

DOING BUSSINES IN COMMERCIAL AIR TRANSPORT IN THE SLOVAK REPUBLIC

Lukáš Korba – Róbert Rozenberg

The article discusses the business of civil air transport, focusing on two areas and the legislative part treating the legislative framework for the airline. Explains the theoretical issues of business in Slovakia, which urgently needs a solution to this kind of business to improve character of whole business. From a practical perspective article describes some issues in business with a focus on environmental impact.

K e y w o r d s. Airline company, environmental and technogenous environment, controllability, efficiency and reliability

1 INTRODUCTION

Business aviation is based on the global interest in this job opportunity. Activities associated with this kind of activities are focused in the area of transport, which is shaping the development of any economic - economy growth companies. Aviation industry was bringing a new change in the management of industrial flows, which began to cause interest in highly prosperous business on the application of new knowledge just in aviation activities. As the importance of success in the labor market has been subject to the availability of both the inflow of information to be disseminated to building quality communication systems but also the transfer of material and people can be treated as second and third means for handling the production of finished products.

Aviation based on entity of travel to its physical principles is one of the fastest and safest transport today. Business conditions in the aviation and the environment must be overcome and usually have a legislative and technical. Interactions between entities in the air with the development of techniques and a steady flow of new technologies gradually come to the interaction under close scrutiny set of control rules, and certifications. The complexities of which pass through these stages were accompanied by the page number of legislative provisions which gave rise to the same rules in business aviation. Going to the transition of international agreements to sub-regional provisions. Specificity in the process of technical terms in aviation business which is accompanied by the author developed a hypothesis to break the current knowledge barrier for pro-active approach to this kind of business.

2 BUSINESS ACTIVITIES IN SLOVAKIA

The overall expression characterizing the success of business aviation in Slovakia in its current form is digressive. Regional aviation is facing depleted air traffic caused by the internal politics of the state and a decreased interest in other potential businesses. Factor of modernization of airports operate financially as feasible in terms of our economic policy and focus on getting active bonuses in the form of projects from the European Union.

Slovakia as a member of the European Union is playing in business aviation than any other country. Striking difference is the environment, education, the possibility of execution. Small producers of aviation

technology ultra light aircraft (ULA) conceptual Products that make the most of applying abroad and the certification is easier in these countries. The question is what causes disunity aviation legislation in terms of the European Union and causing attenuation that equal opportunities legislation in our country.

The need for transportation needs of flying required by the growth of small aircraft and helicopters to provide air began work associated with the growth of information - communication technologies. After the boom of modern aviation technology began to be used to transport and the regional road network in Slovakia was low. Such transportation is not considered as an extraordinary but today's conditions and airport operators are doing to their current land development. Today's choices are not only restrictive nature of the economic situation but also the technical characteristics of restrictive conditions that directly affect the operation of aviation equipment. Operation of aircraft technology focuses on legislative and technical framework. Aircraft to ensure the technique has the following basic assumptions and reliable forms of activity that does not underestimate state of air safety. Finding a compromise we have matching Aviation business traffic along its current advantages and disadvantages.

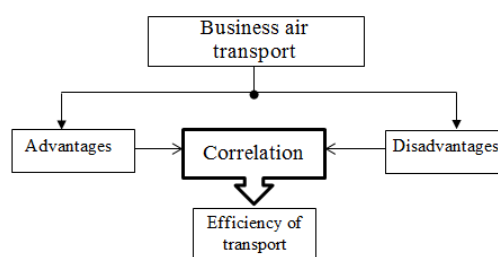


Figure 1. A view of the air traffic stats in general terms

In the field of business objectives in Slovakia, it is necessary to focus on improving the structures of both airlines and marketing advantages of a quality but also on the main article - plane. This brings with it many pitfalls that an airline company reaches high into the economy and its operation.

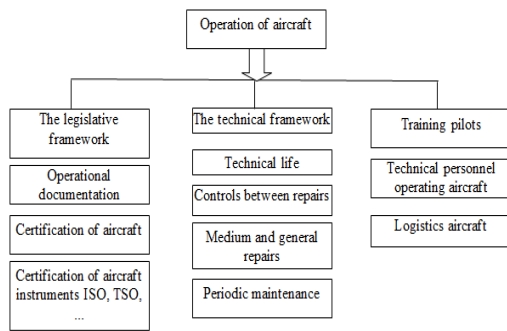


Figure 2. Operation of aircraft

Systematic in the process of operation and the operation of aircraft in the airline is based on simple models:

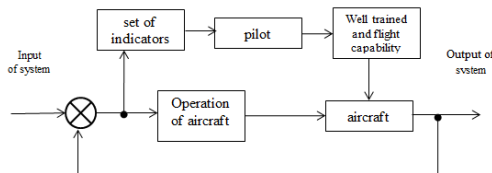


Figure 3. System process to maintain input - output of freight due to the means of transport

Potential business aviation needs to consider carefully in what area you will move to meet not only its internal repletion but also - and profitability - effectiveness - safety.

3 LEGISLATIVE AND LEGAL FRAMEWORK FOR COMMERCIAL AIRLINE

Aviation Enterprise in Slovakia was developing under current legislation ICAO and ECAC. These organizations include Slovakia in 1993 and was a consequence of Slovakia created a completely new control system for air legislation. Air laws, regulations and standards for the airline based on international and national framework regulations. This application is a controllable air generated by the authorities and bodies in the air of temporary legal hierarchy. The airline business is to make the necessary operational and technical manual airline. Another predictive, legislation is needed:

- Aeronautical Information Manual SR (AIP) - make it air traffic services SR, š. p. through the Aeronautical Information Services SR, in accordance with the provisions of ICAO Annex 15 and ICAO Doc 8126th AIP is part of the Integrated Aeronautical Information Package, consists of three parts, which contain different information:

- General (GEN)
- Route (ENR)
- Aerodromes (AD)

- Joint Aviation Requirements - JAR. These rules are adopted by member countries of the Joint Aviation Authorities (JAA). Their aim is to increase safety in air transport, efficient business, playing in competition, or stabilization of common aviation standards. JAR regulations are not aimed at the whole area of aviation, but only in certain areas, namely:

- General concepts
- Maintenance of aircraft
- Certification of Aircraft
- Aircraft
- Competence of personnel
- Trainers and simulators

- Air Regulations - L. Inspiration from the Annex to the Convention on International Civil Aviation, which constitute the basic legal code obliges ICAO contracting country to the observance of common practices. Annexes to the Convention (Annex A) is the implementing regulations for individual activities in the field of civil aviation as well as international recommendations by ICAO Contracting States, the minimum legal requirements. The Slovak legislation as applied to aviation regulations referred to as L1 - L18.

- ESARR aviation regulations - these regulations were developed by EUROCONTROL as having safety regulatory requirements for the safe provision of operational services essential.

- The guidelines, directives, guidelines and adjustments MDVRR SR.

Based on the above, however, be noted that some of the requirements of regulations made pursuant to Annex ICAO and regulatory requirements and regulations in force in the EU, discussing the same subject differ (e.g. the requirements of Regulation L 1 and JAR-FCL 1, the requirements of Regulation 6 L Part I and EU-OPS 1). This inconsistency shall be that which is usually characterized by more stringent requirements of the EU, acting as the complainant element especially for the development of the company, which aims to carry out air transport aircraft, which were manufactured in Europe. This finding confirms the fact of issue special requirements for the export of aircraft manufactured in the United States into the European Union, and it is the EASA.

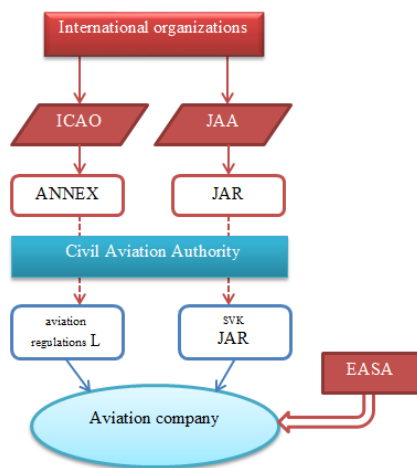


Figure 4. Effect of legislation on business aviation company (AC)

4 ANALYSIS OF THEORETICAL ASSUMPTIONS AND SPECIFICATIONS FOR THE FUNCTIONALITY OF AC

Development of their aviation in the national airline in recent years significantly reduced, which is also a potential source of experienced aviation experts in the field of air operations and maintenance, integrating the systematic nature of the tasks in young airline companies. Today air travel in Slovakia to obtain cheaper focuses airline carriers with full operational support. Slovakia is in the Air Force now focuses mainly in the operation of helicopters as a means for the integrated rescue system, or in carrying out aerial work in inaccessible terrain, and the production of smaller motor gliders (ultra-light, sport aircraft) and the production of their components. Security and stability in air of a company determines the orientation and ways to achieve a high level of material development and the status of aviation in the country and thus the focus of economic investors in the Air Force for Regional Development of these companies (the arrival of Russia's Continental Hockey League in Poprad) and production. The rate of decrease in Slovakia safety audit method designed by the Authority, which, however, their conditions often precludes the application of advanced options for self-realization airlines. As mentioned Certification ULA aircraft certification easier to obtain abroad than here which is reflected in the attitude of many foreign investors.

Multifactorial input affecting business aviation company is presented in three main areas in which they induce changes:

- Economic affairs
- Technical area
- Legislative area

Technical field of the authors to remove and perceived focus includes technical terms, having the

character of increasing costs. Specifications include the importance associated with the operation of aviation equipment. Analysis of these conditions is a constant factor, but understood as the changing conditions of the success of the economic factors of the country where the airline is located and how it affects the conditions of momentary market situation.

Any company in making business is aiming to minimize the risks involved with the business plan. In the aviation business there are risks involved in obtaining such a demand for airlines to trade company in the shortest time possible to minimize economic contributions to society. These deposits are made either for companies with limited liability or joint stock companies controlled by the Supervisory Board for large agglomerations, as well as small business groups with the participation of regular inspections of tax returns and other control mechanisms.

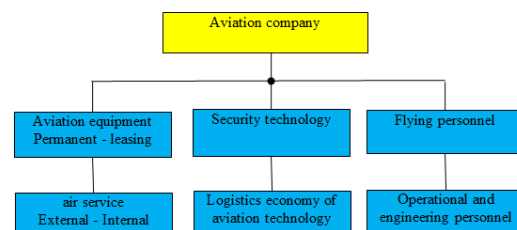


Figure 5. Technical risks, with a significant participation in the economic downturn AC

By purchasing the fleet is not resolved the question of functional carrier. It required constant attention. This weight is located and projected to the effective use of aircraft equipment which is subject to its security. Both these categories are conflicting and overlapping together a small set of user segment. The role of the users of aviation technology is to balance their exposure. Realization of the balance of the aircraft is responsible for managing the system, which may be one (pilot - operator) which takes over all the functionality of the airspace or machine, where the operating parameters are controlled by pilots or removed prior to air supplying personnel. These categories are uniting in the common names and the reliability of the functioning of air company - the air carrier.

5 PURCHASE AND CERTIFICATION OF AVIATION EQUIPMENT

Purchase of aviation technology is not obstacle to business segment of aviation technology. This requires a proper determination of what aviation technology requires the company and for what purpose it will use. Today Slovakia has most visibly helicopter Technology Park where the cost is not burdensome for some kind of business. If we assume, however, purchase or larger commercial aircraft is necessary to use several financial options such as the current lease or so-called "wet" lease.

Wet leasing - leasing of aircraft with crew. Dry lease - lease aircraft only (Low cost).

CAA specifies in its rules for documentation:

1. *Airworthiness monitoring (ACAM)*
 - The importation of foreign aircraft,
 - Application for certificate of airworthiness (ARC) and the extension of the certificate of airworthiness (AC)
 - Application for certificate of airworthiness
2. *Airworthiness management*
 - SR CAA procedures for obtaining authorization to maintenance
 - Acceptance criteria for staff in the organization
 - Maintenance
 - Changes
 - Procedures

The most productive airline helicopter technology is Russian LT (Mi - 8 M, MTV, Mi - 2), where the classical logistic support is predominant. Today it draws attention to the effective use of smaller helicopters whose purchase is directed and oriented to companies such as Augusta Westland, Aérospatiale Ecureuil, Schweizer, Robinson, Bell Jet Ranger etc. These helicopters are only subject to maintenance less manual, which must fulfill the dealer so that the helicopter may be operated in Slovakia. Helicopter operator is obliged to find a suitable service partner to the level of repairs that are necessary for safe operation of the helicopter. The systems are managed by minority helicopter avionics repair companies whose task is the most economical approach to repairs aviation equipment. Thus, "affiliates" which directly or indirectly perform incremental maintenance of aircraft systems and components.

6 ENVIRONMENTAL ASPECTS OF THE AVIATION EQUIPMENT OPERATION

Addressed the issue of why business aviation company in how to manage it and how to set up more or less based on prescriptive legislation and must seek diversity in practice that does not deviate from the standards in force feedback. In order to work with the most complex environmental aspects of the operation of entities for business, you need to define the concepts which will be used by given chapter.

1. Technogenous environment - an environment for excellent technical equipment to support operational work in conjunction engine aircraft - pilot.
2. Systems (elements) are environmental safety elements, equipment and systems for implementation of environmental features (located in AC) security.
3. Ecological risk as a comprehensive indicator of confidence expressed by elements of the techno sphere accident

risk of disasters in the operation of the airline, aviation technology.

4. Social risk is determined by the extent of adverse circumstances (see previous definitions) that affect the lives of employees in the airline.
5. Estimation of overall safety outcome of benchmarking (comparing process) with the criterion value to determine the quality of Environmental company.
6. Environmental environment - all the objects and conditions which shall be made for matters concerning air company. reliability, aircraft, airport area companies, etc.).

An analysis of the stability of the airline and its safe operation under the following axioms:

1. Each unstable system is potentially dangerous.
2. Danger takes effect whenever the flow of information to decrease the stability of the minimum threshold of certainty
3. The source of hazards are elements of stability and security.
4. Danger always occurs at the time and place with the lowest stability. (Pressure on employees)
5. Danger has a negative effect on the positive motivation of the individual human population and reduces the stability of the airline.
6. Differentiate functional interference with the safety and stability of the cause of trauma and degradation of the environment. (Air disaster)
7. Prescriptive management company for nonstationary input object (employees) will require the creation of potential danger facing the passengers or crew.
8. At each facility operates external balanced environment that disrupts the link between stability and security.
9. Information flows in the building and outside the building to be omni-directional nature of the failure thus elements airline passenger there is a lack of interest in the transport or aerial work.

Characteristic manifestation of the carrier's ergonomic dual signs are manifested in the phrase "air staff (personnel) - Aviation equipment". The demonstration of the economic indicators of the volume of the cost of providing the level of security to reveal airline. Each carrier is managed so that by the risks to the operation were minimal. Managing the minimum of economic risk (Er)

$$Er = B / P \cdot 100 \% / \quad (1)$$

B - damage suffered as a result of the company

P - utility (risk) of

Risk management model includes the airline establishment of the risk in a speech the following conditions:

- The existence of a security axiom (sources of danger)
- Expression axiom (or synergy) at a particular time, place or activity in the airline employee.
- Higher (immediate or emerging) Environmental sensitivity of a particular element of operating a risk factor (e.g. scheduled air conditioned work time limits, and the weather deteriorates to no-fly ... etc.)

7 ENVIRONMENTAL INPUT OUTPUT MODEL AC (MIMO - E)

The airline model (MIMO-E) to decide on all the effects that operate on air transport. Each cell in the model is a powerful tool for the state of imbalance which affects the carrier.

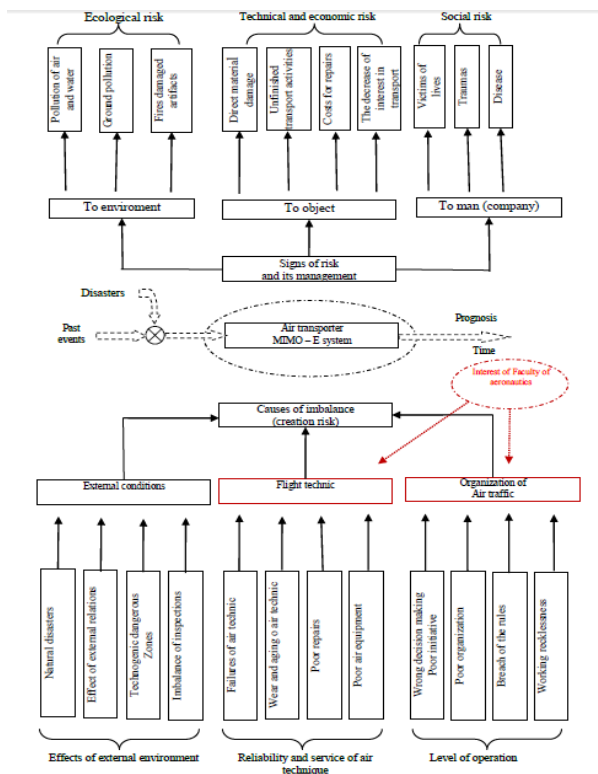


Figure 6. Functional MIMO-model E

Comprehensive management MIMO-E model is due to its complexity is impossible. Therefore, a requirement situational management, which specifically refers to the dominant element MIMO - E model. For this purpose, introduce the concept of “acceptable risk” Significant part of the content of the “acceptable risk” is different in the management of energy flow (fuel, electricity, other energy ...), consumption of which is dependent on technology in the airline so we can establish a connection TECHNOLOGY + ENERGY and created

the concept of “technogenic element”. He is an elementary component of any air carrier. Acceptable risk is therefore often determined by technogenic risks: Axiom: Growth cost reduction technogenic risks ... to improve the socio - economic risk of I_E . When the stage reached

$$I_T = I_E \text{ OPT.} \quad (2)$$

It is also a risk that applies to MIMO - E model acceptable. In this case, the assumption that the system operator OUT - E manage effectively.



Figure 7. Acceptable general principle of management

In other words: Control of MIMO - E model can be reduced to control I_E , do achieve minimums costs of implementing the target function (signs at least at the highest price earnings) - substituting real numbers to further research this model can be confirmed. (Continued research company HELI Company Ltd.).

Changes in the terms that affect the functionality of the Model disrupt the conduct of the flight conditions defined air flight regulations. The nature of the calculations and estimates reflected in such changes cannot be stabilized in the relationship management of the company, aircrafts - external influences. Many factors that affect these systems and processes influenced by external disturbances, equipment and personnel errors (see model). As changes are conditional probabilistic estimates is necessary to determine the values estimated parameters in a particular flight regime and critical situations. Factors which jeopardize safety to technogenous symptoms:

- External disturbances (changes)
- Disorders techniques
- Errors of personnel

These indicators are airline interdependent because each change in response to predetermine the control of the employer or associates in the firm. Addressing the role of acceptable risk is gradually realized in the following steps:

- Reducing the risk level of each complex external and internal audit controls (CAA, EASA, reliable management personnel in the company - readability and loyalty to the company)
- Tools risk: modeling probability theory (stochastic methods).

6 CONCLUSION

Managing airlines in the air transport business is important as in many of its outputs have an impact on the air environment in Slovakia. The authors also analyzed the aspects of business that are emerging elements in low-cost transportation. In Slovakia, the carriers are increasingly adapted to the requirements of an industrial park outside Slovakia and formed small companies that are eliminating support link in the complex environment of Slovakia.

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AUTHORS' ADDRESSES

Lukáš Korba, Ing.,
Magurská 13, 080 01 Prešov, Slovakia
korba@gmail.com

Róbert Rozenberg, Ing., PhD.,
Department of Air Traffic Management,
Faculty of Aeronautics, Technical University in Košice,
Rampová 7, 041 21 Košice, Slovakia
robert.rozenberg@tuke.sk