and remedy procedures. However, the report also highlights several points of contention, where airports and airlines may have diverging views on implementation, and where further work is needed to ensure consistent application across the EU. For instance, while modulating charges for environmental reasons appears to be quite widespread and uncontroversial, some stakeholders challenge the modulation of airport charges to increase traffic. Network and regional carriers, in particular, often argue that volume and growth discounts on new or existing routes may favour low-cost carriers and newcomers. Airlines are also critical of certain aspects relating to consultation and transparency. In particular, some argue that airports should not simply provide information, i.e. their opinions should not merely be heard, but also acted on. They also consider that the information available on costs is not detailed enough to assess whether airport charges are cost-related, and are unhappy that the Directive does not require the provision of information on airports' commercial activities. Another element highlighted in the report is the fact that, although the Directive provides for the consultation of airport users before the finalisation of any plans for new infrastructure projects, it does not specify the procedure to be followed or the minimum requirements for such projects.

To examine the application of airport charges in more detail, the Commission created a new expert group, the Thessaloniki Forum of Airport Charges Regulators, which met for the first time in June 2014.

### 3.2.5 Single European Sky

Building on the achievements of the internal market and the need to cope with the growth in air transport and congestion, the European Commission launched the Single European Sky (SES) initiative in 1999. Its core objective is to reform the architecture of air traffic control in the EU in order to meet future capacity and safety needs, by improving the overall performance of air traffic management and air navigation services.

Two SES packages have been adopted: SES I, which sets out the principal legal framework, and SES II, which aims to respond to the significant growth in air traffic, increase safety, reduce costs and delays, and limit the impact of air traffic on the environment. The overarching SES objective – reforming the architecture of air traffic control in the EU – would be achieved by improving the overall performance of air traffic management (ATM) and air navigation services (ANS), with the specific aim of increasing airspace capacity threefold (thereby reducing delays), and improving 'safety performance' tenfold. The SES is also meant to reduce the environmental impact of flights by 10%, and cut ATM costs by 50%.
The SES II package\textsuperscript{34} was based on four policy pillars: a \textbf{performance} pillar, which introduced EU-wide performance targets; a \textbf{safety} pillar, which increased the responsibilities of the European Aviation Safety Agency (EASA); a \textbf{technology} pillar focused on the SESAR project; and an \textbf{airport capacity} pillar, aimed at improving capacity, including through the establishment of an Airport Observatory.\textsuperscript{35}

To speed up its implementation, which was delayed, the Commission undertook a review of the SES legal framework, and presented an SES2+ package, consisting mainly of a recast\textsuperscript{36} of the four main regulations. The European Parliament, which supported this initiative, adopted its first reading position\textsuperscript{37} on the SES2+ package in March 2014. The outcome of the Transport Council in December 2014 somewhat tempered the ambition of the Commission's initial objectives, but SES2+ has yet to be adopted.

4 State aid for airports and EU funding of airport infrastructure

4.1 The 2014 Guidelines on state aid for airports and airlines

In February 2014, the Commission adopted revised Guidelines on state aid for airports and airlines.

The main rationale\textsuperscript{38} for this revision was changes in the aviation market, which had seen the setting-up of many regional airports. While having a positive impact in terms of regional development and accessibility, the increasing number of airports – particularly regional airports – has raised concerns.

According to the Commission, public support for airport infrastructure has often led to the duplication of unprofitable airports at local level and overcapacity at regional airports, without resolving the congestion problems of large hubs. Today, 63% of the EU's population lives within a two-hour drive of at least two airports.

A related issue is that most regional airports do not generate enough revenue to cover their costs. Where regional airports share the same catchment area, the division of traffic among several under-utilised airports prevents them all from growing. This results in higher costs, since it is not possible to achieve the necessary density/economies of scale. In such circumstances, subsidies are used to cover operating costs, for example, or to attract price-sensitive airlines, in particular low-cost carriers, which may in turn distort competition.

While airports in the EU have witnessed the growing involvement of private undertakings, they are still predominantly publicly owned and managed. Smaller airports, according to the new Guidelines,\textsuperscript{39} display the greatest proportion of public ownership and most often rely on public support to finance their operations. The prices

\textsuperscript{34} Single European Sky II: Summaries of EU legislation.

\textsuperscript{35} Created in 2007 and renamed in 2014, the European Observatory on Airport Capacity and Quality was given a new mandate. Its role is to assist the Commission in addressing airport capacity and quality problems; to promote the exchange of experience and best practices in this area; and to foster a better view and understanding of the problem.

\textsuperscript{36} COM(2013) 410 final.

\textsuperscript{37} 2013/0186 (COD).

\textsuperscript{38} European Commission \textit{Competition policy brief} on New State aid rules for a competitive aviation industry.

\textsuperscript{39} Guidelines on State aid to airports and airlines.
of these airports tend not to be determined with regard to market considerations and in particular sound *ex ante* profitability prospects, but essentially having regard to local or regional considerations'.

While recognising that regional airports can make an important contribution to both local development and the accessibility of certain regions, the new Guidelines are part of the Commission's efforts to improve the competitiveness and growth potential of the EU's airport and airline industries, and to promote the sound use of public resources. Their purpose is to ensure fair competition and promote a level playing field between airports and airlines, in particular by avoiding overcapacity and the duplication of unprofitable airports.

The main new elements of the 2014 Guidelines are:

- Introduction of a transitional period of 10 years for operating aid,\(^40\) during which the amount of operating costs not covered by revenues between 2009 and 2015 may be covered by aid. A distinction is made based on airport size. The maximum amount of aid will be limited to 50% of the initial operating funding gap for each year of the transitional period for airports handling fewer than 3 million passengers per year. For airports with fewer than 700,000 passengers per year, and which may face increased difficulties in achieving the full cost coverage during the 10-year transitional period, the Guidelines allow a maximum amount of aid equal to 80% of the initial operating funding gap for a period of five years, after which the situation will be reassessed by the Commission. The objective at the end of the transitional period is that airports should be able to finance their operations using their own resources.

However, after the transitional period, airports that play an important role in improving the regional connectivity of isolated, remote or peripheral regions may still receive compensation for uncovered operating costs of services of general economic interest (SGEI). The assessment of these specific situations will take into account the characteristics of the airport concerned and of the region it serves.

- New conditions regarding investment aid: the new guidelines will allow such investments only in cases where there is a genuine transport need, and only when there is a clear positive impact in terms of accessibility, regional development and less congestion at major EU hub airports. While the 2005 guidelines did not provide any clear rules on overcapacity and the duplication of infrastructure, the new rules clearly state that 'If an investment project is primarily aimed at creating new airport capacity, the new infrastructure must, in the medium term, meet the forecasted demand of the airlines, passengers and freight forwarders in the catchment area of the airport'. Consequently, aid should not be allowed in areas that are already well connected. The guidelines also define the percentage of maximum permissible aid, which will be higher for smaller airports, ranging from 25% to 75% of maximum permissible aid.

\(^40\) According to the 2014 guidelines 'operating aid means aid to cover the operating funding gap, either in the form of an upfront payment or in the form of periodic instalments to cover expected operating costs', and 'investment aid means aid to finance fixed capital assets, specifically, to cover the capital costs funding gap'.


However, as is the case with operating aid, some flexibility has been introduced, allowing higher maximum aid intensity for airports that are located in remote regions, including outermost regions and sparsely populated areas.

- Provisions regarding **start-up aid for new airlines** as well as **airline-airport arrangements**: airlines departing from airports with fewer than 3 million passengers per year will be able to receive start-up aid covering up to 50% of airport charges for new destinations during a three-year period. A certain amount of flexibility is provided in relation to airports located in remote regions. As for the arrangements concluded between airlines and airports, they will be considered free of aid in cases where it can be demonstrated that a private investor, operating under normal market conditions, would have accepted the same terms. In particular, 'the airport should demonstrate that, when setting up an arrangement with an airline (for example, an individual contract or an overall scheme of airport charges), it is capable of covering all costs stemming from the arrangement, over the duration of the arrangement, with a reasonable profit margin on the basis of sound medium-term prospects'. Airport revenue (airport charges and non-aeronautical revenue) must at least pay for the incremental costs induced by the presence of the airline, and contribute to the airport's profitability.

According to the Commission, these new rules, once implemented, should result in benefits for tax-payers, and encourage airport managers to operate more efficiently and cut costs. Operating aid for passengers could be halved, and public authorities could save as much as €2.35 billion over a 10-year period. While no airports handling more than 500 000 passengers are expected to close, it is anticipated that the new rules will put an end to subsidised airports that duplicate existing capacity, which could lead to the closure of some smaller airports that are failing to improve efficiency or increase their revenue.

### 4.2 EU funding of airport infrastructure

According to a European Court of Auditors (ECA) report published in December 2014, transport infrastructure projects, including airports, attracted a substantial share of the EU budget. Between 2000 and 2013, the EU allocated some €4.5 billion to airport infrastructure, in particular through the European Regional Development Fund (ERDF) and the Cohesion Fund (CF), the breakdown of which is shown in Figure 5. As far as the trans-European network for transport (TEN-T) is concerned, funding was mainly limited to studies and some smaller infrastructure projects in airports in non-cohesion policy areas. In addition, €14 billion in EIB loans has been issued since 2000 to support airport infrastructure in non-cohesion regions.

Of the €2.8 billion drawn from Cohesion Policy funds (ERDF and CF), 24% was allocated to Spain, 21% to Poland, 17% to Italy and 13% to Greece, while the remaining 25% went to other EU Member States.

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The ECA focused its audit on 20 EU-funded airports located in five Member States (Estonia, Greece, Spain, Italy and Poland) which, together, received a total of €666 million under the ERDF and the Cohesion Fund during the 2000-2006 and 2007-2013 programming periods. The overall conclusion of the audit was critical, with the auditors arguing that EU-funded investments in airports provided poor value for money. In particular, it found that too many airports received funding, with many in close proximity to one another, and that EU-funded infrastructure was, in many cases, over-sized. Only half of the audited airports had successfully increased their passenger numbers, while seven of the 20 airports studied were not profitable and risked closure in the absence of public support. The ECA also wrote that EU funding was not well coordinated by the Member States, and that major Cohesion Fund projects were inadequately supervised by the Commission.

For the period 2014-2020, it recommended that the Commission ensure that Member States only allocate EU funding to airport infrastructure 'in those airports which are financially viable and for which investment needs have been properly assessed and demonstrated'. It also recommended that 'Member States should have coherent regional, national and supranational plans for airport developments to avoid over-capacity, duplication and uncoordinated investments in airport infrastructures'.

In its reply, the Commission conceded that support from Cohesion funding for airport infrastructure had not always amounted to effective use of EU funds in past programming periods, but argued that lessons had been learned and that 'the new regulatory framework has been made stricter when it comes to investing in airport infrastructures, limiting the possible options to improving the environmental performance or safety features of the infrastructures'.

The Commission also explained that its staff would approach negotiations on the operational programmes for the period 2014-2020 with a view to focusing EU funding for airport infrastructure on airports in the core TEN-T network; and that 'investments in any airport would in particular need to be subject to a prior detailed assessment of economic viability and competition (e.g. whether private operators could finance the investment)'.

However, the Commission also noted that 'regional airports may often serve communication purposes for a region or community and the public authorities may
wish to maintain their functioning for other than simply financial reasons. That is why public transport infrastructures which are not profitable and require state support are kept in functioning'.

5 Recent developments in air transport policy

5.1 The new aviation strategy

In its 2015 work programme, the Commission announced the adoption of an aviation package as one of 23 new initiatives to be taken that year. On 7 December 2015, it adopted a new aviation strategy for Europe which aims to strengthen the competitiveness and sustainability of the entire EU air transport value chain. Noting that 'it is critical that the EU aviation sector remains competitive, maintains its leadership position and is able to grow', and referring to the challenges stemming from the emergence of new third-country airlines and airports, the strategy also underlines that 'Europe must be a leading player in international aviation', and that 'growth in air traffic in Europe and worldwide needs to be reconciled with maintaining high standards of aviation safety and security, as well as reducing aviation's environmental footprint and contributing to the fight against climate change'.

The new aviation strategy comprises a communication entitled 'An Aviation Strategy for Europe' (accompanied by a Commission staff working document); a proposal to revise the Aviation Safety Regulation, including the introduction of provisions on drones; and recommendations for the Council to issue authorisations to negotiate comprehensive EU-level air transport agreements and further aviation safety agreements with third countries.

In its communication, the Commission identified three key priorities:

- 'Tapping into growth markets, by improving services, market access and investment opportunities with third countries, whilst guaranteeing a level playing field';
- 'Tackling limits to growth in the air and on the ground, by reducing capacity constraints and improving efficiency and connectivity';
- 'Maintaining high EU safety and security standards, by shifting to a risk performance based mind-set'.

The strategy also highlights the need for EU action in four other areas, to ensure that air transport develops in a sustainable way, including: the social agenda in aviation; passenger rights; innovation and digital technologies; and the environment.

While recognising that airports, together with air traffic management service providers, are a vital part of the civil aviation infrastructure, the strategy highlights areas where progress is needed.

In particular, the Commission stresses the importance of completing the Single European Sky, and calls for the swift adoption of the SES2+ revision of the SES framework.

To tackle capacity constraints, the Commission will ask the Airport Observatory to carry out further work on airport congestion and, more specifically, on mitigating measures,

43 On 7 June 2016, the Council agreed mandates for the Commission to negotiate agreements with the Association of Southeast Asian Nations (ASEAN), Turkey, Qatar and the United Arab Emirates (UAE).
including efforts to minimise public exposure to aircraft noise. It also calls on the
Council and the European Parliament to adopt the revised Slot Regulation.

In terms of legislation affecting airport services, the Commission will carry out an
evaluation of the Groundhandling Services Directive, and assess whether the Airport
Charges Directive needs to be reviewed. It will also publish an inventory of current
aviation taxes and levies applied by Member States and examine their impact.

The Commission will work with the Airport Observatory on intra-EU and extra-EU
connectivity in Europe to monitor trends and identify appropriate measures to be
taken. It will also publish interpretative guidelines in 2016 explaining the current rules
governing Public Service Obligations.\(^4\)

The measures planned are set out in the indicative action plan for the aviation strategy.
As far as the legislative proposals are concerned, they include the revision of the basic
Aviation Safety Regulation, and measures in 2016 to address unfair practices (by
revising Regulation 868/2004). As regards the Commission’s implementing acts, the
action plan mentions the revision in 2017 of air traffic management functions, including
the selection of the network manager, and the revision of the performance scheme
(gate-to-gate) in 2019. It plans to finalise best practice on minimum service levels in
airspace management in 2016-2017, guidelines on the application of Regulation
1008/2008 with respect to the provisions on the ownership and control of EU airlines,
and guidelines on air passengers’ rights in 2016. The action plan also includes a list of
studies and evaluations to be carried out, particularly concerning Regulation 1008/2008
on common rules for the operation of air services (scheduled for 2017-2018); Airport
Charges Directive 2009/12 (2016-2017); and Groundhandling Services Directive 96/67
(2017). The Aviation Strategy is now being examined\(^45\) by the EP, the Council, the
European Economic and Social Committee, and the Committee of the Regions.

5.2 EP views

The EP has adopted several resolutions covering air transport in general, and airport-
related issues.

In a resolution\(^46\) of 10 May 2012 on the future of regional airports and air services in
the EU, adopted prior to the 2014 revised Guidelines on state aid to airports and
airlines, the EP called on the Commission to take 'a balanced approach in future
revisions of aviation guidelines in order to provide for a socially and economically viable
development of regional air services'. Parliament argued that 'regional airports should
not be enhancing tools for public deficits and should generally be economically
sustainable in the mid-term'. It pointed out the importance of avoiding a proliferation
of regional airports, while at the same time underlining the need for public service
obligation for air services of economic and public interest, especially those connecting
remote regions, islands and outermost regions. As far as congestion is concerned, the
resolution called on the Commission 'to draw up a strategy for the allocation of
regional airport slots in order to attract new airlines, and promote competition,
decongestion of major airports and the development of regional airports'. Noting that

\(^{44}\) Member States may impose public service obligations on routes which are vital for the economic
development of the region they serve. To do so, they must comply with Articles 16-18 of the Air
Services Regulation 1008/2008.

\(^{45}\) 2016/2062(INI).

\(^{46}\) 2011/2196(INI).
European regions 'are losing links to some of the most congested airports', the EP considered it 'essential for regional airports to have access to hubs', and took the view that this had to be considered during the revision of the Slot Regulation. Furthermore, the EP called for regional airports to be taken into account in future trans-European transport network policy, while emphasising that regional airports in trans-border regions, and those in close proximity to other airports, 'should demonstrate cooperation and coordination in the use of existing capacities as a precondition for EU co-financing by TEN-T, cohesion and regional funds'.

In a resolution\(^47\) of 9 September 2015 on the implementation of the 2011 White Paper on transport, the EP called for the development of an EU airport network including, firstly, major airports (i.e. hubs) and, secondly, 'a well-served, viable and supported network of local, provincial and regional airports'. It also called for the creation of a 'legislative framework for the development and maximisation of the untapped potential of regional airports and of new infrastructures in crowded airports'.

In a resolution\(^48\) of 11 November 2015 on aviation, the EP highlighted 'the loss of competitiveness of EU airlines and airports vis-à-vis subsidised third-country carriers and airports'; requested 'a proactive policy to ensure a level playing field on ownership', and encouraged Member States 'to improve their national infrastructure to allow their airlines to compete on more favourable terms'. Observing that European airports face significant competitive pressures from both airlines and airports, the EP urged the Commission to take this into consideration when implementing the Airport Charges Directive. In the resolution, Parliament called for further efforts in the Council to approve the Slot Regulation proposal, and again highlighted the importance of small and regional airports for regional connectivity in the EU. It called on both the Commission and the Member States to present a long-term strategic plan for regional airports, including state aid rules for transport infrastructure.

### European Economic and Social Committee

In December 2014, the European Economic and Social Committee (EESC) adopted an opinion\(^49\) on Airport Capacity in the EU, in which it emphasised that the EU's existing airport assets need to be used more efficiently. It highlighted the importance of more intermodality, better connectivity, and the more efficient use of secondary hubs and small airports. It also discussed the importance of airport infrastructure, underlining that, 'in the long-term, airport capacity will have to be built in the form of infrastructure such as terminals and runways'. The Committee emphasised that airport expansions have an environmental and public dimension, and are coming up against growing public resistance to infrastructure projects, necessitating dialogue. The EESC recommended that Member States take immediate measures concerning land-use planning and management to prevent development plans being hampered by unexpected obstacles, and stated that 'existing regional airports should only be developed where there is clear demand for more traffic.' In a more recent opinion\(^50\) on an integrated EU Aviation Policy, the EESC underlined that 'the Commission's strategy for EU aviation should be driven by a compelling vision of how best to promote European competitiveness without distorting competition or undermining the social and labour relations', and urged the Commission 'to ensure that comparable international norms and standards will be applied to EU and non-EU competitors'. It also urged 'the Commission to do more to ensure that current EU legislation is implemented'.


\(^49\) EESC Opinion of 10 December 2014.

\(^50\) EESC Opinion of 17 September 2015.
6 Outlook

Spurred on by the liberalisation of the intra-EU aviation market, air transport has seen substantial growth in traffic in recent decades, with passenger volumes at EU airports increasing 23% between 2004 and 2013. Over the past 20 years, the increased demand for air transport within the EU and worldwide has led to significant development of the European aviation sector, including airports.

However, these overall trends mask the diverse nature of EU airports, which differ in size and role. Airports, especially major European hubs, are facing a growing problem of congestion, which has the potential to cause delays and cancellations on an unprecedented scale. On current trends, a large proportion of the potential demand for flights would go unmet, while regular congestion costs could increase by as much as 50% by 2050. According to a Eurocontrol report, in the most likely scenario, many airports in Europe will reach capacity limits by 2035, while only limited increases in airport capacity are expected.

Irrespective of the growth in traffic, the vast majority of EU airports, especially small airports, are experiencing significant difficulties in covering their costs and generating profits, which could weaken their ability to support the infrastructure investments needed to cope with increased demand.

While EU airports are resilient in terms of connectivity, with most indirect connections out of Europe still being channelled via EU hubs, they have seen their share decrease by 10% over the last 10 years. EU airports also face tougher competition from airports elsewhere in the world.

As highlighted in the recently adopted new aviation strategy, the objectives for the EU aviation sector as a whole, including airports, should therefore be to remain competitive in order to retain its leading position in international aviation, while at the same time retaining high quality standards. For EU airports, most of which are loss-making, another challenge will be to cope with capacity and profitability strains, and adapt to the new strategies of the airlines on which they are partly dependent for developing their market and network, whilst at the same time highlighting the importance of the EU’s small and regional airports for regional connectivity, territorial cohesion and intra-EU mobility.
7 Main references


Economic impact of unaccommodated demand and environmental variables influencing airport capacity, final report from a task force of the European Observatory on Airport Capacity & Quality, May 2015.


Learning from national, regional and local strategies on airport capacity/Airport capacity in the EU: a strategic perspective, final report from a task force of the European Observatory on Airport Capacity & Quality, May 2015.


With soaring passenger traffic and an increasing number of destinations and connections, air transport in the EU has been undergoing profound change in recent decades, impacting on airports as key players in the aviation value chain and civil aviation infrastructure.

EU airports, which differ significantly in size and role, had to adapt following the liberalisation of the internal market for aviation; they now have commercial objectives and compete to attract and retain traffic.

This analysis provides a comprehensive overview of the challenges confronting EU airports, beginning with an overview of historical developments up to today, and focusing in particular on connectivity issues, the economics of airports, and future trends. The second part looks at the measures taken by the EU to tackle the challenges facing airports, including the Commission’s recent Aviation Strategy for Europe.