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For scientists, educational staff, PhD candidates, masters of educational institutions, university faculties, stakeholders, managers and employees of management bodies at various hierarchical levels, and for everyone, who is interested in current problems of management, technical sciences, law, ecology, information sciences and psychological sciences through the prism of international security studies.

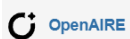
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## CHAPTER 12. FORMATION AND ENSURING SECURITY IN THE RESTAURANT BUSINESS

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**Abstract.** The study examines the issues of forming and ensuring security in the restaurant business. Emphasis is placed on the importance of a safe environment for both staff and guests of the facility. Safety is one of several factors of successful restaurant business. It includes protection of staff and guests from various risks, such as: food poisoning, fires, thefts, injuries, terrorist acts. Unresolved issues are: lack of understanding of the importance of security by restaurant owners and staff, lack of a clear security system in many establishments, imperfection of the legal framework in the area of restaurant business security, lack of qualified security specialists, low level of security culture in society. In the work, a set of measures aimed at forming and ensuring safety in the restaurant business was developed. Implementation of a comprehensive security system will significantly reduce risks to people's lives and health, as well as minimize risks for the restaurant business. The level of formation and security in the restaurant business in Ukraine is insufficient. It is necessary to take measures to improve the situation, such as: development and implementation of regular security systems in restaurants, conducting training of staff on security rules, strengthening control and auditing of security systems, increasing the responsibility of restaurant owners and personnel managers for security. The results of the research can be used for: development and implementation of safety standards in the restaurant business, training of restaurant staff in safety rules, level of safety culture in society.

**Keywords:** security, restaurant business, staff, guests, risks, security system, security rules, emergency situations, control.

**Introduction.** Security at restaurant business enterprises is a set of measures aimed at protecting people, property and information from possible threats. This topic is extremely relevant, because restaurants and cafes are visited by thousands of people every day, and the risks of emergency situations or crimes always exist.

Ensuring security at restaurant business enterprises is determined by a number of factors: an increase in the level of crime: theft, fraud, vandalism are just some of the risks that restaurants may face; terrorist threat: terrorist attacks can have dire consequences for both people and businesses; emergency situations: fires, floods, earthquakes - such events can lead to significant material losses and human casualties; fierce competition: in the competitive environment of the restaurant business, any incident can negatively affect the reputation and image of the establishment; growing demands from the state: the authorities pay more and more attention to safety issues at restaurant business enterprises.

Ensuring security at restaurant business enterprises is an important task that requires a comprehensive approach. The recommendations developed in the course of the research can be used to increase the level of safety at restaurant business enterprises, which, in turn, will contribute to improving the quality of service and increasing the competitiveness of establishments.

During recreation, people think the least about their safety, which sometimes leads to undesirable consequences related to the risk to their lives. Therefore, the task of the administration of restaurant business enterprises is to prevent all possible risks for the life and health of their guests.

The concept of security includes not only protection from criminal situations, but also to a greater extent the creation of precautionary measures to ensure protection against fire, explosion and other emergency events, as well as in the current situation the application of measures to prevent the spread of the Covid-19 pandemic.

The main principle of using restaurant security systems is security, which cannot be ensured at the expense of guest comfort. That is why restaurant security systems, as a rule, are significantly different from «ordinary» ones, which are used in office premises and other enterprises. Therefore, the security system in restaurant establishments includes many components, which include people (security service), door locks in halls and other premises, and safes that can be used by guests of the establishment. Today, a popular and necessary event is the installation of a video surveillance system, although it sometimes causes the disapproval of guests of the establishment.

The concept of safety at restaurant business enterprises in a general sense is an officially accepted system of views on certain goals, tasks, as well as basic principles and directions in the field of ensuring the safety and sustainable development of any restaurant establishment, the life and health of the staff and guests of the establishment, their rights and freedoms – in conditions of possible

external and internal dangers and threats. The development of measures to ensure security at the enterprises of the restaurant business, the mechanism of their implementation, is carried out taking into account the threats that can oppose this object of research as a whole.

### **1. The essence and features of the security system in restaurants.**

The following groups of threats are typical for any restaurant business enterprise: natural, man-made, ecological, terrorist and social. The danger levels of threats of various kinds may depend on the political situation in the country and in the world in general, the stability of the socio-economic development of both the country and the region as a whole.

The multifaceted nature of ensuring the safety of guests and restaurant staff, as well as tasks in the field of information protection, require the creation of a special service that can implement the necessary set of protective measures (*Balatska N.Yu., 2020*). When organizing the security system of restaurant business enterprises, it is necessary to clearly know for what purposes and at the expense of which funds it will function. When solving security issues, restaurant managers tend to resort to two extremes: either they spend significant money on the organization of extremely complex security systems that are intended for high-security facilities, or they do not pay due attention to security issues at all.

In modern conditions, the safety of restaurant business enterprises, its employees and visitors, becomes one of the factors of increasing the competitiveness of this business. However, one should not forget that any restaurant establishment, as a commercial enterprise, is the subject of special interest of competitors in this field of business. The presence on the market of a developed system for extracting commercial information determines the legality of creating an equally developed system for its protection against unauthorized acquisition and malicious use (*Belyaeva S. S., Byshovets L. G., D Kurakin O. B., 2020*). These functions should be performed by the security services of any restaurant business enterprise. The classification of threats, including the dangers that arise during various types of interaction, indicate that in modern conditions, in order to ensure the safety of both the staff and visitors of the restaurant, as well as the restaurant itself as a commercial enterprise, separate measures and actions are necessary will not succeed That is why a constantly operating system is needed, which can cover all the variety of forms and methods of ensuring the safety of this staff, guests of the establishment and the commercial activity of the restaurant enterprise itself (*Rusavska V. A., Chebotaeva T. S., 2021*).

To create the security system described above, it is important to classify various types of dangers and threats that arise in the process of interaction between the parties. Participants of the interaction engage in both direct physical contact and informational and financial interaction, so all

threats can be conditionally divided into three categories, such as: physical, informational and financial.

Physical threats are the result of physical actions. They cause damage to people's health, their property, as well as property of the restaurant business; indirectly affect the size of profits, as well as losses.

Financial threats – cause damages, as well as direct financial losses both to the restaurant business itself and to the guests of the establishment.

Information threats are a consequence of interaction in the field of communication, which lead to indirect financial losses, as well as moral costs (Bocharova O.V., 2019).

One of the urgent issues of the security of hospitality establishments is the information security of the establishment, since any purposeful and unfriendly action against the interests of the enterprise begins with the collection of information. In connection with the deterioration of such components of information resources as confidentiality, integrity, availability and reliability, malfunctions in the functioning of management systems are observed, information constituting a commercial secret is disclosed, and the reliability of financial documentation is violated.

The main information threats are presented in fig. 1.

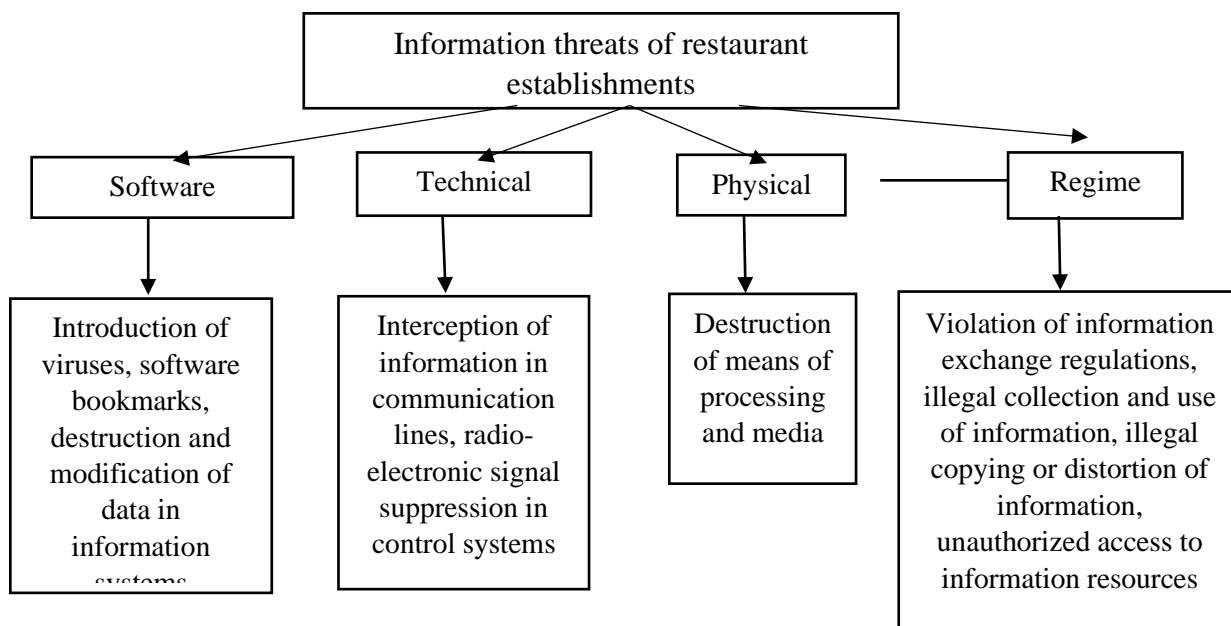


Figure 1 – Main groups of information threats in the field of restaurant industry

Analyzing information security in the field of restaurant industry, special attention should be paid to cybercrime. This is a violation of other people's rights and interests in automated data processing systems.

To ensure information security in the restaurant business, it is necessary to:

- 1) analyze and summarize potential threats and causes of violations;



- 2) develop information risk assessment methods;
- 3) carry out information surveys of the company's resources;
- 4) develop policies and concepts of information security;
- 5) develop a corporate standard for ensuring information security;
- 6) classify part of the information as restricted access (official secret);
- 7) monitor the operation of technical information protection measures.

Thus, in order to increase the level of security in the restaurant industry, it is necessary first of all to conduct an audit and control the functioning of the information security system in a timely manner and to have the opportunity to eliminate risks; to develop a mechanism for managing the security of the enterprise on the basis of controlling, as well as to analyze the threats of the internal and external environment.

There are various types of risk classification. Each of them allows identifying certain properties in risks. N.M. Vnukova considers the classification of risks by external and internal factors to be the most relevant for the restaurant industry (Fig. 2).

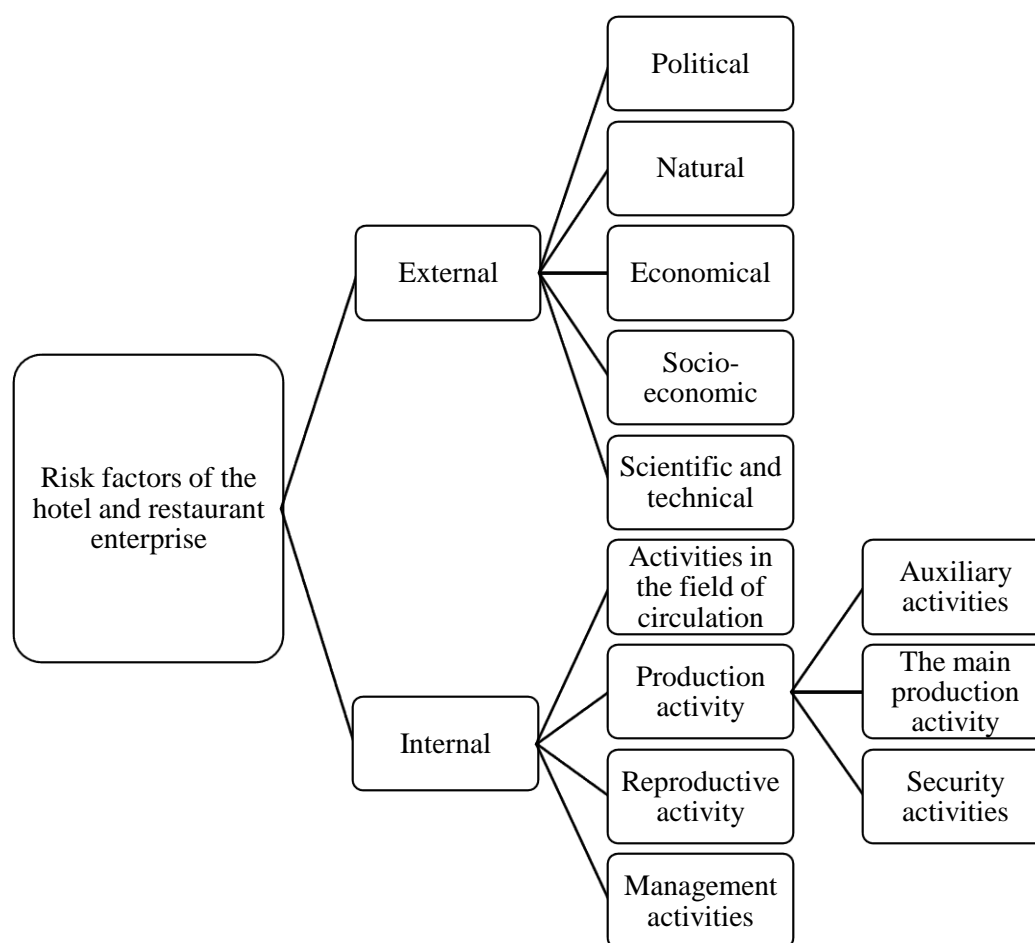


Figure 2 – Classification groups of risk factors in the field of restaurant business

In addition to the specified classification, risks in the activity of restaurant establishments can be divided into:

1. Risks, the consequences of which affect people. This group is divided into two subgroups: risks affecting staff and risks affecting visitors. These are, for example, equipment breakdowns, disasters, inadequate actions of personnel, crime and others.

2. Risks, the consequences of which affect production systems and threaten their integrity. These are, for example, disasters, thefts, equipment failure, etc.

When considering different categories of risks characteristic of the restaurant industry, it is worth mentioning force majeure or force majeure circumstances, as they differ from other types of risks in having more serious and global consequences.

In recent years, terrorism has become a serious international problem. It poses a particular danger for large establishments of the restaurant business. Terrorist attacks are becoming increasingly large-scale, multifaceted in terms of the pursued goals and types of manifestation.

Enterprises of the restaurant business, in accordance with the Law of Ukraine «On Tourism», are responsible for: preserving the belongings of customers, and are also responsible for damage caused to the life, health and property of vacationers as a result of shortcomings in the provision of services, and also compensates moral damage caused to the customer by the violation his rights (*Bocharova O.V., 2019*).

Therefore, every restaurant business enterprise must have a plan of measures to ensure the protection and safety of visitors to the establishment, which includes such risk factors as: fire, theft, injury, unexpected illness, and others. In the building of the restaurant business, all emergency exits and evacuation routes for guests of the establishment must be clearly marked, and in each hall and in all places where visitors gather, there must be visual information about emergency exits, evacuation routes, as well as the nearest fire alarm system.

The protection of guests and their property is an important aspect of the restaurant business. The owner and employees of the establishment are required by law to take all necessary precautions to ensure the safety of visitors to the establishment (including economic). Electronic management systems play a major role in this matter at the current stage of restaurant business development. They use a computer network of the latest generation, as well as the latest technologies, which help to increase the efficiency of operations and minimize annual manipulations when making calculations in the institution.

Enterprises of the restaurant business are obliged to provide their guests with information about fire safety rules, and also, if necessary, call an ambulance for visitors without additional payment (*Rusavska V. A., Chebotaeva T. S., 2021*).

But restaurants have their own safety problems. In institutions of this field of activity, all responsibilities for the control of security systems are entrusted, as a rule, to the general director (*Balatska N.Yu., 2020*).

The area that is of particular interest to the security service in the restaurant industry primarily includes:

- storage and movement of products in the institution;
- storage and consumption of liquor and vodka products (bar products);
- settlements with guests of the establishment;
- document flow at the restaurant business enterprise.

It is very important to control the storage and movement of products in the restaurant business. Since the storage of products and the acceptance of supplies of raw materials according to the establishment's menu can be carried out without the participation of outsiders, most managers of establishments pay attention primarily to ensuring the integrity of products by their own employees and suppliers, as well as the freshness of these raw materials. Food products are a great excuse for would-be thieves.

Not only food products attract the attention of thieves, but also tableware and cooking equipment are no less attractive.

Control over liquor and vodka products, namely bar products, is also very important. Nothing needs the attention of managers interested in the integrity of the establishment's property more than the control of liquor and vodka products, because alcoholic beverages are an extremely profitable product (because they have the highest markup) and are very difficult to control. Theft of alcoholic beverages can take any form: removal from the warehouse, consumption by employees at the workplace, and concealment of profits (*Ivanyuk A., Chikunova-Vasilyeva N., 2019*).

New methods of controlling the storage and sale of alcoholic beverages made it possible to reduce losses from theft in restaurants. One of these methods is the use of an automatic dispenser directly connected to the cash register at the bar of the establishment.

Equally important is control over settlements with visitors to the institution. Service receipts are traditionally the means by which service personnel, namely waiters and bartenders, transfer guests' orders to the establishment's production facilities. In addition, invoices are payment documents that confirm the guest's indebtedness to the restaurant establishment that serves him.

There is only one way to significantly reduce the number of problems associated with the integrity of the logistics and with the billing of the dishes on the menu - is to accurately record everything that happened. After a certain time, you can clearly understand what is happening and immediately take action to prevent these problems. These records should include:

- the essence of what happened during the operation of the institution;
- date and time of the event;
- list of participants from visitors and statements of witnesses, if any;
- damage to the institution's property, if there were any;
- measures taken by the restaurant administration, including notification of local law enforcement agencies, if necessary;
- signature of the compiler of the report, as well as the date.

Quality is important, because if we consider the restaurant industry from the perspective of the dynamics of their development, then quality will have the greatest impact on their activity and competitiveness. Without a high-quality product, the institution cannot achieve its main goal, since quality is more important than profitability (*Rusavska V. A., Chebotaeva T. S., 2021*).

Control over compliance with service standards is a management area: keeping documentation, providing an assessment of the level of service achieved, measures aimed at its improvement, including additional training of personnel, improvement of discipline and creation of a strong work force of the institution.

Collective work in the restaurant industry is rarely analyzed and qualitatively evaluated, since the main reasons for this are (*Ivanyuk A., Chikunova-Vasilyeva N., 2019*):

- insufficient attention paid to the above issue;
- lack of clearly formulated management goals, as well as work standards, on which the institution's documentation should be based;
- assessment, adjustment, as well as restoration of labor activity in a restaurant business establishment;
- correct distribution of responsibilities, as well as reliable accounting methods in the researched institution.

Managers of restaurant establishments do not always want to solve problems related to complications, as well as complaints about consumer service, as well as prices that correspond to the level of this service. Claims and complaints of visitors to the institution are considered as situations in which the search for the culprit is considered more important than finding out the causes and consequences of the situation (*Moisiienko A. V., 2019*).

The prevention of the emergence of claims to the establishment of the restaurant economy should be based on reaching an agreement between the head of the establishment, the employee, and also the consumer, in accordance with the results of the employee's work, that is, the final product. This is best achieved by establishing clear standards that can be effectively monitored and enforced. In addition, the use of the concept of collective work, in particular, in «quality chains», creates the

possibility of interconnection, which is necessary to identify and eliminate the causes of complaints from the guests of this institution. However, even here there are obstacles, the main one of which may be hidden in cultural traditions, which include the right to be protected against the appearance of claims that motivate managers. But even here, problems can be solved by finding solutions and reaching a compromise.

The security system in the restaurant business has its own features that distinguish it from the security systems of other facilities. These features include:

1. Large number of people: restaurants and cafes are visited by thousands of people every day, which creates the risk of emergency situations related to panic, crowding or other factors.

2. Specifics of the work: the work of the restaurant involves the use of flammable materials, combustible substances, as well as the operation of technological equipment, which increases the risk of fire or accident.

3. Assets: Restaurants and cafes often have significant assets such as equipment, food, alcohol, cash, making them a target for theft.

4. Competitive environment: Any incident related to security can negatively affect the reputation and image of the establishment, which can lead to loss of customers and competitive advantage.

5. Requirements from the state: the authorities pay more and more attention to safety issues at public catering enterprises, which requires restaurants and cafes to comply with strict rules and regulations.

Taking into account these features, the security system in the restaurant business should include the following components:

1. Fire safety: fire alarm system, automatic fire extinguishing system, fire extinguishers, evacuation exits, evacuation plans.

2. Security: video surveillance system, security alarm system, physical security.

3. Technological security: access control system, product accounting system, technological equipment monitoring system.

4. Information security: information protection system, data backup system.

5. Personnel: training personnel in safety rules, conducting briefings, practicing actions in emergency situations.

It is important to note that the security system must be comprehensive and take into account all possible risks and threats.

In addition, the security system must be constantly updated and improved to meet modern challenges.

Ensuring security in restaurant business establishments is the key to successful business, preservation of life and health of people, as well as protection of property and information.

## 2. Types of security systems in restaurant complexes: nuances of management.

It has already happened that restaurants are an industry where the traditions of theft are historically strong. Theft methods are "polished" and passed down from generation to generation. Moreover, these methods are so sophisticated that it becomes a shame that unusual intellectual potential is used for such obscene purposes. But it is necessary to fight against theft, and it is necessary to do it professionally. In fact, this is a simple task that simply needs to be solved using a systematic approach and a set of certain tools.

Types of security systems of restaurant establishments are presented in fig. 3.

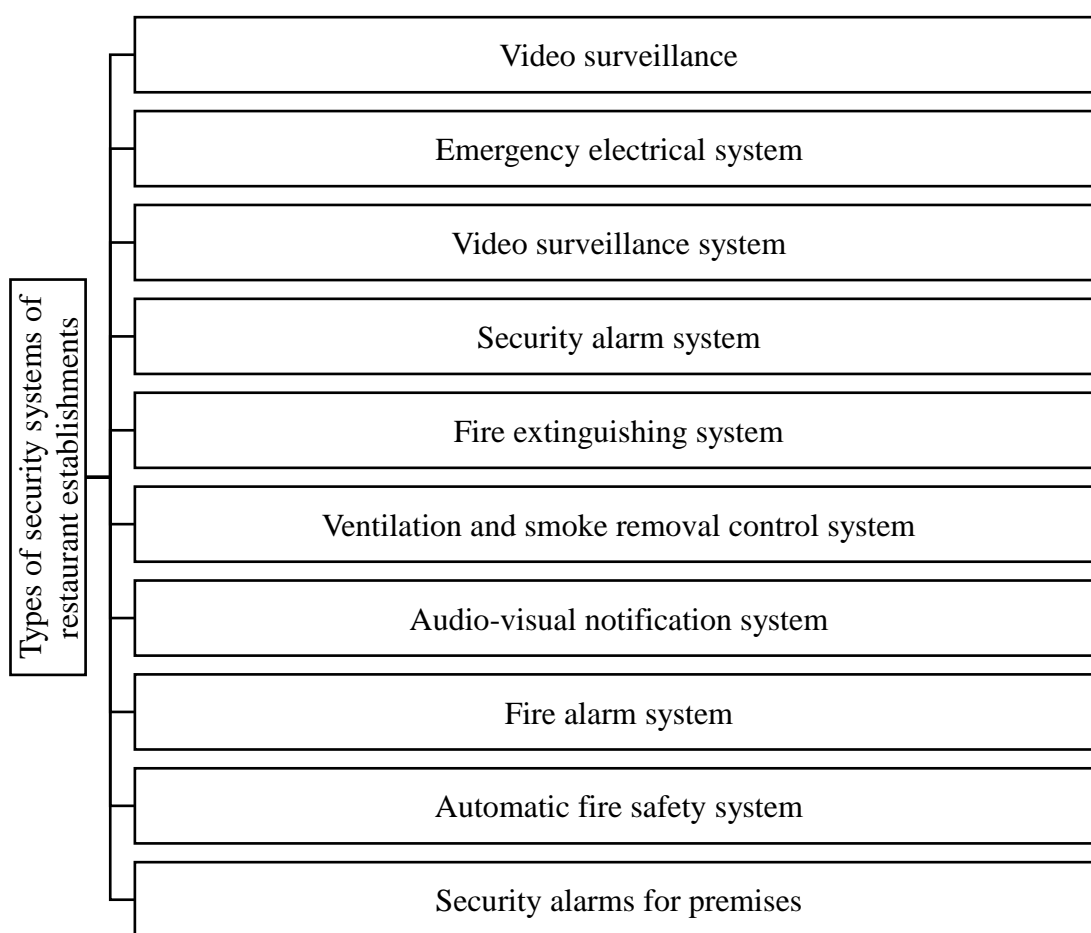


Figure 3 – Types of security systems of restaurant establishments

Technical design systems ensure the safety of restaurant establishments in emergency situations, they include: autonomous design systems (fire extinguishing, sound warning, access control systems), integrated design systems (security and fire alarms) and a comprehensive computer system for the establishment's automation.

The types of security systems of restaurant establishments include:

- means of video surveillance;

- security alarm system for premises of institutions;
- security alarm system for the perimeters of the facility;
- fire alarm in the room;
- fire extinguishing systems in the restaurant industry;
- gate automation (barrier or automatically retractable gate);
- video and audio intercoms at the entrance to the territory of the institution;
- equipment for restricting access to premises, audio monitoring of premises and telephone lines (*Omelchuk S.S., 2019*).

Video surveillance is the main control tool. The installation of this video surveillance system and the access control and management system are today mandatory, and sometimes the main element of any modern security system in restaurant establishments.

The main tasks of security video surveillance at enterprises of the restaurant business are the following:

- ensuring the safety of a large number of people visiting restaurants;
- ensuring the preservation of property of the restaurant business enterprise;
- control over the safety of personal belongings and money of visitors to the institution;
- control over the actions of the institution's service personnel;
- ensuring the absence of theft among personnel.

The video surveillance system at the enterprises of the restaurant business allows you to control the work of the staff. Thus, with the help of video surveillance in these institutions, the management can accurately monitor the amount of tips and ensure that the service staff does not deceive the visitors of the institution and does not commit fraud. The image of the restaurant industry depends on the level of service provided to guests of the establishment and the absence of fraud (*Danylenko-Kulchytska V. A., 2022*).

Thus, modern video surveillance in restaurant establishments can provide detailed monitoring of the quality of service to visitors of the establishment. Video cameras with high image quality provide a continuous, detailed recording of what is happening.

The purpose of implementing a video surveillance system at restaurant business enterprises is primarily to control the quality of service to visitors of the establishment, as well as the work of the staff, their safety, the ability to observe the area of preparation of orders, as well as the storage premises of the catering establishment.

The main components for the organization of television surveillance are television cameras (both black and white and color cameras are currently used in video surveillance), lenses, monitors, squarers, multiplexers (process signals from video cameras), special video recorders. In addition,

various brackets, rotary devices, casings, amplifiers, modulators are used. The specific composition of the equipment depends on the number of cameras, the conditions of their operation (outside the facility or inside the premises), distances between cameras, as well as monitors (observation post) (Rusavska V. A., Chebotaeva T. S., 2021).

It is recommended to install video cameras in restaurant establishments in places where control is especially necessary:

1) in the shopping hall for guests of the establishment - this is an area subject to mandatory video surveillance. The location of the video cameras is determined based on the specifics of the layout of this trading hall. Video monitoring is important from the point of view of the quality of service to the visitors of the institution and their safety, as well as the ability to objectively evaluate the work of the staff;

2) one of the important purposes of the video surveillance system in the checkout area (bar counter) is not only the prevention of theft, but also the detection of fraudsters, which is greatly helped by working with the video archive.

One of the components of the security system is the access control and management system (ACMS). The principle of operation of this system is as follows: each employee of a restaurant establishment receives an electronic key - a plastic card or a biometric reader (fingerprint reader) with the content of an individual code in which the data of the owner of such a card is entered: photo, video images, structural subdivision of the restaurant establishment business and other information about the owner, with the help of which the passage of employees through turnstiles or barriers is organized.

The system of control and management of access to establishments of the restaurant business allows you to conduct:

- accounting of working hours of employees of the institution;
- carry out identification of an employee of the institution;
- exercise control over the movement of employees - going out for smoke or coffee breaks;
- provide protection against transferring the card to another person;
- allows to solve issues of safety and discipline at the workplace;
- automate personnel and accounting records in the institution;
- to create an automated workplace of a restaurant business guard.

Security alarms for restaurant premises can be divided into stationary and mobile. A simple example of a stationary device is an alarm button, when pressed, information about an attack on a given enterprise is transmitted to the security of the establishment (Danylenko-Kulchytska V. A., 2022).



The purpose of the perimeter security alarm system is to detect the trespasser as early as possible, even before he enters the guarded restaurant establishment, in order to prevent any undesirable consequences. That is why such security systems are the most effective means of protection against unauthorized entry, because they give an alarm signal long before an intruder can penetrate into particularly important areas of restaurant business enterprises.

Also, in terms of safety, the fire alarm system (SPS) of an "intelligent" restaurant business enterprise is very important, which is built in such a way that the automatic control systems for life support, fire alarm, as well as control of the automatic fire extinguishing system are performed in a single information space. Direct and unconditional interaction is organized between these systems. SPS integrates with other systems of the security complex of the restaurant industry.

Fire alarm systems that support tens of thousands of address-analog annunciators, as well as loops, are used to protect restaurant business enterprises that occupy a large area.

The SPS of the «intelligent» enterprise of the restaurant business is maximally «open» for programming and configuration, which allows it to be perfectly adapted to the characteristics of the premises of these protected establishments. This system has a high degree of reliability: an alarm signal is generated only after multiple confirmations from the annunciator, so that false alarms are practically excluded, and sensitivity levels and trigger thresholds can be set depending on the time of day and day of the week, and pre-trigger levels are automatically set, which increases the probability of detecting an outbreak at an early stage. In addition, the SPS allows preventive fire-fighting measures to be carried out in areas located in the immediate vicinity of the outbreak site on the territory of restaurant establishments. Fire extinguishing devices and systems used in restaurant business establishments: the purpose of these systems is to automatically extinguish fires and prevent the spread of fire.

The following system construction options are possible:

1. According to the principle of fire extinguishing:

- sprinkler fire extinguishing (the cheapest option under the condition of complete reconstruction of the restaurant business enterprise);

- aerosol or powder fire extinguishing;

- gas fire extinguishing (high efficiency, does not harm the interior of the restaurant).

2. According to the principle of system organization:

- autonomous modules with built-in fire sensors;

- the command to turn on this module will be given by the central fire station or integrated security system.

The purpose of the ventilation and smoke removal system is necessary to prevent the spread of smoke, as well as fire through elevator and ventilation shafts and pipes, smoke removal from the premises of the restaurant business.

This system consists of the following subsystems:

- smoke removal (the central fire alarm station generates signals that start the corresponding electric motors of the ventilation system);
- preventing the spread of smoke (the central fire alarm station generates signals that control the shutter drives of the ventilation system, starts the electric motors of the turbines, which create increased pressure in the elevator shafts) (*Yermoshenko M.M., Horyacheva K.S., 2019*).

Access control systems are also used in restaurant establishments, which help to ensure not only the preservation of material values and information, but also the safety of staff and visitors of this establishment. At a modern level, they solve the tasks of ensuring safety, improving labor discipline, as well as automating personnel and accounting records in various departments of the restaurant business. In addition, the installation of this system of limited access to the premises will significantly increase the efficiency of the security service of the restaurant business enterprise (*Honcharenko N. V., 2021*).

Thus, the application of the described security measures will not only protect visitors of the establishment during their stay at the restaurant business enterprise, but also protect employees from unfounded accusations. And this, along with other aspects, will increase the institution's reputation and, as a result, increase its rating.

Every restaurant business has the goal of making a profit. But this can be hindered by fines from the regulatory authorities. Therefore, occupational health and safety in restaurants is the first step for successful business (*Kupchak B.F., 2019*).

Restaurant establishments can vary in size – from small, cozy coffee shops to large restaurant complexes, and each such establishment has several functional departments: production premises where, in fact, meals are prepared, a service for providing goods and a sales hall for visitors.

The restaurant establishment is served by a whole staff of staff - cooks, waiters, bartenders, administrators. Occupational health and safety in these establishments is very important in the process of organizing a restaurant business, because very often the work exposes workers to serious dangers associated with the use of sharp and heavy objects, special machines, freezers, equipment for processing products with steam and cutting (*Honcharenko N. V., 2021*).

Getting injured while working is, unfortunately, a common thing. That is why it is quite necessary to prevent similar situations in order to avoid fines, court proceedings, and stress.

Occupational health and safety in restaurants is a comprehensive solution that will help avoid problems related to the safety of this business. Conducting an assessment of the state of labor protection at the enterprises of the restaurant business will help to identify shortcomings in the labor protection system. This will contribute to the formation of a safe production environment, as well as reducing the level of industrial injuries, occupational diseases of production and service workers, dangerous accidents and the overall success of the restaurant business (*Ivanchenko N.O., 2019*).

Experienced occupational health and safety specialists will offer standardized work processes where the employee clearly knows their responsibilities, provide appropriate training to the facility's personnel, and help to establish constant control over compliance with occupational health and safety rules.

In order for a restaurant business to be successful, it is very important to be able to constantly receive qualified advice on any issues related to occupational health and safety. Experts in this field will help to quickly deal with any difficult situation that could arise at restaurant business enterprises, organize the necessary training for the staff of the institution, as well as the passing of medical examinations by employees (*Yermoshenko M.M., Horyacheva K.S., 2019*).

The business success, as well as the reputation of any restaurant establishment, depends to a great extent on how successfully these establishments pass regular inspections by local health authorities. Problems with non-compliance with certain sanitary standards can be guaranteed to be avoided if the management, as well as the employees of the establishment, consider ensuring food safety as a top priority in their own activities. At restaurant business enterprises, sanitary and hygienic norms and rules established by sanitary and epidemiological supervision bodies regarding the cleanliness of premises, the condition of sanitary and technical and production equipment, waste removal, and effective protection against insects and rodents must be observed.

Therefore, the implementation of the practice of strict compliance with sanitary and hygienic standards depends on the management of the restaurant industry, because it is they who are authorized to dispose of funds for training and training of personnel, as well as for the purchase of improved and newer models of restaurant equipment.

Special requirements in relation to safety are imposed on service personnel in the institution. First, all personnel must be trained in safe work methods at the facility, know and follow fire safety, occupational health and safety regulations. All employees of a restaurant business enterprise must be subject to a periodic medical examination, and upon being hired, they are required to undergo a medical examination, as well as attend a course on sanitary and hygienic training (*Matskiv O. O., Shah A. Ye., 2014*).

Restaurant establishments that care about the safety of their visitors organize regular additional seminars for employees of production departments, namely the kitchen. The purpose of these seminars is to remind the staff of the need to follow the rules of sanitation and hygiene and thus prevent the danger of spreading infections. In the process of working at restaurant business enterprises, service personnel must periodically, at least once every 2 years, pass examinations on the sanitary minimum. A personal medical book is established for each employee of the institution, in which the results of medical examinations, records of transmitted infectious diseases, as well as the passing of the sanitary minimum are entered. Persons who spread infectious diseases are not allowed to work in restaurants.

Most often, food infections spread in restaurants due to the dirty hands of the staff, which is why it is worth monitoring the amount and frequency of hand washing by the staff of the production facilities (cooks, their assistants, waiters). Therefore, it is not enough to use ordinary soap, and you need special disinfectant soap or detergents, and you should use disposable towels to wipe your hands.

For example, fast food establishments - McDonald's, have strict rules regarding sanitation, which provide for 10 cases when service personnel must wash their hands (*Stelmashchuk N.A., 2019*):

- after smoking in a specially designated area;
- after eating (during the break);
- after visiting the toilet;
- before starting work from the beginning of the working day;
- after washing the floor, as well as changing the trash cans;
- after touching your own uniform;
- after sneezing and coughing;
- after changing the working area during the working day;
- after working with money (settlement for orders with visitors);
- after touching your own hair and face.

It is possible to introduce a number of actions that will convince the management of the need to pay financial attention to this particular problem – ensuring safe food (*Luhova V.M., 2019*):

- more often tell regional level managers «scary» stories about how non-compliance with sanitary standards resulted in large losses and fines for one of the offending restaurant establishments;
- to convince family-oriented managers that the introduction of safe technologies will make it possible to more reliably protect visitors of the institution, who come to this institution with children and relatives, from trouble;

- invite managers of restaurant establishments to meetings of employees where ServSafe classes are held, so that they listen to, look at slides, as well as graphic materials.

Being impressed, they will listen more carefully to the information that disadvantaged areas of the restaurant industry need additional funding for training and improving operations:

- ServSafe certificates obtained by the management can be hung on the walls in the lobby of the restaurant;

- distribute press releases emphasizing that the success of inspections depends on how well and fully the management supports the idea of certifying all employees according to the selected ServSafe program.

### **3. Priority directions for restaurant security.**

Restaurant establishments, which are experiencing a period of self-isolation and have returned to serving visitors in the hall, had to adapt to a completely new reality and look for new tools in the competition for visitors. Visitors returned only to those establishments where they felt more protected. This applies not only to the entire supply chain of products, but also to architectural solutions.

Therefore, restaurants will have to review the planning and approaches to the zoning of halls. Dense seating will be a thing of the past. The intervals between tables will increase - or large spaces will be divided into smaller sections. Before this pandemic, the norm in European restaurants was about 1.4 square meters. m for one seat.

The World Health Organization (WHO) recommended increasing it to 2.5 square meters. m per visitor. However, more than a quarter of respondents think that the distances between tables in restaurants will return to the old norms already at the end of this year, but certain measures of social distancing will remain until the end of 2021 (*Polotai B.Ya., Zhmur-Klymenko B.V., 2022*).

Another trend in the organization of space that can be used in restaurants is an open kitchen, when the process of cooking can be observed through the glass, so that there is no doubt about compliance with sanitary standards. All reusable and previously hand-to-hand items will be replaced with disposable or easily sterilized items. All necessary sauces and seasonings in restaurants must be in individual packaging.

It is also worth abandoning paper menus in the restaurant, so dishes will be chosen on the smartphone screen via QR codes or on restaurant tablets with an antimicrobial coating of the screen.

Disinfecting napkins and sanitizer should be used as a common element of serving in a restaurant, and cutlery must be served in packaging after disinfection - like manicure tools in a beauty salon.

57% of surveyed restaurant visitors via social networks noted that they would feel more comfortable in a restaurant, they would now be helped by "regular and visible hygiene of tables, partitions and other interior elements touched by other people", more than 40% would be happy with

disinfectant wipes, serving food in closed dishes, increasing the distance between tables and the absence of common tables.

Antibacterial fabrics, as well as composite materials and self-cleaning surfaces, are often used in restaurant decoration. For example, copper and alloys with a high copper content have antibacterial and antiviral properties.

Also, restaurants should move towards greater automation and be equipped with contactless technologies: automatic doors, lighting, supply of water, soap and paper in restrooms should become mandatory elements.

Approaches that have long been accepted and mandatory in the processing of medical institutions can be transferred to objects of the restaurant business. This is, for example, a reduction in the number of surfaces on which dust or microbes accumulate, increased requirements for ventilation and air purification systems. Therefore, it is worth reviewing the interior of restaurants, reducing the number of paintings in the shopping halls of the institution, as well as reviewing the decor in the premises of this restaurant.

Also, the priority areas of ensuring the safety of the restaurant by technical means are:

- control of access to the restaurant;
- a set of measures for fire protection in the institution;
- security alarm, as well as video surveillance (*Yermoshenko M.M., Horyacheva K.S., 2019*).

The installed complex of means and protection systems in the restaurant must be adequate to the possible threat, that is, the means and systems must be self-sufficient. It is impossible and impractical to exclude the possibility of damage primarily for economic reasons.

Security devices are quite expensive, so their choice should be determined by a really smart analysis of the highest risks and losses that can occur in the restaurant.

All applied measures and means should not create any danger to the health and life of restaurant visitors and employees of the restaurant business establishment, which primarily concerns the provision of emergency action in an emergency situation.

The centralized security alarm system in the restaurant is the center of ensuring the safety of the life support zones of the recreation facility, preventing uncontrolled entry into the premises.

To ensure constant monitoring of alarm signals, the receiving and control device is located in a place where personnel are constantly present (it can be a security control room or a restaurant bar).

Therefore, the restaurant must be equipped with security alarms:

- emergency exits from the restaurant;
- external doors that are usually closed;
- doors of service premises with equipment that usually works without service personnel;

- the doors of a number of critical premises of the restaurant, the protection of which must be ensured when they are not actively used (*Parpan T. V., 2019*).

In those places where special precautions are required due to the objects located there, it is necessary to install traffic warning signs. The security alarm system in the restaurant should be equipped with sound and visual alarm devices (buzzer, siren, lanyard alarms), which should draw the attention of the staff of the restaurant under investigation to an alarm situation.

It is also necessary to provide a centralized video surveillance system in the restaurant. The system should provide the ability to observe in real time, as well as make a record of what is happening for further study.

It is necessary to ensure the recording of all video cameras in the restaurant on a VCR. The main surveillance monitors, switching equipment and recording devices should be installed in the premises of the security service or the guard on duty.

It is also worth installing additional video cameras: in the production premises (kitchen) of the restaurant, at the entrance to the establishment, near the dressing room.

Video cameras should cover areas where food is prepared, so that it is easy for restaurant management to monitor food preparation processes, as well as compliance with sanitary standards. To minimize the risks of theft and damage to products and other material assets, we recommend, in addition to video cameras, to install electromagnetic locks that can be opened using electronic keys (code, key fob, plastic card) (*Titomyr L., Vlasiuk K., 2022*).

Thus, it will be possible to restrict outsiders' access to the premises of the restaurant, where food, dishes, kitchen equipment are stored, as well as to control materially responsible persons.

We recommend installing anti-vandal video cameras with a high class of protection against external environmental influences (IP65 or IP66) near the entrances to the restaurant premises and around the perimeter, as well as a built-in infrared illumination with a range of at least 30 meters. This will allow the restaurant guard to get a high-quality image in any weather (rain, snow, high cloudiness).

To protect the restaurant business from intruders (burglars, hooligans who try to break the glass, robbers), it is worth configuring the functions of motion detection and sending alarm messages in the cameras.

Therefore, all measures and means used should not create additional danger to the health and life of visitors, as well as restaurant employees. This concerns, first of all, the provision of emergency evacuation in an emergency situation.

We can improve the food safety system in the restaurant by implementing the HACCP (Hazard Analysis Critical Control Point) system in this institution – international standards for reducing the risk of food safety.

For this, it is necessary to develop and register technical documentation for the most important (critical) processes in the restaurant.

The HACCP system in a restaurant depends on the format of the establishment, where some critical processes may differ. But there are main points that should be taken into account when developing this food safety system:

- general procedures for using equipment in the restaurant kitchen and bar;
- instructions for the restaurant staff in compliance with the relevant hygiene standards;
- cleanliness monitoring system in the restaurant premises, as well as rules for its maintenance;
- instructions for preparing all dishes from the restaurant menu;
- procedure for obtaining products from the suppliers of the researched institution;
- rules for transporting raw materials to the restaurant;
- recommendations regarding the process, as well as the temperature of food storage in this restaurant;
- instructions on the terms of preparation, as well as serving dishes to restaurant visitors.

The State Production and Consumer Service has the right to check the operation of the restaurant in accordance with the legislation on food products. The procedures for such control are determined by Law No. 2042, which entered into force on April 4, 2018.

Since September 2019, all establishments of the restaurant industry had to be inspected in a mandatory manner. In connection with the beginning of the spread of the Covid-19 coronavirus pandemic, these inspections have been postponed, which means that establishments can implement this HACCP system during this time.

To get started, restaurants must register their production facilities:

1. Submit an application to the territorial body of the State Production and Consumer Service.
2. The application must be submitted by the director of the restaurant 10 days before the opening of the establishment.
3. The territorial body makes a decision and, if everything is completed correctly, issues an order on state registration (*Honcharenko N. V., 2021*).

Based on seven principles, the HACCP system is a set of rules for the organization of production activities, which guarantees the provision of a high-quality and safe product for the consumer. Each enterprise, whose products pass the way from the state of raw materials to the



consumer, acting in accordance with the principles of HACCP, will provide people with a safe product (Fig. 4) (Moroz O. V., Karachina N. P., Shiyan A. A., 2019). Consider these principles:

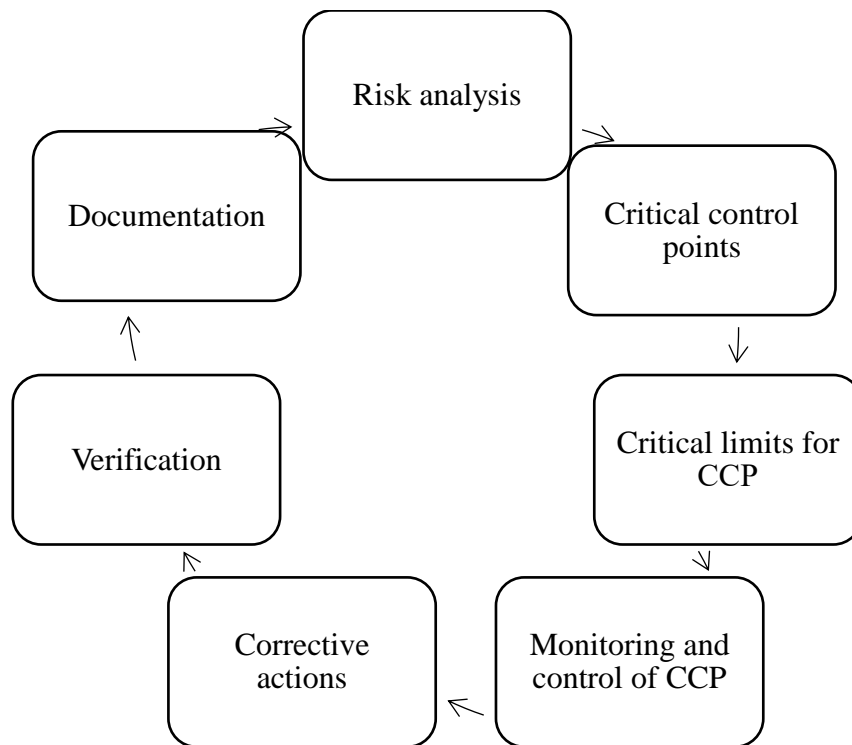


Figure 4 – Principles of the HACCP system

Principle 1. Carrying out risk analysis. The essence of the principle consists in the study of all factors related to the production of products (from raw materials to storage of the finished product in the warehouse), which can affect its safety for the consumer; compilation of lists of production operations in which these risks are possible; developing a list of precautionary measures to control these risks.

Principle 2. Determination of critical control points (CCP). In this principle, the definition of critical stages of the technological process, which affect the safety of products, is assumed. After the analysis of risks and dangers, the obtained information is used to determine specific stages of the production process, which are critical points.

Principle 3. Establishing the critical limits of each CCP. The task is aimed at establishing critical limits, upon reaching which measures should be taken to prevent the development of identified risks at one or another critical control point.

Principle 4. Establishment of a system of monitoring of CCP. After determining the critical control points and optimizing their indicators, a control procedure is developed. Such a control system includes all observations and measurements of the state of the CCP in order to comply with critical limits.

Principle 5. Establishment of corrective actions. In the developed HACCP plan, corrective actions should be clearly defined, which should be taken immediately in the event that the values of its indicators for a specific CCP exceed the established limits. This principle assumes that for the safe production of products, a clear concept of the organization of production with a quick response to the prevention of risk factors is a prerequisite.

Principle 6. Establishing a recording procedure. This principle obliges to develop an effective accounting procedure for the organization and functioning of the entire HACCP system with the maintenance of appropriate documentation.

Principle 7. Establishing procedures for checking the HACCP system. Effective compliance with the HACCP plan requires systematic audits. During the first inspection, the audit commission confirms the ability of the system to adequately and fully resist existing risks (*Postova V. V., 2022*).

The seven principles of HACCP are the basis on which HACCP is based as a product safety management system. In their essence, the principles are a task, the consistent solution of which allows for the development and implementation of mandatory procedures for the company's personnel.

The main goal of HACCP is to protect the health of consumers. This will be achieved if the possible and potential hazards of food production are eliminated.

At the end of 2021, the main problem of Ukrainian restaurateurs was the prolonged impact of COVID-19. Then, as the restaurant industry began to recover from the pandemic in 2022, Ukrainian restaurateurs again faced unprecedented challenges caused by the war with Russia (*Protsak K., Peredrii M., 2022*).

Russia's military invasion of Ukraine changed the life of our entire country. Many people have lost their jobs or are physically unable to work as before. In the first months of the war, the activity of restaurants practically stopped.

Restaurateurs during the war are faced with specific problems that affect the efficiency and success of the restaurant business.

The war created numerous problems in restaurants that require careful consideration and effective solutions. The safety of guests and staff becomes a top priority and every possible measure must be taken to ensure safety. Reduced demand and economic constraints require adaptation of marketing strategies and financial planning.

Ukrainian restaurateurs need to adapt to new business conditions. The use of foreign experience of anti-crisis management in restaurants during the war is relevant.

It is important to have an advanced wartime management plan. The main goal of the plan to improve the management of the restaurant during the war is to ensure the safety of guests and staff

and the effective functioning of the restaurant even in conditions of conflict (Table 1) (Rusavska V. A., Chebotaeva T. S., 2021).

Table 1 – Wartime Restaurant Management Improvement Plan

Name of the event	The essence of the event	Responsible
Threat assessment	It is worth carefully analyzing the potential threats associated with war or conflict in your region. It is also worth considering local conflicts, terrorist acts, the possibility of evacuation and other factors.	Restaurant owner and manager
Creation of an extraordinary committee	It is important to form a committee of representatives of various departments of the restaurant. This committee would be responsible for the development and implementation of the wartime management plan.	Owner, restaurant manager, chief administrator and sous chef
Access control and security	Access control systems, including physical barriers, video surveillance systems and security devices, should be reviewed and improved. It is important to follow up on the provision of everything necessary for safety. The restaurant must have backup power plants and systems fire safety.	Owner, restaurant manager, chief administrator and sous chef
Evacuation plans	Detailed evacuation plans and procedures for staff and guests must be developed. Evacuation drills and training should be conducted, including the use of emergency exits, escape routes and assembly points.	Owner, restaurant manager, chief administrator
Connection and communication	It is necessary to ensure proper communication with the outside world, including local authorities, suppliers. An instant messaging system and mobile means of communication for communication with staff and guests must be established.	Restaurant administrator
Stock supply	It is important to stockpile essential materials such as food, water, medicine and other necessary supplies.	Restaurant administrator
Training and learning	An equally important point is the conduct regular training and drills with staff on emergency situations, including safety procedures, first aid, fire safety and other important aspects.	Owner, restaurant manager, chief administrator
System of psychological support	Psychological support must be provided for staff and guests, as war can have severe emotional consequences. Information and resources for managing stress should also be provided psychological difficulties.	Owner, restaurant manager, chief administrator and sous chef
Monitoring the situation	It is important to constantly monitor the situation, receive updates on the current state of the conflict and follow the instructions of the relevant authorities and experts.	Owner, restaurant manager, chief administrator

This plan should be flexible and updated as the situation changes. It is important to have a clear plan and a team ready to act in case of war to ensure the safety and security of everyone in the restaurant.

We offer the following suggestions for improving restaurant management during wartime:

1. Develop contingency plans: It is important to create detailed contingency plans that take into account the potential risks and challenges of wartime. They should include evacuation procedures, safety measures, contact information for local authorities and other necessary actions.

2. Improving security: a security audit should be conducted and the access control, detection and monitoring systems of the premises should be improved. Consider working with local law enforcement to provide additional restaurant security.

3. Flexibility in services: it is necessary to consider the possibility of expanding the range of services and adapting them to the needs of customers during the war.

4. Crisis Communications Plan: A wartime communications plan must be developed that includes ways to contact guests, staff, and local authorities. The plan should provide a clear procedure for informing about possible changes in the mode of operation, safety and other important issues.

5. Staff training and education: It is important to ensure that staff are trained in emergency procedures, including first aid and evacuation skills. Regularly conduct training and practical scenarios to test the readiness of personnel to act in crisis situations.

6. Reservation and Management of Resources: Develop a system for reservation of resources such as electricity, water and food to ensure resilience during wartime. Monitoring and efficient use of resources can help avoid problems with insufficient supply. These suggestions can help improve restaurant management during wartime and ensure safety, efficiency, and satisfaction of customer and staff needs.

Developing a restaurant in a time of war can be a challenging task due to the unstable situation and security threats. However, even in such circumstances there may be certain prospects for development. Here are some possible ways to develop a restaurant:

1. Specialization in service. One must focus on specific market segments or customer groups that may have special needs or requirements during wartime.

2. Ensuring security and protection. It is necessary to improve security systems and offer services that will help guests feel safe. For example, this may include additional security measures, expert security advice, security, etc.

3. Strengthening marketing and public relations. Attention must be paid to marketing efforts aimed at drawing attention to the restaurant in wartime.

It is worth remembering that the development of a restaurant in the conditions of war is a difficult task, and it requires deep analysis and planning. Depending on specific circumstances, there may be other perspectives and opportunities. The main priority is always the safety of guests and staff, so be prepared to adapt to changes in the situation and take the necessary measures to protect them.

Prospects for further research are:

1. Improvement of security systems:

- development and implementation of new technologies to ensure security, such as biometric access control systems, surveillance cameras with artificial intelligence, automatic fire extinguishing systems;

- integration of security systems with other restaurant systems, for example, with the restaurant management system (POS) (*Ribun M.V., 2019*).

2. Improvement of personnel qualifications:

- development and implementation of safety training for restaurant staff;

- creation of online security courses for personnel;

- involvement of security specialists in the development and implementation of security systems in restaurants.

3. Development of new safety standards:

- development and implementation of new safety standards for restaurants that take into account the specifics of the restaurant business;

- creation of international safety standards for restaurants.

4. Study of the impact of security on the restaurant business:

- research on the impact of a safe environment on restaurant staff (productivity, motivation, loyalty);

- research on the impact of a safe environment on restaurant guests (satisfaction, loyalty, repeat visits);

- a study of the impact of a safe environment on the restaurant's financial indicators.

5. Studying the experience of other countries:

- study and implementation of best practices for ensuring safety in restaurants of other countries;

- cooperation with international organizations on safety issues in the restaurant business.

6. Use of artificial intelligence:

- development and implementation of artificial intelligence systems for forecasting and prevention of emergency situations in restaurants;

- using artificial intelligence to analyze safety data and develop recommendations for restaurants.

7. Environmental safety:

- research on the impact of the restaurant business on the environment;

- development and implementation of measures to reduce the negative impact of the restaurant business on the environment.

8. Economic security:

- research of risks for the economic security of restaurants;  
- development and implementation of measures to protect the economic security of restaurants.

9. Personal safety:

- research of risks for the personal safety of restaurant staff and guests;  
- development and implementation of measures to ensure the personal safety of restaurant staff and guests.

10. Cyber security:

- research of risks for cyber security of restaurants;  
- development and implementation of measures to protect the cyber security of restaurants.

Further research on the topic of forming and ensuring safety in the restaurant business will allow:

- 1) increase the level of security in the restaurant business;
- 2) save people's lives and health;
- 3) minimize business risks;
- 4) increase the competitiveness of restaurants.

**Conclusion.** So, it was determined that at any restaurant business, first of all, the following should be ensured: the safety of the lives of visitors and employees of the establishment, the health and property of the guests of the establishment under normal conditions, as well as in extreme situations.

Studies have shown that the hospitality industry has to deal with many challenges and threats of modern society. Threats that arise as a result of technical failures, human factor or «informational intervention» are considered, forcing to rethink methodical and technological approaches to ensuring the safety of guests of restaurant establishments, staff and virtual information space of the restaurant space. A comprehensive approach to ensuring the safety of guests, staff and the commercial component of a restaurant enterprise is not always effective.

It was determined that safety is achieved through the effective operation of the restaurant's security service, the use of advanced innovative technologies for access, surveillance, fire prevention, and signaling.

In order to increase the level of security of industrial enterprises, it is necessary, first of all, to conduct audits and control the functioning of the information security system in a timely manner and

to be able to eliminate risks; to develop a mechanism for managing the security of the enterprise on the basis of control and analysis of threats from the internal and external environment.

Restaurant establishments use a variety of means to protect visitors, employees, and company property from external and internal threats. Such systems include: automatic fire systems, fire alarm systems, video surveillance and security alarm systems, ventilation and smoke removal control systems.

To improve the operation of the restaurant's security system, the key tasks are: identifying new criteria for assessing the level of ensuring the security of the restaurant's operation; improvement of existing and development of new methods of assessment of real and potential occupational safety threats of restaurant workers in the course of their specialized activities; active implementation of measures aimed at improving the existing security systems in the management of the restaurant's production and economic activities; carrying out activities aimed at constant improvement of existing and development of new methods of increasing the level of professional qualifications of security service personnel; prevention and minimization of the probability of incidents that harm the life and health of employees, guests, corporate clients of the restaurant, which will lead to a significant increase in the level of public safety in the institution, increase its attractiveness for visitors, profitability, financial and economic stability and investment attractiveness.

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Norwegian University of Life Sciences

# INTERNATIONAL SECURITY STUDIOS: managerial, technical, legal, environmental, informative and psychological aspects

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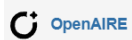
For scientists, educational staff, PhD candidates, masters of educational institutions, university faculties, stakeholders, managers and employees of management bodies at various hierarchical levels, and for everyone, who is interested in current problems of management, technical sciences, law, ecology, information sciences and psychological sciences through the prism of international security studies.

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