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European Legislation on Aviation Safety – From Coordination to Integration

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Foreword

Aviation is, without any doubt, one of the boom industries in Europe. The growth rates of 8.5% in passenger volume and 3.5% in air cargo in 2005 compared to the year before[1] are not exceptional. They merely carry forward a trend that has already lasted for many years. This development takes place in the quickly growing low-cost sector as well as it does for "traditional" airlines and cargo transport, meanwhile leading to serious bottlenecks at the major international hubs. Their capacities develop much slower than demand does, and there is no hint at even the possibility of substantial changes in this situation for the coming years. On the contrary, all growth indicators are heading straight up.

From an environmental and sometimes even transport political perspective one might arrive at the conclusion that this growth rate is rather critical, bearing in mind the current discussion on climate change and with a view to shifting traffic to environmentally friendly modes of transport. On the other hand, air transport has in fact achieved a level of significance for modern societies and economic systems that, despite all criticism, must not be disregarded. Today, aviation is not just an expensive luxury for the rich traveller. Flying has become normality for the majority of the people; furthermore it has even become the basis for economic prosperity of entire regions and companies in Europe.

Operational and technical aviation safety both play an outstanding role in this system. The relevant authorities and the European legislator are particularly called for to keep pace with the dynamic variations in European aviation while ensuring high safety standards. Of course, preventing accidents and thereby reducing losses, the victims' suffering and their relatives' grieving is one aim. On the other hand, maintaining and improving safety standards is of utmost importance for the European economy. Therefore, the current focus on the aspect of security must not lead to distracting attention from safety.

After a phase of liberalising the European aviation market and coordinating national safety regulations for a considerable stretch of time, nowadays harmonised uniform standards are set up on a European scale. The incorporation of the European Aviation Safety Agency in Cologne in 2003/2004 provides visible evidence for such an integrated approach. This paper firstly delivers a short overview of the most important European legislation regarding aviation safety. Then, some areas are portrayed in which common European action is urgently needed.

Despite the - meanwhile generally accepted – understanding that regulations on a merely national or bilateral scale are increasingly inefficient, there still is considerable reluctance towards finding consensus in an approach to a solution. This leaves an enormous potential of increasing the level of safety in European aviation unused, which Europe can ill afford bearing in mind the rapid progress in this sector.

1. Introduction

Flying is the safest mode of motorised transport in Europe. Over 30 years of experience have proven such a positive statement: While 472 people were killed on commercial flights in 1974, there were "only" 71 victims in 1995. This equals a reduction by 85%. These figures are even more remarkable when looking at the increase in the number of flights carried out: During the same period of time, the volume has almost tripled from 2.1 million to 6 million. In relation to the number of flights, this trend means a decrease in casualties from 225 per million flights (1974) to roughly 12 per million flights (1995)[2]. Thus, it is quite obvious that considerable improvements in the field of safety have been achieved.

As positive as this balance is, one aspect must not be disregarded: The *relative* number of casualties – 12 per million flights – has remained more or less constant since 1995. This stagnation gives rise to some concern and is not acceptable neither for the European legislator nor the authorities in charge with aviation safety, because the *absolute* volume of air traffic has increased since then, namely to roughly 9 million flights per year as of today. Therefore, a substantial increase in the safety level is essential to lower the accident rate since a standstill in the increase of air traffic volume cannot realistically be expected. On the contrary, the latest developments have given some additional impetus to the dynamic growth. Some current examples are the revision of the "Third Liberalisation Package"[3] of 1992, numerous agreements on market opening between the EC and third countries[4] and the impressive success in the low-cost sector which already held a market share of roughly 12%[5] in Europe in 2005. All this contributes to the presumed doubling of commercial flights from 9 million today to 18 million in the year 2025 (or, related to passengers, from 1.3 billion to presumably 2.5 billion in the year 2025[6]).

In the next section, a description will be delivered on how the EC has reacted to the challenges in aviation safety so far and in what way new legal provisions can be predicted for the next couple of years. The most important legal provisions within the frame of an integrated approach will be characterized in order of date. Subsequently, proposals regarding some areas where additional legislation would be favourable will follow.

2. EC legislation on aviation safety

When looking at European aviation safety regulations, some basic phases of development have to be considered at first. Initially, aviation worldwide is based on the assumption that **every state holds unlimited air sovereignty** and therefore unrestrained power over safety regulations. The **Paris aviation agreement of 1919** already contained this legal principle and it is also an integral part of the **ICAO Convention of 1944** (***"Chicago Convention"***). Following this basic principle, most of the safety relevant regulations are set up by intergovernmental negotiating bodies and agreements and have to be implemented into the respective national law[7] by all contracting states.

Correspondingly, different regulatory schemes have been established in the EC Member States, sometimes covering different geographic regions. The **European Civil Aviation Conference (*ECAC*)** with its "technical" institutions regarding safety, especially the **Joint Aviation Authorities (*JAA*)** and the **Group of Aerodrome Safety Regulators (*GASR*)** used to be in the spotlight. The regulations they set up supplemented the standards the **International Civil Aviation Organisation *(ICAO)*** passed on a global scale. The necessary process of transposing provisions into the specific national legal systems of different states often leads to differences in their interpretation and implementation. In some cases, the provisions of ICAO have not been implemented at all. This deficiency could lead to a serious safety flaw in European and international aviation.

The principle of bilateral agreements bears considerable risks, notably for Europe, due to the full liberalisation of the single European aviation market since the "third liberalisation package" of 1992 entered into force. Following the aims of liberalisation and the principles of mutual recognition, each European airline holds the permission to operate in the entire European aviation market. This entailed a rapid growth in the volume of air traffic in Europe which was, in addition, accelerated by the process of further defragmentation of the European and global aviation market.

The steady tendency towards more deregulation and liberalisation within the single European aviation market has been accompanied by an increased **integrated approach of safety re-regulation on a European level** in the last couple of years. This follows a totally new avenue and goes clearly beyond the traditional way of coordinating national safety standards according to the principle of bilateral ICAO/ECAC agreements. By supplementing or (based on the principle of precedence of Community law over national law) even replacing national rules and thereby harmonising them Community-wide, the EC follows the principle of supranational legislation which has been proven successful in other policy areas.

2.1 The existing regulations on the European level

2.1.1 Directive establishing the fundamental principles governing the investigation of civil aviation accidents and incidents

In 1994, a directive[8] was already issued which laid down the **basic principles** to be followed by the Member States when **investigating accidents and incidents** in order to find ways to prevent such occurrences.

According to the directive, the Member States are **committed to carry out inquiries** and take measures to **support one another** if necessary. The inquiries have to be carried out by an **independent body**. After an accident, an **accident report** has to be prepared that includes **safety recommendations where appropriate** and has to be published as soon as possible. In cases of incidents, too, a **report** has to be prepared, which has to be transmitted to all those for whom the findings could be safety relevant.

The **accident and incident reports as well as the safety recommendations have to be addressed to the operators involved, the national aviation authorities and the European Commission**. The Member States have to adopt the measures necessary to ensure appropriate provision for the safety recommendation and implementation if necessary.

2.1.2 Regulation on common rules in the field of civil aviation and establishing a European Aviation Safety Agency (EASA)

Regulation 1592/2002[9] assigned **exclusive jurisdiction in the field of airworthiness and environmental compatibility of aeronautical products** to the Community. Furthermore, the Regulation helped encouraging the free movement of goods, persons and services as well as avoiding duplication of work concerning regulatory and certification/approval procedures.

This **supports the Member States' consolidated and uniform interpretation and implementation** of their commitments according to the "Chicago Convention". Furthermore, the **cooperation of the Community and its Member States with third countries and international organisations is strengthened** by the joint efforts of the national aviation authorities to work out the necessary provisions together and to apply and implement them uniformly.

In order to fulfil all the specifications based on this Regulation, the **European Aviation Safety Agency** (**EASA**) was launched in **2003**. It is a legally, administratively and financially self-governed EC agency and forms the vital component of a European integrated aviation safety architecture. EASA supports the European Commission by developing implementing rules. Besides, it takes the necessary measures within the framework of the powers and functions conferred on it by the Regulation, other legal provisions of the Community or international agreements in force. In particular, EASA fulfils the following tasks:

- Issue **type-certificates** of aeronautical products, parts and appliances as well as the appropriate environmental certificates;
- **issue and renew certificates** of design organisations worldwide and of production and maintenance organisations outside the EC (and within a Member State if requested by that State);
- **assist** in the field of **harmonisation** of rules and mutual recognition of approvals;
- **prepare regulations**, issue **drafts**, submitted as **opinions** to the European Commission in order to **assist in the preparation of legislative proposals and implementing rules**, provide the Commission with the necessary technical support;
- issue **certification specifications** (including airworthiness codes and acceptable means of compliance) as well as any **guidance material** for the **application** of this Regulation and its implementing rules;
- conduct **technical inspections** associated with products, parts and appliances **certification** (by itself or through national aviation authorities or qualified entities);
- conduct **inspections and audits** of the **organisations** it approves (by itself or through national aviation authorities or qualified entities);
- conduct standardisation **inspections** in order to monitor the **application of the Regulation** and its **implementing rules** by national aviation authorities;
- conduct **technical investigations** to monitor the **effectiveness** of the application of the Regulation and its implementing rules;
- conduct **safety inspections** and develop **training and standardisation programmes** for a uniform implementation of the European safety regulations
- **collect and analyse data**, develop **research activities** and coordinate them with those of the European Commission and the Member States;
- **assist** the Community and its Member States in their **relations with third countries**;

- **cooperate** with the aviation authorities of **third countries** and **international organisations** and assist Member States in fulfilling their international obligations (in particular those under the "Chicago Convention").

EASA, the **European Commission** and the **national aviation authorities** form a **joint information network** by exchanging information accessible to them in the course of the application of the Regulation and its implementing rules.

2.1.3 Directive on occurrence reporting in civil aviation

This Directive[10] **adds** another element of information exchange to the **fundamental principles** governing the **investigation of civil aviation accidents and incidents** set up in 1994. The objective of this Directive is to ensure that relevant information on "occurrences" is **reported, collected, stored, protected and disseminated** (***"Occurrence Reporting"***). An occurrence in the context of the Directive means an operational interruption, defect, fault or other irregular circumstances that actually has or potentially may have influenced flight safety but has not resulted in an accident or serious incident as defined by Directive 94/56 on the investigation of civil aviation accidents and incidents.

The Directive demands **Member States** to designate one or more **competent authorities** which put in place a **mechanism to collect, evaluate, process and store** occurrences. Accidents and serious incidents as defined in the Directive of 1994 also have to be stored in these databases. The **aviation authorities in charge in other Member States as well as the European Commission shall have access to information on occurrences** stored in these databases.

In order to take into account the need for compatibility with existing software, the European Commission is charged with the development of specific software. The development and administration of the **software programme ECCAIRS** (European Coordination Centre for Aviation Incident Reporting Systems) was assigned to the European Community Joint Research Centre (JRC) in Ispra, Italy. By now, ECCAIRS is **recognized worldwide** and **applied by the ICAO** as well. The JRC Ispra currently also collects data on accidents and serious incidents.

2.1.4 Directive on the safety of third-country aircraft using Community airports

The "SAFA-Directive"[11] *(SAFA: Safety Assessment of Foreign Aircraft)* grants the Community **powers concerning safety requirements of airlines outside the Community**. It introduces a harmonised approach to the effective enforcement of international safety standards within the European Community by **harmonising** the rules and procedures for **"ramp inspections"** of third country aircraft landing at airports in the Member States.

The Member States have to **collect** important **safety information accessible**, information on action taken subsequent to a ramp inspection as well as follow-up information concerning the operator and **keep it in a standard report form**. When carrying out such ramp inspections, particular attention shall be given to aircraft
a) where information has been received indicating poor maintenance condition or obvious damage or defects, b) which have been reported as performing abnormal manoeuvres, c) in respect of which a previous ramp inspection revealed deficiencies, d) where there is evidence that the competent authorities of the ^State of Registry may not be exercising proper safety oversight or e) where the information collected gives cause for concern about the operator.

The competent **authorities of the Member States** participate in a **mutual exchange of information**. All standard reports and ramp inspection reports are made available to the Commission and, at their request, to the competent authorities of the Member States and EASA and are summarised by the **European Commission in a yearly, aggregated report**.

In order to improve the level of aviation safety, the European Commission can take appropriate **measures** on the basis of the information collected, for example to establish the list of information to be collected, detail the content of and procedures for ramp inspections or define the format for the storage and dissemination of data. Furthermore, the **European Commission** can take appropriate measures to **cooperate with and assist third countries** to improve their **safety oversight** capabilities.

Where non-compliance with international safety standards is clearly hazardous to safety, measures must be taken to rectify the deficiencies before departure. If these requirements are not met, the competent authority can ground the aircraft. If a Member State decides to ban a specific airline from its airports, the European Commission and the other Member States are informed about the measures taken.

2.1.5 The Single European Sky and SESAR

The legal package to create a **Single European Sky** ***(SES)*** in 2004 laid the foundation for a **fundamental reform and defragmentation of the European airspace** based on a harmonised European legal framework. Improving the European safety standards is – apart from a functional restructuring of the European airspace in accordance with the traffic flow, improvements in the efficiency of the flight management system and the creation of new capacities – one of the primary concerns of the European legislator. The SES-package consists of four Regulations, supplemented with implementing provisions by the European Commission.

- **The framework Regulation**[12]: The framework Regulation contains, amongst other things, numerous definitions and serves as reference frame for the more precise regulations of the SES package. It provides for the creation of **independent national supervisory authorities** and an **"Industry Consultation Body"**, in which the whole range of different stakeholders is represented for the purpose of consultations concerning strategic questions regarding the implementation of the future European air traffic management system. Furthermore, the framework regulation contains provisions on the **relations to European third countries**, on **implementing provisions** by Eurocontrol, **penalties** in case of offences, **hearings with parties involved**, **investigations and comparisons** concerning the **performance** of air traffic control authorities as well as such involving the **monitoring**, **observation** and **methods to evaluate** possible impacts. In addition, the comitology procedures are supposed to make their contributions, especially in terms of the specific regulations of the SES package.
- **The service provision Regulation**[13]: The objective of this Regulation is to **establish common requirements for the safe and efficient provision of air navigation services** in the Community whilst **guaranteeing the continuity and interoperability** of service provision in the entire Community. The national supervisory authorities referred to in the framework Regulation ensure, in close cooperation, the appropriate supervision of the application of the provisions of this Regulation. To this end, they initiate the appropriate inspections and analyses. The common requirements are established with the aid of the comitology procedures as laid down in the framework

regulation. The adjacent **certification** of service providers takes place **decentralised in the Member States**, while the rights and obligations of such providers are defined in the respective certificate. The **certificates** issued by a Member State are **valid throughout the European Community**. Each Member State designates an air traffic service provider holding a valid certificate in the Community. Air navigation service providers may avail themselves of the services of other service providers that have been certified in the Community. **All relevant operational data** is **exchanged in real-time** between all air navigation service providers, airspace users and airports.

- **The airspace Regulation**[14]: The Regulation mainly focuses on the organisation and the use of airspace in the Single European Sky, in particular the **upper airspace** by **reconfiguring** it into **cross-border functional airspace blocks**. Their shape should be **determined by actual traffic flows** (and not the borderlines) within the European airspace while enabling optimum, smooth and flexible use.
- **The interoperability Regulation**[15]: This Regulation establishes **common measures** with the objective of **ensuring** the **interoperability** of the **air traffic management network**, its systems, **constituents** and **associated procedures** consistent with the European air traffic management network (EATMN). Furthermore, the Regulation wants to ensure and support the **introduction of new concepts of operations and technologies** in the field of air traffic management. To this end, a **uniform certification system** will be created. The EATMN, its systems and their constituents have to meet **general and particular requirements** as specified by the Regulation. Moreover, **implementing rules** for interoperability and **Community specifications** (by Eurocontrol or other European standardisation bodies) are worked out to achieve the aims of this Regulation. The putting into service of air traffic management systems is subject to an **EC declaration of verification** by the air navigation service provider confirming compliance.

Apart from the four regulations mentioned above as an institutional and regulatory component, the SES-project is completed by the technology-related component **SESAR** *("Single European Sky ATM Research"*). SESAR is based on the knowledge that the **existing air traffic management systems are technically outdated** and therefore increasingly incapable of serving the rapid and reliable development of air traffic in Europe adequately.

SESAR is meant for establishing a completely new, more efficient and safer European air traffic management system. A "Joint Undertaking" was founded[16] for this purpose, with the intention to deliver funds by EC state funds, Eurocontrol and the private economy to put SESAR into effect. In a communication[17], the European Commission reports on the latest developments within the SESAR definition phase (2004 to 2008).

According to the Communication, the work within the definition phase **proceeds as planned up to now**. The **long-term finance** of the project appears to be **secured**, taking into consideration the granted 350 million Euro from the EC Research and Development Framework Programme, another 350 million Euro from the Trans-European Networks, 700 million Euro from Eurocontrol and 0.9 to 1.3 million Euro from the industry (which, at the end of the deployment phase in 2013, will be responsible for the financing and control of the whole SESAR project).

Meanwhile, the European Commission has issued a **progress report on the creation of cross-border functional airspace blocks** [18]. In this report, the European Commission noted that, following the bottom-up approach, **nearly all Member States** have **started initiatives** to establish such functional airspace blocks and resolve national airspace blocks in support of the "Single European Sky" project. It noted, however, that Member States would have to

increase their efforts considerably in order to achieve real progress in the defragmentation of the European air space. In 2008, the Commission **will evaluate** the efficiency of the bottom-up approach. It will assess the need for the amendment of the current legislative framework in view of concrete results.

2.1.6 Regulation on a common "blacklist" of air carriers subject to an operating ban within the Community

The original Commission proposal for a regulation dated 16 February 2005[19] merely aimed at stipulating an **obligation** for the air carrier **to inform** the passengers and for the Member States to **exchange information relating to safety**. The aircraft accidents of summer 2005 and the discussion on the inconsistent clearance to land or for take off granted to the Turkish airline *Onur Air* in different Member States necessitated further action. Therefore, the European Parliament, the Council of Ministers and the European Commission rapidly reached a consensus on **EC-wide harmonised provisions for a "blacklist" containing unsafe airlines**[20]. As regards content, the regulations partly resembles an advancement of the SAFA regulation of 2004, in which article 9 (imposition of operational bans or restrictions) was repealed and substituted by the new provisions.

The regulation defines **provisions on the preparation and publishing** of the **list of air carriers that are subject to an EC-wide operating ban** because they do not meet safety requirements. The common criteria for imposing an operating ban are set out in the Annex. An air carrier will be put on the blacklist if a) there is verified evidence of serious safety deficiencies, b) the carrier lacks the ability and/or willingness to address the deficiencies or c) the responsible authorities lack the ability and/or willingness to address safety deficiencies and enforce the safety standards or oversee the aircraft used.

The Community "blacklist" was generated on the basis of a summary of the respective national operating bans. The European Commission issues an update of the list if new operating bans are imposed on carriers or existing bans are withdrawn or to modify the conditions of a ban, but at least every three months. The **Member States and EASA communicate to the Commission** all **information** that may be relevant in the context of updating the Community list. The list does not preclude the Member States from imposing an operating ban or restrictions of traffic rights in view of a safety problem specifically affecting that Member State.

2.1.7 The EC air traffic controller license

The Directive on a Community air traffic controller license[21] contributes to creating cross-border functional airspace blocks within the framework of the "Single European Sky"-programme. Apart from social aspects, aviation safety and harmonisation of training requirements and contents as well as the freedom of movement of air traffic controllers within the EC are important topics of the Directive.

The Directive effects a **harmonisation of the requirements** concerning a) the **training** of air traffic controllers, b) the conditions precedent to their **admission** and c) **the issue of their license**. As for language endorsements, level 4 of the language proficiency rating scale set out in Annex III has to be achieved in **English**. Member States may impose **local language** requirements when deemed necessary for reasons of safety. They may also require level 5 where the operational circumstances warrant a higher level for imperative reasons of safety. According to the principle of mutual recognition, the Member States have to accept the licenses and all associated permissions, competences, language and fitness certificates.

2.1.8 The "EU-OPS" Regulation

The present Regulation[22] is a good example for the **transfer of standards which were developed by the JAA into an integrated European Community law**. The preceding regulation[23], which aimed at harmonised provisions for the design, production, maintenance and operation of aircraft as well as persons and authorities performing these tasks, already comprised some of the regulations as established by the JAA (Joint Aviation Requirements, JAR). In 1995, though, the JAA passed another document with the objective of defining harmonised rules on commercial operations of aircraft. This document contained procedures for common airworthiness requirements.

The rules of JAR-OPS 1 were transferred into Community law with the "EU-OPS" Regulation and slightly adjusted. It is a **comprehensive catalogue of provisions** which contains 19 chapters of detailed **safety requirements** concerning various fields to be fulfilled by air carriers in commercial transport[24].

EASA is authorised to issue **implementing rules** for the purpose of the air carriers' application of the measures set by this Regulation.

2.2 Extending the tasks of EASA

When passing the "EASA-Regulation" (EC) No 1592/2002, it was already decided that the authorities of the Community (or EASA) relating to safety would have to be extended[25]. In November 2005, the European Commission substantiated its ideas in a Communication[26]:

1. As a **first step**, the European Commission suggests a **competence** for the **Community** with equivalent **remits for EASA** in the fields of **operations, licenses for pilots and safety of aircraft from third countries**. These areas used to be coordinated by the JAA, but not uniformly and not binding. Creating a Community competence would practically transfer all the regulations set up by the JAA into Community law and have them applied uniformly throughout the European Community.

   According to this concept, a **proposal for a regulation** was already passed by the European Commission[27] in **November 2005**. The proposal includes the following aspects which supplement or revise the provisions of the existing EU-OPS Regulation:

   - **Operations**: **Community regulations** should be extended to the entire field of flight operations and the procedures of **obtaining** a license for all **operators** performing commercial services[28].
   - **Pilots' licenses**: For quite some time the JAA has been working on developing licenses for crews (*Flight Crew Licensing, JAR-FCL)*. The current proposal for a regulation would necessitate a licence for all active pilots within the EU (***"EU-FCL"***) based on **common requirements** as regards theoretical and practical knowledge, language skills and physical fitness[29]. The regulation will only outline the basic requirements. The details will be substantiated in implementing provisions after this authority will have been transferred to EASA.

     In the future, flight simulators, training organisations for pilots, aero-medical centres and the staff employed must obtain a license according to the EASA implementing rules as well[30]. EASA will then be responsible for monitoring

the application of the regulations in the Member States as well as licensing organisations and flight simulators in third countries[31].

- **Aircraft from third countries**: There is particular need to improve flight safety on board of airplanes of third countries within the EU through common uniform provisions, since they are currently only covered by the Chicago Convetion and the respective national standards. Operators from third countries should have to demonstrate compliance with Community law by obtaining a license. Thus, the concept of a **blacklist** containing **operators that are subject to an operating ban** is refined by adding the **element of a "white list" of approved operators** from outside the EC.
- **Cabin Crew**: Against the background of the current EU-OPS regulation the European Commission suggests that cabin crew concerned with the operation of aircraft must have a medical certificate and evidence showing compliance with the requirements of Regulation 1592/2002[32].

In March 2007, the European Parliament voted on the Commission proposal in a First Reading and largely welcomed its contents. The amendments of the Parliament include:

- **Penalties**: According to the Parliament's conception, EASA should be given enhanced competences to impose penalties. It should be able to impose fines if persons or companies offend against the provisions of the current Regulation and its implementing rules deliberately or by negligence.
- **Safety culture without sanctions**: Whistleblowers should obtain appropriate protection in order to promote occurrences being reported, since their analysis might prevent accidents and thereby enhance safety.
- **Increased exchange of information on safety defects**: In case EASA or a Member State receives information proving that a certificate issued by another Member State does not comply with the safety requirements of this Regulation and its implementing rules, these findings should be communicated to the other Member States and the European Commission immediately. If EASA refuses to issue a certificate for an air carrier, it should forward all information concerning this matter to the European Commission. The name of this carrier could be incorporated in the blacklist, if necessary.
- **Certificates for cabin crew**: Beyond the need to comply with requirements valid throughout the EU, the European Parliament suggests that cabin crew hold a license as the EU-OPS Regulation originally arranged for. This license should be issued by the Member States, approved operators and training organisations.

2. As a **second legal package**, the European Commission has in mind the extension of **Community safety regulations** and of the **remits of EASA on the operation of airports**. Since 2003, annex 14 of the Chicago Treaty requires airports to be certified. Since there are no Community provisions in this field so far but only an intergovernmental coordination within the frame of the Group of Aerodrome Safety Regulators (GASR), a **legislative proposal will probably be issued in 2008** on the basis of the consultations having been finished, once EASA has submitted its comments and an impact assessment has been done.

   The proposal will adopt the standards and procedures concerning safety developed by Eurocontrol *(Eurocontrol Safety Regulatory Requirements, ESARR)* step by step into Community law. **EASA** will **make sure**, after working out the provisions concerning

safety and interoperability, that the **practices of the Member States are adjusted** and compatible with Community law. The certification of airport operation will remain decentralized in the responsibility of the national competent authorities.

3. The **third legal package** is considered by the European Commission to be the assignment of competences to EASA as regards safety in the field of "Air Traffic Management" (ATM) and air traffic control. It is still uncertain when the proposal of the European Commission can be reckoned with. Maybe it will be issued at the same time as the second legal package concerning airport operation.

3. Prospects and future challenges

The facts explained so far make clear that **a lot of steps towards a completely integrated EU legislation** concerning aviation safety have already been taken. It seems noteworthy to state that most of the directives and regulations have been triggered or even entered into force within the last five years. This is a clear indication of how high the pressure is in this sector towards more harmonisation. To this end, here are some basic considerations to begin with:

Since the **integrated approach of Community law** has proved itself, it appears **suitable** for all **further steps** in the field of flight safety legislation. **EASA** should, in particular, always be in the **centre of all considerations** as regards giving anyone the authority to set up provisions and implementing rules as well as the systematic aggregation of data, information and expertise in Europe. This perception is largely shared by the experts dealing with safety aspects[33]. The following aspects may be cited as reasons for this:

- A rather simple, but plausible reason is the fact that **EASA already exists** and already has **regulatory authorities as regards aviation safety**. Any other solution would come close to a doubling of institutional and procedural structures, might lead to ambiguities and gaps regarding responsibilities and impede a consolidation of safety relevant information, data and expertise. All this would redound to an unnecessary derogation of the level of safety.

  The objection that EASA merely resembles an institution representing 27 Member States and therefore, just like other organisations, doesn't cover the whole of Europe may be invalidated by looking at the situation already in existence: Today, some **non-EU countries are included actively in the EASA's activities** already. According to the EU philosophy of maintaining the Community-wide coherence of safety legislation in civil aviation, all European third countries affected can share the advantages of the "EASA-System" of special agreements with the Community. Iceland, Liechtenstein, Norway and Switzerland are full EASA Members. Furthermore, there are "Working Arrangements" with Armenia, Azerbaijan, Bosnia-Herzegovina, Croatia, the Georgian Republic, Iceland, Macedonia, Moldova, Monaco, Norway, Serbia, Switzerland, Turkey, the Ukraine and numerous non-European countries.
- The **supranational nature of the EC and EASA** as well as the principle of **precedence of community law** over national law, likewise, is also of importance. This might also counter the problem of inconsistent interpretation of agreements under international law in the Member States, since all regulations enacted by EASA or the European legislator (European Parliament and Council of Ministers) are directly effective or must be applied by the Member States consistently and unambiguously. The advantages of these principles have already become visible within the frame of the current field of activity of EASA.

- The **advantages resulting from the kind of procedure applicable** in extending the competences of the Community and therefore also EASA are in firsthand connection with these principles. Unlike merely intergovernmental agreements, transferring remits to the Community and EASA **without the necessity of unanimity** between all contracting states within the frame of **co-decision** – i.e. with a qualified majority decision in the Council of Ministers and equal participation of the European Parliament – can take place[34]. This helps avoiding blockades by single states and tends to result in creating supranational methods of problem-solving because of the pro-integrative approach of the European Parliament. Exemplarily, the current legislative project to revise the "EASA-Regulation" 1592/2002 may be pointed out here, in which the European Parliament has spoken in favour of an extension of competences which goes way beyond the proposal of the European Commission and the conceivabilities of the Council of Ministers that partly aim at preserving vested rights.

3.1 Realising the Single European Sky

Realising the "Single European Sky"-project plays a **very important role for improving aviation safety** standards in Europe. There is still considerable need for action, though[35]. As described in 2.1.5, there are **significant delays** due to the **unreadiness of the EU Member States** to create functional airspace blocks following the "Bottom-up" principle. The announcement of the European Commission to possibly launch a revision of the legal framework[36] in case progress remains unsatisfactory is explicitly welcome. During the procedures of adopting the "airspace Regulation" within the "Single European Sky"-package, the **European Parliament** has already pronounced itself in favour of a **stronger position of the European Commission[37] or the Comitology Committee[38]** from the beginning. For example, the European Parliament wanted the **European Commission or the Comitology Committee** to be entitled to reach a **final decision** on defining cross-border functional airspace blocks when **quarrels** between the Member States occur ("Top-Down"-approach). For some Member States, this would have gone too far, though. Once the time span set up by the European Commission has **elapsed** in 2008, the **"Top-Down"-model should definitely be incorporated into the "airspace Regulation"** in order to avoid further delays in creating cross-border functional airspace blocks and **strengthen European decision makers**.

3.2 Centralised collection and evaluation of data

The Directives 94/56/EC[39] and 2003/42/EC[40] as well as the software programme ECCAIRS already resemble important steps to a centralised collection of data on occurrences, serious incidents and accidents. Undoubtedly, this is the prerequisite for the best use of the knowledge gained to enhance the level of European flight safety. Still, some points of criticism may be mentioned here:

- Charging the **JRC at Ispra** with the **establishment** of the **ECCAIRS programme** and the collection of safety relevant data surely was sensible as a first step. This **should not lead to creating a permanent system of data collection outside EASA,** though. In view of the expertise in the field of certification and the announced operational implementation of a large number of safety recommendations, in the medium term the **incorporation of the ECCAIRS data bank into EASA** would be desirable.
- Upon request, the European Commission announced that **EASA will be given unlimited access to ECCAIRS data**[41]. However, the European Commission also

emphasized that the interpretation of the data gathered is intended to take place only on a *national* level up to now according to Directive 2003/42/EC. There is urgent need for action in this. **Apart from the European networking and collection of data** within the frame of ECCAIRS, there **should be a systematic data analysis on a European scale** that could transform the findings gathered directly into proposals for new safety regulations. To that effect, the European Commission acknowledges that the role of EASA should be reconsidered when updating and completing the regulations on the investigation of accidents and incidents. In the beginning

of 2007, the European Commission carried out a consultation on a possible revision of the Directives 94/56/EC and 2003/42/EC, so legal initiatives can be expected accordant to the results. An analysis of the reactions on the consultation makes clear that the majority of the parties affected are in favour of strengthening the central European level in this area[42].

- The existing Directive 94/56/EC establishing the fundamental principles governing the investigation of civil aviation accidents already emphasized that the bodies or entities entrusted with responsibilities to investigate or supervise must be independent in order to avoid conflicts of interest or worse, an involvement in the reasons of the occurrence being looked into. Developing this sensible thought further might lead to the assumption that an **obligation of the Member States to include EASA experts in the investigation of accidents and incidents could be conceivable**. It could enhance the impartiality of the investigations and ensure the implementation of uniformly high European standards.
- The transfer and dissemination of the relevant data is vitally important for the use of the findings from the investigations of accidents and incidents as well as occurrence reports. Unfortunately, they are withheld rather often because the employees who report incidents of which they have knowledge are facing serious consequences (like being posted somewhere else or dismissed). For the **purpose of an improved safety culture *("just culture")***, the **regulations** concerning this should be **tightened** to support such data transmission. A more stringent **obligation to publish findings** appears possible while simultaneously giving **"whistleblowers"** a **legal position** they can rely on in case of a lawsuit.

The European Commission is currently working on proposals for a revision of the two directives; work on the Directive 2003/42/EC on occurrence reporting in civil aviation has made quite some progress already. Both will probably be passed within the frame of a comitology procedure.

3.3 Certification and licensing of cabin crew

The question of **uniform standards for cabin crew** has been an issue in safety relevant legislative procedures again and again. Still, there are **only minimum standards**, even though the role of cabin crew in commercial aircraft is crucial for the safety of the passengers, as shown by the outcome of an Air France accident at Toronto in summer 2005.

In the end, the **EU-OPS Regulation** – at the European Parliament's urging - determined that **EASA should complete a scientific and medical evaluation until the beginning of the year 2009** which, inter alia, ranges over subpart O of the EU-OPS Regulation (cabin crew). Within the scope of this check, the course towards further harmonisation of the training requirements for cabin crew as enacted so far will be sustained in order to ensure their labour mobility within the EU. In this context, the EU-OPS Regulation also provides for another review of the possibilities of further harmonisation of the qualifications of cabin crew. In this

aspect, the **European Commission is requested to submit a proposal for a regulation on licensing or certification of cabin crew** which ensures Community-wide, uniformly high aviation safety standards as well as the mobility of the employees.

Within the frame of the debate on such licensing or certification of flight attendants, the question of a **European license for cabin crew** regularly appears, for example in the discussions during the legislative procedure concerning the EU-OPS Regulation and currently the revision of the EASA Regulation. The interests of the parties concerned are, by all means, legitimate. But the question rather is of a social than safety relevant nature. Therefore, the European Commission should resume the topic of **flight crew licensing in a separate legislative proposal** in order to **prevent social and safety arguments from mingling**, which happens quite often.

3.4 Safety vs. Security

Another aspect which deserves a certain attention is the question of the **relation between security and safety** legislation in aviation. The European Parliament has repeatedly spoken in favour of extending the competences of EASA or verifying whether it makes sense to enlarge EASA's area of remits in this field[43]. The European Commission and the Member States strictly oppose this with reference to EASA's function as a safety regulator only, the need to uphold national sovereignty and the fact that the two topics belong to different responsibility spheres.

Especially against the background of the lengthy debate on security following the events of 11 September 2001 and the often hasty, extremely strict and inflexible legislation in this area, a thematic intertwining of security and safety aspects doing justice to both sides seems advisable. Considering that **security is sure to be given highest priority in the foreseeable future**, there is a risk of an **imbalance to the disadvantage of safety**. Just to mention an example: Making the cockpit inaccessible through reinforcing the door might appear quite sensible from the point of view of a security expert because it prevents acts of unlawful interference by terrorists. From the viewpoint of a safety legislator it raises problems because such stringent measures also make it impossible to help in an emergency (for example by cabin crew or other pilots among the passengers).

Another approach – which is also interesting from the view of industrial policy - at integrating EASA where safety questions are concerned could be, for example, the **assignment of licensing and certification authorities concerning equipment and devices used for investigations, access controls and other security checks**. With such an EASA procedure, the numerous national licensing procedures could be replaced by a uniform, efficient European procedure with the equivalently high standards. This has already proven successful within the framework of the previous certification and licensing competences of EASA and the advantages in efficiency entailed.

Mixed competences for EASA in the thematic transition area between safety and security **cannot be expected even for the long term**, though, due to political reasons. Therefore, creating an **interdisciplinary advisory body** first of all should be taken into consideration. During the continuous monitoring of laws it would identify possible contradictions in the existing legislation and work out adequate recommendations to solve the problem. Both safety and security experts, European and national, should participate in such a board, but also representatives of the industry. For example, it could consist of safety and security experts of the European Commission, representatives of the national departments of transport and the

interior or the national aviation authorities, EASA safety experts and representatives of associations of the aviation industry.

Even without any relation to concrete legal provisions, the question if and in how far the increasingly stringent security measures have a detrimental effect on the safety level in aviation arises as well. It affects cases of imminent danger less than it does daily routines and procedures that might become more difficult or even constrained or delayed. It could even be brought up for discussion whether the already considerable and still growing **employment of human resources and funds in security leads to less investment in safety**. The **European Commission should carry out an analysis** concerning this topic to identify possible flaws.

3.5 Split competences

Even though the **responsibilities and legislative powers** concerning safety **are increasingly assigned** to **European** bodies, **"split competences" still occur time after time in the field of safety regulations in Europe**[44]. For example, such a split competence can be observed in EASA concerning the task of continuous airworthiness of aircraft: While EASA is responsible for all aspects regarding design, the national aviation authorities hold powers concerning production and maintenance. Such partitioning of authorities generates significant problems and sometimes even real safety breaches, like in the field of Aairworthiness Directives. It seems sensible, inter alia, to **introduce a common European aircraft registry** with EASA as umbrella organization in order to remedy this problem.

3.6 Uniform European aviation legislation

The **current system of legislation** on aviation safety with its various regulations and directives (including multiple amendments) is **hardly manageable**, even for those directly affected, which could result in safety relevant effects. A uniform aviation legislation containing at least the basic regulations would be desirable. To the benefit of clarity, EASA and the European Commission are called upon in this context to work out a systematic and comprehensive proposal for a **consolidated "European aviation law"**.

4. Conclusion

The facts and comments in this paper have made clear that the **integrated regulatory approach of the European Community ranges over almost all aspects of aviation safety** or will do so in the future in the course of the legislative projects currently being discussed and those planned for. There **already are, or will be in the near future, legally binding, EU-wide aviation safety standards** and corresponding enforcement mechanisms for personnel and their training, aircraft and airports, the exchange of safety relevant information in different areas, for air traffic control and air traffic management and many other areas **anywhere** from ground to high altitudes.

Apart from the **European Commission and the Comitology Committee, EASA already** plays a **major role** in the establishment and enforcement of Community-wide aviation safety standards within the framework of the integrated regulatory approach today. Over the medium term, the Agency will become the **main aviation safety authority in Europe**, with **extended authorities** concerning all aspects of safety in civil aviation, and **strengthened in its regulatory and monitoring functions**. All this will bring about a **significant added value in European aviation safety** and therefore **goes way beyond the possibilities of merely determining safety standards with the equivalent national implementations**.

The European Parliament and the Council of Ministers should always be aware of this fact in their deliberations on the legislative initiatives by the European Commission to enlarge the competences of EASA even though assigning further authorities to the European level might not always appear easy to understand from the perspective of some Member States in view of the technical expertise and resources of their national aviation authorities.

The basic assumption that enhancing the level of aviation safety can only be achieved with the help and within the framework of the integrated regulatory approach of the Community, i.e. by further strengthening European decision-making bodies, also applies to the suggestions for improvement as stated in the third chapter of this paper (which are only examples; surely other areas could be added).

Transferring competences in the field of aviation safety is persistently seen as the Community or EASA adding just another bureaucracy and regulatory level in certain areas between (or even in parallel to) ICAO and the Member States. Especially some Member States with particularly high safety standards that do not see any necessity for Community-wide harmonised regulations concerning some specific legislative projects put this argument forward (currently, for example, with regard to the proposal of the European Commission on extending the competences of EASA on the operation of airports). According to this hierarchical way of thinking, the direct line of authority from ICAO to the Member States would be interrupted by inserting the Community or EASA - without any additional gain in safety. Such reasoning is not really convincing, though.

The **main aim** of the integrated European regulatory approach and EASA is **not** the **establishment** of **yet another regulatory level or even new standards in addition to the ICAO regulations**. **Primarily, the execution of the ICAO standards should be ensured** in an efficient and effective way. Accordingly, **EASA sees itself as a key element within a network of national and international aviation safety authorities** that are closely interlocked for the benefit of all and which coordinate their activities and flow of information on the basis of uniformly high standards and regulations. Therefore, the criticism of Member States with high safety standards as mentioned above is inappropriate. They only have to render comparatively minor adjustment efforts to bring their rules in line with the Community regulatory system, in contrast to Member States with lower safety standards for which the workload will still be high in the future.

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[3] *Regulations (EC) No 2407/92, (EC) No 2408/92 and (EC) No 2409/92*

[4] *Especially the "Open Skies" agreement between the European Community and the USA*

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[8] *Directive 94/56/EC of 21 November 1994 establishing the fundamental principles governing the investigation of civil aviation accidents and incidents*

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[10] *Directive 2003/42/EC on occurrence reporting in civil aviation*

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[12] *Regulation (EC) No 549/2004 laying down the framework for the creation of the single European sky*

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[22] *Regulation (EC) No 1899/2006 on amending Council Regulation (EEC) No 3922/91 on the harmonization of technical requirements and administrative procedures in the field of civil aviation*

[23] *Regulation (EEC) No 3922/91 on the harmonization of technical requirements and administrative procedures in the field of civil aviation*

[24] *For example on Maintenance (subpart M), Flight Crew (subpart N), Communication and Navigation Equipment (subpart L), Transport of Dangerous Goods by Air (subpart R) etc.*

[25] *Article 1 paragraph 1 lit. b) in connection with Article 7 of the Regulation (EC) No 1592/2002 stating that EASA shall be given competences concerning flight operations and flight crew licensing*

[26] *Communication from the Commission "Extending the tasks of the European Aviation Safety Agency – an Agenda for 2010" (COM(578) final)*

[27] *Proposal for a regulation amending Regulation (EC) No 1592/2002 of 15 July 2002 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency (COM(2005) 579 final)*

[28] *Article 4 paragraph 2 lit b and Article 6b 2) of the proposal stated above*

[29] *Article 4 paragraph 1 lit b of the proposal stated above*

[30] *Article 6a paragraphs 1, 2, 3, 4 and 5 of the proposal stated above*

[31] *Article 15a of the proposal stated above*

[32] *Article 6b paragraph 4 of the proposal stated above*

[33] *In this context, special attention may be drawn to the contributions to the "Conference on the future of Aviation Regulation in Europe", organised by the European Commission on 20 September 2006 at Brussels and the conclusions drawn from it. The contributions are retrievable at http://ec.europa.eu/transport/air_portal/2006_09_20_conference_en.htm*

[34] *According to Article 251 paragraph 2 of the Treaty*

[35] *See also the report "European Aviation – A framework for driving performance improvement" of July 2007 by the "High Level Group for the Future European Aviation Regulatory Framework" founded by EC-Commissioner Jacques Barrot; retrievable at http://ec.europa.eu/transport/air_portal/traffic_management/traffic_management/ses/doc/2007_07_06_hlg_report.pdf*

[36] *See also the Communication from the Commission (COM(2007) 101 final) on „Building the Single European Sky through functional airspace blocks: A mid-term status report"*

[37] *In particular amendment 51 from the first Reading, retrievable at http://www.europarl.europa.eu/sides/getDoc.de;jsessionid=51C6464C9FC01160C5C857045894A3B1.node1?pubRef=-//EP//TEXT+REPORT+A5-2002-0266+0+NOT+XML+V0//DE*

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[39] *Directive 94/56/EC of 21 November 1994 establishing the fundamental principles governing the investigation of civil aviation accidents and incidents*

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[43] *See also the following amendments submitted by Ulrich Stockmann and accepted by the plenum in the*

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[44] *This is one of the conclusions of the report "European Aviation – A framework for driving performance improvement" of July 2007 by the "High Level Group for the Future European Aviation Regulatory Framework", retrievable at* http://ec.europa.eu/transport/air_portal/traffic_management/ses/doc/2007_07_06_hlg_report.pdf

Remarks:
Opinions expressed in this contribution are those of the authors.

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