# Ensuring Information Security in the System of Public Management of Sustainable Development of the Region: EU Experience

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#### Abstract

The main purpose of the study is to analyze the features of ensuring information security in the system of public administration of the constant development of the region. The actualization of the research topic is because the information has become a powerful means of manipulating the public and individual consciousness, as well as a real weapon used in new types of conflicts, confrontations, and confrontations. Creating opportunities for everyone to access information sources, developing the ability to use it, and at the same time protecting people from dirty information flows create a kind of subjectresearch field, one of the most relevant aspects of which is the problem of forming and implementing information security policy at the state, public and civil levels. The research methodology involved the use of theoretical and scientific methods. As a result of the study, the key features of ensuring information security in the system of public management of the continuous development of the region of the EU countries were identified.

**Keywords:** Public Management, Sustainable Development, Information, Security

#### 1. Introduction

The current stage of development of information technologies is characterized by the possibility of a massive information impact on individual and public consciousness up to large-scale information wars, as a result of which the principle of information security in the system of public management of sustainable development of the region becomes an inevitable counterweight to the principle of freedom of information. This principle is due to the global information revolution, rapid development, and widespread introduction of new information technologies global telecommunications. and Penetrating into all spheres of life of states, the

information revolution expands the possibilities for the development of international cooperation and forms a planetary information space in which information acquires the properties of the most valuable element of the national heritage, its strategic resource.

Today, a significant part of the intellectual, political, and economic elite of the world's leading states is involved in building a global and European information society. Information technologies and information and communication systems in the current conditions of global civilizational development are the key resources of society and the state and a necessary condition for their competitiveness in global markets. It is the information sphere in the system of public management of the sustainable development of the region that can act as a leading factor in the implementation of the most important public projects of dynamic development, the formation of civil society, as well as entry into the world community. The criterion for the effectiveness of ensuring information security is a high level of security in the information sphere with a minimum of related costs. The combination of internal and external information threats creates the prerequisites for disrupting the equilibrium functioning of the public administration system. We emphasize that information security acts as a characteristic of a stable, sustainable state of the public administration system, which, under the influence of internal and external threats and dangers. retains essential characteristics for its functioning and development in the public

management system for the sustainable development of the region.

The main goal of the functioning of the information security system in the system of public management of sustainable development of the region is to create the necessary economic and sociocultural conditions, and legal and organizational mechanisms for the formation, development, and ensuring the effective use of national information resources in all areas of activity of a citizen, society and the state. Among the important tasks of the information security system are: creating conditions for ensuring the information sovereignty of the state; participation in the improvement of state regulation of the development of the information sphere by creating regulatory and economic prerequisites for the development of the national information infrastructure, the introduction of the latest technologies in this area, filling the domestic and global information space with reliable information; creating conditions for the active involvement of the media in the fight against corruption; ensuring strict observance of the constitutional right of citizens to freedom of speech, access to information, preventing unlawful interference of state authorities, local governments, their officials in the activities of the media; ensuring information security of all components of the public administration system; ensuring the information and analytical potential of the country; implementation of the state information security policy; monitoring the state of information security; ensuring the preservation of state secrets. The main purpose of the study is to analyze the features of ensuring information security in the system of public administration of the constant

development of the region.

## 2. Methodology

The methodology of the article includes a number of theoretical and scientific methods, the totality of which forms it. Philosophical (dialectical, metaphysical), general theoretical, (epistemological, structural-functional), special (comparative legal, inductive), and intersectoral methods of scientific knowledge (historical, analytical) are used as the methodological basis of the study, the application of which is due to a systematic approach.

### 3. Research Results and Discussions

The European experience in the development of the information market in the system of public management for the sustainable development of the region shows that managerial and entrepreneurial activities need to constantly receive economic and social information. The growing influence and importance of the information component of society, as well as psychological and technical capabilities for manipulating mass consciousness, require a transition to a predictive advanced information support model that provides effective protection against information and psychological impact technologies and also satisfies the growing need of society for receiving useful information.

As part of the information support of national security and the protection of personal information, there is a fight against cybercrime, since this is a particularly urgent problem for European countries, due to the high level of computer equipment. The basic international legal document regulating public relations in the field of combating cybercrime is the Council of Europe Convention on Cybercrime [1-3]. Most European countries have adopted laws that allow providers to be held accountable for posting illegal content on their websites; in addition, some rules restrict providers' access to information sources. Network operators cannot be held liable for the content of information transmitted by networks, but they are obliged, under the terms of issued licenses, to take the necessary measures against users and customers who use networks to transmit information of illegal content. The UK, Germany, and the Netherlands have adopted codes of conduct and set up independent bodies that develop ethical standards for the content of information and the classification of illegal information. In order to increase the effectiveness of the fight against cyberterrorism, it is advisable to implement the following system of measures: develop a state strategy, concept, and doctrine to combat cyberterrorism in the system of public management of sustainable development of the region; organize effective cooperation in the information sphere with the states of the world, their enforcement agencies international and organizations; initiate the signing of regional agreements as one of the most effective tools to combat cyberterrorism; it is necessary to have a national cybercrime unit and an international point of contact to assist in the implementation or prevention of a cyberattack; in accordance with existing laws against cybercrime and cyberterrorism, by current international standards and the Council of Europe Convention on the Suppression of Cybercrime, it is necessary today to adopt laws on electronic security. On Tab.1. depicts the main threats to information security in the system of public management.

Table 1: The main threats to information security in the system of public management

system of public management	
№	The main threats
1	Information war in neighboring countries
2	Cyber-attacks on information sources
3	Lack of an effective system for ensuring the integrity, immutability, and safety of secret information, including intellectual property
4	Development of foreign technical means of reconnaissance and industrial espionage, allowing unauthorized access to confidential information, including that constituting a state secret;
5	inconsistency of information support of state and public institutions with modern requirements for managing economic, political, and social processes

Ensuring information security in the system of public management of sustainable development of the EU region is a continuous process, which consists in substantiating and implementing the most rational methods and ways to improve and develop the protection system, control its condition, identify reserves, as well as illegal actions in the information sphere. Information security can be ensured only with the integrated use of the entire arsenal of available protection tools in all structural elements of the production system and at all stages of the technological cycle of information processing. The greatest effect is achieved when all the means, methods, and measures used are combined into a single integral mechanism of the information protection system.

It is worth noting that information security in the EU is ensured by the implementation of a unified state policy of national security in the information sphere, a system of economic, political, and organizational measures that are adequate to the threats and dangers of the national interests of the individual, society and the state in the information sphere [4-6].

To create and maintain an adequate level of national security in the information sphere, a system of legal norms regulating relations in the information sphere is being developed, the main areas of activity of government bodies are being determined, and bodies ensuring state information security are being formed, well as mechanisms for monitoring and supervising their activities. In modern conditions of ensuring information security in the public management system, sustainable development of the region is achieved through the implementation of a system of measures aimed at preventing threats, these are preventive measures to ensure information security by preventing the possibility of threats; to identify threats, expressed in the systematic analysis and control of the possibility of the emergence of real or potential threats and timely measures to prevent them; to identify threats, which involves the identification of real threats and specific criminal acts; to localize criminal acts and take measures to eliminate the threat or specific criminal acts; to eliminate the consequences of threats and criminal acts, as well as to restore the status quo [7-10].

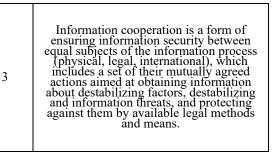
Organizational measures in the EU countries play an important role in creating a reliable mechanism for protecting information, since the possibility of unauthorized use of confidential information is largely due not to technical aspects, but malicious actions and negligence of users. At the enterprise level, organizational measures should be

implemented by the security service, which is entrusted with the following functions: - organizing ensuring the protection of confidential information; participation in the development of basic documents in order to fix the requirements for ensuring information security in them; development and implementation of measures to ensure work with documents containing confidential information; conducting official investigations into the facts of disclosure of information, loss of documents, leakage of confidential information and other violations of information security; maintaining contacts with law and security agencies of other enforcement enterprises.

On Tab.2. depicts the main forms of information security in the system of public management of sustainable development of the region.

Table 2: The main forms of ensuring a high level of information security in the system of public management of sustainable development of the region

of sustamatic development of the region	
№	The main forms of information security in the system of public management
1	Information patronage is a form of ensuring the information security of individuals and legal entities by the state. It involves providing the governing bodies of the information security system of the state with information about destabilizing factors and threats to the state of awareness of individuals and legal entities (information support of information security) and protecting the vital interests of these individuals from information threats or, as they say, information protection.
2	Information protection is achieved by introducing bills as a legislative initiative, implementing judicial protection, and carrying out operational measures by the forces and means of information security.



Information policy in the system of public management of sustainable development of the region is understood as the activity of the state in the information sphere, aimed at meeting the information needs of a person and a citizen through the formation of an open information society based on the development of single information space of the state and its integration into the world information space, taking into account national interests and features in ensuring information security at the domestic and international levels. The main goal of the information security policy of the state is the management of real and potential threats and dangers in order to create the necessary conditions for meeting the information needs of a person and a citizen, as well as for the realization of national interests [11-15]. Thus, in order to realize national interests in the information sphere, it is necessary to revise the priorities of state policy, develop new conceptual approaches to regulating the information and communication technologies market, information and investment policy, developing information legislation, and ensure information security in the system of public management of sustainable development of the region.

An important task in the field of improving the information policy in the EU is the formation of its strategy and setting priorities in order to ensure the adaptation of Ukrainian society and the state to the realities of the global and European information society. The key direction of such a policy should be to increase the intellectual, creative, and technical level of domestic producers of information products, and the growth of competitiveness in the global information market. Only a developed, globally competitive information production can guarantee the implementation of national interests in the information sphere, as well as solve the problem of effective information support of the state socio-

economic policy in the system of public management of sustainable development of the region.

### 4. Conclusions

Thus, experience shows that state bodies play a decisive role in coordinating the actions of subjects in the field of ensuring information security in the system of public management for the sustainable development of the region. The priority direction is the improvement of legislation establishing liability for an offense, and the development and legislative consolidation of a list of offenses and types of liability in the field of information security. Information security, due to the global nature of communication networks, can only be ensured through international assistance. In this regard, it is necessary to strengthen interaction with foreign countries, and intergovernmental organizations on the issues of legal support of information security. An analysis of foreign legislation regulating the information sphere suggests that significant changes have taken place in the sphere of legal regulation of the right to information, access to information, the media, as well as restrictions on freedom of information.

The analysis of international and foreign legal acts in the information sphere indicates that there is a significant and diverse experience of legal regulation both at the international and national levels.

In international practice, issues of ensuring openness and access to public information occupy an important place, but in most cases, it is widely understood as any information held by the public sector. Information security, due to the global nature of communication networks, can only be ensured in the conditions of international interaction in the system of public management for the sustainable development of the region.

As a result of the study, the key features of ensuring information security in the system of public management of the continuous development of the region of the EU countries were identified.

#### References

[1] Lapinskienė, G., & Tvaronavičienė, M. Sustainable development across central and eastern Europe: key factors driving the economic

- growth of the countries. Business: Theory and Practice, 10(3), 2009, 204-213. <a href="https://doi.org/10.3846/1648-0627.2009.10.204-213">https://doi.org/10.3846/1648-0627.2009.10.204-213</a>
- [2] Sylkin, O., Buhel, Y., Dombrovska, N., Martusenko, I., & Karaim, M. The Impact of the Crisis on the Socio-Economic System in a Post-Pandemic Society. Postmodern Openings, 12(1), 2021, 368-379. https://doi.org/10.18662/po/12.1/266
- [3] Stacho, Z., Stachová, K., & Papula, J. The changes in the focus of Slovak organizations on talent management. Business: Theory and Practice, 19, 2018, 255-260. https://doi.org/10.3846/btp.2018.25
- [4] Sacio-Szymańska, A., Mazurkiewicz, A., & Poteralska, B. Corporate foresight at the strategic research institutes. Business: Theory and Practice, 16(3), 2015, 316-325. <a href="https://doi.org/10.3846/btp.2015.550">https://doi.org/10.3846/btp.2015.550</a>
- [5] Russo, F., Calabrò, T., Iiritano, G., Pellicanò, D.S., Petrungaro, G., Trecozzi, M.R. City logistics between international vision and local knowledge to sustainable development: The regional role on planning and on public engagement. International Journal of Sustainable Development and Planning, Vol. 15, No. 5, 2020, pp. 619-629. https://doi.org/10.18280/ijsdp.150504
- [6] Lytvyn, L., Hryhoruk, A., Verbivska, L., Poprotskyy, O., Medynska, T., & Pelekh, O. Enterpreneship Transformation in the Context of the Digitization of Business Processes. Postmodern Openings, 13(2), 2022, 396-408. <a href="https://doi.org/10.18662/po/13.2/461">https://doi.org/10.18662/po/13.2/461</a>
- [7] Harrell, A. Explaining the resurgence of regionalism in world politics. Review of International Studies, 21(4), 1995, 331-358. https://doi.org/10.1017/s0260210500117954
- [8] Kryshtanovych, M., Akimova, L., Gavkalova, N., Akimov, Shulga A., Modern Technologies for Ensuring Economic Security in the Context of Achieving High Efficiency of Public Administration. IJCSNS International Journal of Computer Science and Network Security. Vol. 22 No. 2 2022, pp. 362-368. https://doi.org/10.22937/IJCSNS.2022.22.242
- [9] Kryshtanovych, M., Dzanyy, R., Topalova, E., Tokhtarova, I., & Pirozhenko, N. Challengers to Conceptual Understanding of Sustainable

- Development Regarding Decentralization of Power and Responsibility in the Conditions of the Postmodern Society. Postmodern Openings, 11(3), 2020, 257-268. https://doi.org/10.18662/po/11.3/212
- [10] Kryshtanovych, M., Gorban, I., Kornat, L., Dykyi, A., Marushko N. Investment Support for the Digitalization of Socio-Economic Systems in the Context of Ensuring Security. IJCSNS. International Journal of Computer Science and Network Security. Vol. 22 No. 6 2022, pp. 733-738.

# https://doi.org/10.22937/IJCSNS.2022.22.6.92

- [11] Vveinhardt, J., & Janulienė, I. Influence of advertising as a means of information transmission towards consumer: theoretical aspect. Business: Theory and Practice, 7(4), 2006, 222-231. https://doi.org/10.3846/btp.2006.27
- [12] Kurylo, V., Savchenko, S., & Karaman, O. Aberrational Socialization as a New Type of Socialization of an Individual in Modern Information Society. Postmodern Openings, 11(1), 2020, 225-237. https://doi.org/10.18662/po/117
- [13] Kanapinskas, V., Plytnikas, Žydrūnas, & Tvaronavičienė, A. Sustainable public procurement: realization of the social aspect in republic of Lithuania. Business: Theory and Practice, 15(4), 2014, 302-315. https://doi.org/10.3846/btp.2014.529
- [14] Reason, O. A systematic approach to managing the integrated development of the region. Terra Economicus, 7(3), 2009, 224-226. https://doi.org/10.1186/1472-6963-13-168
- [15] Seabringt, P. Accountability and decentralization in government: An incomplete contracts model. European Economic Review, 40(1), 1996, 61-89. <a href="https://doi.org/10.1016/0014-2921(95)00055-0">https://doi.org/10.1016/0014-2921(95)00055-0</a>