

# Risk-Based Approach to the Audits of Employers and Leading Automated Occupational Safety Management Systems

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**Abstract** With the introduction of a risk-based approach by the Russian Federal service for labour and employment in 2018, it is assumed that the more often a company violates labour law, the more often state inspectors will come to it. And the higher the risk category of the organization, the more often checks will be carried out. This means that employers have increased the need for up-to-date and reliable information about the state of labour protection in the organization. It is possible to meet this need by implementing automated information systems for managing all business processes, including personnel management and the occupational safety management system. Such systems will allow for the rapid collection, processing, recording and analysis of information. This paper considers the key points of the risk-based approach, existing proposals for automation of management processes, and formulated requirements for such systems considering the requirements of the inspection bodies.

**Keywords:** *risk-based approach, audit, employers, leadership, occupational safety, management systems*

## 1 Introduction

From the point of view of economic theory, risk represents a probable event (opportunity), which in case of its realization can have both positive and negative impact of the organization's activity. The consequence of such influence may be, among other things, monetary losses (Belenkiy 2011). From the point of view of labour legislation, employers bear economic and socially determined risks. They are expressed in the occurrence of such adverse consequences as occupational injuries, occupational morbidity, fines from the labour supervision and control authorities, and collective and individual labour disputes (Lyubimova and Matveev 2013).

Since January 1<sup>st</sup>, 2018, a risk-based approach in the Russian Federation is used when checking employers for compliance with labour laws by the state labour inspectorate, and all organizations and individual entrepreneurs are divided into risk categories. And the higher the risk category is, the more often checks will be carried out. This means that employers must have complete and comprehensive information about the state of labour conditions and safety at their enterprise. In the conditions of rapid development of production and acceleration of market relations, the necessary level of awareness can be achieved only by implementing automated information systems for managing all business processes, including personnel management and the occupational safety management system.

## 2. Literature review

The beginning of the risk-based approach in the practice of inspections by the Federal Labour and Employment Service was the approval by the Government of the Russian Federation of Resolution No. 197 of 16.02.2017. Starting from 2018, all organizations and individual entrepreneurs registered in the Russian Federation and employing employees under employment contracts are inspected under the risk-based approach concept. The use of a risk-based approach when conducting inspections of compliance with labour legislation by employers is regulated by the following regulatory legal acts:

1. Federal law No. 294-FL of 26.12.2008 "on protection of the rights of legal entities and individual entrepreneurs in the exercise of state control (supervision) and municipal control" (article 8.1)
2. Resolution of the government of the Russian Federation of 01.09.2012 No. 875 "on approval of the Regulations on federal state supervision of compliance with labour legislation and other regulatory legal acts containing labour law norms»
3. Resolution of the government of the Russian Federation of 17.08.2016 No. 806 "on the application of a risk-based approach to the organization of certain types of state control (supervision) and amendments to certain acts of the government of the Russian Federation" (together with " Rules for assigning the activities of legal entities and individual entrepreneurs and (or) production facilities used by them to a certain risk category or a certain class (category) of danger»)

According to the risk-based approach concept, the frequency and duration of inspections by state supervisory and control authorities depend on the class of hazard or risk category of the audited legal entity or individual entrepreneur. The risk category is determined in accordance with the Regulations on categorizing the activities of legal entities and individual entrepreneurs into a certain risk category or a certain class of hazard.

If the employer's activities are classified as high risk, the relevant decision is taken by the Chief State Labour Inspector of the Russian Federation. If the employer's activities fall into the categories of significant, medium and moderate risk, the decision is taken by the Chief State Labour Inspector of the constituent entity of the Russian Federation.

The decision to change the employer's risk category is made by the same official who made the original decision. The grounds are documents and information about the employer's activities.

If there is no decision to place the employer in the risk category, the employer is considered to be in the low risk category.

The table below shows the frequency of scheduled inspections in relation to the activities of a legal entity or individual entrepreneur, depending on the risk category assigned to their activities (Table 1).

**Table 1.** Frequency of scheduled inspections in relation to the activities of a legal entity or individual entrepreneur, depending on the risk category assigned to their activities

<b>Risk category</b>	<b>Frequency of scheduled inspections</b>
high risk	once every 2 years
significant risk	once every 3 years
average risk	not more than once every 5 years
moderate risk	not more than once every 6 years
low risk	checks are not carried out

Source: Resolution of the government of the Russian Federation No. 806 of 17.08.2016 (ed. 21.03.2019)

In accordance with article 21 of the decree of the government of the Russian Federation of 16.02.2017 No. 197 "on amendments to certain acts of the Government of the Russian Federation", information about employers whose activities are classified as high and significant risks is placed in the information and telecommunications network "Internet" on the official website of Rostrud. This is done before July 1 of the year preceding the year of scheduled inspections (Motroi 2019).

The appendix to the decree of the government of the Russian Federation of 01.09.2012 No. 875 presents the criteria for assigning employers to a certain class or category, depending on the indicator of the potential risk of harm to legally protected values in the field of labour (life and health of employees, labour rights of employees associated with non-payment of wages, other payments made within the framework of labour relations) (Table 2).

Employers have the right to apply to the Federal labour Inspectorate to be provided with information about the risk category of their activities.

The Federal service for labour and employment has developed a list of typical violations of mandatory requirements with their classification (differentiation) by the degree of risk of harm due to violations of mandatory

requirements and the severity of the consequences of such violations. The table below shows data on violations of labour protection requirements (Table 3).

**Table 2.** Risk categories depending on the indicator of the potential risk of harm to legally protected values in the field of labour

<b>Risk category</b>	<b>Indicator of potential risk</b>
high risk	1 or more
significant risk	from 0.99 to 0.75
average risk	ranged from 0.74 to 0.5
moderate risk	from 0.49 to 0.25
low risk	less than 0.24

Source: Resolution of the government of the Russian Federation of 01.09.2012 No. 875 (ed. of 27.12.2019)

**Table 3.** List of typical violations of mandatory labour protection requirements with their classification (differentiation) by the degree of risk of harm due to violations of mandatory requirements and the severity of the consequences of such violations (excerpt)

<b>No.</b>	<b>Violation of labour law requirements</b>	<b>Article of the Labour code containing the requirement</b>	<b>Category of violation depending on the negative consequences for the employee, in points</b>
1	2	3	4
42	Admission of an employee to perform their work duties without passing the established procedure of training and testing of knowledge of the requirements of labour protection	art.212, 225	High risk (10 points)
43	Admission of an employee to perform their work duties without passing mandatory preliminary (when entering the job) and periodic (during employment) medical examinations, mandatory medical examinations at the beginning of the working day (shift)	art.69, 212, 213, 219, 266	High risk (10 points)
46	Failure to meet labour protection requirements when organizing work (production processes)	art.211, 212	High risk (10 points)
47	Admission of an employee to perform their work duties in the presence of medical contraindications	art.212	High risk (10 points)
67	The presence of an incomplete set of normative legal acts containing labour protection requirements in accordance with the specifics of their activities	art.212	Low risk (1 point)
68	Absence of a set of normative legal acts containing labour protection requirements in accordance with the specifics of its activities	art.212	Average risk (6 points)

Source: Federal Service for Labour and Employment (Rostrud) (2019)

Since 2018, state labour inspectors have been using test sheets when checking employers, the form of which was approved by Rostrud Order No. 655 of November 10, 2017. Today, the number of test sheets is 131. Based on the questions contained in these checklists, employers can independently check the state of labour protection in

their organization. This will allow you to identify weaknesses in the existing occupational safety management system and avoid penalties for non-compliance with the requirements of labour protection legislation during the inspection. It is at this stage that most employers face a number of difficulties. One of them is the lack of information, its fragmentation.

### **3. Methodology**

Creating a single information field in the organization based on software products for automated management of the labour protection management system will allow the employer to significantly save labour, time and material resources both at the management stage and at the inspection stage.

The labour protection service needs to perform many different tasks, their functionality implies an impressive amount of work (especially in large enterprises with many employees). Automation of labour protection management will allow you to solve the following tasks more quickly and with less labour costs:

1. Development and implementation of the occupational safety management strategy in the organization, including the processes of analysis, calculation and planning of occupational safety measures.
2. Planning and recording medical examinations
3. Planning and accounting for training and briefings
4. Knowledge testing and recording of results
5. Organization of production control
6. Organization of three-stage labour protection control
7. Accounting for jobs in the context of harmful factors and monitoring the timing of a special assessment of jobs
8. Monitoring of inspections and compliance with regulations
9. Planning and monitoring of occupational safety measures
10. Accounting and investigation of accidents
11. Accounting and maintenance of hazardous production facilities
12. Managing occupational safety instructions and documentation
13. Management of eligibility to work
14. Risk management
15. Accounting for compensation and provision of medical and preventive nutrition

And what is important, it will allow organizations to approach inspections by state labour inspections more prepared, which means it will reduce the likelihood of penalties.

When preparing for the introduction of an automated occupational safety management system in an organization, it is advisable to focus on the following regulatory documents:

- 1) Labour Code of the Russian Federation
- 2) State standard specification R 12.0.230-2007. Interstate standard. System of labour safety standards. Occupational health and safety management systems. General requirements
- 3) State standard specification R 12.0.010-2009. National standard of the Russian Federation. System of Occupational Safety Standards. Occupational Health and Safety Management Systems. Hazard identification and risk assessment
- 4) ISO 45001:2018(E). Occupational health and safety management systems. Requirements and guidelines for their application
- 5) OHSAS 18001:2007. Occupational safety management systems - requirements
- 6) Occupational Health and Safety Management Systems Manual. MOTH-SOUGHT 2001 / ILO-OSH 2001

Using the software of the labour protection management system will create a single information space in the organization and significantly increase the efficiency of the labour protection service. Usually in their professional activity, occupational safety specialists use more than half of their working time to study and select normative legal acts in certain areas of occupational safety, to develop local acts (instructions, orders, plans), to draw up reports on the results of internal audits and for statistical accounting. The software product for automation by the occupational safety management system will solve the task of performing these routine processes. This will allow organizations to reduce the risks of negative inspections by state labour inspections (Kosmylina 2019).

According to the majority of developers of automated control systems, the greatest need for their implementation is experienced by enterprises with a number of employees of more than 1000 people. But this does not mean that smaller companies don't need automation. According to legal requirements, the availability of a health and safety management system does not depend on the size of the enterprise. In addition, the risk-based

approach used in Federal state supervision of compliance with labour legislation puts the criterion of potential risk of harm to legally protected values in the labour sphere at the forefront.

#### **4. Results and discussion**

The main users of automated production management systems and related processes in Russia are companies that are engaged in production, trade, project or educational activities; have a large number of employees; practice a complex system of wage formation; have geographically distributed offices and divisions; implement modern management styles; and have a need for a wide range of highly qualified personnel. An affirmative answer to any of these points indicates that the company needs to automate the processes of managing human resources, including labour protection.

Before choosing a specific automated occupational safety management system for your organization, you need to thoroughly study the market for the proposed software in this area. Analyse their functionality and correlate it with the needs of the company.

Most of the automated information systems developed and implemented in Russian companies are a set of management, technical and software solutions combined in a single system for the purpose of collecting, storing, processing and issuing the necessary information, designed to improve the efficiency of production management by automating and formalizing business processes. These include, for example, SAP Customer Experience, offered by Atlantconsult, or ALFA ims - an information system for production management, a product of the Russian company/vendor ALFA systems. World leaders in the development, implementation and maintenance of automated control systems are such companies as Oracle (USA), SAP AG (Germany), IFS (Sweden), SSA Global (USA), Ross Systems (USA).

Currently offered solutions for automation of production management, as a rule, include a module for personnel management (HRM), which implements automated personnel management (Komsomolskaya Pravda 2017). The availability of automated personnel management systems allows the organization to develop an effective strategy for the development of human resources. Such systems allow you to conduct a comprehensive analysis of each employee's performance indicators, make informed decisions, and form a motivation system. Ultimately, this leads to personal growth of employees and increases their productivity.

Managing occupational safety at an enterprise is just as important as managing cash flows, production processes, or employee movement. This means that the occupational safety management module must also be part of a single automated enterprise management system.

The analysis of the Russian market of software in the field of labour protection management allowed us to identify the most frequently used products today. This is an Automated accounting system for labour protection "Assistant TB" from the company AssistTB and Architect of the special assessment of the working conditions (SAWC) from the company "Inform Consot" (Assisttb 2020).

The automated system of accounting for labour protection Assistant TB covers such areas of accounting for labour protection measures as:

- Accounting for medical examinations
- Accounting for instructions
- Accounting for certifications
- Accounting for personal protective equipment
- Accounting for flushing and neutralizing agents

As one can see, such areas as training on labour protection, production control at workplaces, the system of professional risk management, the system of statistical reporting on working conditions, and three-stage administrative and public control are not reflected here. Therefore, the use of Assistant TB will not allow the organization to fully manage the processes of labour protection in the organization. And that increases the risk of the owners, including at carrying out of inspections by oversight bodies for labour.

The Architect SAWC system offered by Inform Consot includes a larger number of modules for occupational safety management, but it is not universal and is developed for each customer individually. And this significantly increases its cost (Consot 2020).

The analysis of existing software products for automation of the labour protection management system, as well as the study of the risk-based approach when conducting inspections within the framework of Federal state supervision allowed us to formulate the main requirements for such systems:

1. The system should allow you to monitor key indicators of labour protection in real time.
2. It should be possible to get complete information about the state of occupational safety at any time through a single centralized data warehouse, reports and dashboards. This is especially important during the inspection period.
3. Ease of entering the necessary information and data (with the presence of special directories) with the exception of duplication.
4. Availability of remote access, which is very important if there are branches and departments that are remote from each other.
5. Compatibility with existing automated systems at the enterprise.

## 5. Conclusions

All in all, the availability and operation of an automated occupational safety management system at the enterprise increases the efficiency of management by providing operational monitoring, collection, processing, accounting, and analysis of information.

This allows one to evaluate and predict the current and future state of labour protection in order to make timely and objective management decisions, successfully pass inspections by the supervisory and control authorities.

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