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PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE AND THE COMMITTEE OF THE REGIONS**

An Aviation Strategy for Europe

{SWD(2015) 261 final}

I. INTRODUCTION – TAKING AVIATION TO NEW HEIGHTS

1.1 Why aviation matters for the EU

Aviation is a strong driver of economic growth, jobs, trade and mobility for the European Union. It plays a crucial role in the EU economy and reinforces its global leadership position. An Aviation Strategy is needed to ensure that the European aviation sector remains competitive and reaps the benefits of a fast-changing and developing global economy. This Aviation Strategy will therefore provide a strong contribution towards delivering on the core priorities of European Commission.

The EU aviation sector directly employs between 1.4¹ million and 2² million people and overall supports between 4.8³ million and to 5.5⁴ million jobs. The direct contribution of aviation to EU GDP is €110 billion⁵, while the overall impact, including tourism, is as large as €510 billion⁶ through the multiplier effect. The availability of direct intercontinental flights is effectively a major determinant in the location choices of large firms' headquarters in Europe: a 10% increase in the supply of intercontinental flights results in a 4% increase in the number of headquarters of large firms.⁷ A 10% increase of departing passengers in a metropolitan region increases local employment in the services sector by 1%.⁸

Over the last 20 years, the EU's liberalisation of the internal market for air services and the substantial growth of demand in air transport within the EU and worldwide, have resulted in the significant development of the European aviation sector. Air transport users enjoy an unprecedented choice of air travel opportunities at competitive prices. The number and frequency of intra-EU as well as international routes flown, and the number of passengers have increased substantially⁹. Low-fare EU carriers are now amongst the top carriers both in terms of passengers and in terms of market capitalisation. European aeronautical manufacturing has been equally strong.

The international aviation sector outside Europe has also been witnessing some significant developments, characterised by very strong growth in certain world regions. This is associated with the shift of the world's economic centre of gravity towards the East, notably Asia¹⁰. As a result, several new airlines and airports have emerged and are posing a new and considerable challenge for European hub airports and carriers.

At the same time, 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. In short, aviation must grow in a sustainable manner.

1.2 A comprehensive strategy for a more competitive EU aviation sector

As aviation's contribution to the overall performance of the EU economy and its global presence is so significant, it is critical that the EU aviation sector remains competitive, maintains its leadership position and is able to grow. Europe must be a leading player in international aviation and a global model for sustainable aviation, with a high level of service and ambitious EU standards. The goal of

¹⁻³⁻⁵⁻⁶ Steer Davies Gleave – Study on employment and working conditions in air transport and airports, Final report 2015.

²⁻⁴ Aviation: Benefits Beyond Borders, Report prepared by Oxford Economics for ATAG, April 2014.

⁷ Germa Bèl, Xavier Fageda Getting there fast: globalization, intercontinental flights and location of headquarters - *Journal of Economic Geography* 8 (2008).

⁸ Jan K. Brueckner, *Airline Traffic and Urban Economic Development*, Urban Studies, 2003.

⁹ There are today more than 3500 routes between EU Member States and more than 2500 extra-EU routes, Commission Staff Working Document, chapter 1 section 2.

¹⁰ The Asia Pacific region is expected to grow the fastest and will account for 40% of global air traffic by 2034, Commission Staff Working Document, chapter 1 section 4.

this Aviation Strategy is to strengthen the competitiveness and sustainability of the entire EU air transport value network.

The Commission has therefore 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 and performance based mind-set;

In this context, EU actions in the following areas are also needed:

- **Reinforcing the social agenda and creating high quality jobs in aviation;**
- **Protecting passenger rights;**
- **Embracing a new era of innovation and digital technologies;**
- **Contributing to a resilient Energy Union and a forward-looking Climate Change Policy.**

This Aviation Strategy has been guided by a public consultation¹¹ and has benefitted from input from, and extensive dialogue with EU Member States, the European Parliament, the European Economic and Social Committee, and stakeholders. It will be taken forward in line with principles on "Better Regulation"¹². All actions with significant impacts will be subject to consultation and impact assessment.

II. GETTING EU AVIATION BACK AHEAD OF THE CURVE

2.1 Tapping into growth by improving services and access to growing markets

New competitors and emerging markets

European aviation is facing new competitive challenges in a rapidly evolving global market, in particular as a result of a shift of economic growth to the East. These new competitors are benefitting from the rapid economic growth of the entire region, notably Asia, and from aviation becoming a strategic element in their home-country's economic development policies.

With an annual growth forecast of 6%, scheduled passenger traffic in the Asia Pacific region is likely to grow faster than in other regions until 2034 when it will account for 40% of world air traffic. China is expected to become the world's largest air transport market, overtaking the United States of America in 2023 in terms of number of passengers carried.¹³

Unlike other industries, air transport suffers from a number of restrictions in relation to investment and market access which hinder the sustainable and dynamic growth of the sector. These barriers have largely been removed within the European Union through the creation of the EU's Single Aviation Market. For example, there is no limitation on traffic rights within Europe for EU airlines, as long as they have been granted an EU operating licence. Airlines can fly to any European destination to serve

¹¹ <http://ec.europa.eu/transport/modes/air/consultations/doc/2015-aviation-package/synopsis-report.pdf>.

¹² European Commission, Communication "Better regulation for better results", COM(2015)215 of 19.05.2015.

¹³ Commission Staff Working Document, chapter 1 section 4.

the needs of passengers in Europe. There is no limit on investment by EU investors in EU airlines. However, restrictions and obstacles are still very common outside Europe and in the context of international services and third country markets. For example, European airlines are still restricted in their ability to access third-country markets, to access different sources of investment (notably foreign investments), and to merge and create large fully-integrated airline groups without their traffic rights being called into question.

An ambitious EU external aviation policy targeting growth markets

The EU aviation sector must be allowed to tap into the new growth markets where significant economic opportunities will be generated in the decades to come. Geography is not the only factor that determines the location of successful international hub airports and airlines. The availability of suitable infrastructure, the nature of economic, fiscal and regulatory regimes, and historic, cultural and trading links all play a part.¹⁴ These parameters can be managed and Europe has all the instruments at its disposal to do so.

Experience has shown that negotiating EU level comprehensive aviation agreements with third countries is an effective tool. For example, since the signature of the EU Air Transport agreement with the Western Balkan States, the number of passengers has almost tripled. In the case of Morocco, it has doubled. Since the conclusion of the agreements with US and Canada the combined growth in passengers between EU and these markets has been more than 3 million.

By adopting an ambitious external aviation policy through the negotiation of comprehensive aviation agreements, with a clear focus on growth markets, the EU can contribute to improving market access and investment opportunities for European aviation in important overseas markets, increasing Europe's international connectivity and ensuring fair and transparent market conditions for EU airlines. As the experience in the EU's aviation market has shown, market opening achieved through such agreements will also generate opportunities for new entrants and new business models to emerge. The Commission will seek to ensure swift progress in any forthcoming negotiations in a way that ensures continuing growth of the European airline industry.

Furthermore, in order to support worldwide trade in aircraft and related products, the EU should also expand the range of bilateral aviation safety agreements aimed at achieving mutual recognition of safety certification standards. These agreements significantly reduce the transaction cost of exporting aircraft, while ensuring high levels of safety in partner countries and helping to harmonise product standards worldwide. Having successfully concluded such agreements with the United States, Brazil, and Canada, the EU should pursue negotiations with other key aeronautical partners, notably China and Japan.

Market access based on a level playing field

For the EU aviation industry to remain competitive, it is essential that market access is based on a regulatory framework which promotes EU values and standards, enables reciprocal opportunities and prevents distortion of competition.

As there is currently no international legal framework to deal with possible unfair commercial practices in international aviation, it is important and legitimate for the EU to address such practices to ensure fair and sustainable competition. Regulation 868/2004¹⁵ on the protection against subsidisation and unfair pricing practices covers this issue but, as it currently stands, is not considered effective among stakeholders. This issue should be addressed in the context of the negotiation of EU comprehensive air transport agreements and by intensifying corresponding policy action at the

¹⁴ (UK) Airports Commission, Final Report, July 2015.

¹⁵ Regulation (EC) No 868/2004 of 21 April 2004, OJ L 162, 30.4.2004, p. 1–7.

International Civil Aviation Organization level. In addition, the Commission is considering proposing new EU measures to address unfair practices as soon as possible in 2016.¹⁶

Ownership and control provisions form an essential element of the current international regulatory framework. Indeed, airlines are becoming increasingly interesting for investors and global investment funds. However, ownership and control provisions under the international framework contain nationality and control elements which may discourage investments from non-nationals.

Foreign investors are able to invest in EU airlines but cannot exceed 49% of ownership¹⁷, while the control of the company must remain in EU hands. Several major foreign investments in EU airlines have taken place over recent years triggering reviews of the investment rules by civil aviation authorities and the European Commission to ensure that the control of EU airlines remains in line with EU law. Several investigations are still on-going. These investigations show the need for cooperation between authorities and the need for a common understanding of how to carry out the assessment of the 'control' criteria and their proper application.

Bearing in mind the commercial and financial importance of many airlines and the significant upfront financial needs of airlines to operate efficiently in a highly competitive environment, the relevance and importance of ownership and control requirements, as included in Regulation 1008/2008¹⁸ should be carefully examined in this light. The Commission will continue to pursue the relaxation of ownership and control rules on the basis of effective reciprocity through bilateral air services and trade agreements with the longer term objective to do so at multilateral level.

The Commission:

- Recommends to the Council the issuance of **authorisations to negotiate comprehensive EU-level air transport agreements** with the following countries and regions: China, ASEAN (Association of Southeast Asian Nations), Turkey, Saudi Arabia, Bahrain, UAE (United Arab Emirates), Kuwait, Qatar, Oman, Mexico and Armenia;
- Recommends that the EU negotiates further **bilateral aviation safety agreements** with important aeronautical manufacturing nations such as China and Japan;
- Proposes to launch **new aviation dialogues** with important aviation partners such as India;
- **Will negotiate effective fair competition provisions** in the context of the negotiation of EU comprehensive air transport agreements and consider **measures to address unfair practices** from third countries and third country operators;
- **Proposes to publish interpretative guidelines** on the application of Regulation 1008/2008 with respect to the provisions **on the ownership and control** of EU airlines to bring more legal certainty for investors and airlines alike.

2.2 Tackling limits to growth both in the air and on the ground

The main challenge for the growth of European aviation is to reduce the capacity and efficiency constraints, which are seriously impeding the European aviation sector's ability to grow sustainably, compete internationally, and which are causing congestion and delays and raising costs.

Airports together with air traffic management services providers constitute the key elements of the infrastructure of civil aviation. The quality, efficiency and cost of these services have become increasingly important to the competitiveness of the industry. In Europe, airports and air traffic

¹⁶ Legislative proposals will be subject to Commission better regulation requirements.

¹⁷ EU Member States or EU nationals must own more than 50% of the undertaking.

¹⁸ Regulation (EC) No 1008/2008 of 24 September 2008, OJ L293, 31.10.2008, p.3-20.

management can safely handle up to 33,000 flights per day. Yet, European airspace as a whole is inefficiently managed and unnecessarily fragmented, and a slow implementation of the Single European Sky framework means higher costs for the airlines, which directly affects their competitiveness. The estimated costs of the EU's fragmented airspace represent at least €5 billion a year. Such an inefficient use of the airspace causes higher prices and delays for passengers, increasing fuel burn and CO₂ emissions for operators, and impedes our efforts to improve environmental performance.¹⁹ In addition, major European airports are predicted to face a capacity crunch in the near future.

Completing the Single European Sky

The Single European Sky is a concrete example of where the EU can make a difference by raising capacity, improving safety and cutting costs while minimising aviation's environmental footprint. This was the initial ambition more than a decade ago, but, the project is still not delivering. Despite some achievements towards a better performing network, the level of cooperation between Member States air navigation service providers is still far from optimal, and the technology used is not harmonised or state-of-the-art. EU Member States must overcome these challenges in order to achieve a true Single European Sky, which is one of the most fundamental challenges affecting the performance and competitiveness of the EU's aviation system today. For example, a fully optimised air traffic management system would reduce the costs stemming from inefficiencies (delays, and longer routes etc.).

As an important step in unleashing this potential for the EU aviation sector, the Commission urges the Council and European Parliament to adopt the Single European Sky (SES2+) proposals²⁰, in order to ensure the effectiveness of functional airspace blocks and network functions and the swift implementation of the EU-wide targets for the performance scheme based on a fully independent performance review body.

The efficient governance of the Single European Sky remains a priority for the Commission. The respective tasks of the European Aviation Safety Agency and Eurocontrol should be defined in a manner that ensures that both organisations complement each other's tasks, so that overlaps can be avoided and costs reduced.

The tasks of the Network Manager in co-ordinating air traffic flow management at European level will gradually be expanded to include common services that will further reduce the costs; these tasks should evolve towards an industrial partnership. In light of this, the nomination for the Network Manager to act beyond 2020 will take place in 2017.

The ultimate goals of the technological modernisation of air traffic management through the deployment of the Single European Sky Air traffic management Research project (SESAR) are to enable a reduction of air traffic management costs, increased operational efficiency for airspace users by reducing delays, fuel burn and flight time, an increase in capacity and a reduction of CO₂ emissions. All these elements will increase the environmental benefits of SESAR solutions, and are fully linked to the overall air traffic management performance scheme.

In this context, it is important to deploy technological solutions in a timely and coordinated manner. A number of instruments have been developed to this end, such as the air traffic management Master Plan, Common Projects and the Deployment Programme. They are implemented by public-private partnerships, notably the SESAR Joint Undertaking for the definition and development activities and the SESAR deployment framework partnership for deployment. Both development and deployment activities require appropriate financial support. So far, the EU is contributing through programmes such as Horizon 2020 and the Connecting Europe Facility.

¹⁹ Staff Working Document, chapter 2 section 5.1

²⁰ COM(2013)409final and COM(2013)410final of 11.06.2013.

As regards external relations, the Commission will continue to promote cooperative arrangements between the Network Manager and key partners of the EU with a view to improving the management of air traffic. It will also support action from the SESAR Joint Undertaking and the SESAR Deployment Manager. Thanks to SESAR, the EU is also able to play an influential role at a global level in particular in the context of the International Civil Aviation Organization's harmonisation activities.

In order to allow for continuity of air traffic management, a minimum level of service in managing European airspace should be ensured, allowing at least for the movement of overflights (flights crossing the airspace of an affected state or area) causing the least amount of disruption to the network. In this respect, the Commission will promote the exchange of best practices between Member States.

Tackling capacity constraints

In 2035, according to Eurocontrol, European airports will be unable to accommodate some 2 million flights due to capacity shortages²¹. There will be more than 20 airports operating at or near full capacity for 6 or more hours per day, against just 3 in 2012, leading to an additional average airport-related delay of 5-6 minutes per flight. The estimated economic cost of being unable to accommodate demand has been estimated at 434,000-818,000 jobs foregone by 2035 and an annual loss in GDP of between €28 billion and 52 billion²² at EU level.

These projections on the airport 'capacity crunch' show that in spite of a well-developed and extensive airport network, many of Europe's major airports are severely congested, placing the future sustainable growth of the EU aviation system under threat. At the same time, other airports in Europe are underused and there is overcapacity. It is therefore essential to make best use of existing capacity and plan well in advance to absorb the forecasted future needs. It is also necessary to ensure better airport strategic planning at EU level. In this context, the Commission welcomes the work of the Airport Observatory²³ which has in particular recommended that airport strategic planning frameworks be developed in each Member State, including master plans for key airports, in accordance with common best practices. Building on this, the Commission will ask the Airport Observatory to continue working on airport congestion, in particular on mitigating measures but also on the management of minimising population exposure to aircraft noise.

Furthermore, the Commission urges the Council and European Parliament to swiftly adopt the revised Slot Regulation²⁴ in order to enable the optimal use of our busiest airports and provide clear benefits to the EU economy²⁵.

Boosting the efficiency of airport services

The availability of highly performing, competitive airport services, including runways, passenger terminals and ground handling, is critical for the competitiveness of the EU aviation sector and the service quality experience of passengers.

Stakeholders have questioned the suitability of the current legal framework and this was reflected in the Commission's report²⁶ published in 2014 on the application of the Airport Charges Directive²⁷.

²¹ In the most likely scenario of Eurocontrol, this equates to 12% of total demand in 2035, 240 million passenger movements or nine airport runways' worth of capacity. In all, capacity shortages are predicted at 24 airports around 21 cities.

²² Observatory on Airport capacity and quality – 2015.

²³ Staff Working Document chapter 2, section 5.3.

²⁴ Regulation (EC) No 545/2009 of 18 June 2009, OJ L 167, 29.6.2009, p. 24–25.

²⁵ For example, the introduction of secondary trading alone could allow the EU aviation system to service an additional 14 million passengers per year, yielding €300 million in annual economic benefits.

²⁶ COM/2014/0278 final.

²⁷ Directive 2009/12/EC of 11 March 2009, OJ L 70, 14.3.2009, p. 11–16.

The Thessaloniki Forum of Airport Charges Regulators will continue its work on the better implementation of the current Directive, and will provide the Commission with findings and recommendations on the use of market power assessment as a means of determining the optimal regulatory approach. Indeed when airports are subject to effective competition, the market should determine the level of airport charges and there is no need for regulation. However, when airports are not subject to effective competition, a specific regulatory framework may still be necessary. The Thessaloniki Forum should also work on the transparency of airport charges and effective airline-airport consultation. The Commission will then assess the extent to which the Airport Charges Directive may need to be reviewed.

Ground handling includes the services provided at airports which are essential for the safe and efficient turnaround of aircraft, for example fuelling, passenger handling and de-icing of aircraft. The Commission will continue to pursue the effective implementation of the existing Directive²⁸, with a focus on market access for ground handling at EU airports and ensuring a level playing field between ground handlers. The Commission will undertake an evaluation of the ground handling services Directive and then decide if it needs to be reviewed.

Finally, European airports should also improve their multimodal connections, leading to a more efficient transport network and improved passenger mobility.

Better connectivity within the EU and worldwide

The public consultation clearly shows that connectivity (broadly defined as the number, frequency and quality of air transport services between two points) is relevant for the travelling public and for businesses and the economy at large. Studies²⁹ show that the better a city, region or country is connected by air to other destinations in Europe and other parts of the world, the more growth can be generated.

While the increase in connectivity for the vast majority of EU airports has been impressive over the past ten years, with EU airports still delivering the bulk of Europe's connectivity, this cannot be taken for granted. In particular, the analysis of the different components of airport connectivity³⁰ shows that a number of non-European airports have been able to increase their connectivity outreach and passenger flow to a much greater extent. Airport connectivity in Europe varies significantly between major hubs on the one hand offering hundreds of destinations and small regional airports on the other with only a few. While this can largely be attributed to differing demand and supply-side conditions (e.g. population of the catchment area, level of supply-side competition, GDP per capita), it may nonetheless result in a significant competitive disadvantage for less-connected cities, regions or countries.

Studies undertaken notably by the World Bank³¹ have shown the importance of monitoring the level of air transport services available to citizens in a given city, region or country. The ability to determine on a neutral and transparent basis the degree to which connectivity is available and/or socially desired is key for informed policy making and could allow benchmarking of available service levels of EU airports facing similar demand and supply-side conditions.

If it is evident that the market itself will not deliver an acceptable level of air transport services to given regions within Europe, Member States may consider Public Service Obligations to ensure service to and from under-served regions. Regulation 1008/2008³² sets the applicable conditions which are aimed at, inter alia, preventing possible misapplication of these obligations. A comprehensive evaluation of Regulation 1008/2008 was conducted in 2011-2013 and the Public Service Obligations

²⁸ Council Directive 96/67/EC of 15 October 1996, OJ L 272, 25.10.1996, p. 36–45.

²⁹ Staff Working Document chapter 2, section 3.

³⁰ direct, indirect, onward and hub connectivity – See Staff Working Document chapter 2, section 3.1.

³¹ <http://elibrary.worldbank.org/doi/abs/10.1596/1813-9450-5722>.

³² See footnote 18

rules were deemed fit for purpose, but guidance as to their proper interpretation was considered to add value³³.

Current aviation taxes and levies applied by Member States over and above the normal profit tax may negatively impact connectivity and competitiveness. The Commission will publish an inventory of those taxes and levies and examine their impact.

The Commission:

- Urges the European Parliament and the Council to swiftly adopt the Single European Sky (SES 2+) proposals and will continue to work with the Member States and other stakeholders towards the full implementation of the Single European Sky;
- Will assess the necessity to review the Airport Charges Directive;
- Will work with the Airport Observatory to monitor trends of both intra-EU and extra-EU connectivity in Europe, identify any shortcomings and the appropriate measures to be taken;
- Will publish interpretative guidelines explaining the current rules governing Public Service Obligations.

2.3 Maintaining high EU safety and security standards

Over the last 20 years the economic and regulatory landscape of air transport in Europe has changed significantly and technical regulation has successfully adapted to these changes. The European Aviation Safety Agency has also developed over the last 10 years into one of the leading aviation safety authorities in the world. The EU's aviation safety system not only contributes to high standards for safety, but also to a level playing field for the industry. However, in view of the new challenges ahead, the performance and efficiency of the Single European Aviation Market must now be enhanced to ensure its future competitiveness. Adapting the regulatory framework is central to these efforts.

Safety and security are pre-requisites for a competitive aviation sector. With the aviation traffic in Europe predicted to reach 14.4 million flights in 2035, 50% more than in 2012, the first objective is to maintain the current high safety standards alongside growing air traffic. This will allow the EU aviation sector to continue to develop safely in the future. To this end, the regulatory system has to be better equipped to identify and mitigate safety risks, in a quicker and more effective manner. This can be achieved by introducing a risk and performance based approach to safety regulation and oversight, by closing existing safety gaps and by integrating other technical areas of regulation connected to safety more deeply, such as aviation security.

While safety is crucial, it cannot be looked at in isolation. The regulatory framework must also set the conditions under which the aviation industry can thrive and remain competitive on the global market. This includes the integration of new business models and emerging technologies, such as electric engines or drones. It also requires a more proportionate approach to regulation and recognising differences in risks involved in various sectors of civil aviation. Finally, it means abolishing rules and procedures that add time, burden and cost but do not contribute to safety as well as those that stifle innovation and entrepreneurship. There is also room for a greater reliance on recognised industry standards. Ultimately this will provide more regulatory flexibility, while achieving the same or higher level of safety overall.

Furthermore, efficiency and safety gains can be achieved through a better use of available resources at EU and Member States level. To this end, a framework for the pooling and sharing of technical resources between the national authorities and the European Aviation Safety Agency should be put in place. It should allow Member States to transfer on a voluntary basis, responsibilities for the implementation of European Union legislation, to the European Aviation Safety Agency or to another

³³ Commission Staff Working Document SWD (2013) 208 final of 6.6.2013.

Member State. Regulatory responsibility would become clearer and duplication would be avoided. A single European aviation authority should be the longer term ambition.

Many aviation accidents involving European citizens happen outside the EU. Pursuing high worldwide safety standards, based on common standards issued by the International Civil Aviation Organization, must therefore remain a key objective of EU action. The EU takes a legitimate interest in the safety of foreign airlines operating to the EU or airlines being used by EU citizens when travelling outside of the EU. In this respect, the Commission will launch an in-depth evaluation of the existing legislation on the imposition of operating bans³⁴ and on rules on aviation accident investigation³⁵, to make sure they deliver on the EU objectives in the best possible way. Close cooperation between national military authorities, the European Defence Agency and the European Aviation Safety Agency will be promoted with a view to achieving efficiency and safety gains.

The threat of terrorism to civil aviation is likely to remain high in the foreseeable future. High aviation security standards are imperative for the functioning and competitiveness of the air transport system. At the same time, it is important to combine effective security measures with methods and technologies that facilitate passenger flows at airports and minimise the inconvenience and delays for passengers. In this respect the Commission will also seek new ways to alleviate the burden of security checks on passengers, notably through the use of new technology and by applying a risk-based approach in full respect of fundamental rights. Another important tool to optimise security costs is through the one-stop security concept, which allows the passenger to undergo the security controls at the point of origin and then no further security controls are required at transfer points. The EU will pursue the mutual recognition and One Stop Security approach with key trading partners to reduce the cost of security resulting from duplication and incompatibility of security regimes.

Like many other sectors, aviation is digitalising at a fast pace. While this brings many benefits it also makes aviation more vulnerable to cybersecurity or cybersafety risks. Just as it does for other risks affecting flight safety, the Commission will ask the European Aviation Safety Agency to address also cyber risks³⁶, in order to foster security by design and to establish the necessary emergency response capability. The European Aviation Safety Agency will cooperate with other competent bodies to this effect.

The Commission:

- Proposes a **revised Basic Regulation for common rules in the field of civil aviation safety**, replacing the current Regulation (EC) No 216/2008;
- Presents a **revised European Aviation Safety Programme document**, describing the way in which safety is managed in Europe today.

2.4 Reinforcing the social agenda and creating high quality jobs in aviation

Jobs in the EU aviation sector depend on the capacity of the sector to generate significant growth through structural reforms. It is also crucial to maintain leadership in aviation through a highly educated, qualified and experienced workforce. Partnerships between research, universities and industry on education will facilitate the movement of experts between these sectors, which at the end would be very beneficial for the development of the European aviation sector.

New skills and competences, some of which are not yet broadly available, such as those of drone specialists and flight data analysts will have to be developed. Training should be given priority. In this respect, the European Aviation Safety Agency Virtual Academy will further develop a true European

³⁴ Regulation (EC) No 2111/2005 of 14 December 2005, OJ L 344, 27.12.2005, p. 15–22.

³⁵ Regulation (EU) No 996/2010 of 20 October 2010 OJ L295 of 12.11.2010, p.35-50.

³⁶ taking into account the requirements in the draft Directive on network and information security, COM (2013) 48, with regard to risk management and incident notification, including in the transport sector.

network of aviation training institutes. Common standards regarding competences of aviation safety inspectors should also be established.

In the context of the internationalisation of the industry and rising global competition, pressure on airlines to reduce operational costs has been significant. Many EU air carriers, some of which are struggling to restructure their activities, have outsourced non-core activities and gradually also core activities to improve productivity and profitability. New business and employment models have emerged, such as the multiplication of operational bases, the recruitment of air crews through agencies, new atypical forms of employment or pay-to-fly schemes for flight crew. Continuous monitoring and regular exchange of information between the Commission, Member States and interested parties could also contribute to a better understanding of these new trends and ensure fair working conditions in the sector.

The situation of highly mobile workers who have their operational basis ('home base') located outside the territory where the airline is licensed deserves specific attention. It is important to bring clarity on the applicable labour law and on the competent court in charge of disputes. In this context a practice guide on applicable labour law and the competent court in the framework of the European Judicial Network in civil and commercial matters will be issued. The Commission will consider, after evaluation, if interpretative guidelines or regulatory changes for the aviation sector are necessary, based on objective criteria.

Under these circumstances an active and comprehensive social dialogue in industrial relations is essential. Furthermore, where rules could have important social implications, it is of particular relevance that stakeholders, including the Union social partners are appropriately consulted. This also applies to the European Aviation Safety Agency when safety implementing rules are developed.

Furthermore, when negotiating comprehensive EU-level air transport agreements with third countries, the Commission will seek to ensure that the parties' respective policies and laws support high levels of protection in the labour and social domain and that the opportunities created by the agreement do not weaken domestic labour legislation and standards and their enforcement.

The Commission will:

- Support social dialogue, in particular through the sectorial social dialogue committee on civil aviation;
- Strengthen its analysis on jobs and employment in aviation with Member States and open it to interested parties;
- Publish a practice guide on applicable labour law and the competent court, to be issued by the European Judicial Network in civil and commercial matters;
- Consider the need for further clarification of applicable law and competent courts vis-à-vis employment contracts of mobile workers in aviation.

2.5 Protecting passengers' rights

The legislative process to adopt the revision of Regulation 261/2004 on air passengers' rights in case of denied boarding, long delays and cancellations³⁷ is still on going in 2015. The Commission urges European Parliament and the Council of the EU to adopt swiftly the revisions proposed. In the meantime, the Commission ensures a strict application by the National Enforcement Bodies of the EU air passenger rights established by Regulation 261/2004 as interpreted by the Court of Justice of the European Union. In this context, the Commission will adopt interpretative guidelines in order to provide guidance to the citizens and the airlines on the current state of the law, relevant until

³⁷ Regulation (EC) No 261/2004 11 February 2004, OJ L.46 of 17.02.2004, p.1-7.

amendments become applicable. The Commission will also evaluate how to further promote cooperation between the National Enforcement Bodies and the authorities in charge of horizontal consumer rules.

2.6 Embracing a new era through innovation and digital technologies

Innovation plays a central role in the air transport sector. It improves competitiveness, spurring new ideas, market opportunities and technologies to strengthen safety and performance in aviation, aiming to ensure a seamless travel experience for all. European leadership is required in the development of next-generation technologies and the promotion of the use of state-of-the-art technologies. This can be achieved by effectively channelling Europe's creativity and financial resources.

Aircraft are of course at the core of aviation and therefore a competitive aeronautical industry is crucial for a high-performing aviation sector. The aeronautical industry is recognised as one of the top five advanced technology sectors in Europe. Today, research and innovation efforts remain a key factor of the success of the aeronautical industry. Aircraft manufacturers and their supply chain undertake huge efforts to improve the environmental footprint of aviation, increase the safety of air traffic, reduce operational costs and cope with the increasing demand for new aircraft. The Clean Sky 2 public-private-partnership is a good example of this. The development of advanced manufacturing processes, the use of new materials and actions in line with the circular economy are other examples of these efforts.³⁸

Certification is the gate from research and development to market, as a compulsory guarantee of safety and environmental compliance. The European Aviation Safety Agency must be in a position to prepare and conduct certification in a timely and efficient manner, while maintaining its independence and impartiality.

The deployment and optimisation of information and communications technologies are also particularly relevant for airport capacity, performance and quality of service. The EU rules governing airline ticket distribution in the Code of Conduct for Computerised Reservation System³⁹ may no longer be suited for today's market. Consequently, the Commission will assess whether there is a need to revise the existing rules in light of the changes observed. Furthermore, the Commission welcomes the launch of an aviation Big Data⁴⁰ project by the European Aviation Safety Agency, to enable a significant enhancement of analysis capabilities and sharing of large volumes of data, helping to improve safety in aviation through the use of information and communication technologies.

Drones: unleashing their full potential

Drones are a technology that is already bringing about radical changes, by creating opportunities for new services and applications, as well as new challenges. They represent a tremendous opportunity both for our aeronautical manufacturing industry, especially for small and medium sized enterprises, and for the many aviation and non-aviation businesses that will be able to integrate drones into their activities, and increase their efficiency and competitiveness. Today's aviation safety rules are not adapted to drones. Given the broad variety of types of drones being used under very differing operation conditions, a risk-based framework needs to be put in place rapidly. This framework will ensure their safe use in civil airspace and create legal certainty for the industry. In this context, concerns related to privacy and data protection, security, liability and insurance or environment will also be taken into account.

In order to ensure the safe interaction with existing airspace users coming under EU rules and to create a large single home market, of particular relevance to small and medium sized enterprises and start-ups, this framework must be set up at EU level. For safety reasons, all drones must be covered, even

³⁸ Circular economy package

³⁹ Regulation (EC) No 80/2009 14 January 2009, OJ L 35 of 4.2.2009, p.47.

⁴⁰ See Staff Working Document , chapter 5.

small ones. However, the rules must be proportionate to the risk to ensure that new developments are not hampered by unnecessarily heavy and costly rules and procedures, in line with the Commission's Better Regulation approach. The Commission will also seek to rely on industry standards as far as possible.

The Commission:

- Proposes a basic legal framework for the safe development of drone operations in the EU, as part of the new basic aviation safety Regulation replacing Regulation 216/2008;
- Will task the European Aviation Safety Agency with preparing more detailed rules which will allow the drone operations and the development of industry standards.

2.7 Contributing to a resilient Energy Union and a forward-looking Climate Change Policy

The future competitiveness of the European air transport sector and its environmental sustainability go hand-in-hand. Regular and more holistic monitoring and reporting on the environmental impacts and progress on the implementation of the different policies and initiatives across the EU air transport system will help inform about the sector's impacts on the environment and provide a valuable contribution to further decision-making. High environmental standards have to be preserved and enhanced over time in order to ensure that aviation develops in a sustainable manner, avoiding or minimising harmful effects on ecosystems and citizens.

As regards emissions from aviation, the EU has put in place powerful regulatory tools such as the Emission Trading Scheme (EU ETS) addressing greenhouse gas emissions⁴¹, including from aviation.

The International Civil Aviation Organization (ICAO) plays a critical role in the development of a global solution to address greenhouse gas emissions from international aviation. The EU, through its Member States acting within the framework of ICAO, pursues a robust Global Market Based Mechanism to achieve carbon neutral growth from 2020 to be reviewed over time as appropriate, and to be made operational from 2020, as well as the adoption of a first CO₂ standard for aircraft. At the ICAO Assembly in 2016, Europe should reach out to other regions of the world to achieve a truly global mechanism.

In line with the Energy Union agenda, an important contribution to the reduction of aviation's environmental impacts will come from current research and development actions for innovative "green" technologies, including the development and market deployment of advanced biofuels. EU programmes have mainly covered the modernisation of air traffic management and the reduction of the impact on the environment (Clean Sky). The Single European Sky ATM Research project will contribute to fuel savings and a potential reduction of 50 million tons of CO₂ emissions. Industry has also taken initiatives already and the identification of best practices should be properly considered. A reduction in aircraft NO_x emissions should be further pursued, in order to reduce impacts on human health.

Environmental performance of air navigation service provision has become part of the performance scheme under the Single European Sky. The performance of the air traffic management system "gate-to-gate" should be improved in terms of environmental objectives, including the reduction of noise and emissions resulting from aircraft movements at airports.

Air traffic noise around airports directly affects some 4 million citizens in Europe⁴². A new EU Regulation on managing noise-related operating restrictions will ensure that best practices and evidence-based decision making on operating restrictions will be applied throughout Europe from June 2016. The EU is also adopting a new international noise standard to be applied to new types of large aircraft from 2017. Around airports, and in addition to noise, citizens face poor air quality, with the

⁴¹ Directive 2003/87/EC of 13 October 2003, OJ L 275, 25.10.2003, p.32.

⁴² <http://www.eea.europa.eu/data-and-maps/indicators/exposure-to-and-annoyance-by-1/assessment>.

main public health impact coming from ultrafine particles. To address this, the Commission and the Member States will continue to work with industry and international partners within ICAO to mitigate the effects of air pollution caused by airplanes.

The Commission welcomes the publication of a "European Air Transport Environment Report" drawn up by the European Aviation Safety Agency, Eurocontrol and the European Environment Agency which will allow the EU, Member States and industry to better track the environmental performance of the air transport sector and monitor the effectiveness of different measures and policies.

III. DELIVERING THE AVIATION STRATEGY AND LOOKING AHEAD

3.1 A collective effort is needed

European aviation can only remain competitive if all stakeholders from the public and private sector take a holistic approach in addressing the key challenges faced by European aviation today and act in a complementary and a coordinated manner. This approach is what is needed to turn the measures proposed in this Strategy into tangible results.

Member States and all stakeholders, including airlines, airports, air navigation service providers, manufacturers, and the social partners have a role to play: only effective cooperation will ensure that European aviation succeeds globally in the future. Interests might sometimes be conflicting. We should however find a way to act as a team whenever possible. Social dialogue, in particular the sectorial social dialogue committee on civil aviation, should play an important role.

There is a need for unity at international level. The European Union needs to speak with one voice in international organisations and with third countries. In addition to negotiating EU comprehensive air transport agreements as the cornerstone of EU external aviation action, the Commission will continue to insist on the swift conclusion of the ratification process of the Eurocontrol revised Convention and the EU Accession Protocol. It will also fully support the International Civil Aviation Organization's activities on safety and security standards, air traffic management and the environment.

3.2 Investing in aviation research

A catalyst for the development of aviation, and its function as an enabler of growth, will be innovation and digitalisation. The Commission is convinced that appropriate private and public investments into technology and innovation will secure Europe's leading role in international aviation. The European Union has planned to invest € 430 million⁴³ each year, until 2020, in the Single European Sky ATM Research (SESAR) project. It has been estimated that the timely deployment of SESAR solutions can potentially result in the creation of over 300 000 new jobs.

The Commission supports research and innovation in the aviation sector through public-private-partnerships, the Horizon 2020 Framework Programme, European Structural and Investment Funds and the European Fund for Strategic Investments, while ensuring that actions are in line with the EU's safety policy. Research and innovation efforts in aeronautics and advanced fuels are also essential, as highlighted in "Flightpath 2050", a report prepared by the High Level group on Aviation Research. These efforts need to be supported by an efficient mix of public and private funding, including for instance, at EU level, major contributions from public-private partnerships such as Clean Sky and SESAR complemented by research and innovation actions directly funded under the Horizon 2020 research programme, the European Structural and Investment Funds and the European Fund for Strategic Investments.

The Commission will continue to actively promote efficient coordination between these instruments as well as examine how the Investment Plan for Europe⁴⁴ could support the aviation sector, notably the

⁴³ Foreseen average annual contribution over 2014-2020.

⁴⁴ Communication from the Commission – An investment Plan for Europe- COM/2014/0903final.

development and industrialisation of advanced European aeronautical products and services. Furthermore, the development of strategic infrastructures and sustainable transport are key objectives of the European Investment Bank Transport Lending Policy⁴⁵.

3.3 Conclusions and looking ahead

Aviation has become a catalyst for economic growth: a high-performing aviation sector contributes to a healthy EU economy.

The European Union has already assumed the role of a “game-changer” with the creation of a single aviation market. When developing this market, the objective was to promote consumer interests, reduce barriers to trade, maintain a level playing field for operators, foster innovation, maintain the highest levels of safety and involve all stakeholders in the process.

These principles must also be pursued globally. The EU aviation sector must keep up with the pace of growth and change, by ensuring access to key growth markets for EU industry and its citizens. The success of the EU's internal aviation market and the principles and rules it is based on should be promoted at international level through an ambitious EU external aviation policy and negotiations with key partners.

Action at EU level is needed to overcome capacity and efficiency constraints, stemming from the inefficient use of current resources (airspace, airports) and market restrictions. Aviation must become an integral element of inter-modal transport, for the best possible connectivity which in turn will help drive growth for Europe's economy.

The EU should pursue policies aimed at optimising the investment and market conditions affecting the aviation industry and improving the regulatory framework whilst maintaining the highest EU standards for safety, security, the environment and its citizens. The Commission is also convinced that intelligent investments in technology and innovation will help secure Europe's leading role in international aviation.

The successful implementation of this Aviation Strategy will depend on the willingness of all players to collaborate in a coherent and consistent manner. Aviation is a global industry and all parts of the EU aviation network create value. Only a competitive and sustainable air transport sector will allow Europe to maintain its leadership position, in the interest of its citizens and its industry.

⁴⁵ EIB Transport Lending Policy revised in 2011: <http://www.eib.org/infocentre/publications/all/eib-transport-lending-policy.htm>

AVIATION STRATEGY INDICATIVE ACTION PLAN

COMPLETION OF INTERINSTITUTIONAL PROCESS	
2016	Revision of slot Regulation N°545/2009
2016	Revision of Regulation N°261/2004 on passenger rights
2016	SES2+: Revision of Single European Sky framework
2016-7	Conclusion of the ratification process of EU accession protocol to Eurocontrol
COMMISSION LEGISLATIVE PROPOSALS*	
2015	Revision of basic aviation safety regulation N° 216/2008 including introduction of provisions on drones.
2016	Measures to address unfair practices (revision Regulation 868/2004)
COMMISSION IMPLEMENTING ACTS	
2017	Revision of the air traffic management network functions, including the selection of the Network Manager
2019	Revision of performance scheme (gate-to-gate)
INTERNATIONAL DIMENSION	
2015	Authorisations to negotiate comprehensive EU level air transport agreements
2016	Authorisations to negotiate bilateral Air Safety Agreements with China and Japan
2016-7	Launch of new aviation dialogues with key partners
GUIDANCE DOCUMENTS	
2016	Guidelines on air passenger rights
2016	Guidelines on ownership and control
2016	Guidelines on Public Service Obligations
2016-7	Best practices in minimum service levels in airspace management
FITNESS CHECK (REFIT)	
2018	Computerised Reservation System (CRS) code of conduct on the distribution of airline product
STUDIES AND EVALUATIONS**	
2017-8	Regulation (EC) N°1008/2008 on common rules for the operation of air services
2016-7	Regulation (EC) N° 996/2010 on aviation accident investigation
2016-7	Regulation (EC) N° 2111/2005 on the EU airlines safety list
2016-7	Airport charges Directive 2009/12/EC
2017	Groundhandling services Directive 96/67/EC

* Legislative proposals will be subject to Commission better regulation requirements

** Evaluations may suggest to initiate legislative proposals