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IMPLEMENTATION OF THE SAFETY MANAGEMENT SYSTEM WITHIN SMALL OPERATORS

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Abstract: *This paper presents the safety management system for small air carriers. Safety management system is a crucial process in the establishment of the operator itself and in defining its performance targets. In order to understand safety management, it is necessary to consider what is meant by safety. Depending on one's perspective, the concept of aviation safety may have different connotations. Depending on the perspective of the observers, the aviation security concept may have different connotations. It is not possible to achieve 100% security level. It is not possible to guarantee absolute security for both individual and systemic human activities. Security should be classified as a "common culture" of behavior within the operator itself. There must be a clear line between acceptable and unacceptable behavior. Properly designed and objectively tailored, Safety Management System should enable an operator to identify hazards well in advance, implement mitigating measures and to reduce a risk, which hasn't even occurred yet, to a level, certainly acceptable for an operator.*

Keywords: *Safety Management System, air traffic, small operators.*

1. INTRODUCTION

Air carriage is a branch of transport rapidly starting to develop in the 20th century. Due to its core specificity (carriage of people and goods by air), a great concern was, and continu-

ously is, given to its safety. However, safety aspects are getting more and more complex due to the liberalization and massiveness of the air carriage services market, and as such, they have a significant impact on the economic aspects of each organization participating in the air carriage.

The aim of each organization is provision of the state-of-art services in its domain. There is no organization in the world that is established to provide services related to the safety management system exclusively; yet that system constitutes one of the most important organizational processes within the organization itself, but not its primary activity.

Let's first determine the concept of safety. Security is a situation in which the risk of damage to property is maintained at or below an acceptable level of risk. The security management system includes a systematic approach to security management, and establishes the necessary structures, responsibilities, policies, and procedures in the organization.

2. SAFETY MANAGEMENT SYSTEM REGULATION

Regulation related to Safety Management System started to develop along with development of the air carriage and it was mainly based on the reactive principles of safety, meaning it was developed along with technical and technological development of the air carriage and rules were made based on results of air crash investigations. Despite more and more stringent regulations and numerous rules provided, the number of air crashes with highest numbers of fatalities was on the rise during late 70's and early 80's. New technologies made safety management easier to handle, but its implementation was so hurried and prevented people to adapt to such progress properly.

The main problem was basically inadequate testing and reactions of new technologies to potential known and hidden hazards, including processes of acquiring new knowledge through continuing training of the personnel applying and handling such new systems and technologies. As a reaction to it, a need for establishment and implementation of new methods in managing safety matured.

As a difference to reactive methods based on results of air crash investigations that derived new regulations, a new proactive methods are based on understanding how potential hazards and risks occur, and also on development of the generally accepted safety culture. The goal is to prevent accident or incident to occur through identification of potential hazards.

Lately, regulation managing safety management system is prescribed in various international conventions and documents, and it also generates all other terms and conditions relevant for air carriage exploitation. Today, air carriage is the best regulated branch of transport, mainly thanks to its rapid expansion.

Regulations contain general legislation and adopted annexes that followed technical and technological development of the air carriage. Basic regulations regulating air carriage are derived from the Convention on International Civil Aviation adopted in Chicago during December 1944, also called the "***Chicago Convention***". Chicago convention harmonized rules for safe air carriage such as air space sovereignty, aircraft registration, staff licensing, rules of the air, etc. Organization of the United Nations (UN) has established ICAO as specialized agency of the UN charged with coordinating and regulating international

air carriage. In the ICAO's organizational structure, the main entity is Assembly, elected by the Council as a permanent executive body of the ICAO, chaired by the president and general secretary. Chicago convention's signatory states pledged to implement jointly accepted ICAO standards and recommended practices that cover all aspects of the air carriage, including safety. International standards and recommended practices are incorporated into 19 Annexes to the ICAO Convention, which regulate all aspects of the air carriage. ***ICAO Annex 19 Safety Management (SM) Second Edition – 2016*** is basic document covering establisment and implementation of the safety management system by organizations involved in air transport. ICAO has also developed a set of documents that more detaily and concisely process specific areas of air carriage, including detailed requirements for establishment and implementation of the safety management system laid down.

Regulations that preciously define requirements which must be established and implemented by every organization whose main activity is provision of air carriage services are listed under:

a) ICAO Annex 19 Safety Management (SM) Second Edition – 2016;
b) ICAO Doc 9859 AN/474 Safety Management Manual (SMM) Third Edition –2013;
c) Regulation (EU) 965/2012 on air operations Annex III – ORO, ORO.GEN.200 Management System (EASA Air, 2012); and
d) State Safety Program.

3. THE PURPOSE OF THE SAFETY MANAGEMENT SYSTEM'S IMPLEMENTATION

In order to achieve established goals, the highest management of an organization must insist on systematic implementation of an adequate and relevant business processes and systems (Reason, 1997). One of those systems permeated through all other systems is the Safety Management System. Actually that system set a course in shaping, establishing and implementing all other functional systems within organization itself.

Basic purpose of the Safety Management System's implementation is to:

a) Ensure a high awareness of the employees with regards to implementation of safety throughout all segments of operations;
b) Ensure pro – active gathering of safety relevant data at all times;
c) Ensure a systematic and adequate reporting, recording and feedback;
d) Ensures pro – active, reactive and predictive analyses of hazards and associated risks;
e) Ensures eradication, mitigation and maintenance of risks to or below acceptable levels;
f) Ensure systematic monitoring and compliance implementation of policies, processes and procedures in relation to safe operations, airworthy aircraft, trained and competent staff and documentation control;
g) Ensure systematic implementation and monitoring of corrective actions; and
h) Evaluate overall effectiveness of an organization trying to achieve stated objectives.

Three core aspects (ICAR AIR, 2017) of a successful implementation of the Safety Man-

agement System are:

1) **Systematic** – Activities related to the safety management system are in accordance with the plan and are implemented consistently across all operator systems;
2) **Pro-active** – An approach that emphasises hazard identification, risk control and mitigation, before events that affect safety occur; and
3) **Explicit** – All safety management activities are documented and visible.

4 IMPLEMENTATION OF THE SAFETY MANAGEMENT SYSTEM WITHIN SMALL OPERATORS

In accordance with ICAO requirements, each member state must establish and implement State Safety Program.

It is recommended that establishment and implementation of such program should be phased in 4 steps, as follows:

Step 1 – Provision of the State Safety Program gap analyses and preparation of regulations that will govern functions of the State Safety Program;

Step 2 – Provision of training program for national regulator staff;

Step 3 – Provision of the requirements related to the organization's Safety Management System and development of guidance material pertinent to organization's for implementation of their Safety Management System; and

Step 4 – Revision of the national regulator's policy in the implementation of regulations.

In accordance with ICAO Annex 19 Safety Management (SM) Second Edition – (2016) standards and recommended practices, State Safety Program should define phased implementation of the organization's Safety Management System, as follows:

PHASE 1 – Safety Management System implementation plan

The aim of phase 1 is to determine the Safety Management System implementation plan and to define how to integrate it within organization's activities. Phase 1 is effective immediately after defining model of operations, aircraft type and destinations. In order to implement phase 1, organization must:

1) Select and submit for approval, by the national regulator, a list of nominated persons of the organization, including a person nominated for implementation of the Safety Management System;
2) Based on defined model of operations, aircraft type and desired destinations, to implement a system of control and oversight of the approved and qualified organizations that could potentially expose its personnel and property to certain safety risks in a course of provision of its services (approved aircraft maintenance organizations, ATS, certified airports, ATO, TO, etc.);
3) Develop the Safety Management System implementation plan in respect to national and international regulations, based on the gap analyses and its safety policy and targets.

PHASE 2 – Safety Management System reactive processes

The aim of phase 2 is to check and verify all processes and procedures of the organiza-

tion including rectification of the non – compliances verified through existing Safety Management System's reactive tools.

Those tools may be:

a) Combination of the safety assessment checklists;
b) Verification of potential practical problems of the organizations similar to its size and purpose; recommendation of the national regulator on which sources of problems to be focused; analyses of the existing reports and information related to verified deficiencies and incidents;
c) Results of compliance monitoring audits and inspections, since such results may be used as a significant source for potential hazard identification; and
d) Preliminary reports on effectiveness of the employees generated through organization's management meetings.

In order to implement Phase 2, organization must:

1) Implement elements of the Safety Management System that implies reactive evaluation and potential risk management, identified based on severity and likelihood safety assessment, especially if specific risk or hazard is repeating itself through verified non – compliances, no matter how insignificant it may be;
2) Continuously train personnel in accordance with the Safety Management System implementation plan including development of the safety awareness, safety policy, necessity for development of safety culture, necessity concerning development of non – punitive modality "*report and get reported*" and risk management differences between approaching to perceived problem in reactive and proactive manner;
3) Establish and implement safety risk tolerability matrix;
4) Establish and implement specific documentation related to the Safety Management System implementation plan components;
5) Establish and implement necessity of the:
a) Organization's safety policy;
b) Organization's safety communications; and
c) Dissemination of critical and "nice – to – know" safety information, gathered while managing safety risks by reactive processes.
6) Establish and implement purpose of necessity for reporting;
7) Establish and implement methods of assessment and control of risk occurred during the processes of change within organization, regulations, existing systems, services, equipment, etc (the management of change); and
8) Establish and implement safety promotion.

PHASE 3 – Safety Management System proactive and predictive processes

The aim of phase 3 is to implement advance mechanisms of management and control. During and after implementation of phase 3, organization shall be capable to successfully perform safety analyses and assessments based on the data gathered by the mentioned methods, including successful modelling of the future procedures and processes in every organizational segment by using proactive and predictive methods of hazards identification, and elimination and control of potential consequences at the level acceptable to the organization.

In order to implement Phase 3, organization must:

1) Based on proactive and predictive methods, perform continuing analyses and assessment of the management of identified and controlled risks (MEL list principles), (Deming, Edwards, 1994) always taking into consideration potential hazard that may occur in correlation of two and/or more risks whose processes are not interconnected;
2) Continuously improve safety in day – to – day operations;
3) Encourage employees to continuously promote safety policy, safety culture and reporting, and to actively participate in predictive and proactive problems solving through daily meetings and other forms of communications; and
4) Continuously improve its documentation, manuals, processes and procedures through proactive and predictive approach related to processes of change that affects organizational safety.

PHASE 4 – Safety Management System effectiveness assurance

This is a final phase in implementing Safety Management System.

This phase determines whether the level of effectiveness of the organization's Safety Management System assures safety of all segments of air carriage within the safety risk tolerability matrix. Safety Management System effectiveness assurance is determined through periodical audits, active exchange of information and implementation of corrective plans and measures in order to maintain risk control effectiveness assurance during processes of change within organization, regulations, existing systems, services, equipment, etc. Implementation of complete phase 4 assures effective and efficient risk management including adequate control of an operational environment, acceptable for the organization.

In order to implement Phase 4, organization must:

1) Continuously analyse and monitor performance indicators and trends review through safety management processes;
2) Continuously analyse and improve safety policy targets through analyse and monitoring of performance indicators and trends review;
3) Continuously promote and assure effectiveness of the Safety Management System; and
4) Continuously improve the Safety Management System.

Definition whether an organization is complex or non – complex depends by size, nature and complexity of the activities it does. Regulation (EU) 965/2012, Annex III – Part ORO Subpart GEN reference AMC1 [6] ORO.GEN.200(b) defines requirements on complex operator. Number of employees and complexity of operations defines weather an organization is complex or non – complex. Complexity may, but doesn't have to be related to the size and organization may have less than 20 employees with just one aircraft in the fleet, but to be considered complex because it carries dangerous goods, operates on CAT B and/or CAT C aerodromes, etc., and it must fulfil all requirements as large complex organizations, too. Based on the paragraph 4.1 below, for the purposes of this paper, the organization is considered as a small – complex.

4.1 Planned model of operations and selection of the aircraft type

Major incentives for implementation of specific model of air carriage are supply and demand based on the economic and trading necessities of the region or state.

Available statistical records related to potential growth trends in passenger, cargo and mail movements, including selection of the origins and destinations have been used in order to determine current state and future prospective of specific model of air carriage. For the purpose of this paper, we have evaluated market potential for specific region and leading airport in it, including applicable model of flight operations. Also, one of the major European cargo and mail shippers analysed market of Bosnia and Herzegovina and collected credible statistical data proving sustainable potential and growth in establishing regular cargo flights from/to one of the European hubs.

Following parameters have been used in a course of selection of an adequate aircraft type:

1) Fragility of new cargo and mail flights in unknown and undeveloped region;
2) Routes on which aircraft will be utilized (max up to 500 Nm);
3) Comparing BIH economic and trade status with countries in region in which shipper already operates;
4) Percentage of the potential quantities of cargo and mail intended for this model of air carriage, calculated based on transported cargo and mail parameters in countries in region in which shipper already operates; and
5) Total price per rotation calculated based on costs of all generated services in air carriage related to planned model of operations and aircraft type used.

By taking into consideration all above parameters, operator using aircraft type Turbolet L 410 UVP – E20 Cargo has been chosen for this model of air carriage.

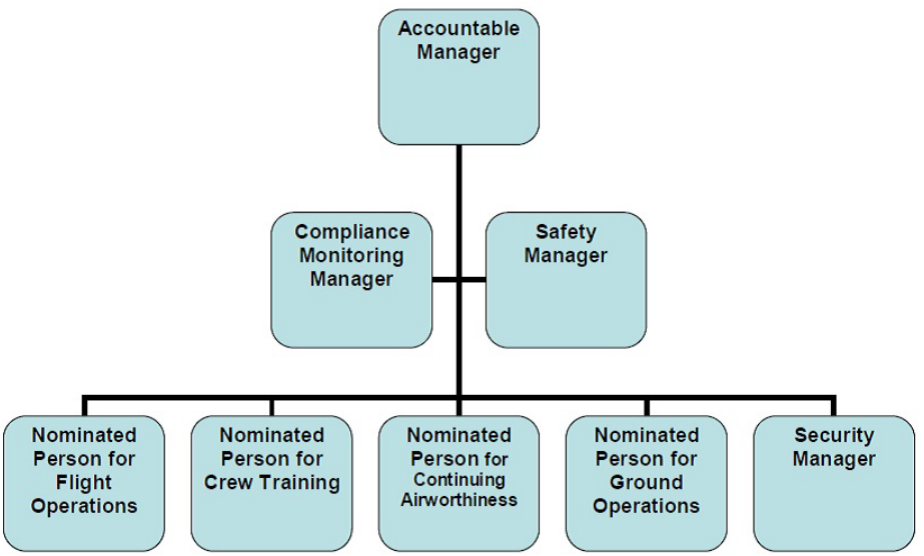
In order to, as much as realistically possible, process implementation of the Safety Management System within small operators, we'll use parameters for the planned model of operations, as follows:

Type and purpose of operations: Carriage of cargo and mail for one of the leading cargo and mail shippers in Europe	
Number of aircraft in fleet	1 (1 leased substitute aircraft)
Number of nominated persons	5
Number of deputies to nominated persons	5
Number of nominated managers	3
Number of deputies to nominated managers	3
Flight crew composition	1 captain + 1 first officer
Number of flight crew sets	3
Cabin crew	Not required

Number of line maintenance mechanics	4
Other staff (including finances)	2
Number of planned daily routes (sectors)	1 (2 sectors);
Number of home base airports	1
Number of non – home base airports	1
Number of flight days in the week	5 (except weekend).

4.2 Key staff

In accordance with Regulation (EU) 965/2012 on air operations, key staff and their functions are given in picture 1 below. Each nominated person must have a deputy nominated by the Accountable Manager, who will exercise duties and responsibilities of the nominated person in his absence.



Picture 1. Functions of the nominated persons and managers within small operators

Nominated manager's functions are:
1) Security manager;
2) Compliance Monitoring Manager; and
3) Safety Manager.

Basic functions, responsibilities and accountabilities of the nominated persons must be

in accordance with relevant national and international regulations, particularly those given in ORO.GEN.210 (Commission Regulation EU, 965/2012)

4.3 Process of selection and nomination of the key staff compared to Safety Management System implementation requirements

Responsibility and accountability are interlinked and the execution of one is impossible without the execution of another and vice versa. While individual staff members are responsible for their actions, they are also accountable to their supervisor or manager for the safe performance of their functions and may be called on to justify their actions. Although individuals must be accountable for their own actions, managers and supervisors are accountable for the overall performance of the group that reports to them. Accountability is a two – way street whereby managers are also accountable for ensuring that their subordinates have the resources, training and experience needed for the safe completion of their assigned duties. If all conditions are fulfilled, we may say that organization has implemented and developed "*safe working place and conditions*".

4.4 Safety Management System implementation tools

It is necessary to set and measure performance outcomes in order to determine whether the system is operating in accordance with expectations, and to identify where action may be required to enhance performance levels to meet these expectations. The acceptable level of safety expresses the safety goals of the organization. In reality, it provides an objective in terms of the safety performance that organization should continuously maintain. In practice, the concept of acceptable level of safety is expressed by measuring ***safety performance indicators*** and ***safety performance targets***.

Safety performance indicators are a measure of the safety performance of a department. Safety indicators should be easy to measure and be linked to the major components of the organization's Safety Management System. Therefore, safety indicators should differ between organization's departments.

Safety performance targets are determined by considering what safety performance levels are desirable and realistic for individual departments or organization in whole. Safety targets should be measurable, acceptable to stakeholders, and consistent with Safety Management System.

Main tool for implementation of the Safety Management System is hazard identification and risk management through implementation of adequate measures necessary for eradication and/or mitigation of the risks that can affect level of safety acceptable for the organization. Hazard identification is enabled by applying various applicable reactive, proactive and predictive methods, effectively implemented comparing to the size and complexity of the organization. The process of hazard identification and risk assessment is required to be completed and documented for each safety relevant activity to be undertaken and could have significant consequences on the safety of people, infrastructure and equipment. Whenever hazard is identified, measures that would completely eradicate or mitigate associated risks must be developed and such mitigation must be constantly controlled. Whenever mitigation measures are proposed, their implementation would be verified and a periodic review of their effectiveness as well as possibility of better mitigation strategies will be undertaken.

Implementation procedure

General methods of risk assessment are well defined by national and international regulations, but it's mainly related to the size and complexity of organization, including safety requirements necessary for assessments of reliability, availability and effects of the work technology, systems, programs, procedures and processes in use within the organization.

In general, risk assessment is to be carried out as per the following seven step process:

Step 1:	Development of a complete description of the activity to be evaluated and of the environment, in which the activity is to be implemented
Step 2:	Identification of hazards
Step 3:	Estimation of the severity of the consequences of a hazard occurring
Step 4:	Estimation of the likelihood of a hazard occurring
Step 5:	Evaluation of risk
Step 6:	Mitigation of risk
Step 7:	Development of safety assessment documentation

This process could be additionally developed and expanded, but it all depends by the organization. Implementation of the successful process represents successful implementation of the Safety Management System. The concept of the process is not so much important, such as the effectiveness of the safety system in managing and implementation of the processes.

4.5 Safety Management System calculation of risk index

Safety Management System must determine risk index for every hazard identified, calculated on the basis of severity and likelihood of the risk itself. Risk severity is based on assessment of the level of consequences of the hazard if it happens, and risk likelihood is based on evaluation how often such consequence may happen. Risk matrix is used as a tool for calculation of risk index and its severity and likelihood. It is a usable tool to assess a risk and define mitigating measures. It also defines tolerance threshold below which all activities are considered as dangerous for the safety of the organization. Knowing that absolute safety is unachievable goal, safety may be considered as a state in which the risk of possible human and property casualties is reduced and maintained within acceptable boundaries, established by the safety matrix.

Table 1. Severity of the Occurrence

SEVERITY OF THE OCCURRENCE		
DEFINITION	**MEANING**	**VALUE**
Catastrophic	Multiple fatalities, effects on pollution, equipment destruction, significant financial loss, company reputation ruined, etc.	A

Hazardous	Physical stress or workload of the operator causes an irregular or complete failure to perform duties. The consequences are: serious injury or loss of human lives and the occurrence of great damage to equipment.	B
Major	An operator has a reduced ability to perform tasks due to an increase in workload. The consequences are serious accidents and injury to persons.	C
Minor	In the case of operational restrictions, extraordinary procedures are used. The consequences are: minor accidents.	D
Negligible	No injuries, negligible or no effects on equipment, finances and reputation.	E

Table 2. Probability (Likelihood) of the Occurrence

Probability (Likelihood) of the Occurrence		
Definition of frequency	**Meaning**	**Value**
Frequent	Likely to occur many times (frequently)	5
Occasional	Likely to occur some times (infrequently)	4
Remote	Unlikely, but possible to occur (Has occurred rarely)	3
Improbable	Very unlikely to occur (Not known has occurred)	2
Extremely Improbable	Almost inconceivable that the event will occur	1

Table 3. Risk Tolerability Safety Matrix

RISK LIKELIHOOD (PROBABILITY)		RISK SEVERITY				
		Catastrophic A	Hazardous B	Major C	Minor D	Negligible E
Frequent	5	5A	5B	5C	5D	5E
Occasional	4	4A	4B	4C	4D	4E
Remote	3	3A	3B	3C	3D	3E
Improbable	2	2A	2B	2C	2D	2E
Extremely improbable	1	1A	1B	1C	1D	1E

Table 4. Risk tolerability results

Assessed risk index extracted from the risk tolerability safety matrix table	Management decision
Under review (TOLERABLE RISK LEVEL) 5DE, 4CDE, 3BCD and 2ABC	**Unacceptable under existing circumstances.** Risk is too high to continue operations. Major mitigation is necessary to reduce the likelihood and severity of the consequences associated with the hazard.
	Risk control, reduction of activities and management decisions are needed. Introduction of appropriate mitigation measures is required. Determination of the risk level and its tolerability is to be revalidated by the Safety Manager. Only the Accountable Manager may authority operations at this level of risk. The consequence and/or likelihood should be of continuous concern. Measures to mitigate the risk to as low as reasonably practicable should be sought. If the risk is still under the review category after this action, then the risk may become acceptable provided that the risk is understood and has the endorsement of the individual ultimately accountable for the safety within the organization.
Acceptable 3E, 2DE and 1ABCDE	**Risk is tolerable and can be accepted for the operation.** Continuous monitoring is required, i.e. control. Measures to further reduce the level of risk can be taken, if it is financially justified. The consequence is so unlikely or not severe enough to be of concern – the risk is tolerable. However, consideration should be given to reducing the risk further to as low as reasonably practicable in order to further minimize the risk of an accident or serious incident.

4.6 Incorporated Compliance Monitoring Management as a tool for improved Safety Management System within small operators

International regulations allow implementation of the Compliance Monitoring Management incorporated with organization's Safety Management System. Basically, both systems needs to be treated the same. The only difference is in the system's handling since

Compliance Monitoring is always acting as reactive assessment of quality level of implemented operations, mostly based on the available checklists developed on the basis of the organization's specifications, size and complexity of the operations, type of aircraft, size of the fleet, etc. Compliance monitoring management is not intended for proactive hazard identification and risk assessment, but it may provide us with some frequency parameters, such as likelihood and severity of certain event that, if not managed properly after several appearances, may endanger safety of specific activities and impose serious, even catastrophic consequences.

Basic concept of the compliance monitoring implementation and assurance should be based on:

5. IMPORTANCE OF IMPLEMENTATION AND MAINTENANCE OF THE EFFECTIVE SAFETY MANAGEMENT SYSTEM WITHIN SMALL OPERATORS

Aircraft accidents don't just happen; they are result of activating significant number of critical links in the chain of event. Those critical links are operational processes and procedures, tightly connected to activities of the organization. If the Safety Management System doesn't exist or exist declaratively, hazard identification and management of risk related to operational processes is not possible, implementation of eradicating and/or mitigating measures shall not be effected and accident is inevitable. Direct costs suffered from accident or serious incident are easily to be quantified. They include potential aircraft damage and loss of human life compensation, injuries and property damage. All these losses are covered by insurance policies.

Indirect costs that may occur are very hard to quantify and may reflect to:

- Loss of business and reputation (loss of trust from clients and public);
- Loss of time and funds invested in renewal of human resources and new equipment;
- Loss of time and funds invested in re – certification of damaged aircraft and equipment;
- Increased insurance premiums; and
- Penalties.

All direct and indirect costs are far greater than costs for implementation of effective Safety Management System. This is especially important for implementation of the Safety Management System within small operators with less number of aircraft in fleet, lower level of operations and less number of operational and managerial staff. The fact is that less number of aircraft and operations contains less fatal accidents risk. Unfortunately, the risk cannot be excluded, since the air carriage is one of the most risky means of transportation. Low levels of operations mean low income required for self – sustainability and business, assuming that organization is self – sustainable. This is where lack of implementation or just declarative implementation of the Safety Management System is the most dangerous for small operators. Limited financial and operational funds, limited number of aircraft in fleet, limited number of operational and managerial staff also limits possibility for small operator

to recover from fatal accident, and sometimes even from serious incident. Large operator and systems are in possession of significant financial, operational and human resources and are able to deal with fatal accident consequences, while small operators have vanished from the scene immediately after an accident happened.

Cost to establish, implement and maintain efficient Safety Management System becomes less important and significantly valuable investment by comparing it to the costs incurred by doing nothing [6].

6. INFERENCE

Definition of the importance to implement adequate, even more important, applicable Safety Management System, necessary for efficient management of all systems throughout the entire organizational infrastructure, especially within small operators, may be set forth with thesis below, as follows:

If the operator creates and implements all processes and procedures based on results of objectively performed hazard identification, risk assessments and mitigating measures, having in mind necessary regulatory requirements applicable to those processes and procedures, than we could state that the operator has implemented effective reactive and proactive Safety Management System.

If we add to it a freedom to report and inform about problems and incidents, ability for generating overall opinion of an entire organization concerning necessity to respect differences in approaching safety culture by every individual employee, and maybe as the most ultimate one, the importance of successful and relaxing two-way communication between manager ↔ employee in respect to safety problems and solutions, than we could state that the operator has also implemented predictive Safety Management System.

Establishment and implementation of an efficient Safety Management System have an economic justification too. It is of an utmost importance for all employees, and management particularly, to comprehend and understand that implementation of the Safety Management System is a business like process, and not one that must be implemented because its mandated by the regulations, what is unfortunately usually often and therefore wrong approach at the very beginning. Process of implementation of the Safety Management System imposes certain costs to organization without visible return on investment effect. Also, continuing assurance and maintenance of the efficient Safety Management System impose certain additional costs to organization while doing business.

However, cost to establish, implement and maintain efficient Safety Management System becomes less important and significantly valuable investment by comparing it to the costs incurred after fatal accident or serious incident, which makes small operators particularly vulnerable.

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