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MODIFIED KINNEY METHOD FOR RISK MANAGEMENT OF IMPARTIALITY AND INDEPENDENCE IN INSPECTION AND CERTIFICATION BODY FOR PRODUCTS, PROCESSES AND SERVICES

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Abstract. *This paper presents modified Kinney method which is implemented in few inspection and certification body accredited according to ISO/IEC 17020 and ISO/IEC 17065 in Serbia as way to fulfill the requirement for management of impartiality. Although in Note 2, clause 4.2.3. of ISO/IEC 17065 is specified that "identifying risks does not imply risk assessments as stated in ISO 31000", this standard which provides the basic general principles for risk management, was used as a main tool for managing of risks to impartiality this type of conformity assessment bodies. For identification of risk to impartiality was used also specification ISO PAS 17001.*

Key words: *Impartiality and independence, ISO/IEC 17020, ISO/IEC 17065, modified Kinney method.*

1. INTRODUCTION

One of the main requirements for all conformity assessment body is to provide impartiality and independence of its activities. This requirements are special important if we talk about organization that providing inspection and certification of products, processes and services because of level of confidence that have to providing this type of organization to all interested parties. These types of organizations are one of the key elements not only in infrastructure of quality in one country but also one of the key elements in fulfillment of essential requirements of products, processes and services safety on the market according to New and Global Approach EU Directives.

Requirement that have to fulfill different type of Inspection bodies are covered by International Standard ISO/IEC 17020. For certification bodies, that has to be third-party impartial conformity assessment bodies, relevant International Standard is ISO/IEC 17065. Both types of organizations can be owned and operated by government or industry bodies, or to be separate organizations. Regardless of their ownership and way of operation they have to demonstrate independent of the other parties involved. Inspection bodies, according to level of independence, are classified in three types:

Type A - bodies provide third-party services and are expected to be independent of the other parties involved;

Type B - provide first-party services to their parent body only;

Type C- first-party inspection bodies which may also provide inspection services to other organizations.

Versus Inspection Bodies Certification Bodies has to be third-party impartial conformity assessment body. The main general requirements for impartiality CAB (conformity assessment body) it has to demonstrate through accreditation [1].

In clause 4.1, of International Standard ISO/IEC 17020, as well as in standard ISO/IEC 17065, clause 4.2 required that relevant body shall identify risks to its impartiality on an ongoing basis. International Standard ISO 31000, *Risk management – Principles and guidelines*, can be used as a framework and a process for managing risk of impartiality in inspection body or certification body in spite of that in Standard ISO/IEC 17065, clause 4.2.3, Note 2 is specified that "identifying risks does not imply risk assessments as stated in ISO 31000".

Opinion of the author of this article is that standard ISO 31000 provide general principles of risk management which are the basically same as requirement in ISO/IEC 17065, clause 4.2.4, as well as in ISO/IEC 17020, clause 4.1.4. As a method for identification and adequate risk treatment is used the Kinney method which are widely recognized and in used in the national organization for the risk assessment in the field of Risk Assessment for Health & Safety at the Work. This method, which

will be presented, is adapted and modified for the needs of inspection and certification body and requirement for management of impartiality.

2. MANAGEMENT OF IMPARTIALITY AND INDEPENDENCE

First step in a process of management of impartiality and independence was to establishing the context, regarding to objectives of organization and its external and internal parameters which will be taken into account and the Policy of impartiality and independence. Also, at this stage was developed the methodology, selected relevant project team members and its trainings.

In the project team member were included top management of inspection or certification body as well as representatives of top management of the whole organization especially management of those sectors that might have a potential conflict of interest with the part of its organization which is inspection or certification body. Task of the project team was to identified potential risk to impartiality and independence, potential conflict of inters, and to developed way of collecting information through organization. To create a list of potential conflict of interest to impartiality and independence project team was used also Public Specification ISO/IEC 17001, *Conformity assessment – Impartiality - Principles and requirements*, which contains principles and requirements for the element of impartiality as it relates to standards for conformity assessment.

In a stage of risk identification, as a tool for collecting information have been developed two types of questionnaires, one for individuals and another one for the organization. Personal questionnaire was filled by all employees in the inspection or certification body, irrespective of the manner of engagement, as well as individuals from Management Board or other shareholder who can have an impact on decision-making in the inspection or certification body. Issues in the questionnaire were included all identified risk that my having individual.

Another "The Questionnaire about the conflict of interest of The Organization" is filled by the Management Board where were requested information about ownership structure, all potential conflict of interest activities in the organization, financial transactions with existing and potential clients, joint project, marketing or other activities with a clients.

A list of all identified risks to the independence and impartiality had over then 20 identified risk grouped in 6 categories: personal risk (ownership, employment or joint projects with client organization etc.), management risk (engaged in the design, manufacture, supply, installation, purchase, ownership, use or maintenance of the items inspected etc.), sharing of material resources, join marketing activities, risk of different type of agreement with the client (multi agreements with third parties, long-term contracts, subcontracting etc.) and financial risk (borrowings, loans, etc.).

As a basic method for risk assessment it was used the Kinney method. The Kinney method was first developed and used for explosion risk prevention in military industry. Now this method is widely in use for risk assessment in Safety and Health at Work.

This method is based on three criteria: probability (P), risk frequency (F) and the gravity (G) of the induced consequence. For each identified risk is determined by probability (P), risk frequency (F) and the gravity (G) of the induced consequence.

For adapting The Kinney method of risk assessment were modified a following tables:

Table 1. Numerical value for probability (P)

Rank	Qualitative description
0,1	Virtually impossible
0,2	Practically impossible
0,5	Plausible, but unlikely
1	Improbable, but possible at boundary conditions
3	Unusual, but possible
6	Possible
10	Predictable

Table 2. Numerical value for frequency (F)

Rank	Qualitative description
0,5	Never happened
1	Very rare (not in the last 2 years)
2	It happened (ones in the last 2 years)
3	It happened occasional (more than one in the last 2 years)
6	Regular (yealy)
10	Permanent

Table 3. Numerical value for gravity (G)

Rank	Qualitative description
1	Without consequences
3	Significant consequences
7	High
15	Very high
40	The impact that directly affects the loss of impartiality

Frequency of two years was taken as a limited period that is long enough to ensure impartiality and its specified also in standard ISO/IEC 17065, clause 4.2.10, Note 1 and clause 7.13.6.

On the basis of collecting data, from questioners and assessment according to presented tables, the risk is calculated according to the following formula R:

$$R = P \times F \times G$$

The level of risk (R) is ranked from acceptable risk which no required additional measure to extreme,

intolerable, which requiring interruption of work activities and immediately corrective measure and could be reflect on the loss of accreditation.

Table 4. Risk ranking scale – risk level (R)

Risk level	Risk class	Required action
< 20	Very low	Acceptable risk: no measure required
20 - 70	Possible	Monitoring and following procedures
70 - 200	Significant	To be taken protective measures and following
200 - 400	High	Immediate improvement
> 400	Very high	Activity cessation. Require immediate action by the top management

On the basis of identified and assessed risks and estimation level of risk project team established safeguards clauses. Typically safeguards clauses could be, as it specified in the standard ISO/IEC 17065 that person who have provided in the past two years of consultancy to the client shall not be used to review or approve the resolution of a complaint or appeal for that client. Another safeguards clause could be not acceptance some client of some product for inspection or certification with explanation to the client.

Task for project teams is also to propose the control measures and points, which is also topic of management review, as well as other risk assessment results. Identified and assessed risk level is also topic of inspection and certification body management review.

Identified risk level is a base for classification of inspection body as a type A, B or C.

Risk identification and assessment have to be presented also to the stakeholders, as well as their opinions, complaints and appeals should be base for review and identifying risks to its impartiality on an ongoing basis.

3. CONCLUSIONS

Even though standard ISO/IEC 17020 for inspection bodies neither standard ISO/IEC 17065 does not require the application of the some methodology for risk assessment presented methodology in this paper were used in few inspection and certification bodies in Serbia. Benefits from the presented methodology were first of all simple, systematic and targeted collecting relevant information for risk analysis. This Kinney modified methodology clearly separated risks which should be following and risks which required safeguard measure, as well as activities that may result with suspension of accreditation.

Also this presented methodology is verify as methodology which is fit for purpose for management of impartiality in several inspection and certification bodies and assessed positively by accreditation body.

All of this confirms that standard ISO 31000 provide widely applicable principles, framework and a process approach for managing risk. Also we would like to open the question why in standard ISO/IEC 31010, *Risk management - Risk assessment techniques* which is following standard ISO 31000 is not recognized the Kinney or other methods widely used in Safety and Health at Work assessment as a risk assessment techniques.

REFERENCES

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