Just Culture as a Useful Tool for the Organizations in the Context of ISO 45001:2018 Standard Implementation

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Keywords: occupational health and safety management systems, safety culture, just culture, reporting culture.

ABSTRACT

This article presents basic issues related to a just culture in the context of ISO 45001:2018 standard—occupational health and safety management systems implementation. The organizations that want to implement the new standard, need an effective tool to make their reporting systems more effective because of some new requirements of the standard laws. One proven solution of that has been used for some time in the past, especially in aviation and medicine which is called a just culture model. The practical tool of the just culture, called the Fair Culpability Model, is presented in this article. This tool supports the organizations with handling blame and punishment. It inverts blame culture into the just culture in the organizations. In addition, in this article we can find information about the factors determining the growth of adverse occurrence reports number in the organizations and ways to classify the behavior and attitudes of employees as acceptable or not acceptable one.

INTRODUCTION

International Organization for Standardization—ISO published on the 12th of March 2018 a new standard ISO 45001:2018 “Occupational health and safety management systems—Requirements with guidance for use”. The standard replaces existing standard of Occupational health and safety (OH&S) management systems such as OHSAS 18001:2007 or probably Polish national standards PN-N-18001:2004. The standard ISO 45001:2018 was setup by ISO to develop an international standard for OH&S management. It is based on directives of International Labour Organization—ILO. ISO 45001 allows system solutions implementation in terms of OH&S. The standard enables organizations to provide safe and healthy workplaces by preventing work-related injury and ill health, as well as by proactively improving its OH&S performance. ISO45001 emphasis the role of the organization. Organizations are obliged to identify all external and internal aspects which have a significant impact on achievement of their occupational health and safety. ISO 45001 is applicable to all organizations, despite size or branch. It is designed to be integrated into an organization’s existing management processes and to follow the same high-level structure as

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other ISO management system standards, such as ISO 9001 (quality management) and ISO 14001 (environmental management). Current users of OHSAS 18001 are obliged to update their systems according to the requirements within a three year transition period.

Key potential benefits from using the standard include reduction of workplace incidents (especially those generating severity of their consequences), reinforced leadership commitment to proactively improve OH&S performance and creation of a health and safety culture, whereby employees are encouraged to take an active role in their own OH&S and to report incidents and nonconformities.

The list of hazards is only as good as the access we have to information relating to the safety. In the context of safety information source process, the following paragraphs of ISO 45001 seem to be important:

- “5.1 Leadership and commitment, which states that top management shall demonstrate leadership and commitment with respect to the OH&S management system, i.e. by developing, leading and promoting a culture in the organization that supports the intended outcomes of the OH&S management system and protecting workers from reprisals when reporting incidents, hazards, risks and opportunities’’;

- “10.2 Incident, nonconformity and corrective action, which states that the organization shall establish, implement and maintain a process(es), including reporting, investigating and taking action, to determine and manage incidents and nonconformities’’[1]. It means that there is a need to extend the range of occurrences which have to be reported and investigated. It is associated with the term of incident used in the standard. It is “occurrence arising out of, or in the course of, work that could or does result in injury and ill health”’. The definition consists of occurrences which result in injury and ill health and occurrences without those results. Additionally, nonconformities are defined as non-fulfillment of a requirement.

These changes appear to be better for proactive approach in OH&S based on evidence and focused on prevention. If the implementation process goes correctly, the changes can build up the atmosphere of trust in the organizations. Meanwhile, employees are encouraged to report incidents and nonconformities which is leading to the higher range of incidents reports and better knowledge about safety. This way the organization can improve its proactive actions.

THE IMPORTANCE OF NO INJURY OCCURRENCES INVESTIGATION

The issue was researched by Herbert William Heinrich—an American industrial safety pioneer from the 1930s. Then it was improved by Frank E. Bird, Jr., who was the Director of Engineering Services for the Insurance Company of North America in 1969 and later improved by the ConocoPhilips Marine. The Heinrich’s Law states that in a workplace, for every accident that causes a major injury, there are 29 accidents that cause minor injuries and 300 accidents that cause no injuries [2]. Bird’s research improves the ratio with four categories such as fatality, serious accidents, accidents and incidents [3]. In 2003, ConocoPhilips Marine conducted a similar study that showed a difference in the ratio of serious
accidents and near misses; for every single fatality there are at least 300,000 at-risk behaviors (activities that do not exist in safety reporting system) [4]. The Heinrich’s 1-29-300, Bird’s 1-10-30-600 and then ConocoPhilips Marine’ 1-30-300-3000-300,000 (depicted in triangles in Fig. 1) relationships in the ratio clearly indicate how wrong it is to direct main prevention effort only at the relatively few events resulting in injury when there are many opportunities for more effective control of total incident losses[2]. It does not necessarily show that the ratio will be the same for any particular occupational group or organization. The significant point is that major injuries are rare events and more opportunities for prevention give more frequent, no injury events. As a result, there is a solution in an identification of deficiencies that would otherwise have gone undetected.

Experience has shown that accidents are often preceded by safety-related incidents and deficiencies (no injury occurrences) revealing the existence of safety hazards. Safety information is therefore an important resource for the detection of potential safety hazards. Additionally, whilst the ability to learn from an accident is essential, only reactive systems have limited use in forward improvements. Reactive systems should therefore be replenished by proactive systems which use other types of safety information to make effective improvements in OH&S. The organizations should contribute to the improvement of OH&S through the introduction of more proactive and evidence based safety systems, which focus on accident prevention, based on the analysis of all relevant safety information, including information on occurrences. This proactive and evidence-based approach should be implemented by the organizations [5].

Figure 1. Heinrich’ triangle (on the left) and its modifications elaborated by Bird in 1976 (middle) and by ConocoPhilips Marine in 2003 (on the right). Source: Own elaboration based on [2], [3], [4].

THE SAFETY CULTURE

To accomplish that goal the organizations need an effective tool to improve their reporting systems. The question is how to make employees talk about safety issues. The just culture is described as an atmosphere of trust thanks to which people are encouraged to provide essential safety-related information. At the same time, they are also clear about where the line must be drawn between acceptable and unacceptable behavior.

The tool is a part of wider term—safety culture. The safety culture of an organization is the product of an individual and group values, attitudes, perceptions, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of, an organization’s health and safety management. Organizations with a positive safety culture are characterized by communications, established on mutual trust and the confidence in the efficacy of preventive measures[6].
The elements of a safety culture described by Professor James Reason[7] are depicted in Figure 2 and summarized below:

1) Just Culture. All personnel must understand that honest errors can be made. However, this is not a blameless culture and deliberate violations of rules and regulations could result in disciplinary action.

2) Reporting Culture. Open and honest reporting of safety concerns by all employees is essential, to understand and manage the potential causes of future accidents.

3) Flexible Culture. The complex and diverse nature of different organizations dictates that the response to safety concerns should be flexible.

4) Learning Culture. Learning followed by communication is a central part of a safety culture. If lessons identified within one sphere are not effectively communicated across all areas, there is potential for undesired outcomes to be repeated. Proper investigation of occurrences and management of resultant recommendations is key to an effective learning culture, facilitated by OH&S.

The just culture seems to be crucial in the terms of cited 5.1 of ISO 45001:2018 law. It is important for the prevention of accidents and incidents to communicate, in the shortest time possible, relevant information, including particular reports and safety recommendations resulting from safety investigations. The OH&S system should equally promote a non-punitive environment facilitating the spontaneous reporting of occurrences.

James Reason and Patrick Hudson carried out researches in this scope. The results of their studies are Reason’s Culpability Decision Tree (1997) and Hudson’s refined Just Culture Model (2004). The culpability decision tree and Just Culture Model are valuable tools for evaluating the culpability of an individual whose involvement in a workplace incident is in question.

Figure 3 displays a decision tree which helps to decide the culpability of an unsafe acts. Figure 4 displays Hudson’s Just Culture Model that is an extending of Reason’s Culpability Decision Tree. This more complex model integrates different type of violations and their causes.

The just culture rules in EU aviation have been implemented inter alia based on Regulation (EU) No 376/2014 of The European Parliament and of The Council.
of 3 April 2014 on the reporting, analysis and follow-up of occurrences in civil aviation.

**THE FAIR CULPABILITY MODEL**

In this article, there is presented a particular model of the just culture thanks to personal experience of the author. The model has been implemented by Military Aviation Authority (MAA) in the UK military aviation since 2010. Based on it, the model has been implemented (with author's participation) in The Aviation of Polish Armed Forces in 2015.

The Fair Culpability Model (The FCM) is rather similar to Reason’s model than Hudson’s. The FCM, depicted in Figure 5, comprises a flowchart to determine behavioral classifications based upon information gathered during a safety investigation, and a framework for assessing the relative levels of culpability or accountability described to 8 behavioral classifications which can be considered in 3 categories [8]:
a. Unintended Action, Unintended Consequence. Where neither actions nor consequences were intended by those involved, the actions would be considered as errors.

b. Intended Action, Unintended Consequence. Where the actions were planned but the consequences were not.

c. Intended Action, Intended Consequence. Where both actions and consequences were planned, the actions would be considered as sabotage [6].

The FCM is intended to be used by a suitable Occurrence Review Group—the ORG (experienced specialists in considered particular branch of the occurrence from the organization) that relies on the results of a safety investigation to resolve any questions of culpability arising due to the actions of an individual or group of individuals. Where appropriate, the ORG makes recommendations regarding appropriate disciplinary or administrative actions; however, it is still the management's responsibility to determine and pass any action in accordance with law procedures.

The FCM, leads the ORG to one of the eight behavioral classifications. These are showed below [8]:

a. Error. An error is an action that does not go according to plan. Errors can either be due to an individual doing something different than what he was intended to do (error of commission) or failing to do something because of an issue with concentration or memory (error of omission).

b. Mistake. A mistake is an action that goes according to the plan but where the plan is inadequate to achieve the desired outcome.

c. Situational Rule-Breaking/Violation. In some situations, given the conditions at the time, deliberately not following, or actively violating, the rules may have been the only way to complete a task.

d. Unusual Situation Rule-Breaking/Violation. This classification is connected with those unusual occurrences where rules are deliberately not followed, or violated, in unforeseen or undefined situations.
e. Rule-Breaking/Violation for Organizational Gain. This classification covers situations in which an individual deliberately fails to follow rules with the aim of benefiting the organization.

f. Selfish Rule-Breaking/Violation. This classification is connected with those occurrences where rules are deliberately not followed by the aim of benefiting the individual.

g. Recklessness. Recklessness is conscious, substantial and unjustifiable disregard of visible and significant risk.

h. Sabotage. Sabotage is a malicious or thoughtless damage or destruction. To determine whether an individual’s actions constitute sabotage there needs to be intent for both the actions and the consequence, to cause damage or disrupt operations.

The Just Culture policy requires the ORG to assess whether actions were reasonable, given the conditions at the time of the occurrence, by applying The Substitution, The Routine and The Proportionality Test [8].

a. The Substitution Test. This considers whether another ordinary person with the same competence would behave the same way in similar circumstances.

b. The Routine Test. This considers whether the event in question has happened before to either the individual or the organization.

c. The Proportionality Test. This considers the safety value that any punishment would have.

After all these activities described above, the ORG can determine levels of culpability and recommend appropriate interventions. The resulting behavioral classification with a relative level of culpability within the model is determined largely by the intention of both actions and consequences. The Just Culture requires a ‘red line’ to be drawn, which distinguishes what behavior is broadly acceptable to the organization and what is not. The FCM helps the ORG, and thus the management, to determine which behaviors will be managed through disciplinary action; these are optimizing rule-breaking for personal gain, recklessness and sabotage. The majority of other behaviors will be managed through improving performance-influencing factors, although a small number of cases (e.g. death, very serious injury or level of ‘write-off’ cost) might result in separate legal action.

![Figure 6. The Fair Culpability Model. Source: Own elaboration based on [8].](image)
AN EXAMPLE

As it was mentioned before, the author is experienced in aviation, thus an example of real usage of The Fair Culpability Model is connected within the area. It illustrates the process in action. In an aviation, organization during a pre-flight walk round, while doing the inspection of the crew of a helicopter, noticed that all of the fasteners for the driveshaft fairings were insecure. The engineers were notified and the flight was delayed. During investigation, it was discovered that the fairings had been closed but not fastened post a servicing block. Then it went unnoticed during a technical flight servicing. Furthermore, the unsecured fairings were not noticed by the aircrew on a pre-flight walk round prior to air test. A thorough inspection of the aircraft revealed no damage caused by the detached fasteners and no loose parts were present. What was the error? The fairings had been closed but the fasteners had been not. Neither was it noticed during the turn round service after the test flight nor during the pre or post flight inspections. When did it occur? During a scheduled servicing block. Why did it occur? Because of poor supervision, multiple tasks involving helicopter, poor attention to procedures, lack of attention to detail during flight servicing. The posterior action, according to the Fair Culpability Model, caused the following consequences: The maintenance supervisor was found to have broken rules under the FCM process and was subject to administrative action. Two technicians carrying out the work, as well as aircrews, made errors and were re-briefed.

CONCLUSION

To sum up, new changes in the law associated with ISO 45001:2018 implementation require new tools to deal with safety culture and more effective reporting system within the organization. One proven solution of that, called the just culture, has been used in aviation and medicine. It shows clearly where the line must be drawn between acceptable and unacceptable behavior. To ensure people report the occurrences, the top management shall declare their determination of the just culture rules implementation in a safety policy of the organization. In order to encourage staff to report occurrences, they should be regularly informed about action taken under occurrence reporting systems. Employees should not be the subject of any prejudice on the basis of information provided pursuant to this regulation, except the few cases causing foreseeable damage to a person or to property, or seriously compromising the level of safety [10]. The organizations should contribute to the improvement of safety through the introduction of more proactive and evidence based safety systems which focus on accident prevention based on the analysis of all relevant safety information.

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