



*Research Article*

# **E-Governance in System Interaction of Public Authorities**

**Anastasiya ILYINA**

DPA\_KNUTE – Department of Public Administration,  
Kyiv National University of Trade and Economics, Kyiv, Ukraine

nnnasta@ukr.net

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## **Abstract**

The development of the e-governance system in public authorities significantly affects the quality and efficiency of the staff performance. This reflects the level of its qualification as an ability to use programmable electronic systems in order to process and analyze official information, which will further serve to provide electronic services to individuals and legal entities and, consequently, solve problems related to the development of priority sectors of economic activities, covering the scope of human capital management (HCM). There are following methods used in the article: scientific abstraction, system analysis, grouping, comparison and modeling. As a result, Ukraine lags far behind in ranking, which indicates a low level of readiness to introduce a full-fledged e-governance system in public authorities. In this case, the human capital development requires the improvement of e-governance system in the service process of public authorities. It would allow maintaining constant communication between public authorities and local self-government bodies, strengthening public-private partnerships in order to regulate business activities, strengthening relations between the population and local self-government bodies and controlling the quality of public and private services to the population. All of this will save significant time on solving local issues and funds taking into account the reduction of the need to purchase office equipment, which will further increase the level of HCM efficiency based on investment in the development of priority sectors of the economy.

**Keywords:** E-Governance, Human Capital, Public Authorities, System Interaction.

## Introduction

During the process of the statehood formation, Ukraine has faced many problems related to the transition from conducting the paperwork by public authorities to the use of the latest technological means of communication in the performance of official duties. It is about e-governance as a form of public administration that increases and improves the efficiency and effectiveness, openness and transparency of public authorities with the use of information and communication technologies (ICTs), focused primarily on the needs of citizens. Analyzing the international experience, we can conclude that the e-governance development is one of the key factors for the successful reform and improvement of the country's competitiveness in public administration. Thus, e-governance allows creating conditions for improving the quality of services for individuals and legal entities and, consequently, development of human capital, that is, a set of skills of personnel of enterprises / institutions / organizations of any ownership, whose activities are aimed at improving the sustainable development of the territory and, hence, the whole country.

In the conditions of the development of society, it is clearly recognized the need to reform the entire system of public authorities due to the requirements for the quality-of-service provision by the state, that increases the living standards of the population and, thus, labor productivity. Consequently, e-governance is a transformation of the system of public administration, which affects all areas of activities related to the provision of services and communication between the government and society. The achievement of this system is that all the benefits apply to both public and private sectors. However, the availability and ability to use ICTs for finding the necessary information, using one in the right direction and protection means of communication from burglary, are the most pressing issues for many developing countries, including

Ukraine, and need further research.

## Literature Review

Recently, there were published research papers by Ukrainian scholars, in particular Kalishenko (2018), Yushchenko and Kovtun (2019), and foreign researchers, in particular Bwalya (2018), Shekar (2019), Suri and Sushil (2017), trying to place great emphasis on the e-governance development in order to strengthen cooperation between public authorities and local self-government bodies by improving the skills of staff of the relevant institutions. These researchers propose to create new regulations and involve business structures and citizens in the discussion of these regulations in order to make final decisions on making new changes to the legal and regulatory framework for the provision of e-services. However, they have paid too little attention to the development of human capital as an integral part of public administration in the e-governance system.

Other Ukrainian researchers as Arkhypova and Dmytrenko (2015), Chechel et al (2020), Holovnia et al (2019), Shcherbakov (2020) and foreign scholar Khan (2018) devoted their works to the study of priority areas of strategic development of human capital in public authorities as the components of e-governance in the application of specialized electronic systems, analyzing foreign experience. However, the issue of the improvement of the electronic interaction between the state and citizens needs further research.

On the other hand, Ukrainian researcher Vasylieva (2021) and foreign scholar Hughes (2019) investigated the country's human capital development, the level of which depends on the availability of material, informational, labor and intellectual resources. However, the nature of their relationships in the process of fulfilling the tasks and functions of public authorities to citizens by implementing strategic plans for sustainable development of the country is considered insufficiently.

In this case, it is proposed by Mainka (2018) and Susanto and Leu (2019) to consider the European experience in the formation of human capital in public authorities as a factor in the e-governance development which in turn affects the human capital development among the local population. In these works, there was mainly investigated the introduction of various human resource management information systems in the service activities of public authorities aimed at improving the skills of its staff in order to gradually reform the decentralized management system. Here, the e-governance development requires additional research in the context of establishing the system interaction between public and private sectors based on the assessment of e-readiness of the population.

Since, as for the European standards approved by the Association Agreement between the European Union and the European Atomic Energy Community and their Member States, of the one part, and Ukraine, of the other part (2017), any public activity related to the provision of services to legal entities and individuals directed to the human capital development should be carried out on the basis of openness and transparency, the question arises of introducing electronic systems that would provide access to public information of representatives of business structures and citizens. Adhering to the provisions of the Concept of e-governance development in Ukraine (2017), it is necessary to improve the design of public sector websites, aimed at ensuring the private sector e-participation; creating an electronic queue management system of the e-services provision; optimizing the open data systems that would help to cross-check information with existing documents recorded in the electronic document management system and specialized electronic systems. Each of these steps will be an impetus to improve the HCM system in public authorities.

### **Research design and methodology**

The purpose of the article is to study the nature of the relationship between the development of e-governance and human capital in public authorities.

There are following methods used in the article: scientific abstraction – determining the nature of the system interaction between the development of the e-governance and human capital in public authorities; system analysis - establishing a structural link between representatives of the public authorities and private enterprises / institutions / organizations, as well as the population and local self-government bodies in the e-governance system; modeling – formulation of a model of an advanced e-governance system aimed at the human capital development; statistical methods (grouping, comparison) – used in the analysis of the dynamics of the E-Government Development Index and E-Participation Index during 2003-2020 in Ukraine compared with Estonia.

The methodological basis of the study is data obtained from the works of Ukrainian and foreign scholars; Association Agreement between the European Union and the European Atomic Energy Community and their Member States, of the one part, and Ukraine, of the other part; Concept of e-governance development in Ukraine; official website of the United Nations E-Government Knowledgebase.

### **Result**

Given the research study of Vasylieva (2021), Ukraine's European integration aspirations, like most developing countries, have aimed the country to implement various electronic systems in public authorities in order to achieve European standards of quality of e-services, openness and transparency of government for citizens, non-governmental organizations (NGOs) and business structures based on investment in human capital. Thus, as noted by Yushchenko and Kovtun (2019), it is worth analyzing the E-Government Development Index (EGDI) and E-Participation Index (EPI), reflecting the

level of readiness of the population to use ICT as an indicator of the education level. And, taking into account the experience of Estonia as a leading country in e-

governance development, the dynamics of the relevant indexes should be compared both in rank and in value in Ukraine and Estonia (Table 1).

**Table 1: Indexes of e-government development and e-participation in Ukraine compared to Estonia for the period from 2003 to 2020**

Index/Year	2003	2004	2005	2008	2010	2012	2014	2016	2018	2020	
<i>Country: Ukraine</i>											
E-Government Development Index	Rank	54	45	48	41	54	68	87	62	82	69
	Value	0,46167	0,53255	0,54561	0,57280	0,51808	0,56530	0,50316	0,60756	0,61650	0,71190
E-Participation Index	Rank	24	24	28	14	48	83	77	32	75	46
	Value	0,39660	0,34426	0,36507	0,56818	0,25714	0,15790	0,43137	0,74576	0,68540	0,80950
<i>Country: Estonia</i>											
E-Government Development Index	Rank	16	20	19	13	20	20	15	13	16	3
	Value	0,69680	0,70289	0,73473	0,76000	0,69653	0,79873	0,81796	0,83344	0,84860	0,94730
E-Participation Index	Rank	5	11	11	8	9	8	22	22	27	1
	Value	0,75860	0,63934	0,61904	0,72727	0,68571	0,76320	0,76470	0,81356	0,91010	1,00000

Source: author's development according to: UNEGN: Estonia, 2020; UNEGN: Ukraine, 2020

During 2003-2020, Ukraine had moderate fluctuations in e-governance performance and e-participation level, taking an above-average position among 193 countries.

Speaking of the EGDI, when from 2003 to 2004 its value increased from 46.2% up to 53.3%, the country's ranking rose from 54th up to 45th positions. However, the EPI showed a slight decrease in value from 39.7% down to 34.4% respectively, given the unchanged position in rank (24th place). In 2005, the EGDI value increased up to 54.7%, while the rank rose up to 48th place. At the same time, the EPI value

increased slightly up to 36.5%, but the country's ranking dropped down to 28th place. Considering the adoption of the Laws of Ukraine "About electronic documents and electronic document management" and "About Telecommunications" in 2003, public authorities were not able to implement appropriate electronic systems that would provide departmental and interagency system interaction. With regard to the scientific view of Bwalya (2018), due to the lack of information of how to use the relevant systems, public authorities paid attention to the development of targeted programs for the

software purchase and staff training in order to master the latest ICTs. It should be noted that for the period from 2005 to 2008 the EGDI increased in value up to 57.3%, in rank – up to 41st position, the EPI value increased up to 56.8%, rising up to 14th rank. Here, basing on the tasks of the national informatization program for 2006-2008, approved by the Resolution of Supreme Council of Ukraine in 2015, public officials provided constant information to the public on the planning of certain measures to monitor the implementation of strategic plans for sustainable development of the relevant areas.

By the end of 2010 the EGDI value decreased down to 51.8%, and the country ranked 54th position. This was also reflected in the EPI value, which decreased down to 25.7%, reflecting its mark on the country's ranking (48th place). In 2012, despite the increase in the EGDI value up to 56.5%, Ukraine dropped to 68th place in ranking and at the end of 2014 ranked 87th position, taking into account the decrease in index value down to 50.3%. At the same time, by the end of 2012 the EPI value decreased down to 15.8%, and the country's ranking dropped down to 83rd place. However, in 2014 its value increased up to 43.1%, and the rank rose up to 77th place. Taking into account the research study of Kalishenko (2019), the entry into force of the Law of Ukraine "About the basic principles of the information society development in Ukraine for 2007-2015" in 2007, which prompted to adopt the Laws of Ukraine "About personal data protection" in 2010, "On access to public information" in 2011 and "On administrative services" in 2012, significantly slowed down the procedure for introducing available electronic means of communication in the activities of public authorities. As Chechel et al (2020) emphasized, during the analyzed period the Government of Ukraine paid great attention to the study of the latest ICTs needed to process the information to be covered on websites and implement a registration system on relevant websites to obtain e-participation from the public and e-services from the population through the so-called "Single Window", that is electronic queue

management system for registering through the websites of administrative service centers (ASCs).

In 2016, the situation in the country significantly stabilized, as indicated by the increase in the EGDI value up to 60.8% and EPI value up to 74.6%, when the country's ranking on the relevant indexes rose up to 62nd and 32nd positions respectively. Based on the research studies by Chechel et al (2020), Holovnia et al (2019) and Kalishenko (2019), here the implementation of the action plan for information support of the Open Government Partnership Initiative in Ukraine in 2015, approved by the Cabinet of Ministers of Ukraine, which was aimed at strengthening partnerships between the state and the public, played an important role in improving the websites of public authorities. However, the introduction of the Concept of electronic governance development in Ukraine into the system of public authorities, approved by the Cabinet of Ministers of Ukraine in 2017, and finally the adoption of the Law of Ukraine "On electronic trust services" in 2017 served to slow down the process of e-governance development in Ukraine in 2018. Because of the receipt of a huge amount of information about the latest electronic systems to be set up, there was a need to allocate funds for training / retraining / advanced training of public authority staff to master the skills of using the relevant ICTs. This was reflected in the country's decline in the e-governance development ranking down to 82nd position, despite a slight increase in the EGDI value up to 61.7%, and in the e-participation ranking down to 75th position, despite the fact of the EPI value increase up to 68.5%.

At the same time, by the end of 2020 the situation in the country has improved, as shown by the increases in the EGDI value up to 71.2% and EPI value up to 81.0%, while the country has ranked up to 79th and 46th positions respectively. This situation was significantly facilitated by the improvement of the work of ASCs on the provision of e-services to individuals and legal entities. This is based on the approval of the Resolutions of the Cabinet of

Ministers of Ukraine “On approval of the Procedure for the use of electronic trust services in public authorities, local self-government bodies, enterprises, institutions and organizations of state ownership” and “On approval of requirements in the sector of electronic trust services and the procedure for verifying compliance with legislation in the sector of electronic trust services” in 2018; “Issues of the Unified state web portal of electronic services and the Unified state portal of administrative services” in 2019 and finally adoption of the Law of Ukraine “On amendments to certain legislative acts of Ukraine on optimizing the network and functioning of centers for administrative services provision and improving access to administrative services provided in electronic form” in 2020. However, as practice shows, the adoption of a new legal act with new ideas for e-governance development only slows down this process. Only after some time the work of public authorities in the e-governance system is improved through the application of appropriate measures to improve staff skills. This once again confirms the low level of e-readiness of the population of Ukraine due to the low level of human capital development in public authorities.

At the same time, Estonia’s experience in the e-governance development during the analyzed period shows very positive results. If during 2003-2018 the country had moderate fluctuations in the e-governance development ranking, in 2020 the country took the leading position.

Thus, from 2003 to 2008 the EGDI value gradually increased and at the end of 2008 amounted to 76.0%, when in 2003 the figure was 69.7%. At the same time, in 2008 the country ranked 13th place in the EGDI, while in 2003 it was in 16th place, in 2004 – dropped down to 20th place and in 2005 the country’s ranking had a slight increase (19th place). Speaking of the EPI, during 2003-2008 there was a clear interdependence between the EGDI, according to which the country in 2004 fell from 5th down to 11th positions and, being unchanged in 2005, by 2008 rose up to 8th place. However, by the end of 2005 its

value decreased from 75.9% down to 61.9%, and at the end of 2008 it increased up to 72.7%. As for results of the analysis of the research studies of Arkhypova and Dmytrenko (2015), Khan (2018) and Shekar (2019), in 2000 Estonia passed the Law “On the population register”, which led to the creation of such electronic resources as “e-Tax Boar”, “e-Cabinet”, “m-Parking” and “e-Geoportal”. Moreover, in 2002 there was established E-Governance Academy (EGA) to teach individuals and legal entities to use ICTs, adopted the Law “On electronic elections” and introduced an electronic system “Window to the World”. In 2003 there was introduced the portal of Information System Authority (RIA). All of this served the country to take a high position during 2000-2003 by providing the best services to citizens. The country’s downgrade in 2004-2005 can be explained by the launch of the latest e-services portal eesti.ee, which took time to master due to the huge amount of information. However, the adoption of the Strategy of information policy 2007-2013 in 2006 and the Law “On personal data protection” in 2008, and also the launch of the systems “e-School”, “e-Ticket”, “e-Police”, “e-Notary”, “e-Business” and “e-Health” during 2003-2008 led to a significant acceleration of the country in the e-governance development in 2008.

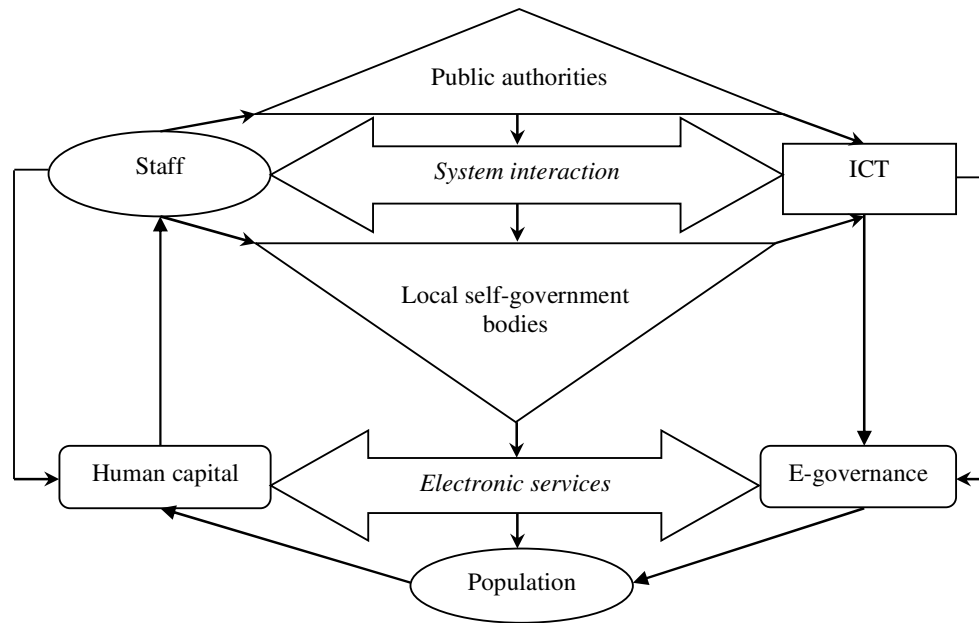
Speaking about the situation in the country during 2010-2012, in 2010 it ranked 20th place in the EGDI, when in 2012 the country’s ranking remained unchanged, despite the increase in the EGDI value for the corresponding period from 69.7% up to 79.9%. At the same time, in 2010 the EPI value decreased down to 68.6%, when the country slightly decreased down to 9th place in its ranking. In 2012, it increased slightly (8th place), given the significant increase in the EPI value up to 76.3%. As reflected by the research studies of Arkhypova and Dmytrenko (2015) and Susanto and Leu (2019), it can be assumed that launched in 2009, the country’s initiative EstWin, providing high-speed Internet, and introduced in 2010 electronic system “e-Prescription”, served as factors in maintaining the country’s high ranking in e-participation by creating convenient conditions for the use of ICTs. However,

since 2014, the country is gaining momentum in the e-governance development. It confirms the increase in the EGDI value in 2014 up to 81.8% and its gradual growth by the end of 2020 up to 94.7%. A similar situation is observed with the EPI, the value of which in 2014 increased up to 76.5% and by 2020 it reached 100%. The introduction of the system "e-Residency" in 2014, providing an opportunity for anyone in the world to apply for a secure digital residence in Estonia, has given citizens a significant incentive to explore the intricacies of the system due to the high demand for this service. This forced the Government of Estonia to make constant amendments to the system, which to some extent helped to increase the country's ranking in the e-governance development in 2014 up to 15th position and keep it almost in one place during 2014-2018. Moreover, the integrated data exchange system X-Road, launched in 2001, was finally improved by the end of 2017, and in 2017 the Government of Estonia transferred the right to implement it in Ukraine to the State Agency for E-Governance of Ukraine. Accordingly, despite the country's decline in the ranking of e-participation in 2014 down to 22nd position and its gradual lowering by 2018 (27th place) caused by the necessity of qualified staff, Estonia ranked 1st place in e-participation and 3rd place in e-governance development.

Thus, the main problem of Ukraine lagging behind Estonia in the e-governance development is the lack of qualified staff in public authorities. Therefore, with the

adoption of new laws and regulations and amendments to existing ones, no introduced new electronic systems allow an effective interaction with the private sector. However, the initiated work of Trembita due to the transfer of X-Road by Estonia, which allows public authorities to interact via the Internet by exchanging electronic messages between their information systems, and creation of the Unified State Web Portal of Electronic Services Portal Diia (Portal Diia), should eventually enable Ukraine to reach greater heights in increasing e-participation among legal entities and individuals. At the same time, the acquisition of skills of how to apply the newly introduced electronic systems requires an in-depth study of newly adopted laws and regulations in the field of e-governance, the provisions of which emphasize the need to improve the professional competencies of public administration specialists in the strategic analysis of priority sectors of the economy.

As mentioned in the research studies of Shekar (2019) and Suri and Sushil (2017), the EGDI is calculated as the arithmetic mean of three sub-indexes: web services, telecommunications infrastructure, and human capital. In order to determine how they interact, it is necessary to consider the process of electronic interaction between public authorities, local self-government bodies and the population. It primarily depends on the staff qualification to manage human capital in accountable sectoral enterprises / institutions / organizations using ICTs (Fig. 1).



**Fig. 1: The relationship between the formation of e-governance and human capital**

Source: Author's development

Speaking of the sub-index of web services, the interaction between public authorities requires the use of the Internet depending on certain stage. Thus, the first stage is determined by the emerging presence, when basic information about the authority and its structural subdivisions, including some archival documents, should be available on the official website. The second stage is an enhanced presence, when both archival and current regulations, service documents, downloaded databases, and search engines are available through the web interface. In the third stage (interactive presence), online services become interactive when you have an opportunity to make any requests for information and receive it not only in document forms, but also in audio / video formats and participate in online discussions. At the fourth stage (transactional presence) it is realized the bilateral interaction between public authorities and population, where the local self-government bodies became the mediators, regulating the situation in a separate territory of the country. Here you can pay taxes, apply for ID cards / birth

certificates / passports and renew licenses. Finally, in the fifth stage (connected presence), there is an integration of interaction between the public and private sectors, when the government promotes the involvement of the population in the decision-making process and bilateral open dialogue based on interactive services (web questionnaires, online discussions, etc.).

However, the sub-index of web services cannot be formed without the sub-index of telecommunications infrastructure, which includes the number of personal computers, Internet users, telephone lines, mobile phones and televisions per thousand inhabitants, and also the total number of inhabitants. In other words, without the presence of ICTs, public services will not be provided by a government to people, and the lack of staff will make the sub-index of telecommunications infrastructure senseless, as ICTs will not be used. In this case, the availability of staff will not make sense without some qualifications that guarantee the use of ICTs by public authorities for the benefit of the state and



society, while a high level of education of citizens determines the willingness to use web services.

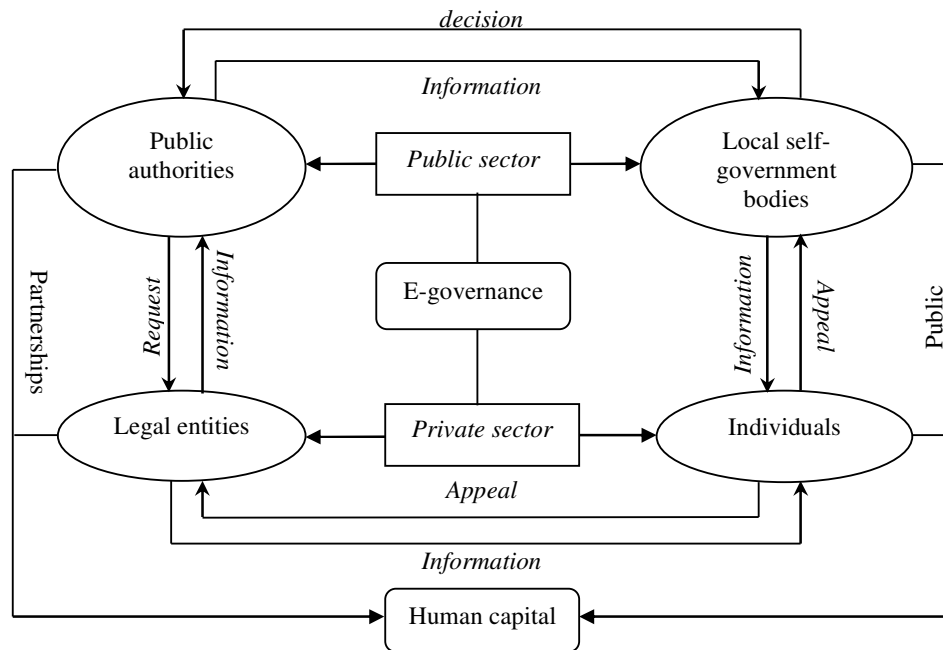
At the same time, such a willingness is not determined by the quantity and quality of high-performance ICTs with high-speed Internet in public authorities, which is only the end product of public relations. Here, the main indicator of the e-governance development is the users' understanding of the purpose of electronic systems that provide system interaction between public authorities and local self-government bodies in order to jointly address the problems of sustainable development of territories. In other words, for public officials with a high level of professionalism in the score of human capital management, the use of such electronic systems facilitates rather than complicates the procedure for them to perform their duties. Thus, it is determined the sub-index of human capital, including indicators of the level of public employees' qualification and the population education.

As illustrated in Fig. 2, the system interaction is more than just the interaction between the state and society. As Mainka (2018) noted, it significantly depends on the e-governance system, the development of which reflects one of human capital as an indicator of partnerships between public

authorities and private enterprises / institutions / organizations, and the relationships between citizens and local self-government bodies. Here, we should accept the scientific view of Shcherbakov (2020) that the human capital in public authorities impacts on the human capital development in priority interconnected sectors of the economy, where e-governance is a process of improving the system of their interaction.

Thus, in order to ensure the effective system interaction between public authorities, local self-government bodies, individuals and legal entities, it is necessary to create the interactive electronic systems of data consolidation, federalization and dissemination respectively in public sector.

To ensure the effective cooperation between representatives of public sector, that is public authorities and local self-government bodies, it would not hurt to introduce into the service process an electronic system of data consolidation. It is about collecting data in several systems and integrating into the one data permanent storage location for making the report and analysis in data ware house, or as initial information for other applications in operational data store.



**Fig. 2: The model of improved e-governance as a human capital management system**

Source: Author's development

In this way, the local self-government bodies will have access to relevant information, which will save a lot of time to organize public consultations and, consequently, take a decision to conduct events in a particular area. After approval of this decision, it will also be available to local authorities in the system, in accordance with which the order will be developed and approved to implement the action plan to address the necessary issues over a period of time. Such a system will allow maintaining the public relations and control the execution of citizens' appeals by local authorities based on the decision of local self-government bodies and developed order of local executive authorities. This method of public administration with the use of such a system primarily reflects the effective adjustment of appropriate investments in priority sectors of the economy by coordinating and providing state support to sectoral institutions (educational, health care, cultural, sports, social welfare and tourism institutions; environmental organizations; industrial and agricultural enterprises) based on the analysis of their

activities.

At the same time, the supporting effective public-private partnerships require the creation of a so-called data federalization system, that is providing a single virtual picture of one or more sources of initial data of certain private enterprises / institutions / organizations. All necessary data conversions are carried out at their extraction from primary files sent after request through the system by public authorities due to the technology of enterprise information integration. The use of this system will enable public officials to conduct a qualitative analysis of the innovative activities of private enterprises related to the release of radioactive substances into the environment. It undoubtedly affects the quality of processing of raw materials by agricultural enterprises, aimed at the sale of finished environmentally friendly products by industrial enterprises as an impact on the level of effectiveness of services to citizens by health and other personal care institutions.

Also, in order to ensure the effective interaction in private sector, that is between the legal entities maintaining partnerships of public authorities, and individuals who, as members of the public, cooperate with local self-government bodies to resolve local issues, it is necessary to develop the data dissemination system. Such a system is used to copy from one place to another, perform real-time operations and manage events recorded when citizens apply to corporate institutions and obtain the necessary information based on enterprise application integration or enterprise data replication. The updates occurring in the primary system (private sector) can be transmitted to the final system (public sector) synchronously when both systems are updated during the same physical transaction, or asynchronously. This way of HCM aims representatives of public sector to carry out the process of serving citizens by corporate institutions and record their level of satisfaction, which ultimately leads to the organization of e-participation to discuss the development of new regulations on topical issues of concern to the population and make some changes to existing ones.

Thus, the creation of a so-called e-self-governance system in public authorities, that combines three components as data consolidation, data federalization and data dissemination systems, will have a significant impact on increasing the level of the HCM efficiency. Such a unique system will provide comfortable and safe living conditions for the local population. As mentioned in a research study by Hughes (2019), this HCM system will create an affordable access to the services in education, health care, social protection, housing and communal and other services, providing the employment and adequate salaries for qualified employees. Here, the local executive bodies should execute the approved order based on the decision of local self-government bodies and constantly report to the central executive bodies on its execution in order to implement the strategic development plan of the country.

## **Conclusion**

In Ukraine, compared to Estonia, the government e-readiness is at a low level. With the adoption and entry into force of new laws and regulations in the field of e-governance, the e-governance development is significantly slowed down. It can be assumed that public officials' misunderstanding of the purpose of the newly implemented electronic systems creates inconvenience in reconfiguring to "new working conditions" in electronic mode, adaptation to which takes a long time. In this case, the level of e-governance development is not an indicator of the level of human capital development, but only its reflection. The absence of knowledge, skills and abilities of HCM based on organizing the investment in priority sectors of the economy makes the increase of the number of electronic systems in public authorities senseless. In this case, the introduction of electronic systems into the public authorities is carried out in accordance with the staff professional level. Thus, the very misunderstanding of the process of application of methods of the state regulation of economic and social activities, reflecting the level of interaction between public authorities and local self-government bodies, creates different problems for public officials of the new e-performance tools.

Consequently, the adoption of the HCM software in order to create the e-self-governance system of intersectoral cooperation requires an optimization of organizational structures of public authorities, including the training, retraining and advanced training of qualified personnel in the state sectoral and personnel policies. Here, the public officials should achieve an appropriate level of professionalism in the effective HCM to understand the interconnection between the elements of the HCM system as priority sectors of the economy. It makes it clear that the areas of education, culture, tourism, sports and social protection are the interdependent informational impacts on ensuring a high level of education, maintaining good health and reducing unemployment in the country, including

agricultural and industrial sectors. Taking into account the achievement of the appropriate skill level by public officials, the use of such a unique electronic system will allow the competent public authorities' staff to monitor the HCM activities of the relevant units using the components of this system. It includes the automatic collection of information on human capital investments recorded in official documents; its analysis concerned the level of institutional functioning of accountable sectoral institutions and dissemination to other competent public authorities in case of detection of certain violations by data analysis.

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