

**IMPROVEMENT OF SECURITY SYSTEMS FOR CATEGORIZED OBJECTS*****Djabbarov Tursunali Mamadalimovich****Senior Lecturer, Department of Troops Training, Ministry of Internal Affairs,  
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**Annotation:** this article covers the existing shortcomings in the system of guarding categorized objects and proposals and methods for their improvement.

**Keywords:** video surveillance, face recognition, cloud technologies, unmanned aerial vehicles, in and out control, automated systems, artificial intelligence.

**Introduction**

In the modern world, the security of facilities with special value or significance is becoming one of the key tasks for public and private organizations. Categorized facilities such as industrial enterprises, scientific laboratories, healthcare facilities and other important infrastructure facilities require special attention in matters of protection. Improving the security systems of these facilities is an urgent topic, as security threats are becoming more diverse and complex. In the context of globalization and technological progress, the need for effective and reliable security systems is becoming indisputable.

Modern security technologies such as access control systems, video surveillance and alarm systems play an important role in ensuring security. However, despite the availability of these technologies, many organizations face problems related to their integration and adaptation to the specifics of protected facilities. It is important to note that insufficient classification of objects and the lack of a unified approach to their protection can lead to vulnerabilities and risks.

This article will cover several key topics related to improving security systems for categorized facilities. First of all, the issue of modern security technologies, including their advantages and disadvantages, will be analyzed.

Engineering and technical means of protection, such as video surveillance and alarm systems, will take a central place in the discussion, as they are the main tools for monitoring and preventing threats. In addition, the need to create a commission for the classification of facilities will be discussed, which will allow adapting security measures to their specifics and features.

**Modern security technologies**

Modern technologies for the protection of facilities with a high category require consideration of many factors, such as the degree of threat, the scale of protected property and the specifics of operation. Innovations in the field of security systems are becoming an important aspect for effectively ensuring the resilience of facilities to various types of influences, including cyber threats, physical infiltration and internal risks.

The analysis of modern security technologies begins with the integration of video surveillance systems, which continue to evolve to this day. Smart cameras with face recognition and real-time image processing allow you to quickly respond to possible threats. The use of cloud technologies makes video surveillance systems more accessible and flexible in management. The integrated use of analytical platforms for video data processing makes it possible to eliminate false alarms by filtering contextual events and highlighting truly dangerous situations.

Biometric identification, which is becoming more widely used, is also not left out. Systems based on fingerprints, irises, or voice authentication can significantly increase the level of access to protected objects. These methods provide a high degree of protection against unauthorized access by creating multi-layered barriers.

The integration of IoT (Internet of Things) into security systems opens up new horizons for monitoring and management. Smart sensors placed around the perimeter of the facility can detect changes in the environment, such as vibrations, noises, or movement, and immediately provide data to a centralized control center. The interaction of various security devices in real time allows you to quickly respond to incidents, significantly minimizing the consequences of violations.

Another area is the use of drones to patrol a large area. Unmanned aerial vehicles (UAVs) have already been successfully used to check the external perimeter, as well as in situations where surgical intervention is required in hard-to-reach places. These devices can be equipped with cameras, thermal imagers and other sensors, which allows them to effectively perform security tasks.

Equally important is the development of software for the management of security systems. Modern applications allow you to centrally control all aspects of security, obtain data analysis, and configure scenarios for various situations. This approach makes the system more flexible and adaptable to changing conditions, ensuring a high level of security.

Security trends also focus on cybersecurity, especially in the context of the active introduction of digital technologies into traditional security systems. The urgent need for data protection obliges organizations to develop measures to protect against hacker attacks and information leaks.

Thus, modern security technologies are becoming not only a protection tool, but also a key element in ensuring a strategic approach to security, responding to the challenges of the time and market requirements. The effective implementation of these technologies requires the integration of various systems and approaches, which necessitates the continuous development and implementation of innovations in the security sector of categorized objects.

Engineering and technical means of protection

Engineering and technical means of protection play an important role in ensuring the safety of categorized objects. These facilities include video surveillance, alarm, access control systems, as well as various barrier structures and devices.

Modern video surveillance systems provide not only monitoring of the territory, but also event analysis. The use of intelligent technologies allows you to recognize faces, track suspicious behavior and record violations. This significantly increases the level of security, as operational decisions can be made based on the information collected.

Alarm systems, in turn, must be integrated with other security elements. This makes it possible to ensure the fastest possible response in the event of a threat. For the effective functioning of these systems, it is necessary to carry out regular inspections and maintenance, which will avoid possible failures or malfunctions.

Access control provides the actual control of the flow of people and vehicles on the site. The use of biometric technologies, access cards, and unique identifiers can significantly reduce the likelihood of unauthorized access. In this context, it is important to provide support for all levels of access in order to minimize the risks of confidential information leakage.

Barrier structures such as grilles, fences, and barriers serve the function of physically restricting access to protected facilities. They can be supplemented with motion sensors and alarm systems,

which will provide a high degree of protection against intruders. The integration of these physical assets with electronic security systems forms an integrated approach to security.

New technologies, such as Internet of Things (IoT)-based systems, provide additional monitoring and control capabilities. These technologies make it possible to collect and analyze data in real time, which makes it possible to predict possible threats and minimize losses. The introduction of automated systems also helps to reduce the human factor in the security process, which adds a level of reliability to this area.

The training of personnel responsible for the operation of engineering and technical protective equipment is critical for their effective use. This includes not only training in the use of equipment, but also preparation for actions in non-standard situations. Regular exercises and training allow us to maintain high security readiness for various challenges.

Working with engineering and technical means of protection requires constant monitoring of new technologies and methods. This will make it possible to adapt existing systems to modern challenges and threats, as well as to implement the most effective solutions for the protection of categorized objects. Investments in new developments and improvements to existing programs will have a significant impact on the overall level of security, as well as help create a stable and reliable protection infrastructure.

An integrated approach to the security system

An integrated approach to the security system requires a systematic analysis of all aspects of the security of categorized facilities. Considering the security system as a whole, rather than individual elements, allows you to create more reliable and effective protection measures. Each facility is characterized by specific threats, so it is necessary to take into account both internal and external risks when conducting a security assessment in the context of a specific situation.

The main focus is on the integration of various security technologies and methods. For example, the combination of video surveillance, access control, and burglar alarms creates a multi-level protection system where each element supports and enhances the others. It is important that all components of the system interact effectively and ensure continuous monitoring, detecting any deviations from the norm. In addition, the use of analytical tools, such as video surveillance systems with face recognition, increases the responsiveness to threats.

There is a need for continuous updating and improvement of existing systems. Technological progress in the field of security offers new solutions that can significantly increase the level of protection. For example, the use of artificial intelligence to analyze visitor behavior makes it possible to identify suspicious activities before they can escalate into an incident. This makes the system more projective and reduces the likelihood of emergencies.

Putting the human factor at the forefront, it is impossible to ignore trainings and staff training. Trained security personnel can not only effectively use technical means, but also correctly assess the situation and take adequate measures in emergency cases. Investing in regular training and exercises enhances overall security by allowing for rapid response to violations.

When implementing an integrated approach, the compatibility of security systems with current legislation and standards becomes an important aspect. Taking into account current regulations helps to avoid legal problems and contributes to the creation of a modern approach to security. Public and private initiatives in this area should be synchronized to achieve maximum impact.

The ever-changing criminal environment requires the flexibility and adaptability of security systems. Establishing and maintaining links with law enforcement agencies, as well as sharing information and experience with other organizations and security experts can increase the level

of protection. Security systems will be successful only if they are integrated into the overall security strategy and take into account the system of responding to potential threats.

Effective protection of categorized facilities is the result of a continuous process of analysis, implementation of new technologies and staff training. Constructive interaction of all elements of the security system allows not only to minimize risks, but also to ensure a high degree of protection of facilities. This approach opens up new opportunities for developing innovative security solutions and increasing trust in security systems in general.

### Conclusion

In conclusion, it should be emphasized that the improvement of security systems for categorized facilities is an urgent task that requires an integrated approach and the introduction of modern technologies. In the context of constantly changing threats and challenges related to security, it is necessary to adapt existing security systems to new realities. Modern security technologies such as access control systems, video surveillance and alarm systems play a key role in ensuring the security of facilities that require special attention.

Engineering and technical means of protection, such as video surveillance and alarm systems, must be adapted to the specifics of protected facilities. This includes not only the installation of equipment, but also its regular updating and maintenance. It is important that all components of the security system work in a single complex, ensuring maximum efficiency.

The classification of objects for security is an important aspect that allows you to adapt security measures to specific conditions and risks. The creation of a commission to classify objects will help determine the threat level and appropriate security measures, which in turn will increase overall security.

An integrated approach to the security system involves the integration of various subsystems, which makes it possible to create a more stable and effective protection system. This includes not only technical means, but also organizational measures such as staff training and the development of incident response regulations. It is important that all participants in the security process work in a unified manner, which will minimize risks and increase the level of protection.

Thus, the improvement of security systems for categorized facilities requires constant analysis and the introduction of new technologies, as well as adaptation to changing conditions. Only an integrated approach based on modern standards and technologies can ensure reliable protection of objects that require special attention. It is important to remember that security is not only technical means, but also the human factor, which plays a key role in the successful implementation of all security measures.

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