ORIGINAL PAPER

INTEGRATED AIRPORT SAFETY AUDIT

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ABSTRACT. **Background:** The aim of the article is to present the concept of integrated management of airport safety audit. Airports function in a dynamically changing environment. These changes are the result of EU legislative processes and the changes of safety risk profile. Therefore, it is necessary to search for new and effective methods of ensuring safety and security of airports.

Methods: The efficient and effective method seems to be an integrated safety audit. The concept of such has been developed on the basis of the ICAO and EASA regulations and ISO standards and guidelines for the management systems.

Results: Developed design of integrated safety airport audit is the first-party audit. It takes into account the currently applicable legal requirements concerning the management and certification of the airports, which aim is to ensure safety and security. The project involves the integration of management systems and refers to the issue of conversion Aerodrome Certificates.

Conclusion: So far established management systems and audit programs in civil aviation relate primarily to the safety and security issues of air transport. However, omitting the change management and the flow of means of transport and loading units at the airport issues, which conducive to the fluctuation and escalation of threats. It follows the need to extend the formula and the audit scope, which will continue in the further work of the author.

Key words: safety audit, airport, change management.

INTRODUCTION

Results of the analysis of changes and development taking place in civil aviation, carried out in the fields of technical, standardization and management indicate that the highest rate of development is characterized by technological progress and the obvious consequence of this action in the field of standardization and harmonization of technical parameters, as well as the organizational rules for the operation of flights and use air transportation.

The origins of the international system of air law gave the Convention Relating to the Regulation of Aerial Navigation [1919], commonly known as the Paris Convention and the Convention for the Unification of Certain Rules Relating to International Carriage by Air [1929], commonly known as the Warsaw Convention. Purpose of the Paris and Warsaw Conventions has resulted from the significant development of aircraft construction and the growing demand for air transport. The provisions of the Paris and Warsaw Conventions have been permanently incorporated into the current international aviation law, which is based on the Convention on International Civil Aviation signed in Chicago [1944], also known as the Chicago Convention. On the basis of the Chicago Convention in 1947, it was established in 1947 International Civil Aviation Organization – ICAO, a UN agency.

The aims and objectives of the ICAO are to develop the principles and techniques of international air navigation principles and to foster the planning and development of international air transport, including establishment and adopting, in accordance with the provisions of Chapter VI of Chicago Convention, international Standards and Recommended Practices – ICAO SARPs, for convenience, designate them as Annexes to Chicago Convention and notify all contracting States of the action taken. ICAO SARPs are technical and organizational specifications adopted by the Council of ICAO in accordance with Article 37 of the Chicago Convention to achieve the highest practicable degree of uniformity in regulations, standards, procedures and organization in relation to aircraft, personnel, airways and auxiliary services in all matters in which such uniformity will facilitate and improve air navigation and transport. ICAO SARPs are published by Council of ICAO in the form of Annexes to Chicago Convention – ICAO Annexes. At the moment, it was issued 19 ICAO Annexes, of which only one, the last published in 2013. ICAO Annex 19 relates to its object management system (safety). All other ICAO Annexes in its content on the management at most refer to the Quality Management System – QMS [ISO 9001].

In such a state of formal and factual, considered in relation to ongoing current developmental changes in the civil aviation resulting from scientific and technological progress, social needs (especially in EU countries) and current threats, as well as practical experience, it is reasonable to say the growing inadequacy of SARPs ICAO current needs, which is reflected in determining the powers and objects of the European Aviation Safety Agency – EASA [EC 216/2008], a EU agency. Therefore EASA in legislative activity considered a ICAO SARPs as a sufficient baseline for current requirements, but acknowledges some deficiencies that should be addressed, notably to support future applications, e.g. implementation the concept of the Single European Sky – SES.

EASA competencies and tasks concerning safety of airport operation are set out in Commission Regulation [EU 139/2014], which lays down requirements and administrative procedures for airports and sets out detailed rules on:
- administrative procedures,
- aerodrome certification basis,
- conditions for the acceptance and for the conversion of existing aerodrome certificates issued by Member States,
- conditions for airport operating,
- the conditions under which operations shall be prohibited, limited or subject to certain conditions in the interest of safety,
- apron management service,
- certain conditions and procedures for the oversight of airports.

The aims of Regulation [EU 139/2014] is establishing and maintaining a high uniform level of civil aviation safety in Europe based on ICAO SARPs and Manuals, which, however, were developed or amended in particular by increasing the degree of ICAO requirements, and this in order to increase the level provided safety and security, including through the introduction of new regulations and specifications or the extension of existing ICAO SARPs. The Regulation shall be binding in its entirety and directly applicable in all Member States and Competent Authorities involved in the certification and oversight of aerodromes, aerodrome operators and apron management service providers shall comply with the laid down requirements before 31 December 2017. In order to ensure a smooth transition and a high level of civil aviation safety in the EU, EASA has issued supplementary documents reflecting the state of the art and the best practices concerning aerodromes and taking into account ICAO SARPs and worldwide aerodrome operation experience, and scientific and technical progress, i.e. Airport Design and Certification – ADR and Implementing Rules – IR, which defined:
- Acceptable Means of Compliance – AMC,
- Certification Specifications – CS,
- Guidance Material – GM.

In the Polish aviation law order, based on the Aviation Law Act (2002) has already been significantly revised, amendment and implemented EU regulations. In such a legal state airport operators must carry out the task

of complying with the new rules and requirements [EU 139/2014] and to prepare for the conversion of previously issued (according to the previously applicable and existing regulations) Aerodrome Certificate.

This raises questions about how to efficiently prepare for that? and will it be sufficient and appropriate for other hazards at the airport?

INFRASTRUCTURE, OPERATION AND CERTIFICATION OF THE AIRPORT

Aerodrome is a defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft. [Annex 14 ICAO] Which is under consideration – airport – is a special kind aerodrome defined as means any area of land especially adapted for the landing, taking-off and manoeuvres of aircraft, including the ancillary installations which these operations may involve for the requirements of aircraft traffic and services including the installations needed to assist commercial air services [96/67/EC]. Elements of airport infrastructure are:

- Movement area – that part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and the aprons [Annex 14 ICAO];
- Centralised infrastructure – the elements of airport infrastructure used for performing ground handling, which cannot be split or duplicated due to their complexity, cost or environmental impact [96/67/EC];
- Communication, navigation, surveillance, automated weather observing systems and visual aids for navigation.

Tasks related to administration and management of the airport infrastructures, and the coordination and control of the activities of the different operators present in the airport or airport system concerned, belong to Airport Operator, that is managing body of the airport [96/67/EC]. Other entities operating in the airport, are:

- airport user, defined as any natural or legal person responsible for the carriage of passengers, mail and/or freight by air from, or to the airport in question;
- supplier of groundhandling services, defined as any natural or legal person supplying third parties with one or more categories of groundhandling services.

The primary requirements that must be permanently met to ensure the safety, regularity and continuity [Annex 9 ICAO] and security [Annex 17 ICAO; EC 300/2008] of air transport services. In this aspect, the duties and responsibilities of the airport operator, in particular:

- ensuring the principles of public use utility;
- implementation of the Safety Management System – SMS [Annex19 ICAO];
- maintenance of the airport and its infrastructure components capable of corresponding technical conditions and requirements;
- security, rescue and crisis management coordination;
- oversight competence of airport staff and other entities personnel.

From the legal obligations arising practices implementation by the airport operators also the Quality Management System – QMS [ISO 9001], Business Continuity Management System – BCMS [ISO 22301], and Information Security Management System – ISMS [ISO 27001].

Confirmation of the permanent fulfillment of the requirements for operation and management of the airport is followed by the issuance of Aerodrome Certificate – AC. AC is issued by the competent authorities in accordance with the relevant provisions [Annex 14 ICAO; EU 139/2014] concerning the operation of airports. The basis for issuing the AC is a positive result of the certification process. The certification process is a verification of permanent entity's ability to ensure the safe operation of the airport, in scope of:

- organization and methods of operation,
- personnel qualification and training programs,

- documentation and documented procedures and operational instructions,
- technical measures,
- firefighting and rescue,
- wildlife hazard control,
- ensuring the safety operation and airport security.

The airport certification process is generally implemented and conducted in a manner consistent with the principles of auditing management systems (which is identical to the third party external audit) [ISO 19011], and consists the following stages:
- application for the certificate;
- evaluation, acceptance or approval of personnel and decimation;
- conducting the audit, defined as a systematic, independent and documented process for obtaining evidence and evaluating it objectively to determine the extent to which requirements are complied with [EU 139/2014];
- taking (positive or negative) decision in subject to issue AC valid until a specified date (according to ICAO SARPs) or for an unlimited duration (according to EASA and UE Regulations).

During the certification process and audit as the result can be identified (and classified accordingly) non-compliance:
- a level 1 finding shall be issued when any significant non-compliance is detected with the certification basis of the aerodrome, the applicable requirements of CS and its IR, which are the Immediate Safety Hazard – ISH;
- a level 2 finding shall be issued when any non-compliance is detected with the certification basis of the aerodrome, the applicable requirements of CS and IR and AMC which could lower or possibly hazard safety.

In any case of non-compliance, the aerodrome must prepare a plan and implement corrective action. AC will be issued only after taking corrective action the removal of all non-compliance. After the AC was issued the airport operator is under subjected continuing oversight, what means the tasks which are conducted for the implementation of the oversight programme at any time by the Competent Authority to verify that the conditions under which a certificate has been granted continue to be fulfilled during its period of validity.

AIRPORT INTEGRATED MANAGEMENT SYSTEM

Safety Management System SMS implementation is a legal requirement [Annex: 14, 19 ICAO; EU 139/2014]. The aim of the SMS is to achieve and ensure the state in which risks associated with aviation activities, related to, or in direct support of the operation of aircraft, are reduced and controlled to an acceptable level safety – safety [Annex 19 ICAO].

ICAO defined SMS as a systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures [Annex 19 ICAO].

EASA defined SMS as a systematic approach to managing aviation safety including the necessary organisational structures, accountabilities, policies and procedures, and includes any management system that, independently or integrated with other management systems of the organisation, addresses the management of safety [EU 376/2014].

These two definitions are similar to each other, but in the definition of EASA was awarded a very important issue, i.e. Integration.

As stated in the ICAO Safety Management Manual [ICAO Doc 9859] aviation organizations vary greatly in terms of overall size and complexity. Each organization has a layered management system that is composed of multiple sub-systems given direction through some type of governance system. The organization should integrate organizational management systems designed to achieve specific organizational goals, i.e., provide products and services to customers. A holistic organizational management system has often

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been referred to as an integrated Management System or simply the organizational ―management system. Typical management systems within an aviation organization, may include: Safety Management System – SMS, Quality Management System – QMS, Security Management System – SeMS, Environmental Management System – EMS, Occupational Health and Safety Management System – OHSMS, Information Security Management System – ISMS, Business Continuity Management System – BCMS and Security Management Systems for the Supply Chain – SMSSC. This is because aviation organizations must develop, implement and operate a number of different management systems to achieve their production goals through the delivery of services. Integration of management systems as functional components of the overarching enterprise management system is often used practice and developing tendency in civil aviation to reap the benefits, as: reduction of duplication and therefore of costs, reduction of overall organizational risks and an increase in profitability, balance of potentially conflicting objectives, elimination of potentially conflicting responsibilities and relationships [ICAO Doc 9859].

Another important aspect and objective of integration is that efficient and effective SMS requires the integration of reactive, proactive and predictive safety risk mitigation strategies and methods.

The functioning of the SMS is based on the risk management process, alike SeMS, EMS, OHSMS, ISMS, BCMS, SMSSC, and even QMS.

Defined by the ICAO [Annex 19 ICAO; ICAO Doc 9859] safety risk management process is analogous to the risk management process, defined [ISO 31000] by the International Organization for Standardization – ISO. The ISO risk management process includes the same principle elements and components, i.e.:
- risk assessment (hazard and risk identification, risk analysis, risk evaluation);
- risk treatment (selection of risk treatment options, preparing and implementing risk treatment plans);
- monitoring and review;
- communication and consultation.

The ISO 31000 provides principles and generic guidelines on risk management and can be applied by any kind of enterprise and organization to managing any type and profile of risk. This Standard is not intended for the purpose of certification risk management system but generally specifies the architecture:
- principles,
- framework,
- process.

For managing risks effectively and is intended to harmonize risk managing in established processes and implemented management systems (existing and future), i.e.: ISMS, SeMS, EMS, OHSMS, ISMS, BCMS, SMSSC. In conjunction with QMS [ISO 9001] it gives a fundamental basis for the formal and methodological integration of different management systems implemented by airport operator and even other entities. The main aim of this integration is to increase effectiveness and efficiency and optimization in the field of time, cost, resources, assets and processes. EASA recommends the integration SMS and other management systems based on the QMS [EU 139/2014]. ICAO notes that if the SMS were to operate in isolation of these other management systems, there may be a tendency to focus solely on safety risks without understand the nature of quality, security, or environmental threats to the organization SMS is based on the risk management process safety of flight operations [ICAO Doc 9859].

QMS is defined [ISO 9000] as management system to direct and control an organization with regard to quality which is defined [ISO 9000] as degree to which a set of inherent characteristics fulfils requirements.

QMS is based on the principle of continuous improvement: Plan-Do-Check-Act – PDCA and the process and systematic approach. The application of the process approach in QMS enables:
- understanding and consistency in meeting requirements;
- the consideration of processes in terms of added value;

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- the achievement of effective process performance;
- improvement of processes based on evaluation of data and information.
- QMS required components and references are in particular:
- Quality Policy, what on the considerations is the same as the Safety Policy [Annex 19 ICAO; EU 139/2014];
- documented information (documentation, quality manual, documented procedures, records), what on the considerations is the same as the Aerodrome Manual [Annex 14 ICAO], SMS Manual [Annex 19 ICAO] and aerodrome documentation [EU 139/2014];
- control of documented information (and record keeping), what on the considerations is the same as the oversight documentation [EU 139/2014];
- leadership and commitment, what on the considerations is the same as the safety management commitment and responsibility [Annex 19 ICAO; ICAO Doc 9859], responsibility and accountability throughout the aerodrome operator, including a direct accountability for safety on the part of senior management [EU 139/2014];
- communications (internal and external communications relevant to the QMS policy, requirements and communicating the importance of effective quality management), what on the considerations is the same as the safety communication and promotion [Annex 19 ICAO; EU 139/2014], communication and dissemination of safety information and safety reporting [ICAO Doc 9859] and occurrence reporting [EU 139/2014; EU 376/2014];

and others, such as: understanding the organization and its context, planning (actions to address risks and opportunities, quality objectives and planning to achieve them, planning of changes), support, resources (people, organizational knowledge and competence, infrastructure), operation (operational planning and control), review of the requirements, control of externally provided processes, products and services, performance evaluation (monitoring, measurement, analysis and evaluation), internal audit and management review.

These are the adequate common components of any management system (ISO) and they are required by ICAO SARPs and by the EU law regulations.

In the context of the above tasks airport operators to achieve compliance with the new requirements and to prepare for the conversion of AC [EU 139/2014] internal audit is of particular important. That is fundamental to identify potential non-compliance with CS and IR, AMC and to plan adequate corrective action. The result of the audit is also to provide objective evidence of the effectiveness of the management system and compliance with the requirements.

INTERNAL AUDIT AS A TOOL FOR IMPROVEMENT AND INTEGRATION

Audit is defined as a systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which audit criteria are fulfilled [ISO 9000].

Audits are used to determine the extent to which the management system requirements are fulfilled. Audit findings are used to assess the effectiveness of the management system and to identify opportunities for improvement. Internal audit is conducted by, or on behalf of, the organization itself for management review and other internal purposes, and may form the basis for an organization's declaration of conformity.

The effectiveness and objectivity of the results of the audit results of the basic principles of auditing [ISO 19011], i.e. .:
- Integrity;
- Fair presentation;
- Due professional care;
- Confidentiality;
- Independence;
- Evidence-based approach.

The above principles must be properly taken into account in the process of preparing the audit plan (description of the activities and arrangements for an audit [ISO 19011]), and

establishing the audit programme (arrangements for a set of one or more audits planned for a specific time frame and directed towards a specific purpose [ISO 19011]).

The audit program must be managed, among others, through the monitoring and evaluating performance, efficiency and effectiveness according to the principle P-D-C-A continuous improvement.

The adequacy results of audits program is determined, in particular, by establishing the objectives, scope and criteria of individual audits. The objectives of internal audit usually relate to assess the degree and extent the compliance with the requirements of systems and processes, assessment of the implementation and effectiveness of preventive and corrective actions, identify the areas and extent of improvement and planning of preventive or corrective) actions.

Moreover, the internal audit objectives can be also identification of:
- common components and parts of management systems, procedures and processes;
- potential non-compliance;
- vulnerability and risks relating to the procedures and processes, resources and assets;
- area and scope of integration management systems.

This requires proper establishing the purpose and scope of the audit. In practical establishing the integrated audit programme are taken into account, in particular, the audit objectives, processes and interprocess relationships (regarding activities and operations, resources and assets, information security and data [ISO 27001], the business continuity [ISO 22301; ISO 27001], susceptibility [ISO 27001], fluctuation and escalation of threats), results of previous audits, records (including implementation of preventive and corrective actions), as well as:
- legal requirements (currently in force and amended);
- changes (planned or occurred);
- risks (opportunities and threats [ISO 31000]);

- the scope of the considered integration and the objectives and criteria optimization established for management systems and processes;
- business agreements and commitments;
- industry codes of practice [Annex 19 ICAO];

which must be consistent and additionally take into account the criteria resulting from the combination of objectives and scope of management systems integration, the aim of which is to optimize and increase the efficiency and effectiveness of the integrated management system and processes.

The results of such a program of integrated audit is the basis for adequate planning and implementation them, rework and repair, preventive and corrective actions [ISO 9000], that are properly required by both ICAO and EASA regulations. This belongs to the scope of continuous improvement, which aims is also to ensure continuous and sustainable development (understood not only in respect of ecology of the entity). This is very important because today's air transportation enterprises operate in a complex environment impact customers, stakeholders and shareholders, employees, banks and financial institution, government agency and legal organizations. These influences are primarily the desire (or need to) increase the value of the enterprise, to catch up and surpass the competition, to implement various management systems.

THE PROGRAM OF INTEGRATED AIRPORT SAFETY AUDIT

The primary objective of the integrated airport safety audit is to prepare the airport to the new requirements [EU 139/2014], within the required time (31.12.2017). This is a "classic" objective of change management. Taking into account that:
- airports are previously certified on ICAO requirements [Annex 14 ICAO];
- airport operator must implement SMS [Annex 19 ICAO, EU 139/2014];
- it is common practice that the airport operator implements and integrates various

management systems, and QMS as the first of all;

− certification procedures are similar to audits and certification of management systems;
− EASA has developed a framework to integrate systems management and auditing [MA.IMS.00001-003:2012; LI.IMS.00003-003:2013; EU 139/2014].

It was assumed that the audit, as a tool for airport change management, must take into account as a priority the aspects of safety and new regulations on airports certification.

The integrated airport safety audit program should be managed and implemented in the following stages:
1. Review of SARPs ICAO [Annex: 14, 19 ICAO] and national regulation [Act of 2002] to identify the currently binding requirements.
2. Review the conditions and specifications currently held AC.
3. Assessment of compliance with currently binding requirements (1.) and the AC specifications (2.).
4. Review of new regulations [EU 139/2014], to identify new and changes requirements (1.), conditions and specifications (2.).
5. Review of Aerodrome Manual and aerodrome documentation, to assess compliance with the requirements (1.) and (3.), conditions and specifications (2).
6. Overview of personnel competence, to assess compliance with the requirements (1.) and (3). conditions and specifications (2.) and evaluation of competence of auditors [ISO 19011].
7. Based on the results of (1.), (2.), (4.), (5.) and (6.) establishing specific audit objectives.
8. Review SMS and other implemented management systems, to determine the scope of the audit, taking into account the findings (7.).
9. Identification the standards requirements and specifications of the implemented management systems, to establish the audit criteria, taking into account results of (7.) and (8.) stages.
10. Audit risk assessment and undertaking preventive actions.

11. Selecting audit method, based on the results of (7.), (8.), (9.) and (10.) stages.
12. Election the members of audit team, audit team leader and technical experts [ISO 19011], taking into account results of (6.), (8.) and (9.) stages.
13. Initialing audit activities and audit performing [ISO 19011].
14. Review the records of audit evidence, findings and conclusion, to plan corrective and preventive actions and continual improvement.
15. Approval the planned corrective and preventive actions, concerning, respectively:
    − organizational structure (arrangement of responsibilities, authorities and relationships between personnel members);
    − management systems (compliance and the adequacy, effectiveness and efficiency, integration and improvement);
    − staff and personnel (competence, training, awareness);
    − documentation;
    − procedures and process;
    − resources and infrastructure.
16. Monitoring the audit programme and results, to improve the audit program and the competence of auditors and effective identification of risks and non-compliance.
17. Determination and adoption of priorities (safety, security, quality, continuity).
18. Establishing the objectives, scope and criteria of the next integrated internal audit, taking into account results of (15.), (16.) and (17.) stages.

The internal audit client is an airport operator top management by [ISO 9000], i.e.: airport senior management by [EU 139/2014] or airport accountable executive by [Annex 19 ICAO].

An issue to be resolved is to designate the person responsible for managing the audit program. Taking into account, that safety issues are priority, the person will be Safety Manager [Annex 19 ICAO]. Considering, however, that the internal audits are managed by the Quality Manager [ISO 9001], it is also the right person. To avoid potential conflicts of

competence and taking into account the requirement of integration management systems [EU 139/2014], it is proposed appointment Airport Audit Committee – AAC. Members of the AAC should be Safety Manager, Quality Manager, and managers of others implemented management systems, i.e.: ISMS, BCMS. The Chairman of the Airport Audit Committee should be member of senior management accountability for airport safety.

CONCLUSIONS

The significant changes in the laws relating concerning airports operation, management and certification make it necessary to take timely and effective adequate preparatory actions. These activities, due to size and scope must be treated as a systematic change management process, Paruzel, Kozłowski [2014]. It is a implicated result of the legislation and the amendment EU aviation law [EU 139/2014; EU 73/2010] relative to the ICAO SARPs [Annex: 14, 19 ICAO] and relations with ISO standards.

A necessary support component of airport change management process is presented integrated security audit. The above describe audit program after achieving compliance with the new requirements [EU 139/2014] will be able to be reduced by step (4.). But will continue to be an effective tool for self-assessment [ISO 9004] to ensure continued compliance with the requirements [EU 139/2014] and validity of issued AC.

It is very important, because AC holder, i.e. airport operator will be subject continuing oversight. This implies conclusion to prepare and publish industry code of airport audit practice [Annex 19 ICAO].

To improve and increase the objectivity of airport audits, the proper and purposeful will be conducting second-party, combined and joint internal airport safety audit. Then, auditors, auditee and audit clients will be airport operator, air carrier, ground handling agent, known consignor and account consignor [EC 300/2008], and ATS provider. And this in order to continuous, effective and uniform

raising the level of safety, which is a priority objective of SES.

Considering the airport in terms of logistics, it is the link of the supply chain in air transport. It jointly allows expand the airport internal safety audit scope for sustainable development, security and continuity of the supply chain [ISO 28000; ISO 22318] and custom risk management [COM(2012) 793; COM(2010) 673].

As shown by numerous studies: Pietrzak [2006], Tkaczyk, Syta [2010], Syta [2015] it is needed and will be the subject of further research and publications of the Author.

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ZINTEGROWANY AUDYT BEZPIECZEŃSTWA PORTU LOTNICZEGO

STRESZCZENIE. **Wstęp:** Celem artykułu jest przedstawienie koncepcji zarządzania zintegrowanym wewnętrznym audytem bezpieczeństwa portu lotniczego. Porty lotnicze funkcją w dynamicznie zmiennym otoczeniu. Zmiany te wynikają z procesów legislacyjnych Unii Europejskiej oraz zmiany profilu współczesnych zagrożeń bezpieczeństwa transportu lotniczego. Zatem, koniecznym jest poszukiwanie nowych, skutecznych metod zapewnienia bezpieczeństwa i ochrony portów lotniczych.

Metody: Taką, skuteczną i efektywną metodą wydaje się być zintegrowany audyt bezpieczeństwa. Koncepcja takiego audytu została opracowana na podstawie przepisów ICAO i EASA oraz standardów i wytycznych systemów zarządzania ISO.

Wyniki: Opracowany projekt zintegrowanego audytu bezpieczeństwa portu lotniczego jest audytem strony pierwszej. Uwzględnia on aktualnie obowiązujące wymagania prawne dotyczące systemu zarządzania i certyfikacji portu, których celem jest zapewnienie bezpieczeństwa i ochrony. Projekt zakłada integrację systemów zarządzania oraz odnosi się do zagadnienia konwersji Certyfikatów Lotnisk.

Wnioski: Dotychczas ustanowione systemy zarządzania i programy audytów w lotnictwie cywilnym dotyczą zagadnień bezpieczeństwa i ochrony transportu lotniczego. Pomijają natomiast zagadnienia zarządzania zmianą oraz przepływu środków transportu i jednostek ładunkowych w porcie lotniczym, co sprzyja występowaniu zjawiska rozprzestrzeniania się zagrożeń. W odniesieniu do tego, celowym będzie rozszerzenie formuły i zakresu audytu bezpieczeństwa, co będzie kontynuowane w dalszych pracach Autora.

Słowa kluczowe: audyt bezpieczeństwa, port lotniczy, zarządzanie zmianą

DAS INTEGRIERTE AUDIT FÜR DIE FLUGHAFEN-SICHERHEIT

ZUSAMMENFASSUNG. Einleitung: Das Ziel des Artikels ist es, ein Konzept für Management des integrierten Audits für die Flughafen-Sicherheit zu präsentieren. Flughäfen funktionieren in einem sich dynamisch verändernden Umfeld. Diese Veränderungen ergeben sich aus den betreffenden EU-Gesetzgebungsverfahren und sind auf die Veränderungen am Profil der gegenwärtigen Sicherheitsrisikos zurückzuführen. Daher ist es erforderlich, nach neuen und wirksamen Verfahren zur Gewährleistung der Sicherheit in den Flughäfen zu suchen.

Methoden: Eine effiziente und effektive Methode dafür scheint das integrierte Sicherheitsaudit zu sein. Dessen Konzept wurde auf der Basis der ICAO- und EASA- Vorschriften sowie ISO-Standards und -Richtlinien für die Managementsysteme entwickelt.

Ergebnisse: Der entwickelte Entwurf für das integrierte Sicherheitsaudit für Flughäfen stellt ein Audit der ersten Seite dar. Es berücksichtigt die aktuell geltenden gesetzlichen Vorschriften bezüglich der Verwaltung und der Zertifizierung von Flughäfen, die darauf abzielen, die Sicherheit vor Ort und deren Schutz zu gewährleisten. Das Projekt umfasst die Integration von Managementsystemen und bezieht sich auf die Frage der Konversion von Flughafen-Zertifikaten.

Fazit: Die bisher etablierten Managementsysteme und Audit-Programme im Luftverkehr betreffen in erster Linie die Sicherheit und den Schutz innerhalb von Flughäfen. Allerdings lassen sie das Change-Management und den Fluss von Transportmitteln und Ladeeinheiten im Flughafen außer Acht, was die Verbreitung von Gefährdungen zu Folge hat. Daraus ergibt sich die Notwendigkeit, die Formel und den Prüfungsumfang zu erweitern, was in weiteren Forschungsarbeiten des Autors fortgesetzt werden wird.

Codewörter: Sicherheitsaudit, Flughafen, Change-Management

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