

розробки проблем повітряного та космічного права України, а також удосконалення чинного законодавства, яке регулює діяльність авіації.

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SAFETY MANAGEMENT SYSTEM LIKE KEY INSTRUMENT OF INTERNATIONAL CIVIL AVIATION REGULATION

First of all we'd like to pay your attention to the major criteria of air transport. The most prominent features of air transport are very high relative speed, very good reliability, high cost of transportation and medium flexibility. Another recognized aspect of air transport activity is the relatively high level of safety. Now let's compare other ways of transport concerning safety criteria.

We can use different ways to evaluate passenger's safety. One of them is comparison of ratio of fatalities per trip. According to this method and basing on statistics of report from the US National Safety Council, the most dangerous means of travel is by car. The possibility of death for the occupant of a car is more than 2 times higher than for motorcyclists and odds 1 in 415. The second most dangerous transport is motorbike. The possibility of motorcyclist's death is 1 in 907. In comparison to previous means of transportation, pedal cycling is less dangerous. A recent report from the US National Safety Council put the lifetime odds of dying as a pedal cyclist at 1 in 4,982. But the safest means of transport is an airplane. The odds of dying in the air are just 1 in 7,229, which includes considerably more dangerous non-commercial travel. This is more than 18 times lower than for motorcyclists, more than 8 times lower than for occupant of a car, more than 1,5 times lower than for pedal cyclist. Another method which we can use for comparing means of transport is to compare fatalities per passenger's miles. For example, passenger trains have a fatality rate of 0.06 per 100 million passenger miles. In comparison, commercial buses have a fatality rate of 0.05 per 100 million passenger miles. At the same time, scheduled airlines have a death rate of 0.003 fatalities per 100 million passenger miles. This is more than 16 times lower than for commercial buses and more than 20 times lower than for passenger trains [1]. However, such a high level of safety has been reached not immediately but was the

result of many years of aeronautical scientists, technicians and designers activity. In retrospect, the history of the progress of aviation safety reliability can be divided in three distinct eras, each with fundamentally differing attributes.

The first era, which spans from the pioneering days of the early 1900s until approximately the late Sixties, aviation could be characterized as a fragile system from a safety reliability standpoint. The safety focus was on individuals and the individual management of safety risks, which in turn built upon the foundations provided by intensive training programmes.

During the second era, from the early Seventies till the mid-Nineties (the human era), aviation became not only a system, but a safe system. The frequency of safety breakdowns diminished significantly, and a more all-encompassing understanding of safety, which went beyond individuals to look into the broader system, was progressively developed

From the mid-Nineties onwards to the present day (the organizational era), aviation entered its third safety reliability era, becoming an ultra-safe system, (i.e. a system that experiences less than one catastrophic safety breakdown every one million production cycles). Fundamental in this consolidation was the adoption of a business-like approach to the management of safety, based upon the routine collection and analysis of daily operational data. This business management-like approach to safety underlies the rationale of safety management systems (SMS). In the simplest terms, SMS is the application of business management practices to the management of safety [2].

According to Global Civil Aviation Regulation Framework the Safety Management System is regulated on three hierarchical levels - Global, Regional and National. Global, regional and national levels are hierarchically interconnected and mutually consistent. Now let's have a closer look on them.

The Global level (provided by International Civil Aviation Organization (ICAO)) consists of international training standards (based on Standards and Recommended Practices (SARPS)), co-ordination of activities and sharing best practices, etc). ICAO Safety Management System is grounded on management commitment and consists of three main directions of civil aviation development – safety, effectiveness and efficiency. By ICAO main 3 risks defenses within Global Safety Management System are: regulations; training and technologies [3].

The Regional level (Regional aviation organizations, such as EUROCONTROL, European Civil Aviation Conference (ECAC), European Aviation Safety Agency (EASA), etc.) adapts international standards and recommendations to regional features and requirements.

Regional aviation development programs, such as the Single European Sky, play an important role for increasing of aviation safety level. European airspace is among the busiest in the world with over 33,000 flights on busy days and high

airport density [4]. This makes air traffic control even more complex. The EU Single European Sky is an ambitious initiative launched by the European Commission to reform the architecture of European air traffic management. It proposes a legislative approach to meet future capacity and safety needs at a European rather than a local level. The Single European Sky is the only way to provide a uniform and high level of safety and efficiency over Europe's skies [5].

The National level (National aviation organizations, such as National Supervisory Authorities (NSA), Civil Aviation Authorities (CAA), State Aviation Administrations (SAA) and national training centers, such as National Aviation University (Ukraine) and Ningbo University of Technology (China) etc.). At this level implementation of safety standards is provided. It should be underlined that higher education and research institutions play a significant role in the development of training programmes, technology and regulations. National training centers, such as National Aviation University and Ningbo University of Technology (China), formulated recommendations for three levels of civil aviation regulation on continuous development of the Aviation Safety Management System and the application of new technologies [See Fig 1.].

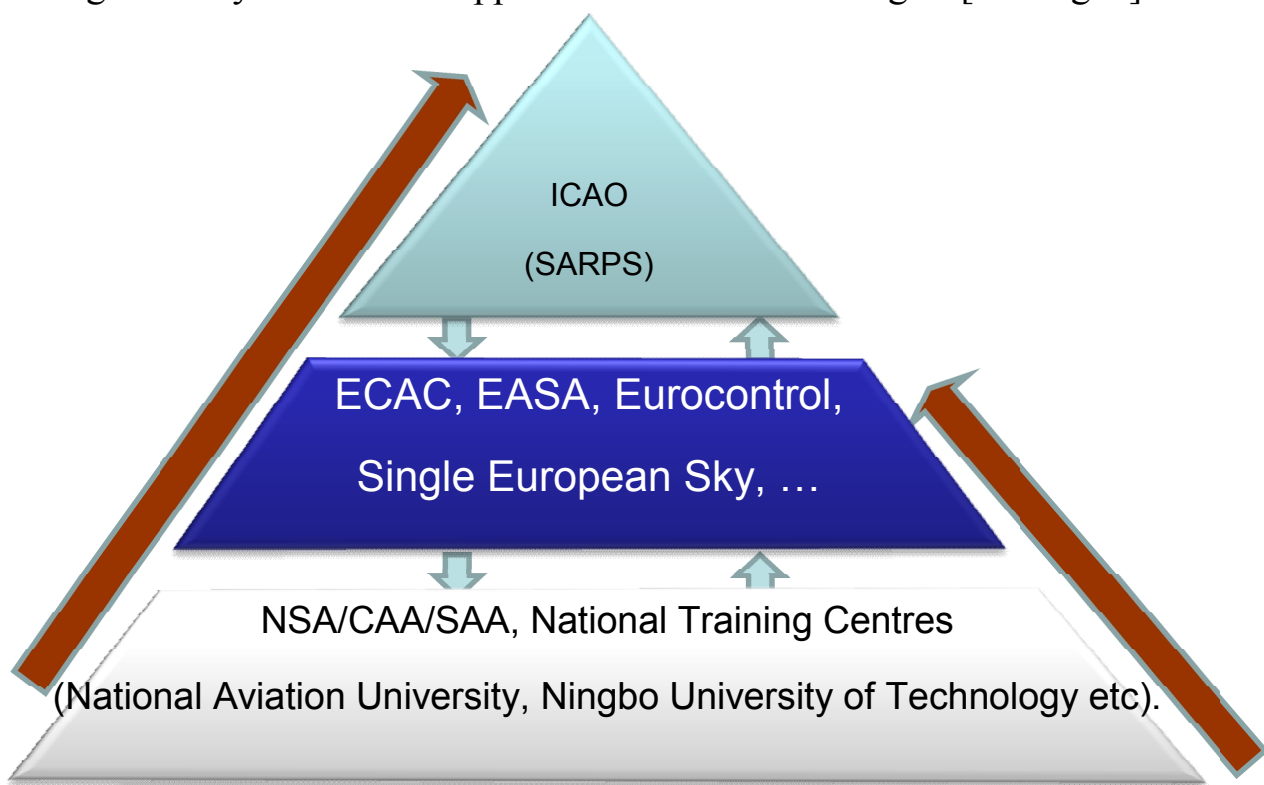


Fig 1. Development of Global Aviation Safety Management Systems

For Global Level. Development of International Safety Standards (based on Standards and Recommended Practices (SARPS) ICAO), Recommendation for Co-ordination of Activities and Sharing Best Practices, etc.

For Regional Level. Recommendation for Adapting of Safety Standards to Regional Features and Requirements (for ECAC, EASA, Eurocontrol, Single European Sky regulations).

For National Level. Development of New Aviation and Transport Training Specialties (first, second and third educational cycles). Implementation of the World and Regional Safety Standards [6].

Joint research activities of the national training centers, such as National Aviation University and Ningbo University of Technology (China), is the key to further development of Aviation Safety Management System.

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ПРАВОВОЕ РЕГУЛИРОВАНИЕ ОБЕСПЕЧЕНИЯ АВИАЦИОННОЙ БЕЗОПАСНОСТИ В АЗЕРБАЙДЖАНСКОЙ РЕСПУБЛИКЕ

После приобретения независимости Азербайджанской Республики с целью улучшения деятельности гражданской авиации руководство страны проделало огромную работу, основной целью которой является эффективное обеспечение безопасности гражданской авиации. Был принят ряд нормативных актов, регулирующих деятельность гражданской авиации (Закон Азербайджанской Республики «Об авиации» 2005 г.). Правовые