

UDC 65.012.123:614.8.086

Dorenska A.O.,
assistant of labor economics and management department
Kirovohrad National Technical University

Methodical approaches to organisation of making administrative decisions by hazardous profession personnel

Today's amending living conditions enhance the number of specialized rescue services and hazardous professions (firemen, military men, emergency response specialists (rescuers), guards and guardians, law enforcers and others). Operating under extreme conditions involves high requirements to hazardous profession representatives. Such experts should be able to constantly monitor their health condition, be ready for quick decision-making, adequate assessment of the situation, as well as be able to lay down their life in case of emergency. This requires considerable mental effort and psychological resistance. Their skills and quick decision-making impact the outcome of their work and even life and health of other people.

As it is known, making decision process begins with a statement of the emergency situation and ends with choosing a solution, i. e. choosing an action that will address the problematic situation. The decision-making process is influenced by many different factors. The most important are the following: degree of the risk (there is always a possibility of making wrong or delayed decisions); the time (which is given for the decision-making, and often there is no opportunity to analyze all possible alternatives because of the lack of time); the degree of team support that is granted to the individual (it impacts the team's confidence and the quality of the decision implementation); personal qualities of a person who makes a decision (this is one of the most important factors, because regardless of how rational the decision-making model might be, the person who makes the decision should be responsible for it, thus he/she should be able to make effective decisions).

In addition to these factors emergency response specialists as well as their decision-making are directly impacted by operating conditions. In fact, the emergency response specialist is a person who was appropriately trained and certified, has the ability to and actually is involved into disaster response. Disaster response should be understood as actions in furtherance of searching, rescuing and protecting people, material assets and cultural values, and providing environmental protection in case of emergency situations. Emergency situation is a violation of the normal course of life and activities caused by accident, catastrophe, natural disaster or any other dangerous event that leads to death of people, causes on the facility or in the area any threats to people lives and health, and leads to the destruction of buildings, constructions, equipment and vehicles, causes breakdown of production or transport process, or scathes the environment [2].

Emergency response services of the Ministry of Emergencies of Ukraine are aimed to important social functions: warning, prevention and emergency response. Personnel of emergency response services operate during hydrometeorological, geological, natural or biological emergency situations, while locating at facilities that are chemically hazardous, fire hazardous, potentially explosive, hydrodynamic, and radiative. If we look at the working comfort zones, the emergency response service representatives are situated in the area of adverse conditions (psychological end point of safety perception) while perform their duties,

as well as in unfavorable conditions zone and unacceptable conditions zone (at the physiological capabilities end point) with a high probability of death and injury.

In the context of insufficient, intempestive or unreliable information all management and specialists of the majority of emergency response services should predict possible outcomes under different circumstances, including nature changes and changing degree of risk, when they evaluate alternatives and make decisions. Operating under conditions of incomplete, unclear, and unreliable information management and specialists of the most of emergency response services should assess alternatives and make decisions and at the same time predict possible outcomes in different circumstances and taking into account nature changes and the change in degree of risk. Figure 1 represents the classic version of the decision-making.

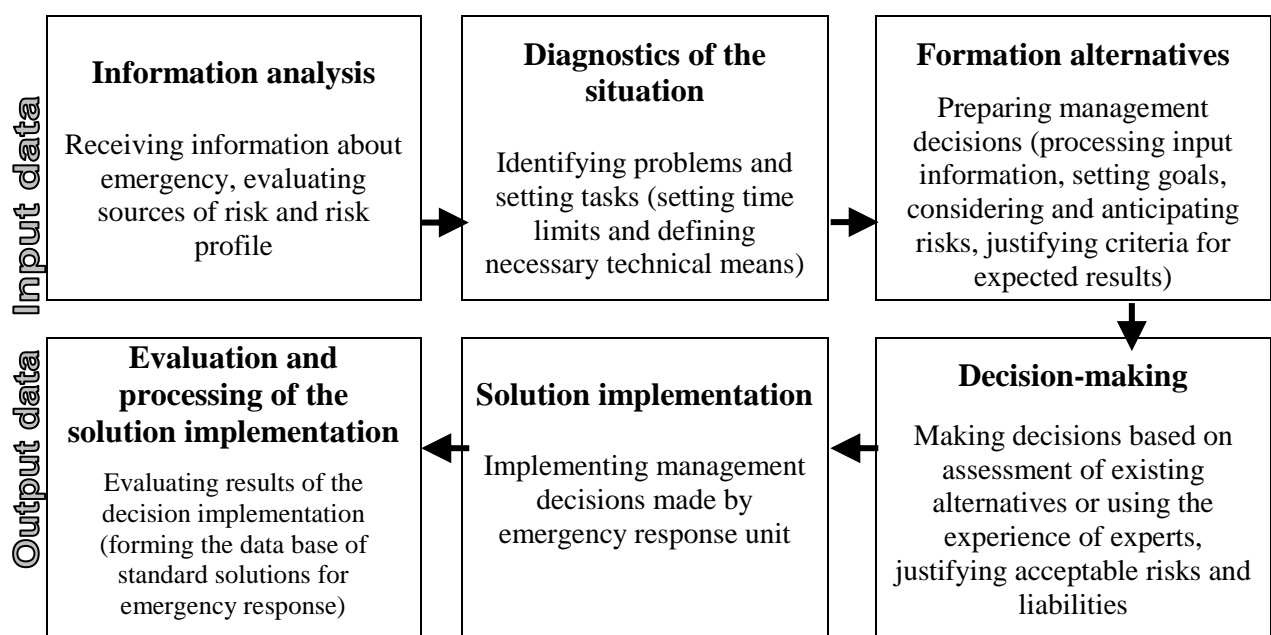


Figure 1 – Block schematic diagram of management decision-making during emergency response

Source: composed by the author.

The risk arises when decisions are made under conditions of uncertainty, strife, lack of professionalism and high risk. For hazardous profession personnel the danger is a stress factor that reflects individual's understanding of the fact that some circumstances (fire, act of God, accident, disaster or the necessity to rescue affected people) may cause physical injury or psychological harm, provoke an accident resulting in injuries and possibly lead to death.

When faced with uncertainty, the head of emergency response unit can use various opportunities: 1) try to get additional relevant information and re-consider the issue taking it into account; 2) operate in accordance with past experience and intuition, and make assumptions regarding the probability of events.

To improve and optimize the process of making decisions by responders it's proposed to use methodology for training to operate under hazardous and dangerous situations. It is based on emergency events and actions simulation model. Using this model during personnel trainings will allow emergency response service representatives to make decisions based on pre-simulated situations, that take into account acquired knowledge and experience. A functional block diagram of such a simulation model is shown on Figure 2.

Proposed model allows to generate adequate personnel behavior during emergencies, which begins with recognition of the situation as hazardous, origination of demands in efficient response, developing an adequate program of actions, and ends with making decisions to implement this program. But it should be noted that it is necessary to carry out continuous evaluation of the management decisions effectiveness, based on information and analytical support, which involves operational data collection and processing with the use of mathematical modeling.

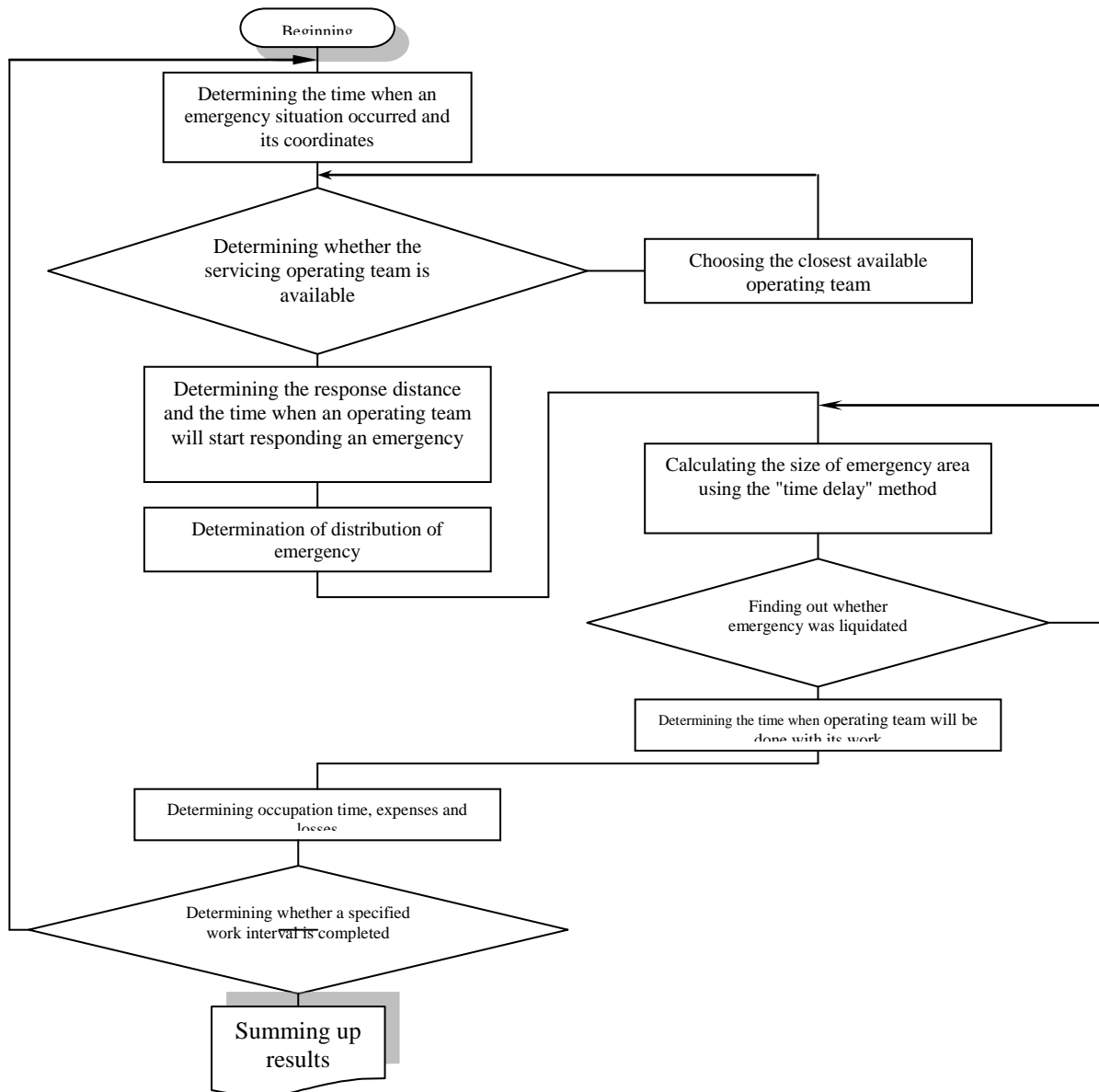


Figure 2 – Functional block diagram of a simulation model

Source: [1].

References

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