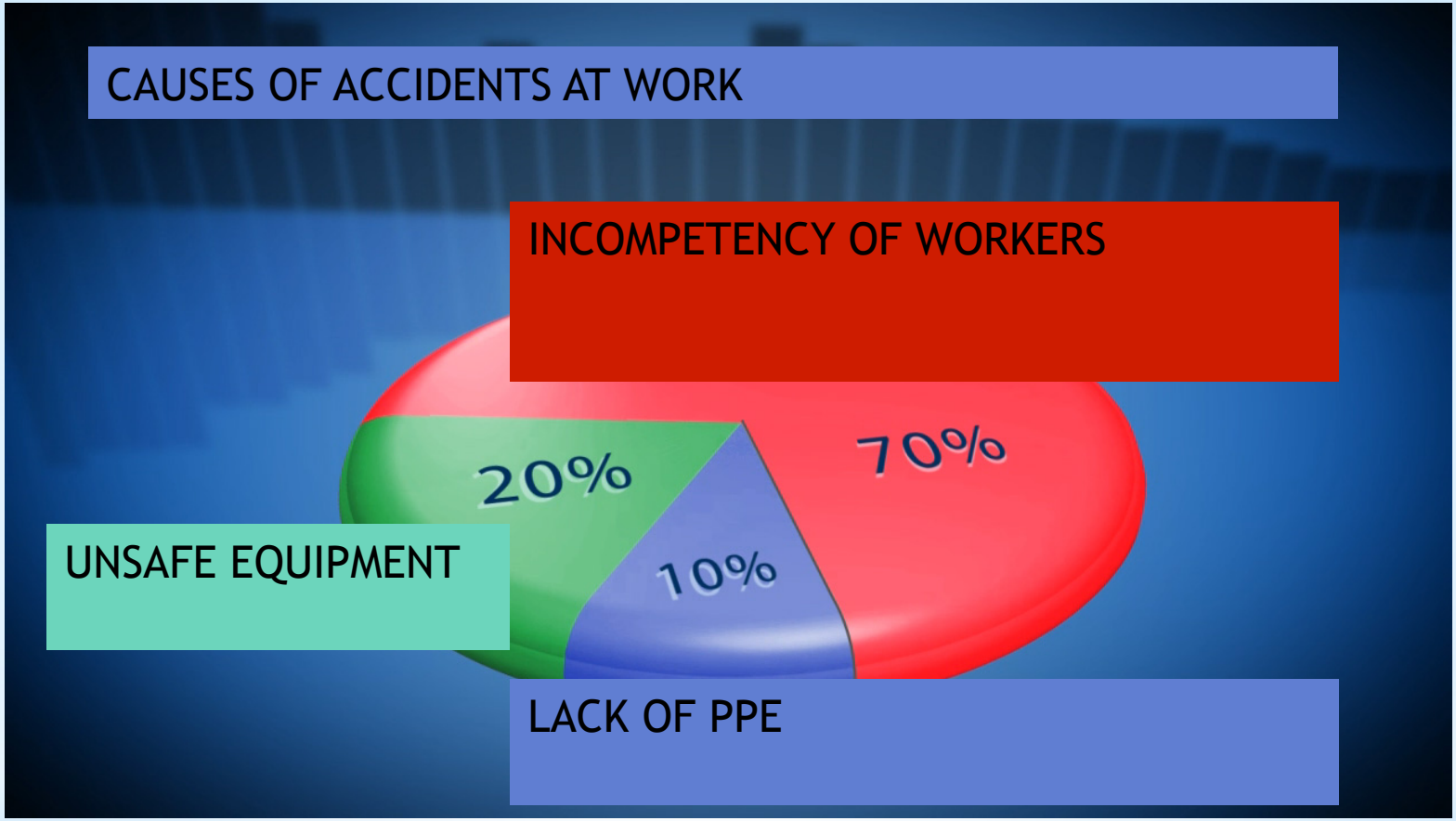
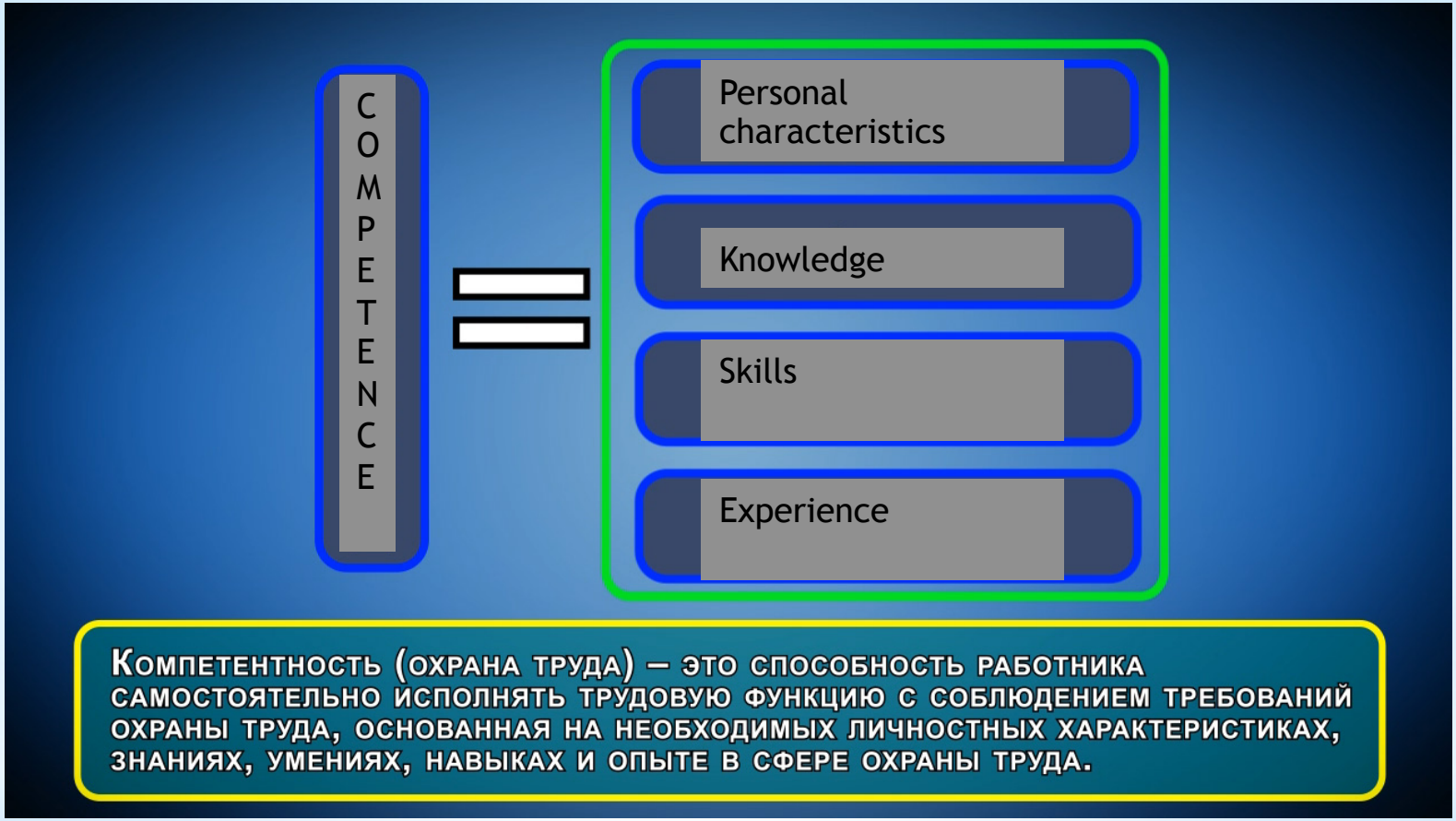
Video informational complex for development and control of workers' competence according to the Occupational Safety requirements.

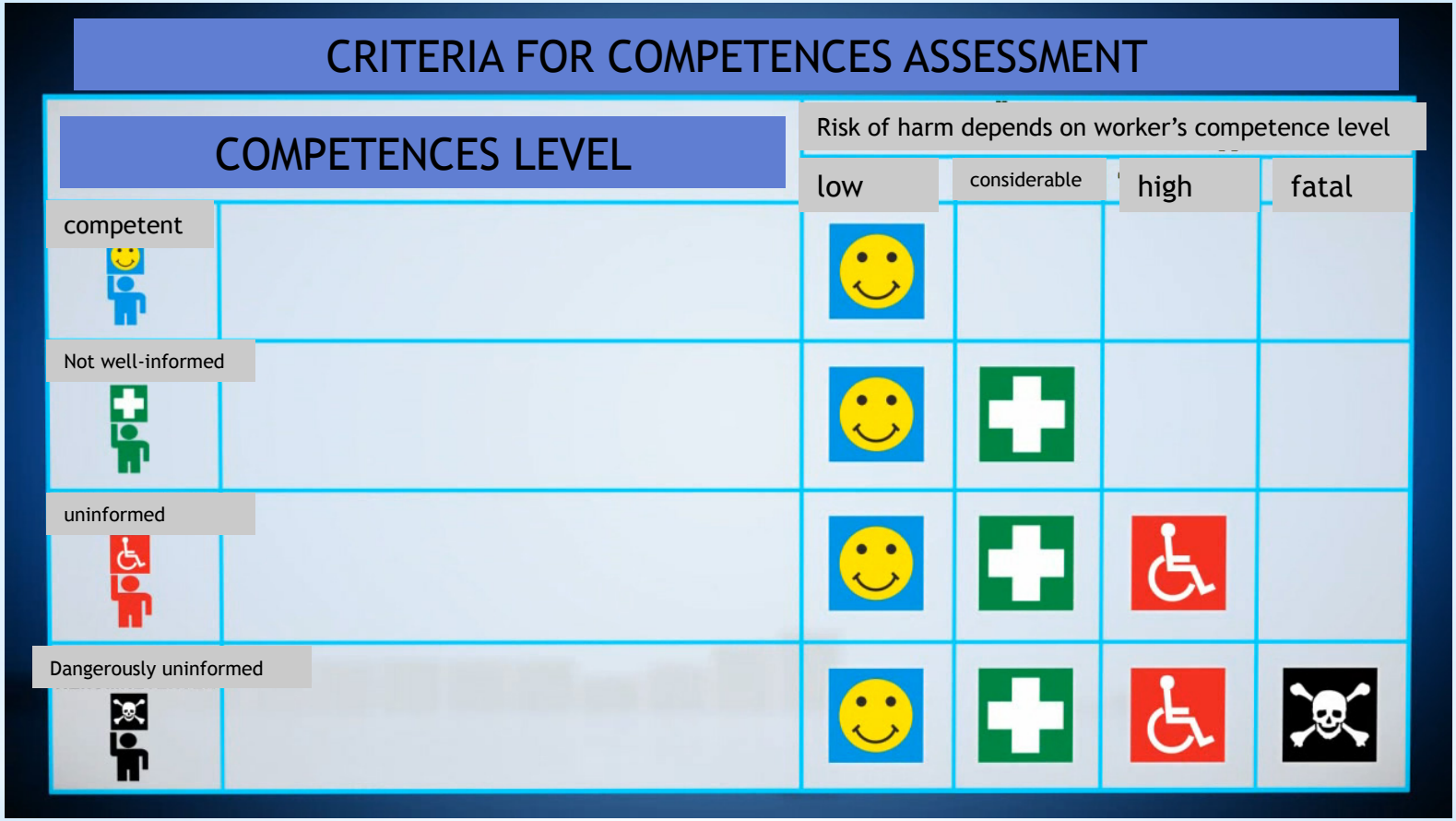


According to statistics the main causes of occupational accidents are workers' incompetent actions.

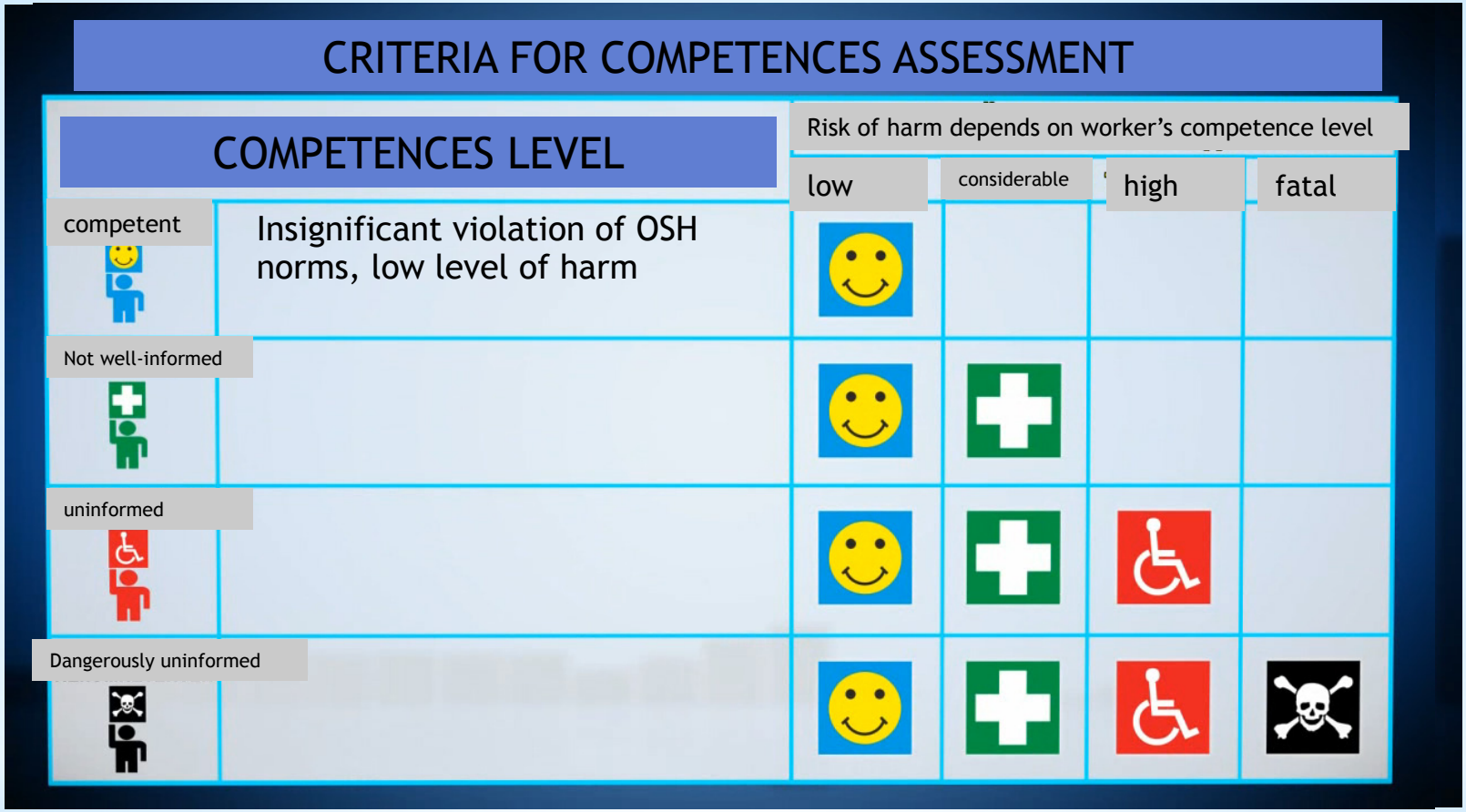
The lack of protective equipment and the usage of unsafe tools are left in the background.



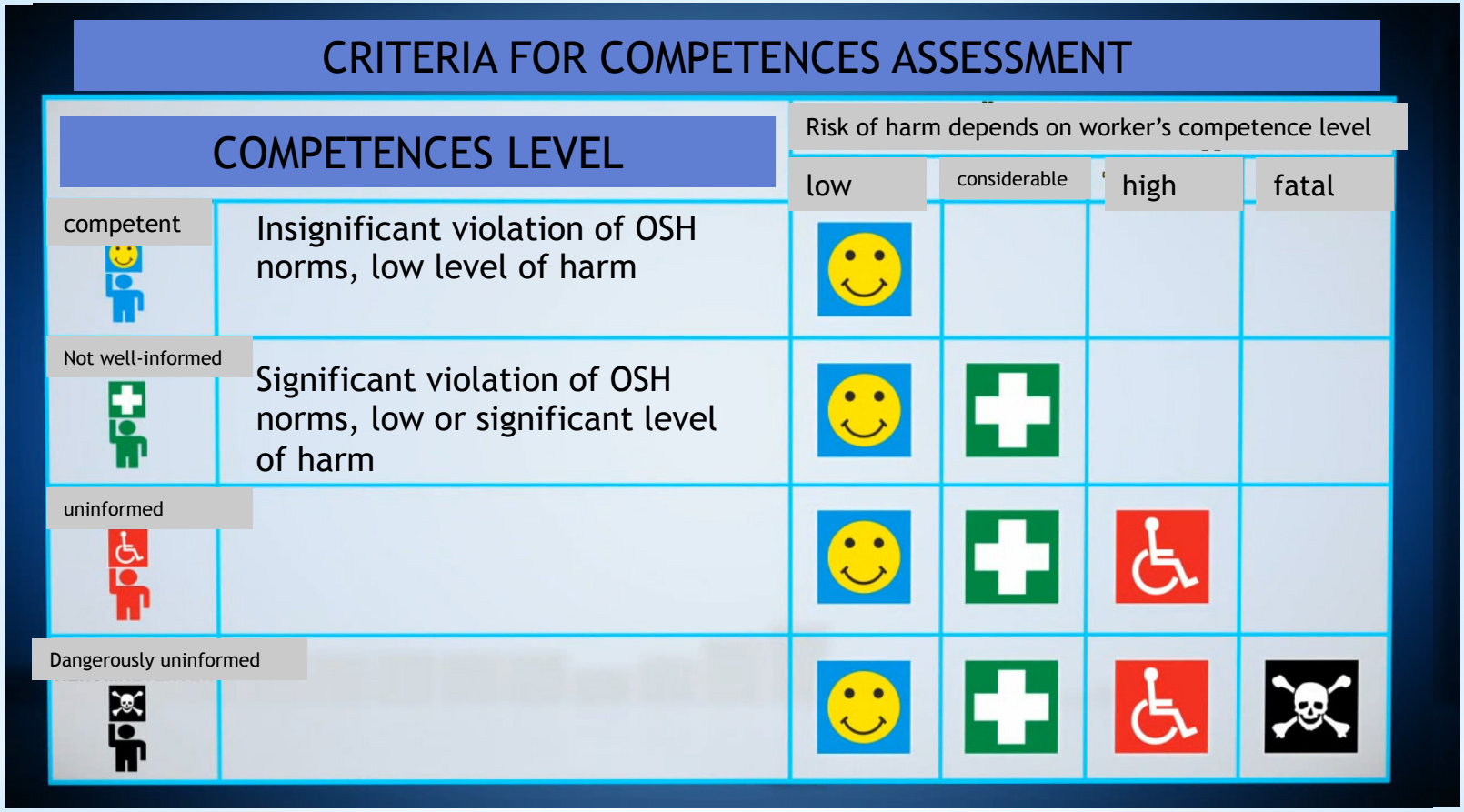
The competence in occupational safety is the worker's ability to work independently, observing the occupational safety requirements. This ability is based on personal traits, knowledge, skills, habits of work and the experience in occupational safety.



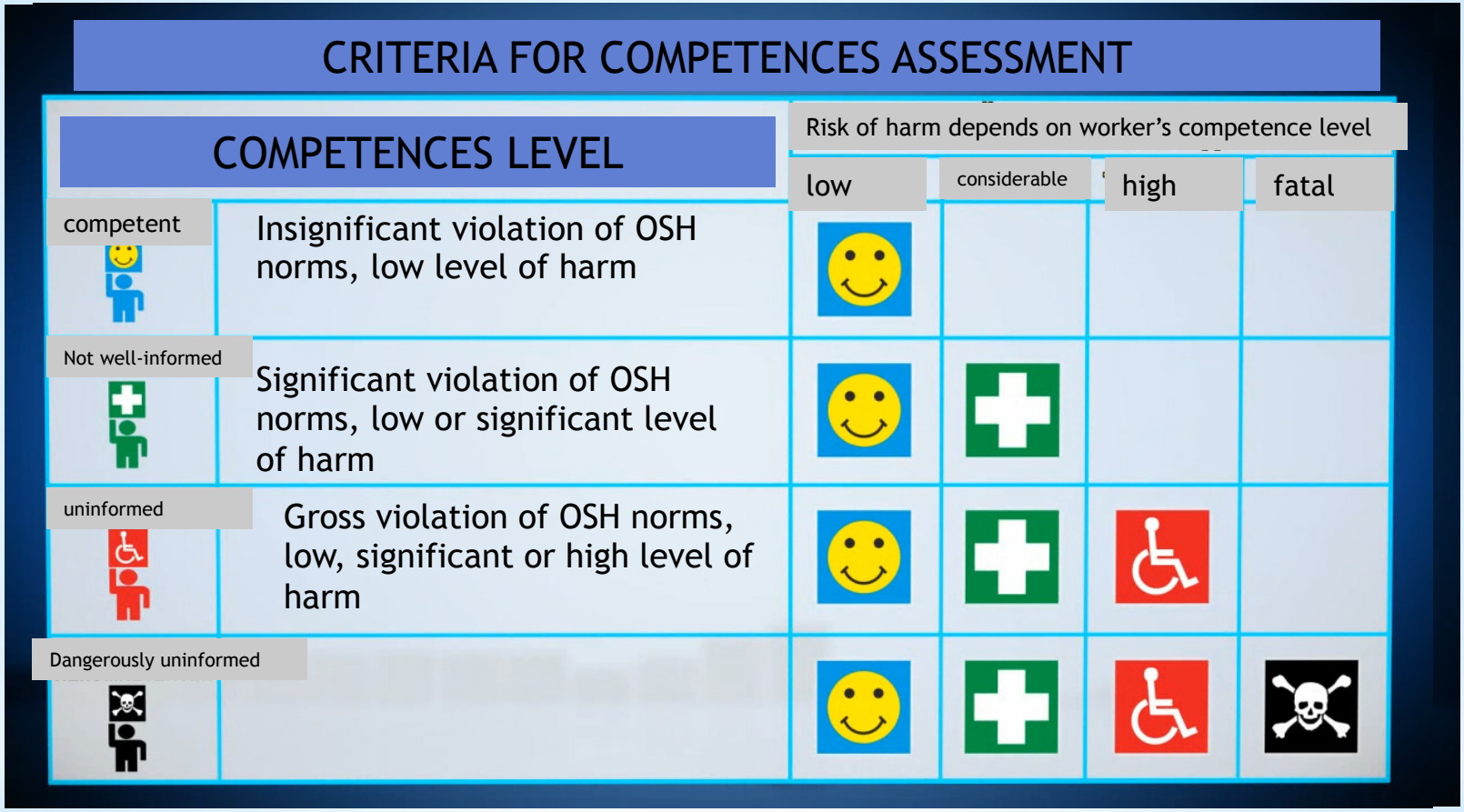
The probable harm level depends on worker's competence level. The competence is divided into 4 levels:



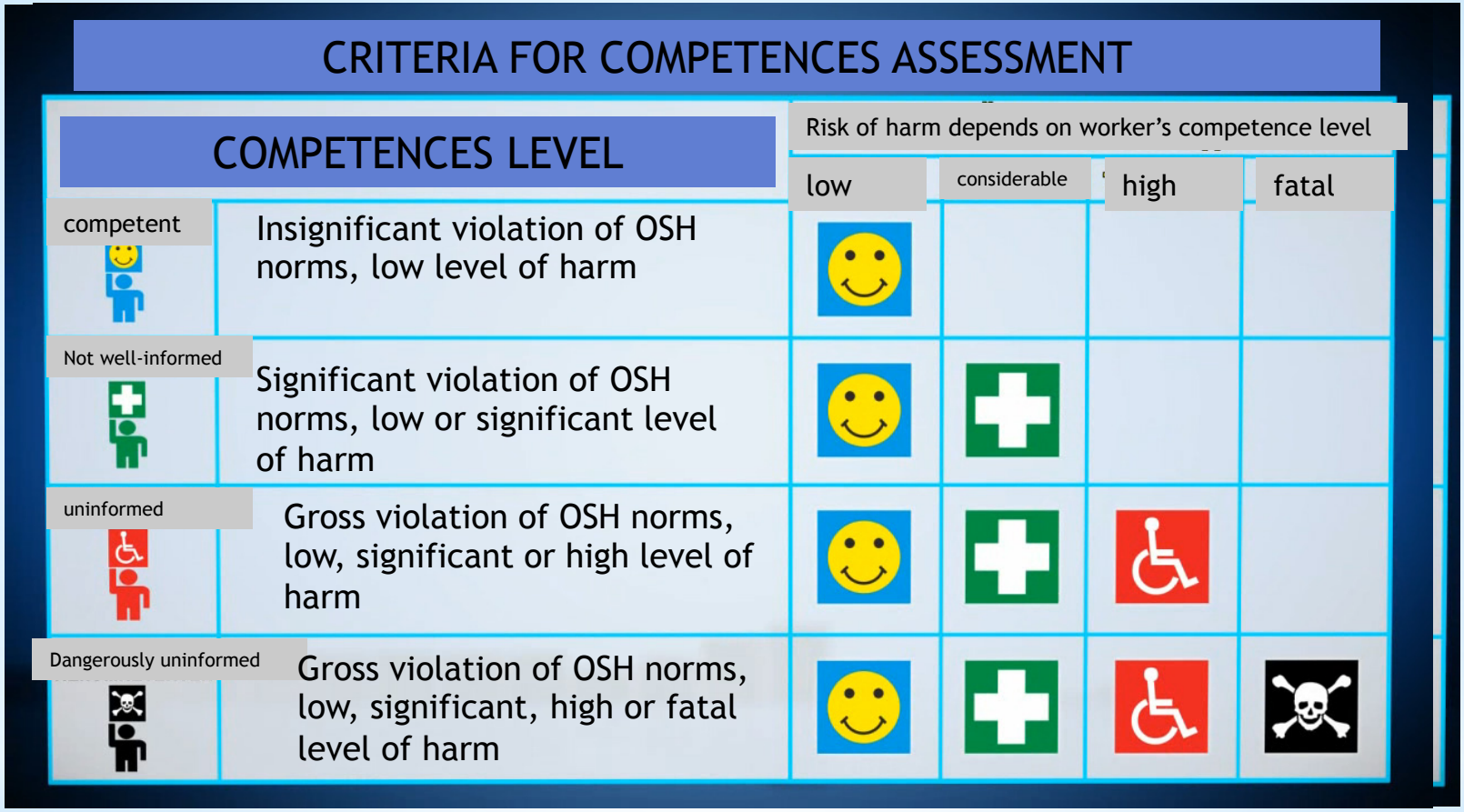
- the actions of the competent worker may lead to the insignificant breach of occupational safety requirements, low risks realization and low harm to health;



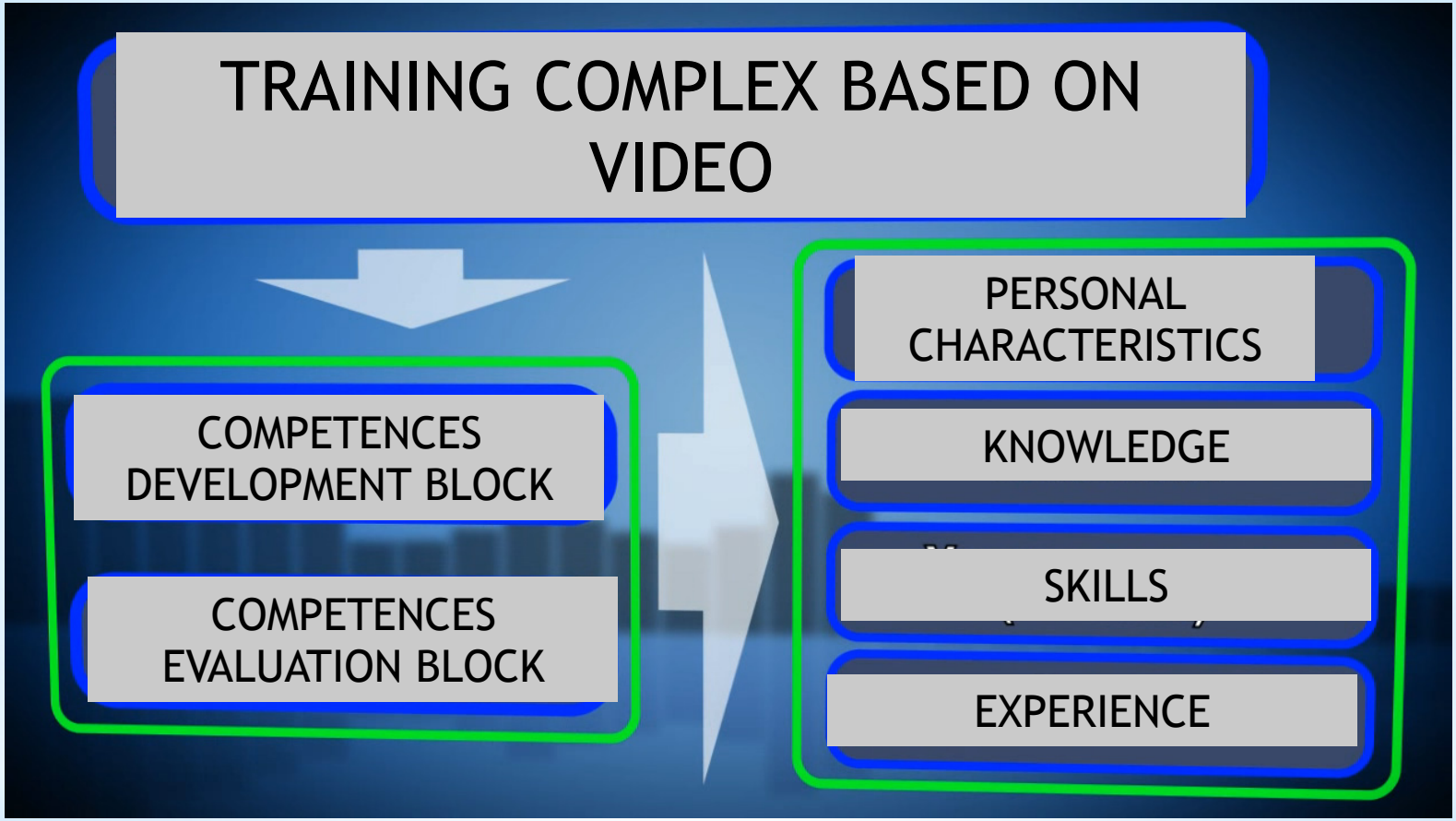
- the actions of uninformed worker may lead to the essential breach of occupational safety requirements, essential risks realization and essential and low harm to health;



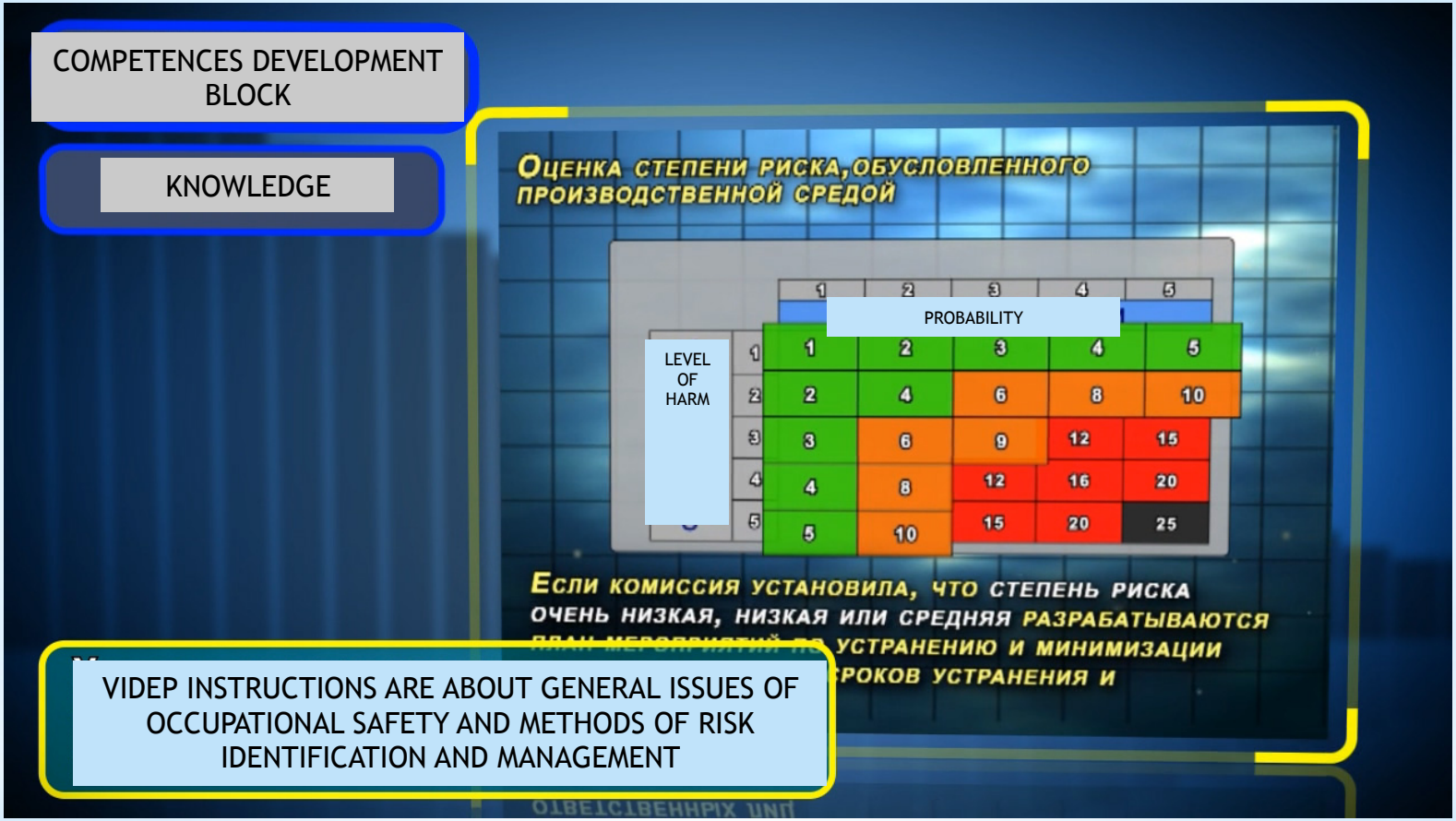
- the actions of incompetent worker may lead to the rough violations of occupational safety requirements, high risks realization, serious injury, essential and low harm to health;



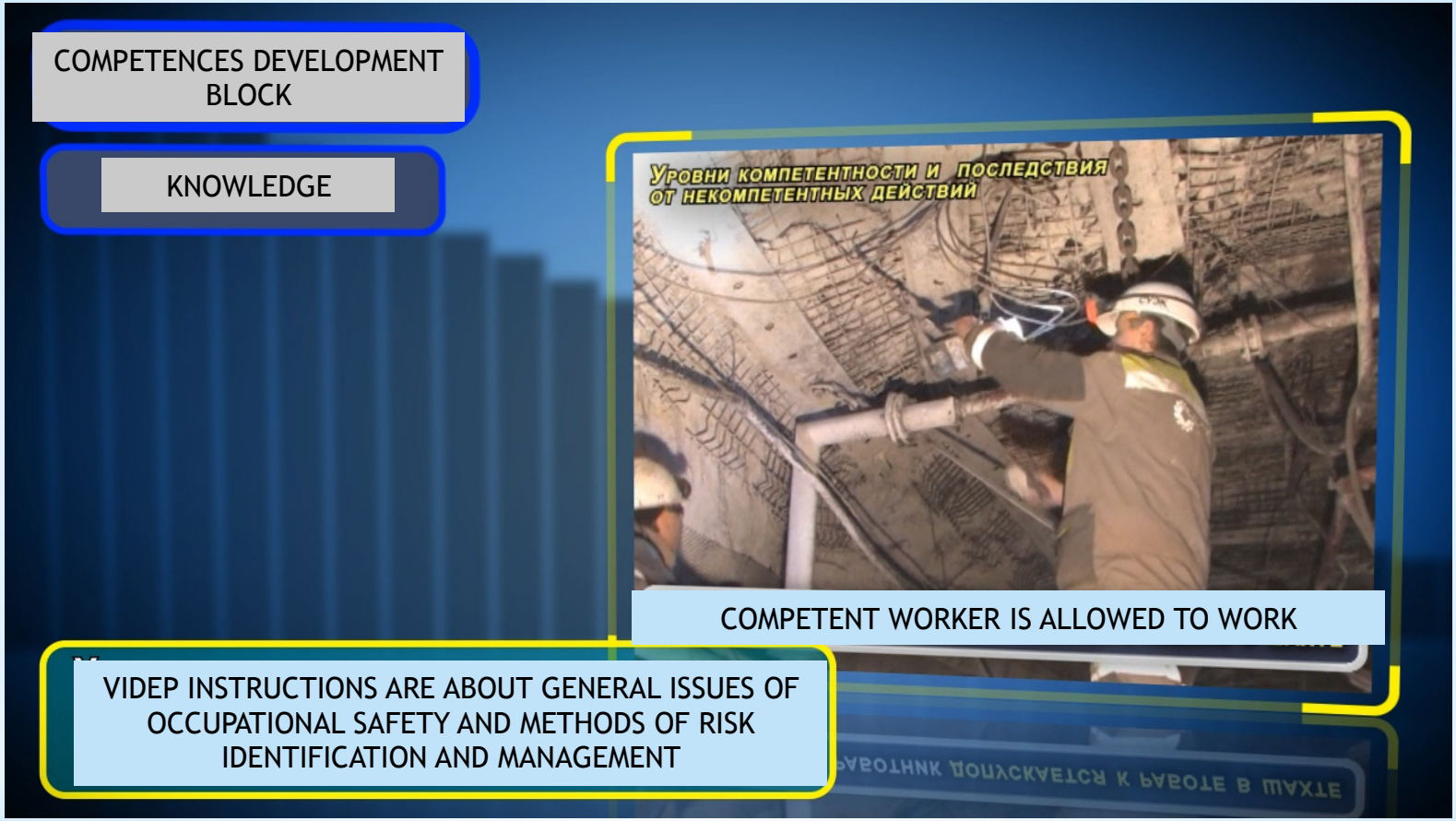
- the actions of dangerously incompetent worker may lead to the fatal violations of occupational safety requirements, fatal risks realization, the harm to health of all the levels, including death.



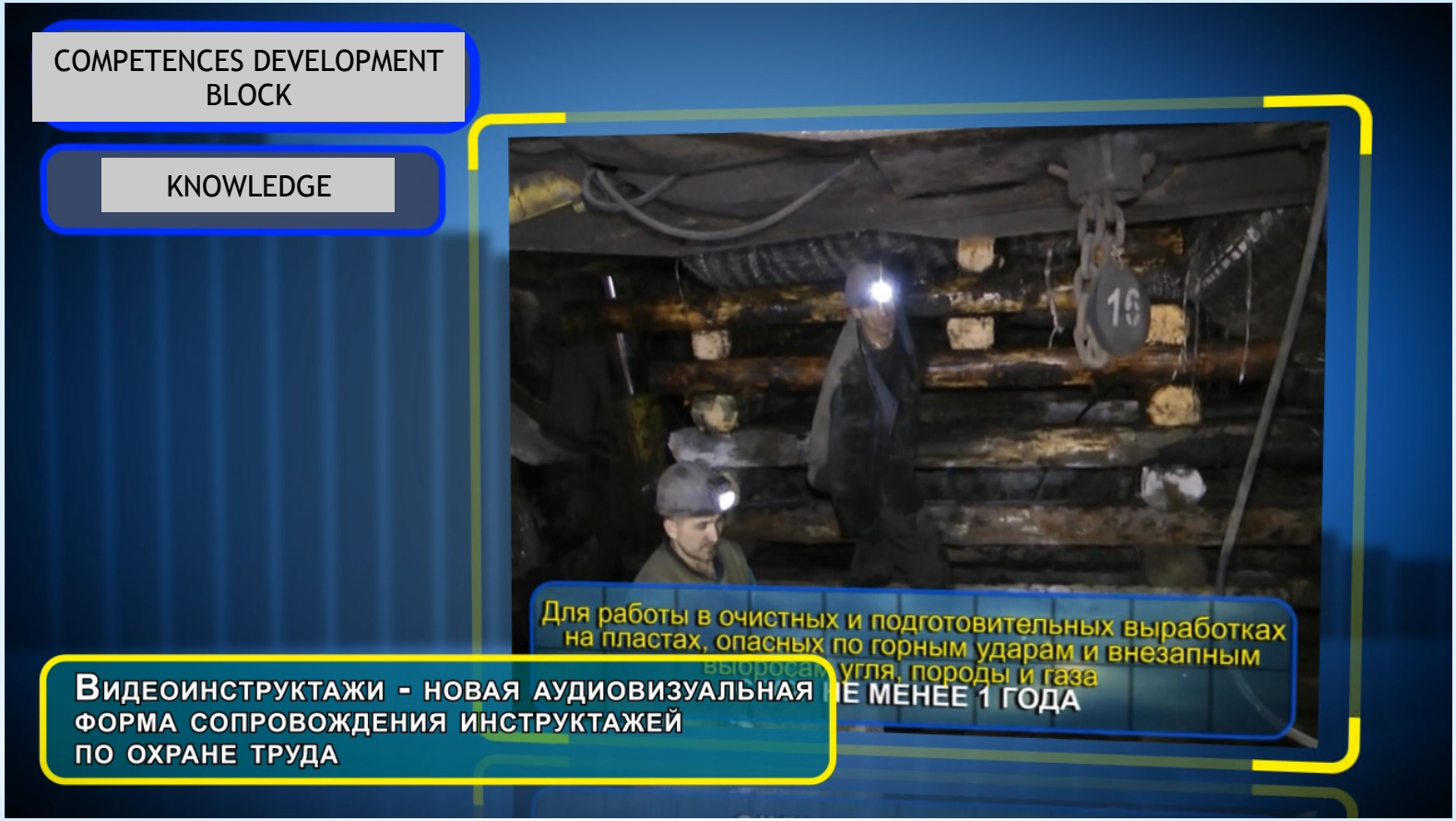
The modern video informational technologies can be conventionally divided into the section of worker's competence development and the section of control of the worker's competence level.
For the development of worker's competence we use innovative methods, which influence upon different components of the competence.



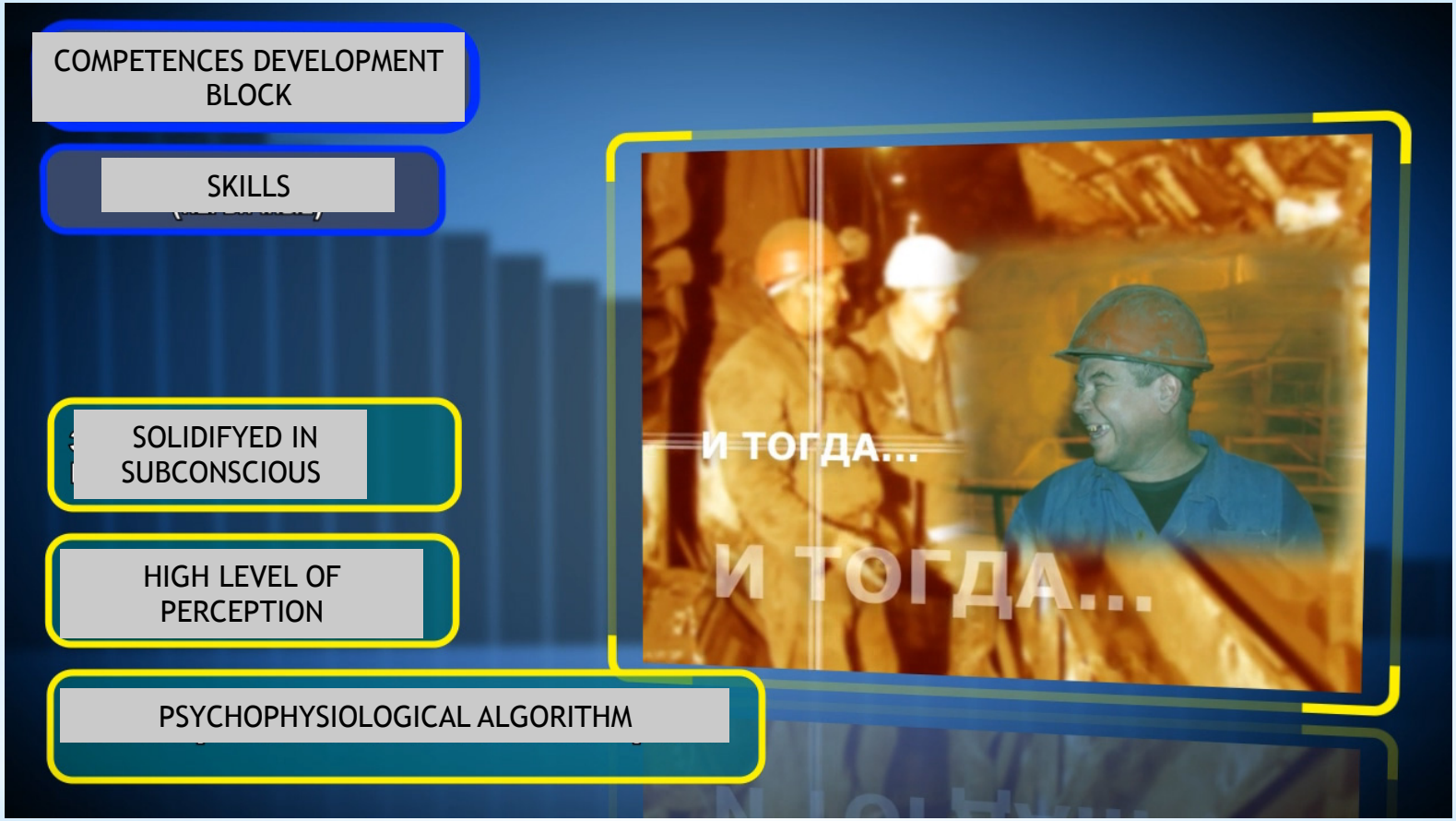
Educational video courses and video films are dedicated to the general issues of occupational safety and to the methods of risk detection, evaluation and management.



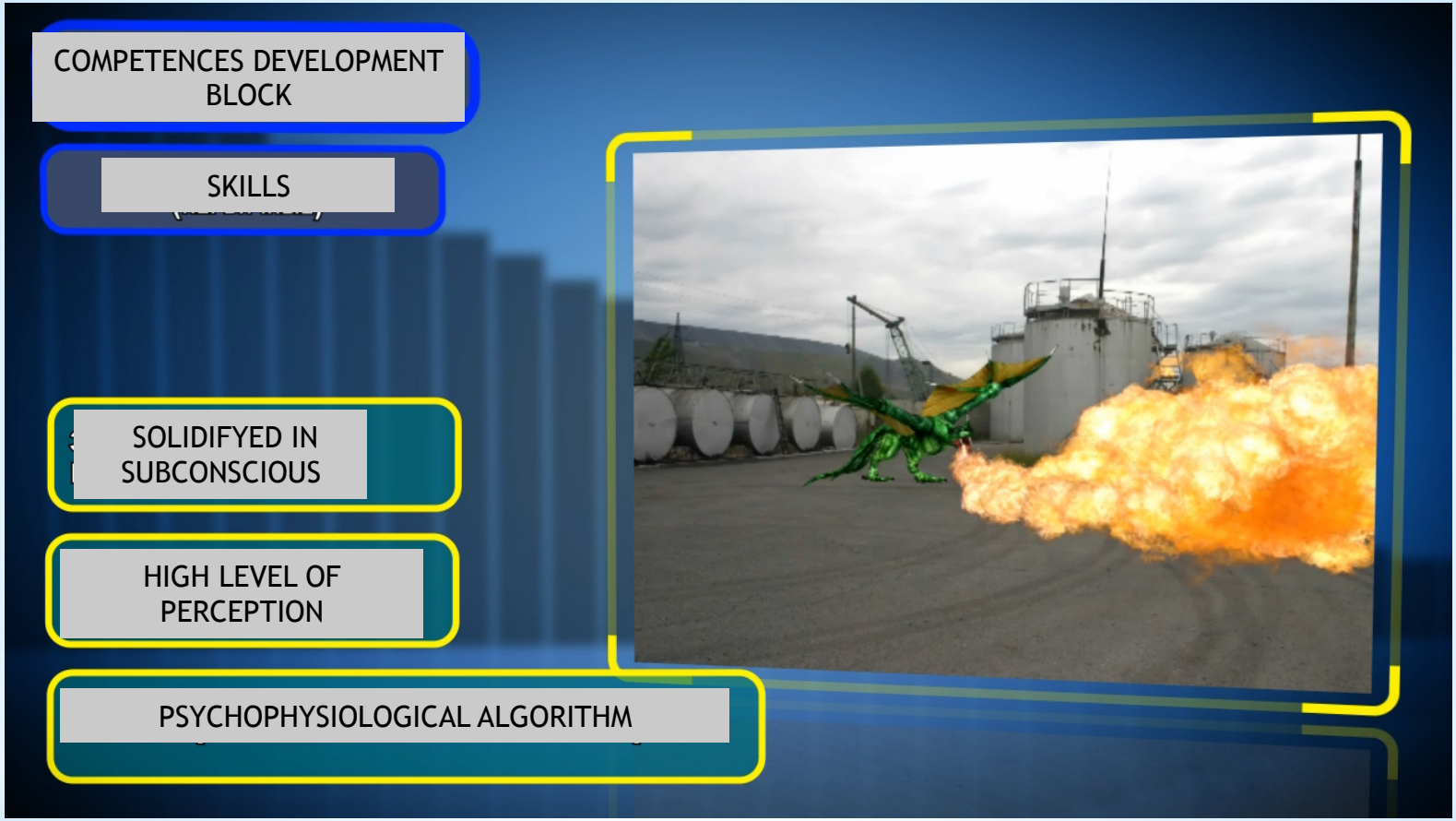
Their aim is to form at worker's the initial habits of safe work, to inspire in worker the confidence, that his personal competent actions increase his safety.



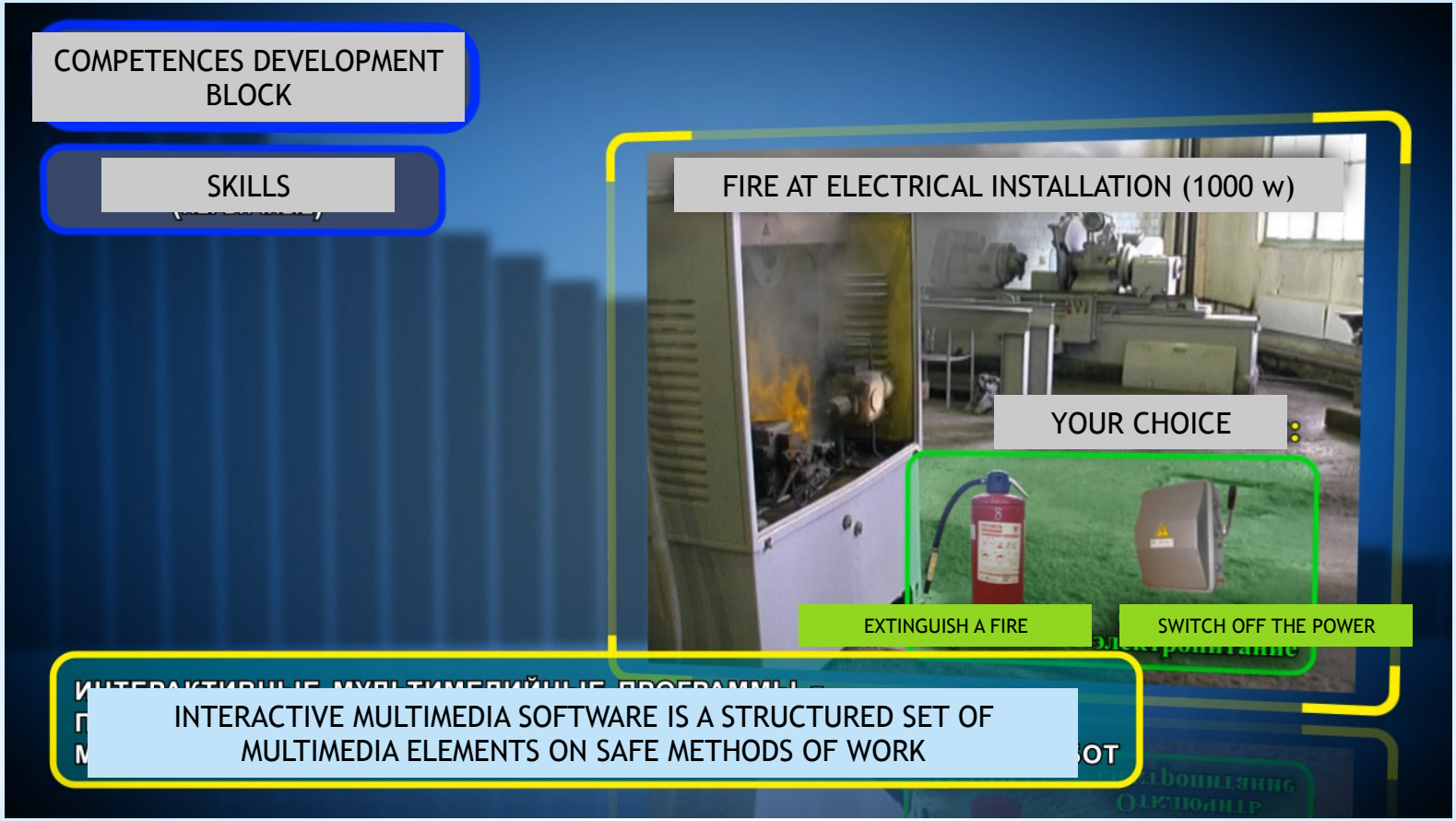
The video instructions are the new audio-visual form of assistance during the occupational safety trainings. It includes the review of harmful and dangerous occupational factors, safe methods and habits of work, and also the requirements of occupational safety.



Kuzbass-COT developed a special psychophysiological algorithm, that enables the high level of perception of the instructions' texts and the efficient consolidation in the workers' inner space.

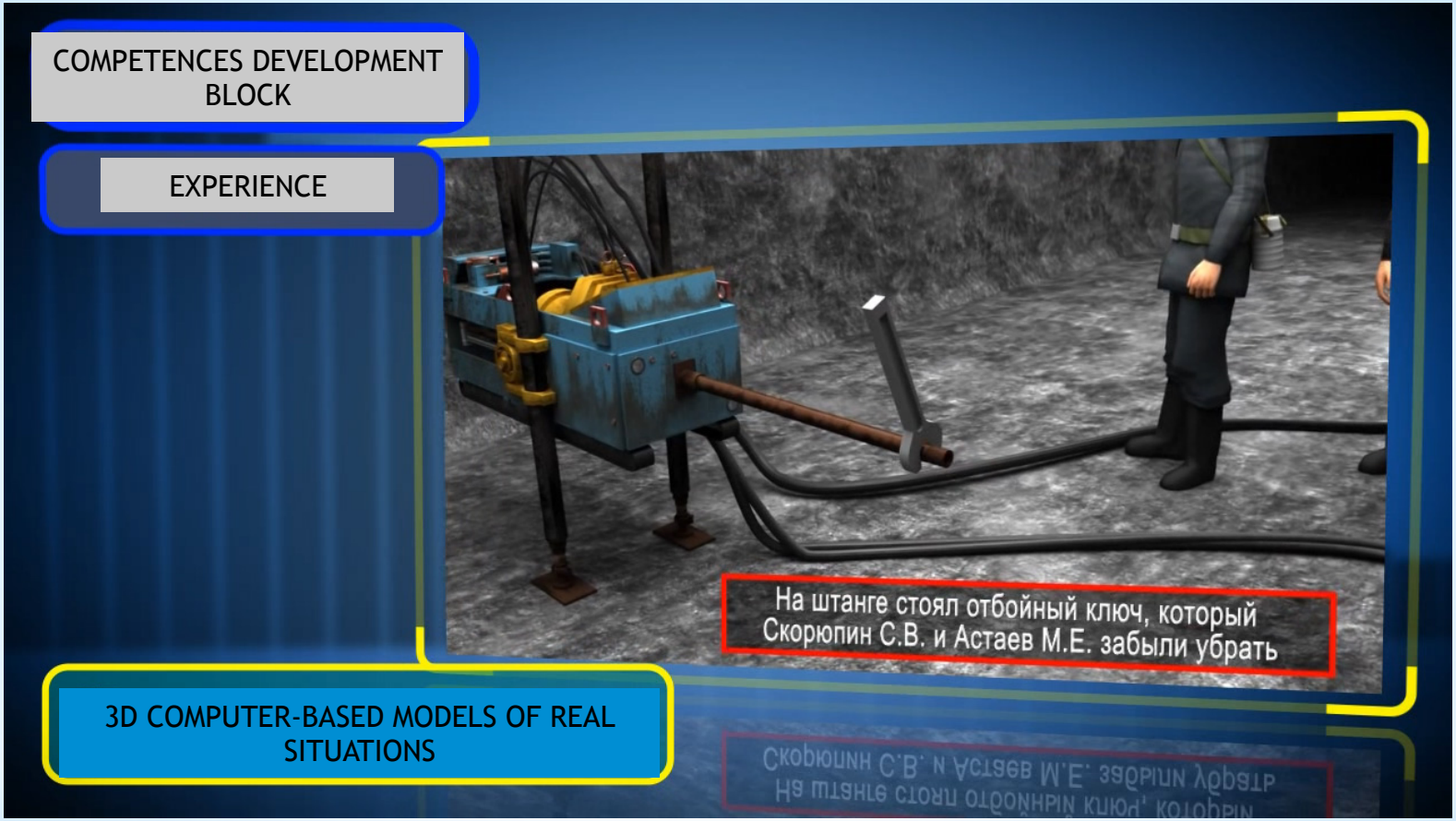


In the algorithm are widely used the psychological techniques, which improve the quality of memorizing of the educational issues.

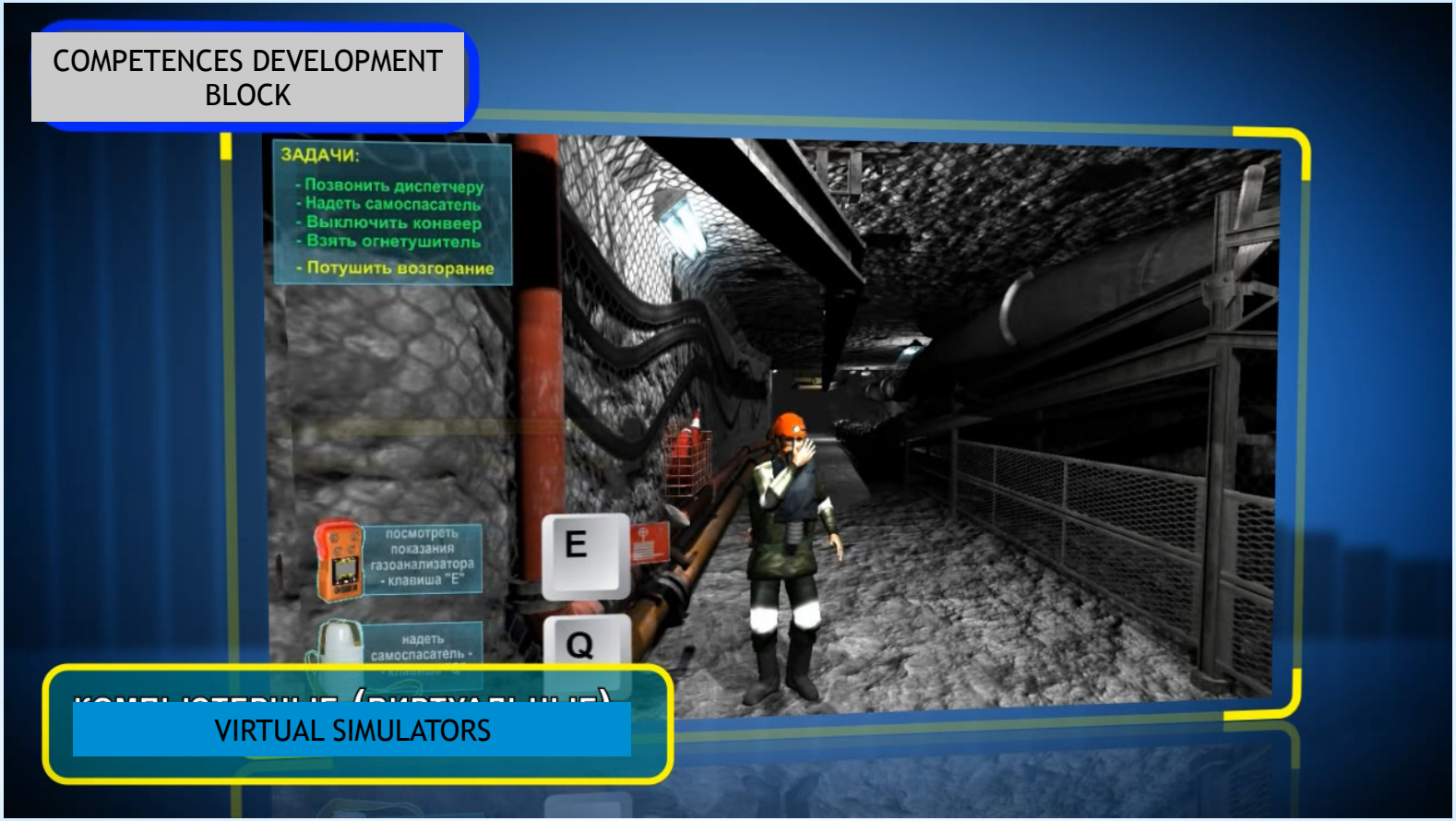


We also use interactive multimedia programs, which are the structured bank of multimedia pieces of safe work, where the trainee is not only a spectator, but the character, who has to make decisions and perform certain actions. The consequences of incorrect actions are also demonstrated.

The transfer of experience is realized at the expense of analysis of real accident. The detailed analysis on the example of 3D model piece, showing the breach of occupational safety requirements and its tragic consequences, involves the strongest, so called, emotional memory and helps in more efficient memorizing of the information.

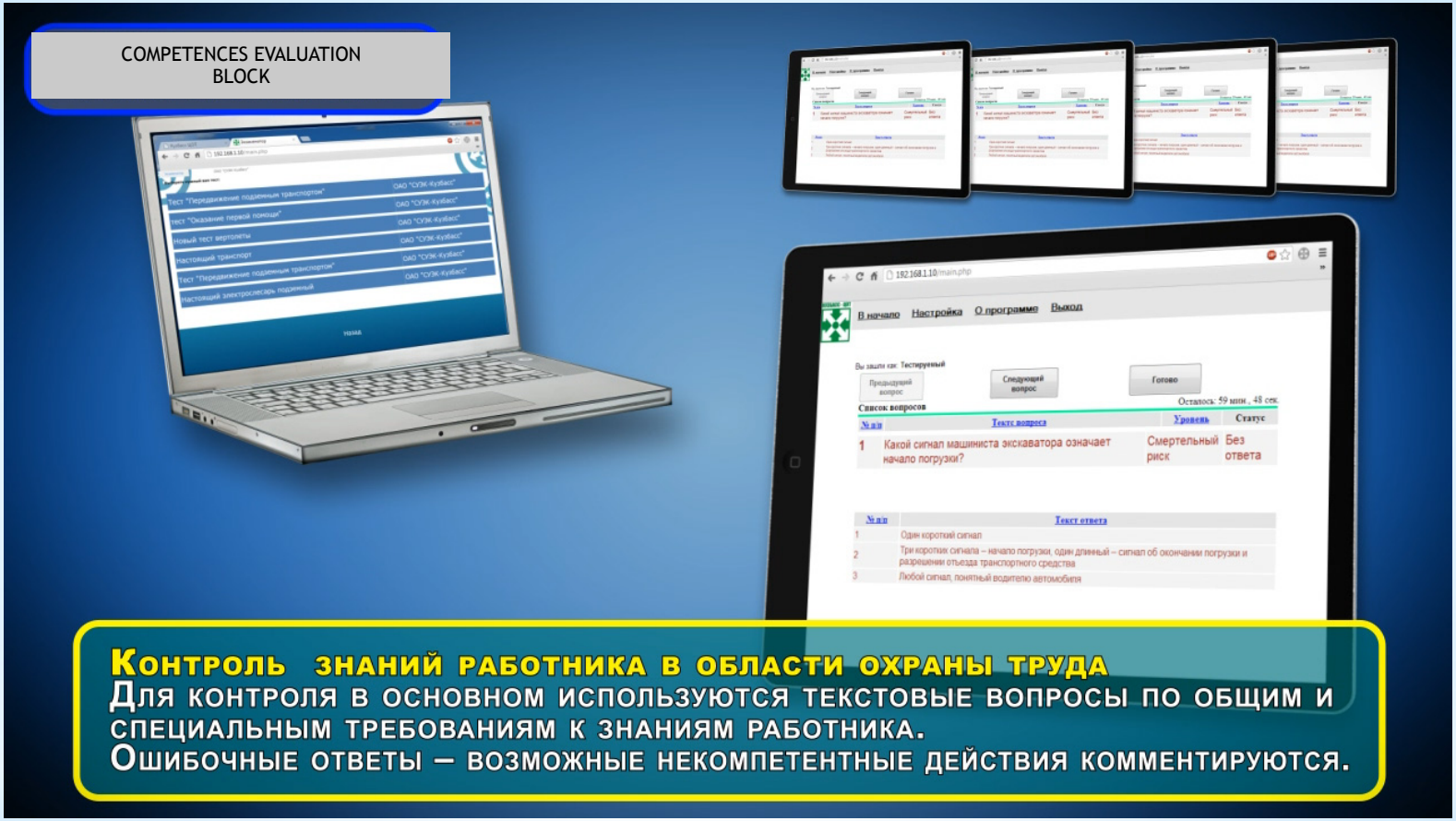


From this point on in the dangerous situation the emotional memory is activated and the analysis is remembered. As a result the worker acts reasonably and more carefully.

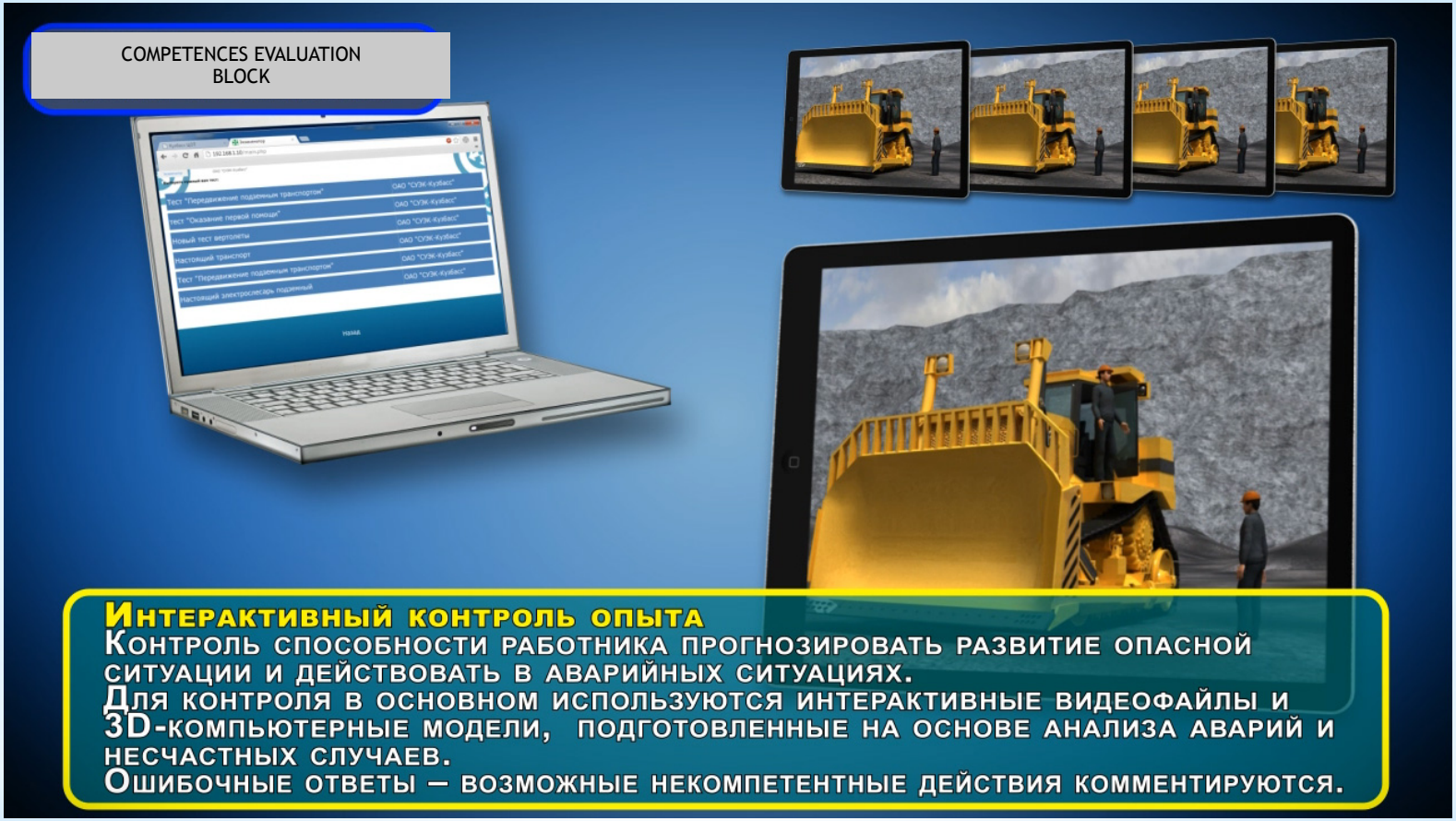


The combined development of all the components of worker's competence is provided by computer virtual simulator. As the tragic practice shows, the mass base of people (60 %) act impulsively, in a random manner, panic, when the serious danger appears.

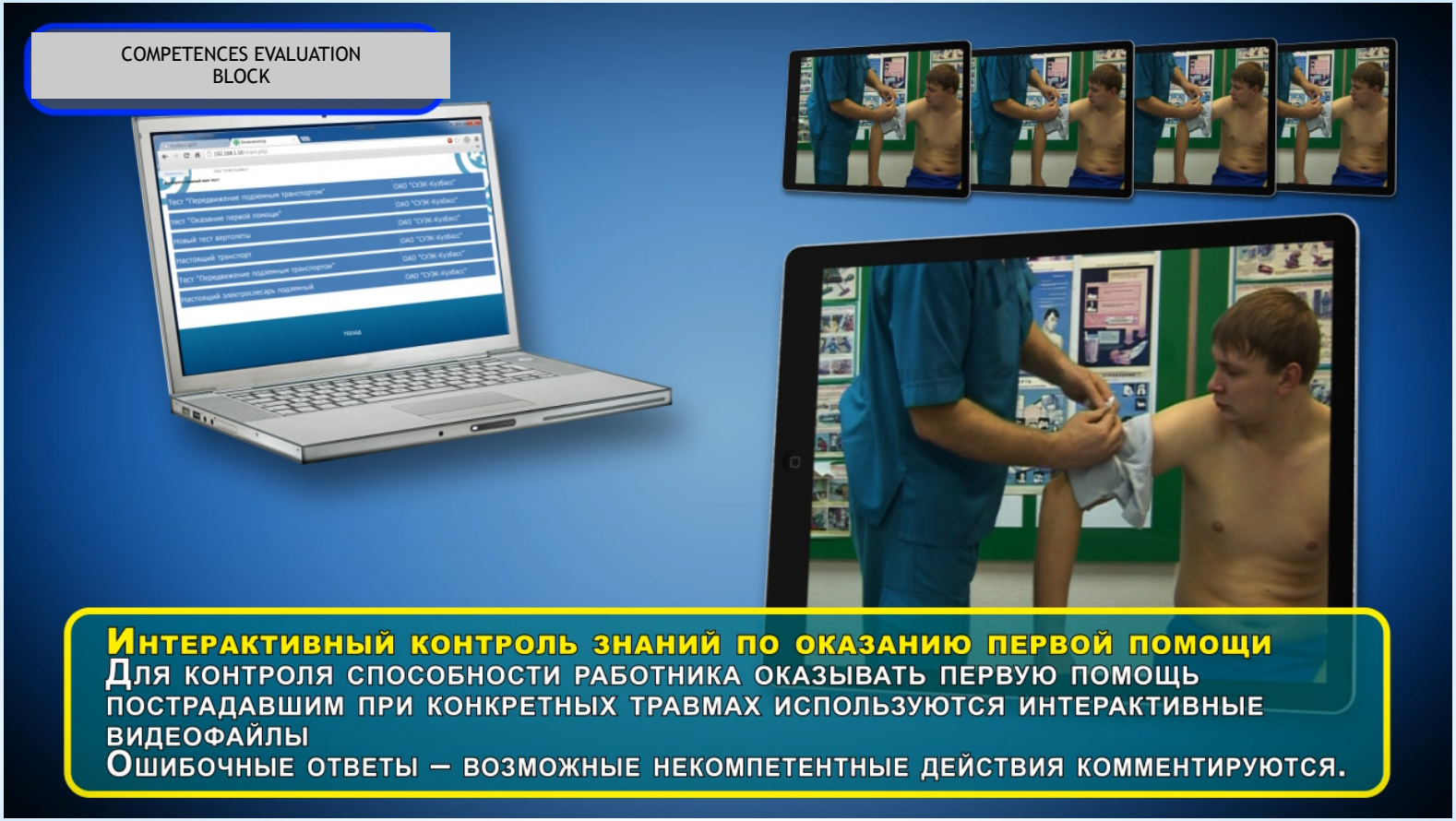
The preliminary trainings on correct actions with the usage of personal and collective virtual simulators identically provide the decrease, the supression of the panic factor in emergency situation.



To evaluate the worker's competence and its components we use special examiner, which provides the control of worker's knowledge in occupational safety. For control are generally used text questionnaires on basic and special requirements. Incorrect answer and probable incompetent actions are commented.

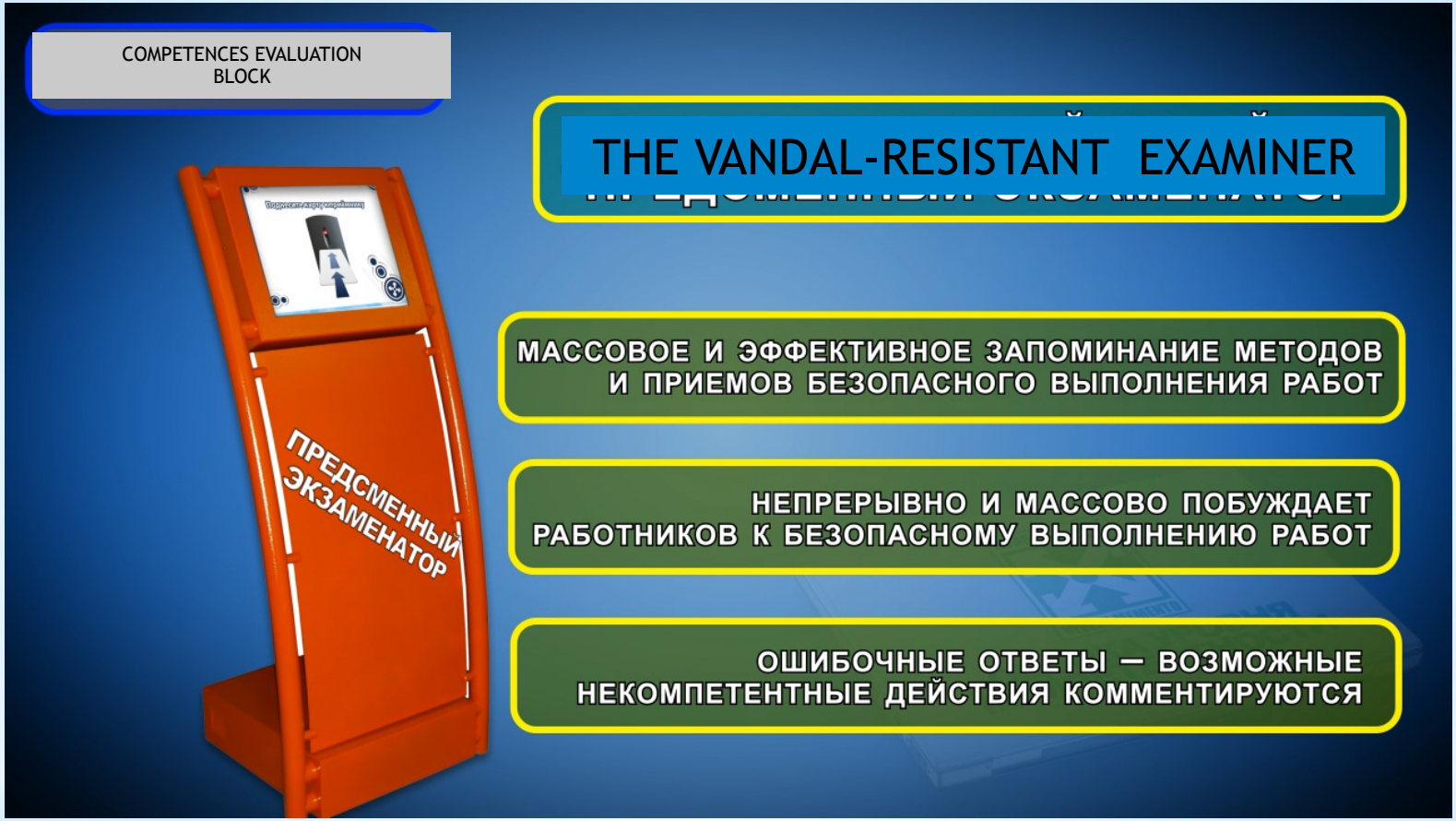


Interactive control of experience. The control of worker's ability to predict the development of dangerous situation and to act in emergency situations. For control are generally used interactive video files and 3D models, created on the basis of analysis of accidents. Incorrect answer and probable incompetent actions are commented.



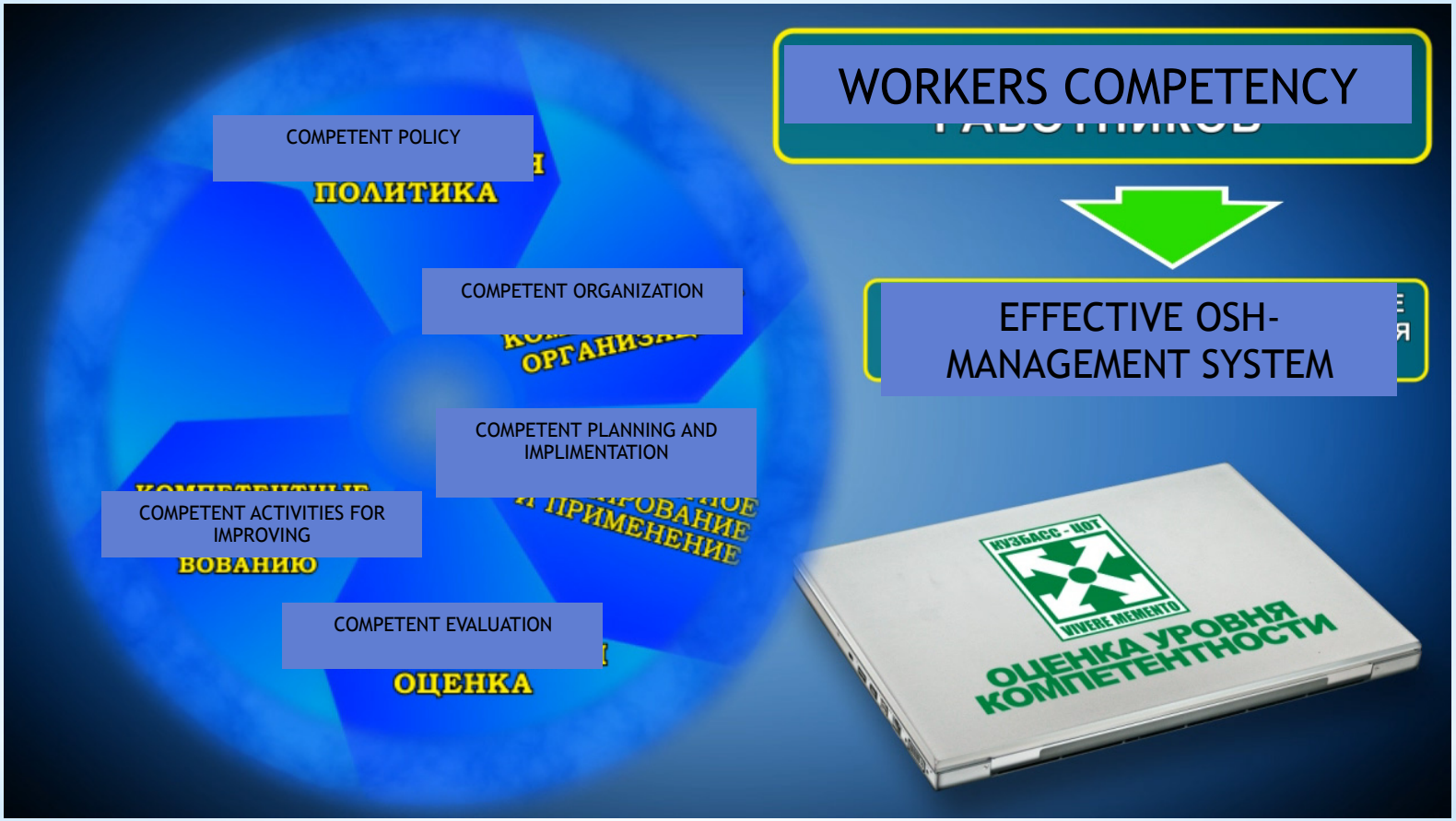
Interactive control of first aid knowledge. For control are generally used interactive video files. Incorrect answer and probable incompetent actions are commented.

The examiner is created on a base of client-server architecture, supports the wireless data transmission and provides the possibility to use budget-priced tablet PCs. The results of examination are collected in the single data base of workers' competence.

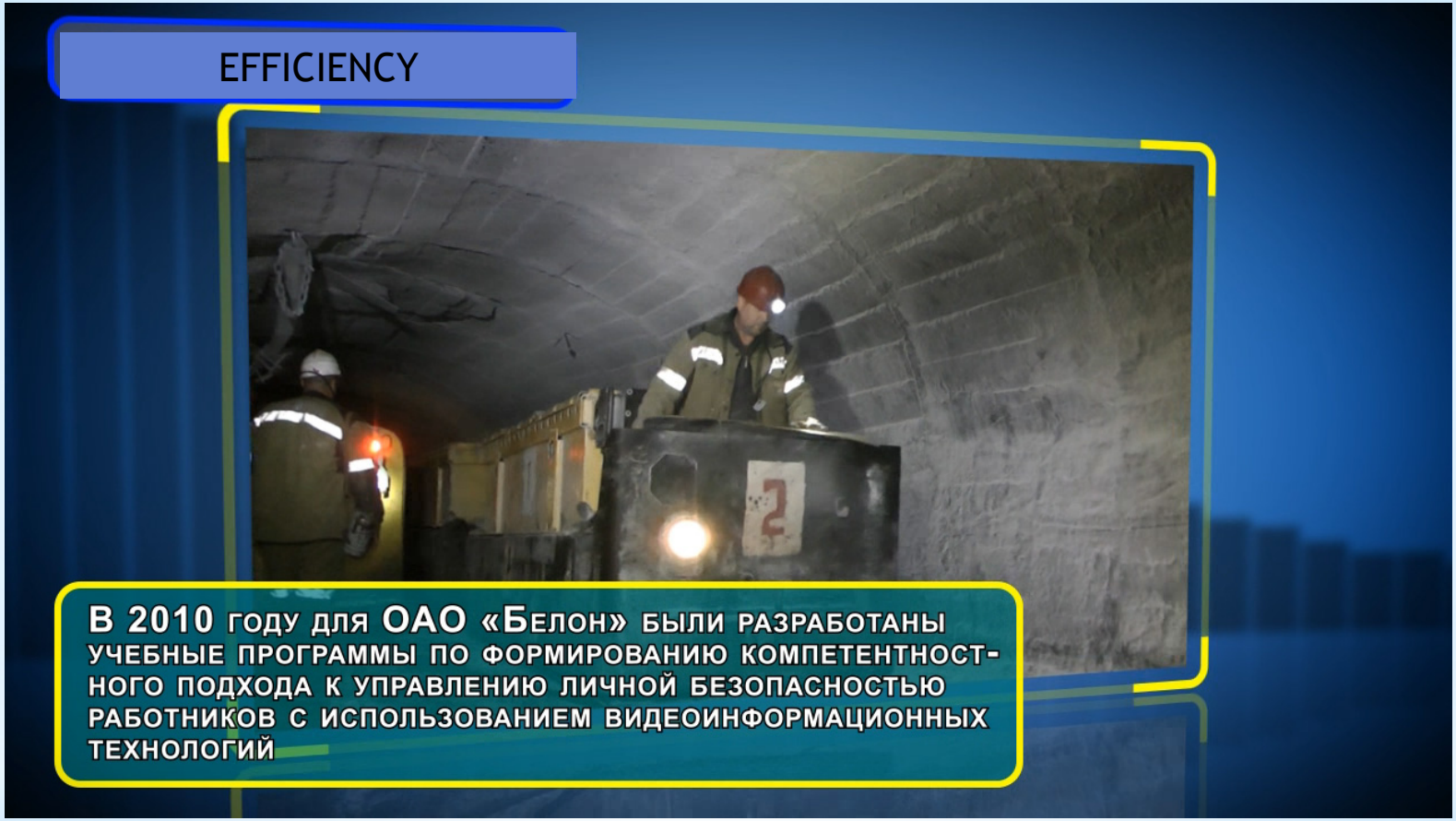


The vandal resistant before shift examiner makes possible the automation of massive personal control of workers' knowledge through rapid (10-20 seconds) testing before the shift. It guarantees massive and efficient memorizing of methods and habits of safe work.

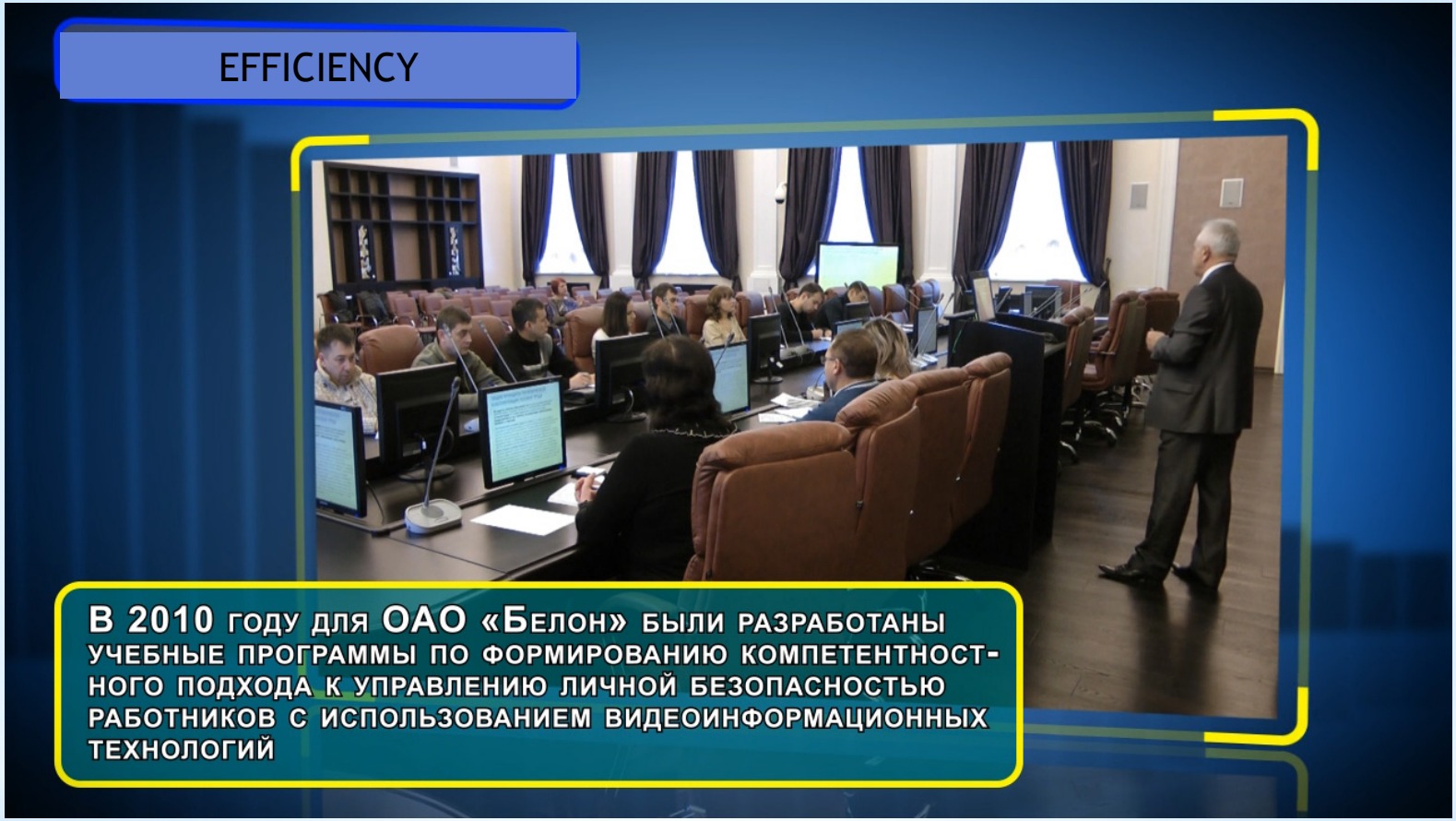
It enforces the workers to work safely permanently and massively. Incorrect answer and probable incompetent actions are commented. Computer examiner “Competence level control” and before shift examiner actively stimulate workers’ self-tuition in occupational safety issues.



Objective and operative control and maintenance of adequate level of workers' competence provide the efficient functioning of all the main elements of the occupational safety management system, such as: competent policy, competent organization, competent planning and implementation, competent evaluation, competent action on improvement.

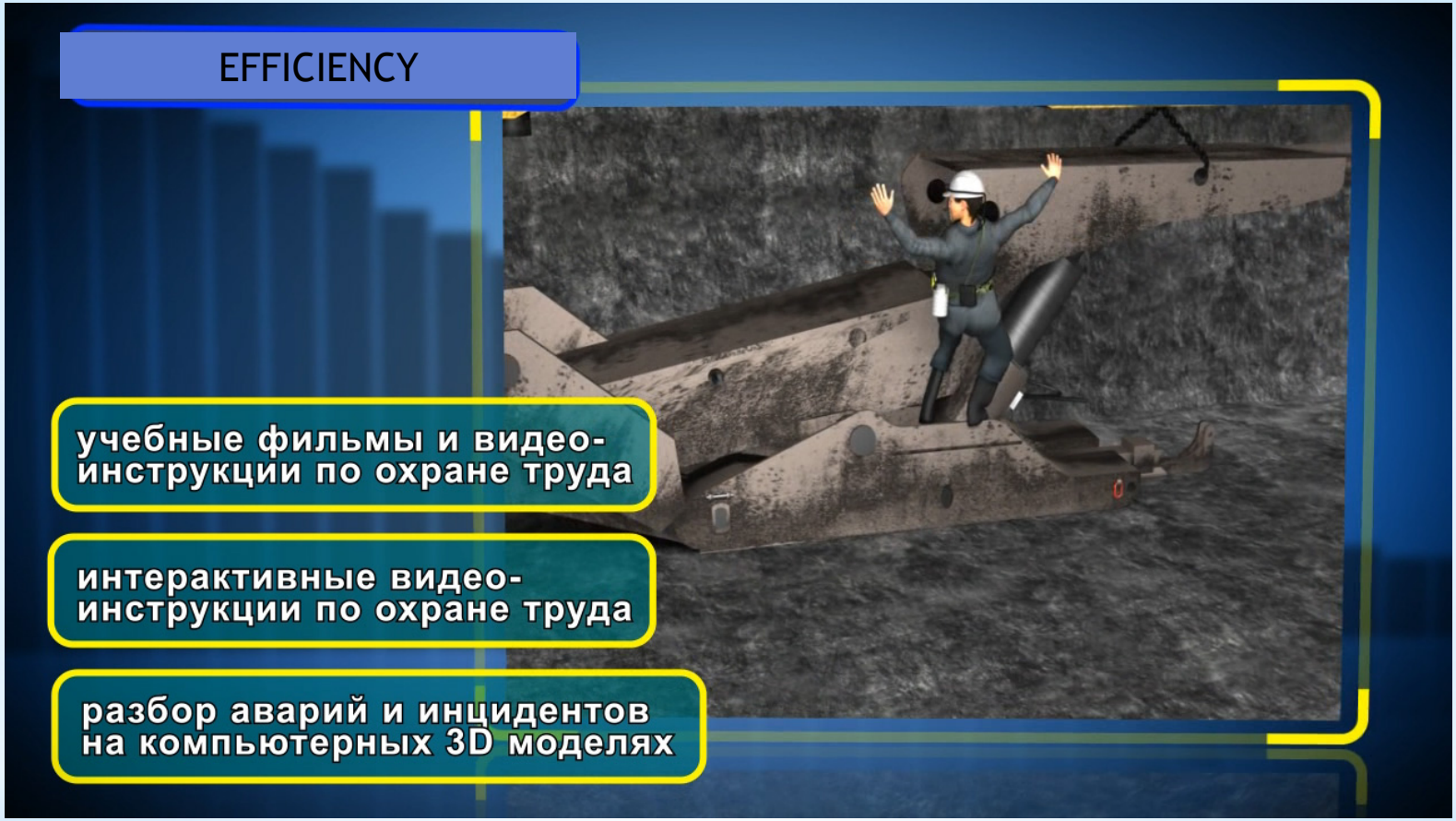


The following example illustrates the efficiency of using the video informational technologies to develop and control the workers' competence: in 2010 OAO Belon (open joint-stock company) made a decision to create the educational program, which would form the competent approach to workers' personal safety management.

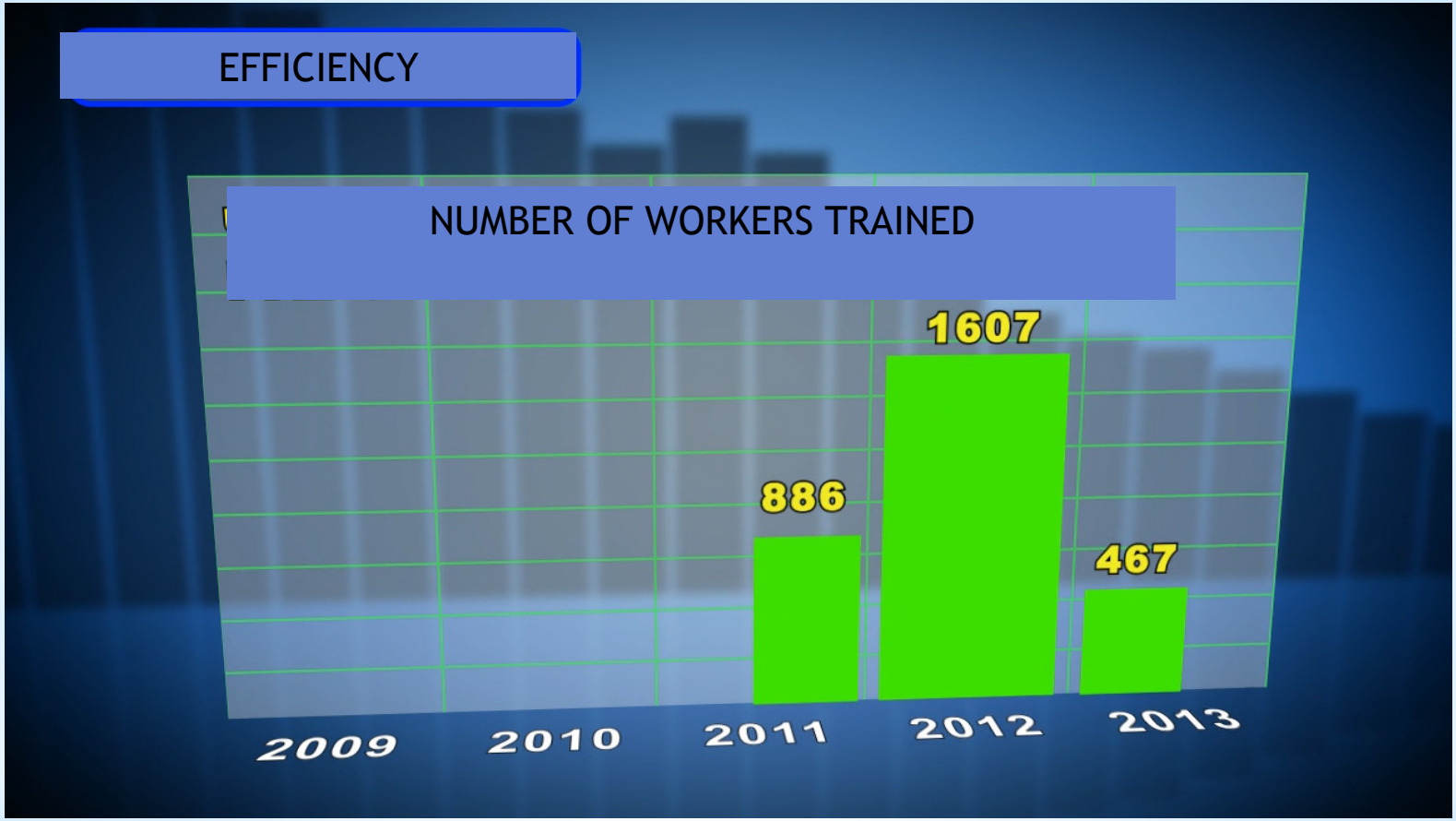


Kuzbass-COT developed educational programs and adequate lectures with the usage of video informative technologies.

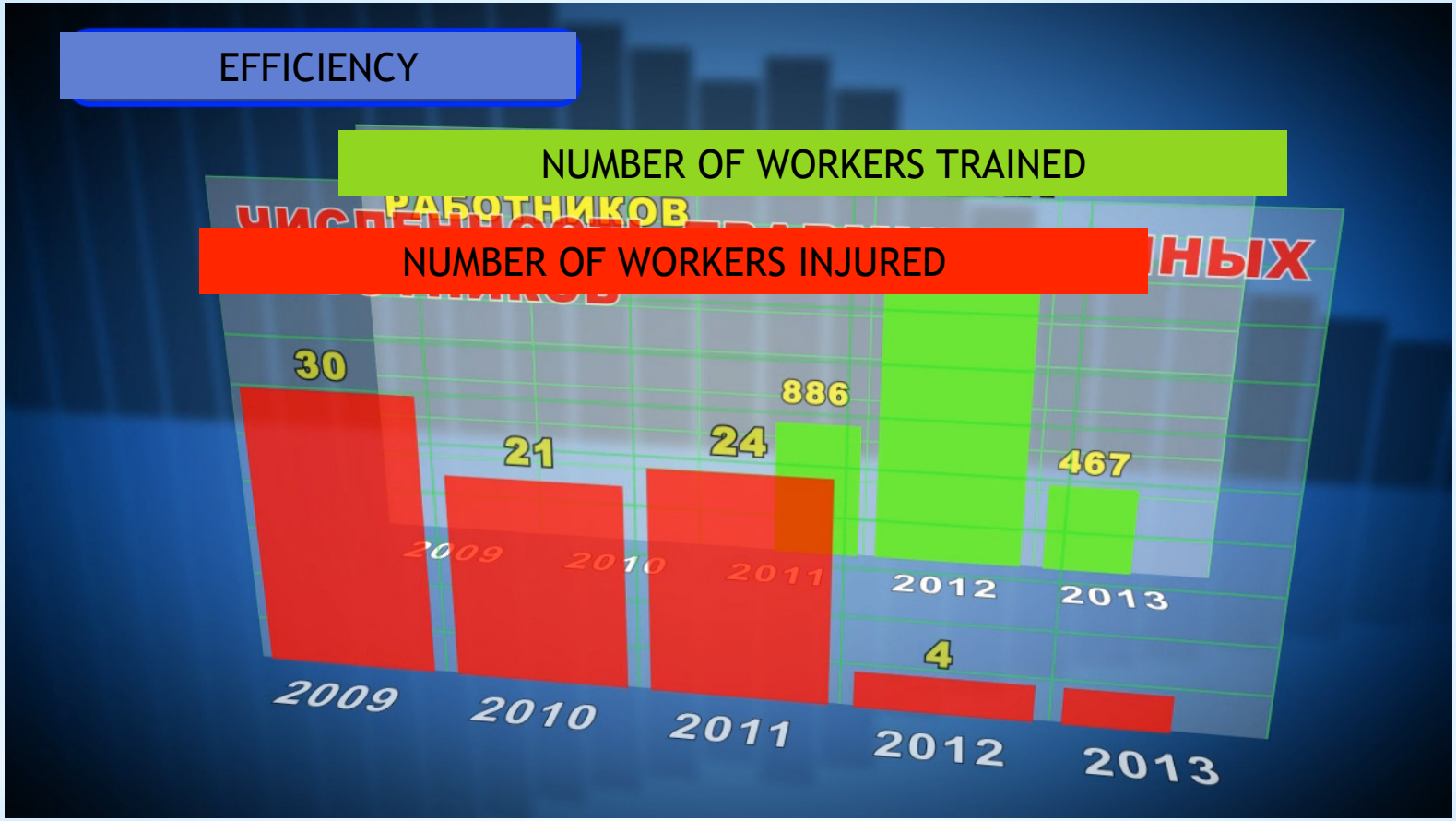
The educational films and video instructions on occupational safety were shot in the coal mines with the workers of OAO Belon (open joint-stock company). Including the instructions, which can be used as interactive.



The analysis of concrete emergency situations and accidents was based on the 3D models of the real accidents.



The number of workers trained under the program “Leadership in occupational safety” during 2 years was 2960 individuals, or 53,6% of the whole staff. The expected percentage for 3 years is about 80,4%.



Resulted from using the video informational technologies in the trainings of personnel of OAO Belon (open joint-stock company) the essential reduction of occupational injuries appeared. Obviously, the other measures to reduce occupational injuries were realized in the Company. Otherwise, it is important to note that it has been done in the past.

Thus, we guess, the improvement of worker's competence in occupational safety, using video informational technologies, has proved its practical significance and it is now one of the most efficient methods to reduce occupational injuries.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