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THE ECONOMY OF THE INTERNET OF THINGS: POSSIBILITIES AND PROSPECTS

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ЕКОНОМІКА ІНТЕРНЕТУ РЕЧЕЙ: МОЖЛИВОСТІ ТА ПЕРСПЕКТИВИ

Концепція розвитку та використання такого явища як Інтернет речей стрімко стає популярним та актуальним сьогодні. Поняття Інтернету речей сформувалась завдяки технічним особливостям мережі Інтернет і зазнала еволюційного розвитку разом з глобального телекомунікаційною мережею. Але технічні особливості не є єдиноможливими для розвитку відповідних технологій. Стрімка поява Інтернет речей в житті суспільства потребує дослідження соціологічного феномену даного явища – дослідження споживчих властивостей, визначення можливостей участі у виробничих процесах, розвитку способів та напрямів використання тощо. Метою статті є висвітлення результатів дослідження економічних аспектів використання Інтернету речей, та визначити особливості такого використання. У процесі підготовки матеріалів статті були використані загальнонаукові методи опису економічних явищ з метою переходу від абстрактного опису до конкретних умов застосування концепцій та ідей, що пропонуються. Вивчення особливостей використання можливостей Інтернету речей в економічній практиці дозволяє класифікувати дане явище як своєрідний економічний актив у практиці діяльності підприємств. Подвійна природа поняття Інтернету речей дозволяє визначити напрями інформаційного оброблення даних, що пов'язані з роботою Інтернет речей. Це у першу чергу стосується особливостей збору даних, розуміння важливості консолідації даних та способів її реалізації, класифікації інформаційних загроз, забезпечення інформаційної повноти необхідної для прийняття виважених управлінських рішень. Стаття містить огляд можливостей доступу до властивостей елементів Інтернету речей, що є важливим як для виробників послуг так і їх споживачів. Розвиваючи ідею ефективної консолідації даних у статті пропонується авторська інтерпретація архітектури хмарної платформи, яка має бути ефективним знаряддям у розбудові різноманітних бізнес стратегій із застосуванням Інтернету речей. Дано визначення особливостям складу компонент технології ефективного використання системи Інтернету речей. Визначено

сфери господарювання де можливості Інтернету речей можуть проявити себе найкраще. Висвітлено актуальні особливості впровадження стандарту Індустріального Інтернету речей та визначено важливі практичні особливості розвитку даного напряму. Практична цінність роботи полягає у систематизації технічних, економічних, соціальних, юридичних та інші аспектів, які притаманні феномену Інтернету речей. Виконання досліджень у даному напрямі є важливим та необхідним для гармонійного входження поняття Інтернету речей у життя сучасного суспільства. Через це роль та значення даного економічного явища є багатоаспектним та вартим проведення окремого наукового дослідження.

The concept of development and use of such a phenomenon as the Internet of Things is rapidly becoming popular and relevant today. The concept of the Internet of Things was formed thanks to the technical features of the Internet and underwent evolutionary development together with the global telecommunications network. But technical features are not the only possible ones for the development of relevant technologies. The rapid appearance of the Internet of Things in society requires the study of the sociological phenomenon of this phenomenon - the study of consumer properties, the determination of opportunities for participation in production processes, the development of methods and directions of use, etc. The purpose of the article is to highlight the results of research into the economic aspects of using the Internet of Things, and to determine the specifics of such use. In the process of preparing the materials of the article, general scientific methods of describing economic phenomena were used in order to move from an abstract description to specific conditions of application of the proposed concepts and ideas. Studying the peculiarities of using the possibilities of the Internet of Things in economic practice allows us to classify this phenomenon as a kind of economic asset in the practice of enterprises. The dual nature of the concept of the Internet of Things makes it possible to determine the directions of information processing of data related to the operation of the Internet of Things. This primarily concerns the

peculiarities of data collection, understanding the importance of data consolidation and methods of its implementation, classification of information threats, ensuring the completeness of information necessary for making balanced management decisions. The article contains an overview of the possibilities of accessing the properties of Internet of Things elements, which is important for both service producers and their consumers. Developing the idea of effective data consolidation, the article offers an author's interpretation of the cloud platform architecture, which should be an effective tool in building various business strategies using the Internet of Things. The features of the composition of the components of the technology of effective use of the Internet of Things system are defined. Areas of business where the possibilities of the Internet of Things can show themselves best have been identified. Current features of the implementation of the Industrial Internet of Things standard are highlighted, and important practical features of the development of this direction are defined. The practical value of the work lies in the systematization of technical, economic, social, legal and other aspects inherent in the Internet of Things phenomenon. Carrying out research in this direction is important and necessary for the harmonious entry of the concept of the Internet of Things into the life of modern society. Because of this, the role and significance of this economic phenomenon is multifaceted and worthy of a separate scientific study.

Ключові слова: *Інтернет речей, економіка Інтернету речей, архітектура хмарної платформи, компоненти технології Інтернету речей.*

Keywords: *Internet of Things, Economy of IoT, Sharing Economy, Cloud Platform Architecture, Technology Components at the IoT.*

Statement of the problem in a general form and its connection with important scientific or practical tasks. The term "Internet of Things" describes a network of items physically connected to the Internet, such as a refrigerator, a car, or a telephone. These elements, or "things", have the ability to collect and share

data, allowing them to "talk" to people and to each other. The Internet of Things can be roughly divided into four main parts: "sensors" or "devices", connections, data processing, and "user interface" or "action".

The largest sectors of the economic sphere, where the application of the Internet of Things is relevant, include the management and control of industrial assets, the protection of critical infrastructure, advertising and interaction with consumers of products, the sphere of entertainment and media.

For example, through the use of cameras, motion sensors and alarms, modern intelligent infrastructure security systems provide remote access, instant warnings and constant protection.

IoT sensors integrated into buildings, roads and bridges monitor their structural integrity. They enable prompt maintenance and prevent catastrophic events by detecting problems such as cracks or stress zones and sending alerts before these problems worsen. Smart irrigation systems in agriculture use sensors to monitor weather conditions and soil moisture levels, ensuring plants are irrigated only when needed, helping to save water and increase yields. Utilities and consumers can more effectively integrate renewable energy sources, minimize waste and optimize energy use thanks to smart grids and meters that provide detailed data on energy consumption.

Thanks to the use of cloud platforms and big data analysis tools, the use of the Internet of Things in the economic sphere contributes to a significant increase in the efficiency of the use of machines and human resources of enterprises. The Internet of Things refers to an ecosystem of connected intelligent devices and sensors that monitor the performance of economic and industrial assets in various locations.

Without IoT, asset management solutions face delays and errors in manual data collection. They can also suffer from underutilization of assets, poor maintenance, and inaccurate reporting. This leads to a lack of awareness of real-time customer needs, inefficient use of assets, data limitations and losses. Also, IoT

usage is helping to predict overall and personalized content consumption in the media and entertainment industries.

The Economy of IoT combines the physical and digital worlds. In general, this allows us to manage enterprise assets at four levels:

1. Data collection. Sensors help detect or measure parameters such as light, sound, temperature, humidity, pressure, biometrics, proximity, acceleration, and GPS coordinates. Devices affect the sensor input or capture the input themselves — smartphones, TVs, game consoles, and home automation devices.

2. Data consolidation. Gateways collect and consolidate data from sensors and smart devices and transmit them to cloud platforms using high-bandwidth channels. They can communicate using multiple protocols such as cellular, Bluetooth, Wi-Fi, and Ethernet.

3. Interception of data. IoT platforms collect data from gateways or devices and processes. They can also directly transmit data to applications in the clouds for further processing, analysis and action. It connects the Internet of Things with cloud technologies.

4. Data visibility. Dashboards and reporting for understanding and using information to forecast future needs by enterprise managers.

Enterprise management can now make more informed decisions by collecting multiple aspects of consumer data. These include data such as location, time of day, concurrent activities related to consumption, age group and region. As a result, marketers can develop more detailed consumer profiles that allow them to target ads and personalize content accordingly, delivering a higher return on advertising.

Formulation of the goals of the article. One of the interesting personalities of this phenomenon is its economic component. In our opinion, the development of the Internet of Things, which is caused by economic processes, is not covered enough in the scientific literature. In order to reveal this important aspect, we proposed this publication. Perhaps it will be part of a set of publications on this topic. This article is devoted to highlighting the characteristics of strategies of the

behavior of enterprises in the market of the Internet of Things and the construction of appropriate tactics of possible behavior.

The study used the following methods: scientific abstraction, historical, systematic approach, systematic and system analysis. The modern trend is the active use of the Internet of Things in society. The role and importance of the Internet of Things is rapidly gaining popularity today. Historically, this concept arose as a consequence of the rapid development of the Internet and the possibilities of its use. In its essence, the Internet of Things is a kind of side effect of the development of the global communication network. The Internet network, first of all, is a collection of various technologies - communication technologies, means of information security, provision of information services, etc. Since the Internet of Things is a consequence of the development of the Internet, this phenomenon has absorbed all the features common to the global communication network.

The main material of the research. The development of the Internet of Things has its advantages and disadvantages, which are also inherent in the peculiarities of using the Internet. Let's consider the last statement in a little more detail.

The Internet is made up of nodes connected to each other. Since the days of the Arpanet network, a simple rule has been preserved - none of the nodes is mandatory. This makes it possible to talk about the equality of nodes, independence and the possibility of interchangeability. The principle of communication, which is oriented towards use within nodes, is the same for all - the use of sockets with simple numbering of addresses and the use of the concept of ports as a means of providing multiple services to each of the nodes independently. In the Internet, it is customary to divide nodes according to the characteristics of "givers" and "receivers". This results in the development of separate models and architecture of interaction - clients and servers, files and servers, multi-chain architecture, etc.

Coordination of the work of others by one node is not something exotic in the Internet. The formation of the behavior strategy of an individual node can be

quite diverse because of this. A node can be in constant communication with its coordinator. The node can be partially isolated or have no quality connection with the outside world. A node can work independently and have no connection to the network at all or have extremely rare connections characterized by frequent pauses and interruptions. Other examples of purely practical cases of node interaction can be cited. All of them will be connected by one feature - one way or another, all nodes are connected to each other. There is a certain guarantee of the possibility of obtaining access to nodes and, conversely, providing access to certain nodes to others. This is the only way the Internet can function, even if, for various reasons, some segments of the network are difficult to access.

But let's return to the concept of the Internet of Things and ways of using this concept. A node in the context of the Internet is a means of information interaction. Consideration of the logic of using the concept of a node in this plane is always within the scope of issues of working with information exchange protocols, maintaining a certain level of information security, and other similar technical tasks. If we consider the Internet of Things as a collection of devices that interact with each other, then we will see that these are some nodes of the Internet for which the possibilities of information exchange among themselves are clearly defined. The Internet of Things is perceived as a means of obtaining services that are convenient and physically accessible to a person. But not all Internet nodes are designed to provide such services. The Internet network is a unique environment for the development of the concept of the Internet of Things - therefore, some nodes of the Internet network will be designed to support such an environment and are the basis for the work of other nodes.

As indicated in [7], three main methods of organizing the communication of nodes that are part of the Internet of Things are popular today: direct peer-to-peer communication, access through the use of a special web server, and, as already mentioned, the use of cloud technologies. These are the possibilities of information access to the nodes that make up the Internet of Things network. A node in the context of the Internet of Things network is a source of data about what this node actually is. From this point of view, the possibility of physical access to this node and, as a result, to the Internet of things associated with such a node is important.

The principle of "givers" and "receivers", which is the basis of the Internet, extends to the Internet of Things network as well. But a node in the context of the Internet of Things is no longer just a node that provides or receives information - it is a node that is associated with a service. Therefore, a network node that is part of the Internet has a dual nature - on the one hand, it is a purely informational phenomenon, on the other hand, it is a physical phenomenon with features that are indirectly inherent or not inherent in the concept of "information". For example, such features can be the time of providing the service, the amount of work performed, the cost of the necessary resources, suitability for integration into the chains of production processes, etc.

Since the organization of physical access to the nodes of the Internet of Things may be necessary both for the owner of the Internet of Things (provider) and for the potential consumer (client), four economic strategies of behavior can be distinguished, which are naturally followed by both sides of this process. Schematically, the features of such strategies are shown in Figure 1.

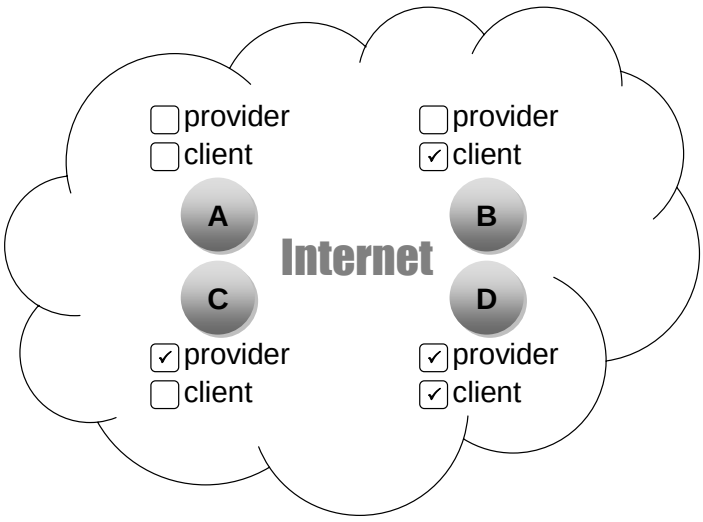

Figure 1. Physical access to Internet of Things properties

Source: developed by the authors

Under the conditions of implementation of strategy A, there is no need for explicit physical access to the Internet for both parties. An example of the implementation of a similar scheme of providing services on the Internet can be the rental of software. There are a number of significant advantages that the consumer

of such services receives - a significantly lower purchase price compared to the explicit transfer of program codes and their implementation, the absence of the need to purchase expensive technical equipment, the absence of costs for software administration, compliance with license purity in use lost funds, etc. From the point of view of the service owner, there is a significant saving of economic resources for the development of one's own technical infrastructure - the active use of appropriate cloud technologies or the rental of the necessary technical sites can significantly help in this. An example can be the provision of a virtual server rental service, which is popular in Ukraine today. A virtual server, as a site within which software is located, the use of which is offered as a service, does not require the obvious physical presence of any of the parties. The only important thing is remote access to the Internet, which is enough to carry out economic transactions.

Under the conditions of implementation of strategy B, the need for explicit physical access is important only for the consumer of services. This option of providing services using the Internet became popular with the development of the concept of "smart devices". If we assume that the device does not require repair within the warranty period of operation (that is, there is no obvious physical need to contact its manufacturer), then its connection to the Internet can be carried out for the purpose of receiving automatic updates of the service software for error correction, receiving clarifications to basic settings, import of new functionality, collection of statistical data, etc. Also, such a strategy can be successfully used by the device manufacturer as a means of effective advertising. The latter is an indisputable advantage because the advertising audience has already been formed and the distribution of advertising messages will be accurately directed to the desired target group of consumers. An example of such devices can be kitchen appliances - food processors, slow cookers, coffee makers, etc.

Under the conditions of implementation of strategy C, the need for explicit physical access is important only for the service owner. In our opinion, this strategy is similar to strategy A, with the difference that the owner of the service is also the owner of the technical equipment used on the Internet to provide access to

such services - web servers, cloud infrastructure, etc. In Ukraine, this direction is actively developing, as evidenced by the experience of well-known domestic companies [8, 9, 14].

Under the conditions of implementation of strategy D, the need for clear physical access is important for both sides of the economic process. Historically, the first example was the experience of the Coca-Cola company with a remote connection to a beverage vending machine [12], which is often mentioned in various publications. Although this event happened way back in 1982, this experience can be attributed precisely to the named strategy. The beverage vending machine worked independently, remotely, outside the company. At the same time, it was possible to control the state of its operation, control the presence of products in it, which made it possible to make a balanced decision about the need for physical maintenance of the device. The availability of CocaCola products at any convenient time can also be noted as an advantage, but one that concerns consumers. In Ukraine, as a similar experience, it is possible to note the work of the company BikeNow [11], which develops the Ukrainian system of public bicycle rental. The devices that are available in the bike rental network are equipped with geolocation sensors and other means that allow you to receive all the necessary information about the state of service provision, determine the current location of the devices, collect information about the need for maintenance, etc. through the Internet. The development of the market for car sharing services [4] is relatively new for Ukraine, which, thanks to the Internet, is also developing rapidly recently.

From the point of view of conducting business, the active implementation of technologies based on the application of the capabilities of the Internet is the basis for the transition to the economy of shared consumption of goods and services. The new term "Shared Economy" is actively entering our lives. Some references source [6] claim that this is a new direction of development that will be characteristic of the entire 21st century.

The concept of the four strategies of economic behavior that were considered can also be used to determine the place of application of the main methods of organizing the communication of nodes that are part of the Internet of Things, which have already been mentioned: direct connections, the use of specialized web portals, the use of cloud technologies. All of them may require the use of related technologies: methods of organizing high-quality and reliable communication, development of device management protocols, use of specialized means of data storage and processing, development of technologies for monitoring service provision processes, development of means of interaction with devices, etc.

It is not possible to determine in advance when the need to provide a service in the Internet of Things system will be actualized. Access to the service can be provided 24/7 without interruption. Because of this, the recent trend is the gravitation towards the active use of cloud technologies. In our opinion, this direction is the most priority today. The architecture of cloud platforms is a combination of service-oriented architecture and event-driven architecture, which has both internal and external features of its implementation. The Figure 2 contents of the composition with typical architecture of modern cloud platforms is shown.

Cloud computing architecture consists of components and subsystems required for the cloud computing concept. These components are external platform (thick client, thin client, mobile device), internal platform (servers, storage), cloud delivery and network (Internet, Intranet, Intercloud). The architecture of cloud platforms is divided into the following two parts:

• Front End;

• Back End.

The rapid growth in the number of connected devices opens up huge opportunities for the industry. Consumers get the opportunity to control the improvement of goods. At the same time, suppliers receive detailed information about consumer preferences. Some of the key areas where IoT is contributing to the enterprise asset management industry are:

• Management of industrial assets;

• Targeted advertising;

• Personalized content;

• Immersive content (augmented reality technology).

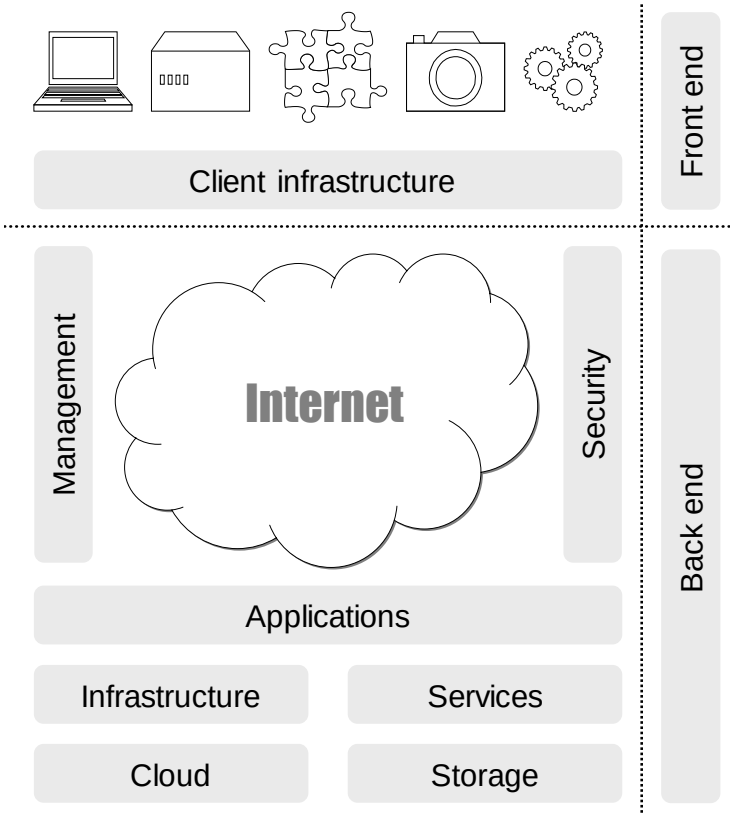

Figure 2. Cloud platform architecture

Source: developed by the authors

For example, in the gaming industry, augmented reality using IoT devices such as smartphones, tablets, and portable game consoles provides the highest form of immersive entertainment. Virtual reality combines elements of the real world with the virtual, superimposing the virtual on the real.

Today, several major brands are building their own ecosystems around virtual reality and the Internet of Things for entertainment. There's Facebook's Augmented Reality glasses, Microsoft's Kinect as a motion detection app for Xbox 360, Amazon's Augmented Reality player, Augmented Reality Emojis using your phone's camera from Snapchat, Disney, and more. Disney Corporation is coming up with a revolutionary combination of augmented reality and the Internet of Things to track and communicate useful information to guests about attraction

delays. They also provide information about who certain activities are for, based on where they are in the park place [5].

The future holds unique streaming of immersive live events using IoT devices, Virtual Reality headsets, Augmented Reality glasses, etc. for large segmented audiences.

With the increase in the number of smart devices, the content has become mostly digital. You can be on a walk, cycling with friends, doing sports or driving home. For example, depending on your location or activity, the music platform you listen to can offer you upbeat, relaxing, or party music. Portable devices, mobile phones, tablets, and social media data collected from a household can provide a detailed map of family composition, preferences, needs, friends, and more [5].

In the past, television used to show ads to everyone without knowing if they would reach the target audience. There was no way to filter it out for those it didn't concern. Today, with the availability of digital content and the capabilities of OTT (Over The Top) technology, media and entertainment platforms can track consumer behavior across devices.

Based on data collected from wearables and other smart devices, it is now possible to gather metrics on how many people saw a particular ad on different devices and how many of those people made a purchase decision. In addition, such detailed information about users helps to adapt advertising campaigns to the placement of advertising messages in a way that would guarantee the most profit.

From the above, it is clear that Internet of Things tools are nothing more than company assets that are used for profit. The definition of some features of the management of such assets of enterprises (Table 1).

Separately, it should be noted that the Internet of Things can take the form not only of individual devices, but also be distributed as an element of a specific import of technologies. In particular, it is natural to add the possibilities of connecting conventional tools, which are already at the organization's disposal, to the Internet. For example, by installing a variety of sensors, tracking devices, control devices, etc. on equipment that is already in operation. This will make it

possible to carry out traditional management of means remotely. In particular, similar mechanisms are widely used today in the practice of transport logistics [2, 10] and in other fields.

Table 1. Technology components at the Internet of Things system

Components of asset management	**Technologies of the Internet of Things system**
Tracking of movable assets	These can be vehicles, logistics and electronic bracelets that customers use in person
Monitoring	Monitoring the health of assets, in particular, equipment, machines, according to such parameters as compliance with settings, checking connectivity, the presence of technical errors and counting the time of use or downtime
Work process automation	Using the voice assistant to turn the equipment on or off, reduce or increase the volume of the music system or TV, make data transfers
Equipment maintenance	Based on asset tracking and monitoring, maintenance forecasting. For example, detecting technical failures in the operation of the asset using IoT devices, and notify specialists about maintenance in advance
Security	At the enterprise any digital assets must be protected with role-based authentication and authorization for access, collaboration, and content addition. For the end user, the assets must be secure to prevent the breach of sensitive personal information
Improving customer accessibility and experience	If there is a technical problem with the car, or an unpaid rental bill, the supplier can send a message to the customer. This can be viewed in the mobile application or on the customer's phone. Even in the event of a technical problem, the client can enter the application and start diagnostics with the help of a chatbot

Source: developed by the authors

The practice of hazardous production also requires means of remote control of technological processes. Recently, this direction has been separated into a separate field - the Industrial Internet of Things. Among the advantages of this direction, as noted in [3], it is possible to note the possibility of active use of the latest software and technological solutions that contribute to improving the quality of interaction with end users, the possibility of operational influence on the production process, high potential opportunities for optimal planning of the use of available resources, etc.

As already noted, the agro-industrial sector of the economy is a relevant direction of application of the Internet of Things for our country. First of all, this direction is connected with the possibilities of automation of various agricultural processes. As noted in [1], such processes can include monitoring the state of

climatic conditions, automating the operation of greenhouses, managing the crop growing process, monitoring the state of livestock, organizing work to ensure precision agriculture, robotizing machines and separate mechanisms, etc.

Thus, solutions in asset management in the Internet of Things system provide significant opportunities to raise the level of customer service. Harnessing the capabilities of the Internet of Things serves as a powerful predictive monitoring tool that helps maintain assets and provides a deep understanding of end-user desires. Every day, new and better IoT devices appear on the market. Therefore, it is better for companies to invest in the intelligent structure of the Internet of Things today.

But the Internet of Things has not only advantages - it also has certain disadvantages. Hackers will have more chances as there will be more connected gadgets. To protect against cyber attacks, it is important to have reliable security measures. IoT devices pose privacy concerns because they collect a lot of personal data. It is important to understand how this data is used and protected. Ensuring seamless compatibility between different devices and vendors can also be a challenge.

Using IoT, Mobile, Chatbot and AI capabilities, companies can provide better customer service. This is very evident at the end customer level. For example, free remote tuning with a connection to the TV. Previously, the provider had to send a person to do the full setup. Today, with the help of a chatbot on your website or app, the customer can perform this procedure independently or in a fully automated way. In addition, the installer is intelligent enough to check the network connection and inform the user about it. The process is predictable and controllable. This saves valuable time for the customer support team, which can instead focus on more important tasks. It can also help to have a smaller, highly skilled support team, as smart devices are connected and handle tasks with minimal human intervention.

Every device in the Internet of Things system collects data, whether it's a security camera, a refrigerator, or an Amazon Echo. This poses a potential threat to

privacy and overall security from cybercriminals. They can gain access to such a device, monitor its operation, gain access to confidential digital and physical data. Because of this, securing the Internet of Things environment is extremely important.

The 62443 series of standards of the International Electrotechnical Commission (IEC) is the first step in solving the issues of secure information infrastructure of the Internet of Things. In particular, a structured approach to the protection of the industrial environment, namely the industrial Internet of Things, is proposed. IEC 62443 defines a comprehensive set of standards, technical reports and guidelines dedicated to improving the electronic security of industrial automation and control systems (IACS) [14].

The importance of this standard lies in its holistic approach, covering tasks from risk assessment and system design to maintenance and incident response. It provides a common language and set of requirements that facilitate effective collaboration between asset owners, product and service providers, ensuring a coherent and effective strategy for protecting control systems.

The integration of artificial intelligence into IoT technologies within the framework of IEC 62443 can improve industrial cybersecurity in several ways:

• Through anomaly detection and threat intelligence. The ability of artificial intelligence technologies to analyze large data sets enables the early identification of unusual attack patterns that may indicate potential threats, suggesting preventive security actions.

• Automated incident response. AI-driven systems can automate the response to security incidents, significantly reducing response times and rapidly mitigating potential consequences.

• Forecast maintenance and risk assessment. Artificial intelligence technologies improve the ability to predict disruptions and assess possible risks, thereby improving the overall safety of industrial systems.

Organizations should consider the following strategies for IoT-based systems [13]:

• Establish a robust governance framework: ensure the integrity, quality and confidentiality of data coming from IoT sensors throughout the lifecycle.

• Stimulate and encourage collaboration between AI professionals, cybersecurity experts and industry stakeholders to align strategies and share experiences.

• Implement continuous monitoring through regular AI-driven audits and controls of cyber security systems to maintain their effectiveness and compliance with defined tasks.

• Maintain a constant level of investment in personnel development in order to develop relevant capabilities, adapt to the requirements of technological progress, master the practices of timely response to the challenges of cyber threats.

All this is necessary in order to fully exploit the potential of artificial intelligence and ensure security within the framework of the IEC 62443 standard.

Conclusions. The development of society today is impossible without the active use of digital tools. This applies equally to both hardware and software. The introduction of digital technologies has become the norm of modern life. One of the areas of development of digital technologies is the formation and implementation of the Internet of Things concept, which is rapidly gaining popularity. The prospects of this direction are accelerated economic growth and stimulation of attracting investments in production and sales processes, increased competitiveness of enterprises, accessibility of the opportunities of the digital world to broad segments of the population, development of human capital, the formation of a digital industry, which is important for the formation of a digital society.

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