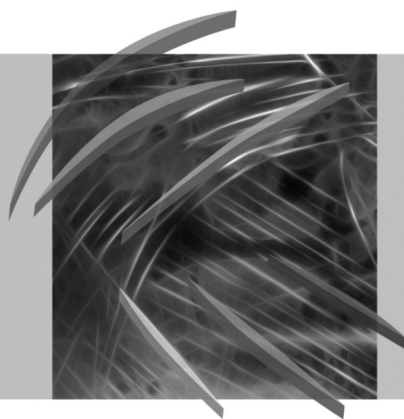# Advanced Information Technologies for Management – AITM 2011

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Streszczenia

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COMPUTERIZATION AS THE IMPROVEMENT OF PROCESSES IN LOCAL ADMINISTRATION OFFICES

Abstract: In contemporary conditions in which local governments operate it is necessary for them to communicate with external and internal clients not only in a traditional way but also in an electronic way. The article lists the types of communication that local administration offices have to consider in their operations and presents the results of research on introducing e-platforms in local administration office in Poland. Such platforms are to improve the processes in local administration office so that they operate faster and more effective. Thus, the clients' satisfaction grows and the competitive advantage can be created. The research has shown that there are still many challenges and obstacles in the process of e-administration implementation.

Keywords: local administration office, communication, process, e-administration, e-platform, process development levels, computerization.

1. Introduction

The strategy of computerization in Poland until 2013 says that one of the ways to implement the idea should be the increase of availability and effectiveness of public administration services using information and communication technology to reconstruct internal processes or public administration and providing the services for customers [Marciński 2011]. It creates new, important expectations for the public sector but at the same time it is a big opportunity.

Improving processes in the public administration, at the central level as well as at the local one, can be realized in various ways. In this article the authors presented one of the directions in such improvement – computerization and using communication technologies. Implementation of the newest solutions in the area of ICT (Information and Communication Technology) may considerably affect the improvement of processes realized in the public administration. Such technologies make it possible to

exchange the information, which is of great importance for the customers because in many cases it allows limiting the number of personal visits in public offices. Modern telecommunication nets enable quick and effective exchange of information so the geographical distance is no longer an obstacle.

The main aim of the article is to point out the directions and obstacles in the area of improving processes in the public administration by using ICT tools. Computerization of local administration office may concern various areas of public administration activities. The authors paid particular attention to the processes connected with the client services, treating such processes as the main ones used by the administration.

2. Implementation of electronic platform and e-services in local communities

According to the level of communication with the citizens and to the kind and complexity of services offered by offices in an electronic, way we may list four levels of e-administration services development:
– **informational** – offices publish information on the Internet sites and citizens watching the sites with computers or at special information desks receive needed information,
– **interactive** – a user can communicate in an electronic way with given offices, but the offices do not always communicate via the Internet with the users,
– **transactional** – a user can communicate with the given offices in an electronic way and electronic applications provide answers,
– **integrative** – dedicated portals provide information coming from different offices and make it possible to have transactions. Internal systems have been integrated using algorithmic administrative processes. The level of integration makes it possible to do everything necessary to have things done in the office in an electronic way – from getting the information, through downloading special forms and sending them back after filling (sometimes filling forms online on the Internet site). Moreover, it is possible to pay fees and receive official allowances, certificates, decisions or other documents which the person wants (Figure 1).

Achieving the last level of communication development allows an interactive communication with the client.

In 2002 in the response to growing needs connected with the necessity to use ICT in the area of public administration the Scientific Research Committee worked out the concept to establish Electronic Services Platform in Public Administration [*Wrota...* 2002] in order to simplify the process of communication of local administration office with citizens. This project was the trial to implement the EU instructions published in the e-Europe 2005 program, whose aim was to develop electronic services in public administration, e-learning development and enlarging the access to
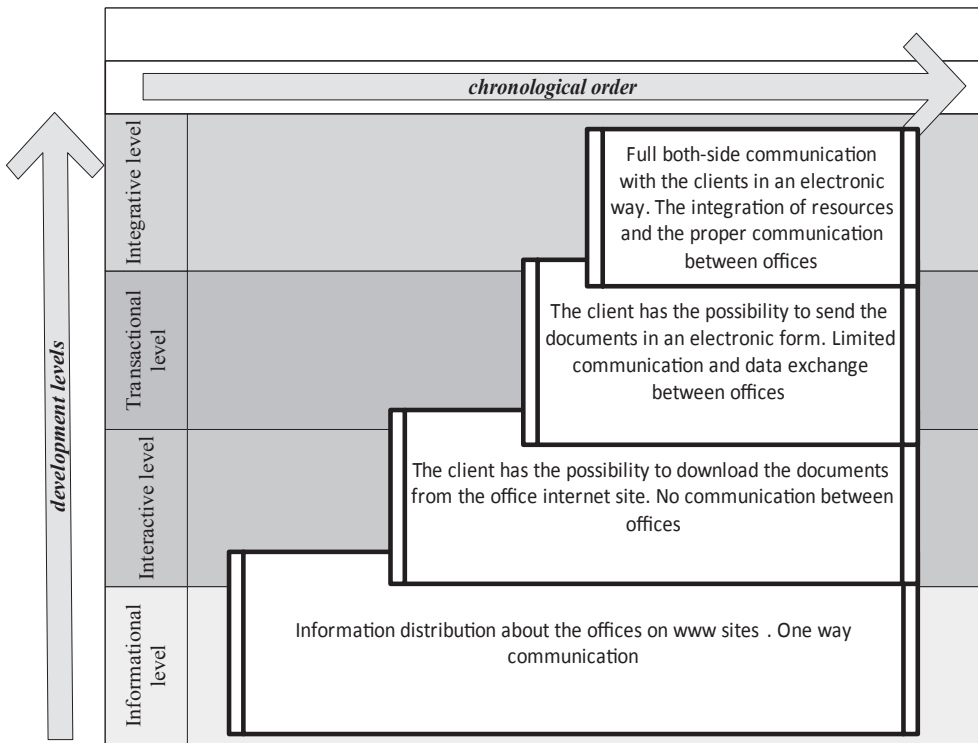
Figure 1. Levels of the computerization development

Source: on the basis of: [Olszak, Ziemba 2007, p. 163].

wide-band Internet. The main idea of the project was to build central system which would enable the online access to all the services in the public administration. In the first phase of the implementation the main functions of the system were:
– improving the flow of information to the citizens,
– giving the possibility for citizens or companies to deal with community in an electronic way,
– making it possible to fill special forms for documents via the Internet,
– simplifying the access to medical and insurance data,
– exchange of information directly between communities [Szyjko 2011].

The main profits achieved by placing the public services on the electronic platform were minimizing the need for inhabitant to appear in the office personally, standardization of procedures to make things done, shortening the time to fix things and improving the quality and effectiveness of services offered [Radzikowska 2005].

Unfortunately, according to the research conducted in 2010 by OUN, published in the report *United Nations E-Government Survey 2010. Leveraging e-government*

at a time of financial and economic crisis, the progress connected with introducing electronic platform has been considerably slowed down. According to the report, the main reason is the lack of integration between the solutions implemented in specific sectors. In all the regions in Poland electronic platforms have been created [*Wrota Podkarpackie* 2011], but moving information between systems in many cases is done in printed forms which must be typed by hand to the next system [Bogucki 2011].

This situation is to be improved by full implementation of e-PUAP but the sixth edition of research made in 2010 concerning the level of computerization in Poland showed that most of the offices are on the interactive level [*Komunikat MSWiA...* 2011; *Informacja o wynikach…* 2009; *Raport generalny...* 2010]. The reason of such a slow progress of offices computerization is a lot of obstacles resulting from the lack of complex law regulations connected with the communication with clients as well as from the problems in organization, finance and even in socio-cultural aspect.

3. The areas of communication with clients in local administration offices

The research was conducted in local administration offices in Wielkopolska and Dolny Śląsk regions.[1] According to the research results, the basic determinant to improve and master processes in local administration office is the identification of the clients' needs and requirements and thus improvement of the client services results. The improvement of processes in local offices is possible because of constant monitoring, auditing and evaluation of implemented procedures. Hence, to be able to control processes more effectively in many local administration offices in Poland, the identification of processes of client services is done from the perspective of the main communication areas. Very often the areas result from the law. Most of local offices, in order to monitor implemented procedures, have gone into quality management. Thus, they are able to identify, describe and approve the processes in quality books.

Namely, as the results of the research have shown, in every analyzed local office which uses quality management systems client orientation plays a very important role. The orientation enforces undertaking the activities which are directed at meeting clients' requirements as well as meeting law requirements. The system is analyzed from time to time and special audits take place to constantly improve the processes to make the client satisfaction bigger. Here, we think about internal clients – who are offices workers, and external ones – who are all the stakeholders.

As the research has shown, for better monitoring of the activities identified processes in the area of client communication are usually divided into special areas [*Księga jakości...* 2011]:

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[1] The research was conducted in 40 local governments from Wielkopolska and Dolny Śląsk regions. The research was made by use of questioners and interviews with local leaders and authorities.

- obligatory communication,
- complementary communication,
- promotional communication.

As the results of the research conducted in 40 local administration offices in Wielkopolska and Dolny Śląsk regions have indicated, in the area of obligatory communication there are all the procedures connected with the relations with clients, which result from the law – all the external law documents and offices' internal documents. This area is the basic aspect of communication. As the element of improving the relations with clients, offices implement the procedures of measuring clients' satisfaction. These are the possibilities to make official complaints, disagree with local offices' decisions and conduct question research to gain the opinions in random. Because the range of services offered by local communities is the key area of their activities, in many local administration offices there are various courses for the employees in order to improve their competencies and knowledge. This results in the new quality of the contact with clients. Moreover, to improve the communication in this area in local offices, special electronic platforms to make offices' services more available are constructed.

In the second area there are processes connected with the complementary communication. In the profound research which the authors conducted in the local governments the complementary communication is to help offices to activate local society and make it play important part in programming local activities and budget. In that area there are processes connected with the regulation and organization of public services, local order, safety and processes connected with communal services.

The third platform of communication is connected with the whole range of promotional activities. Such communication results on the one hand from the requirement to pass to the public information about local offices' activities as well as from underlining offices actions in mass media. Promotional communication takes place with the use of press conferences, local press, posters and with the use of modern tools such as Internet portals and sending newsletters.

The distinction of business processes connected with client services and putting them into the right communication area lets us set priorities in choosing the ways to improve specific procedures. Approving and implementing the rule of constant improvement of processes which are connected with client service and monitoring the level of client satisfaction enforces the activities connected with measuring, analyzing and improving procedures used. This results in constant measuring and evaluation of clients' satisfaction from offices services. Such activities are more and more common and also the computer infrastructure is used more and more often. It provides local administration offices with many tools to monitor if the used procedures are appropriate or if they should be corrected.

4. Main obstacles of e-administration

The reasons that there are obstacles in the development of e-administration are the topic of many discussions and meetings of local workers as well as central government representatives. The same situation is with the possibilities of solving the problems in an effective way. In the e-VITA III program there was the sixth conference on 5th of April 2011, concerning the evaluation of the level and perspectives of development of electronic administration in Poland [Baranowska-Skima 2011]. The outcome of the conference in terms of difficulties in the implementation of e-administration may be very useful for all the local administration offices to avoid such problems in the future. The outline of the research presented during the conference is listed below.

Barriers listed there may be divided into three different categories: legislative, organizational and financial, and socio-cultural.

The main obstacle in the legislative area is the lack of unified interpretation of law regulations by particular offices. The difficulty here results on the one hand from not precise formulations, which are not appropriate for specificity of electronic data exchange. On the other hand, the level of electronic development in offices in Poland is different, which results in the need to modify communication procedures. The second very important problem in legislative area is the need to introduce similar regulations concerning using electronic signature. In the EU regulations the definition and legal results of electronic signature are regulated by the Document nr 1999/93/EC on Common Infrastructure of Electronic Signature. This document defines electronic signature as "the data in an electronic form which are connected with other electronic data and which are used as a form of probability" [*Dyrektywa 1999/93/EC...*]. However, advanced electronic signature means must meet the following requirements:
– it is uniquely connected with the person,
– it allows to identify the person,
– it is created by the means remaining under the person's control,
– it is connected with the data which it concerns in such a way that every next change of the data is possible to be discovered.

Such a definition allows for some flexibility as for interpretation and so it resulted in the creation and usage in practice of the following kinds of electronic signature:
– electronic signature – namely graphic version of authentic signature which is a declaration and confirmation of writers' identity. It can be sent as a signature of an e-mail or it can be a scanned handwritten signature copied in PDF document;
– advanced (safe) electronic signature – it is a signature which, with the help of special technical means (cryptographic), is difficult to be a subject of a fraud on the document. This category concerns most of the systems traditionally called electronic with various cryptographic algorithms for safety;

– qualified electronic signature – advanced form of a signature, which is possible only with the use of qualified certificate and special equipment to place the signature (SSCG) [Podpłoński, Popis 2004].

The main obstacle in this area is the fact that for most of the stakeholders it is not clear which signature they should use in a given situation. Moreover, using qualified signature is not free of charge.

In the organizational and financial area the main obstacles of e-administration development were listed in the debate as follows:

– required in practice attaching a lot of documents and forms in a traditional form used in spite of a ban used in the article 220 of Administration Law to require special documents which should be known to the office or possible to establish on the basis files,

– citizens have to know complicated procedures connected with filling forms and sending documents in an electronic form, but there is a lack of clear forms which should be filled by the use of creators,

– the tendency to implement paper bureaucracy on electronic bureaucracy – so implementation of electronic solutions does not simplify procedures but makes them longer,

– lack of organizational and formal solutions allowing free communication between offices – it requires implementing and gathering the same data, which makes the costs of office's functioning higher,

– lack of source files and lack of standardization of digital coding in these files – in most offices traditional filing dominates and only to some extent there is an electronic way of keeping documents filing,

– the barriers connected with the infrastructure and access to the Internet in rural areas – the necessity to create friendly infrastructure in order to minimize the effect of digital alienation, especially for people in rural areas [*Ocena instytucji…* 2010].

In spite of the inconveniences connected with legislation, financial, and organizational areas, in the debate the most important barrier of introducing e-administration is the problem connected with the socio-cultural area [*Rozwój elektronicznej...* 2011]. In this area the most important barriers are:

– lack of abilities, insufficient knowledge and social awareness of both clerks and citizens;

– lack of feeling of necessity to implement solutions in e-administration area – the development of e-administration is to improve the life of citizens;

– low culture of work with digital documents – a small number of implemented forms and documents in electronic form results in workers forgetting to implement electronic procedures, even if they were trained. They also give the citizens incomplete and incompetent hints as for using e-forms;

– low level of management competencies as for informatics in local offices, especially in local offices. At the same time, there is a lack of managerial knowledge among informatics employed in local offices;

– unclear local websites, not ergonomic usage systems, complicated forms and procedures of filling them result in the unwillingness of citizens to use electronic communication [Baranowska-Skima 2011].

To sum up the debate concerning the barriers of the e-administration development, it has been underlined that the harmonization of central and local administration is very important. The progress in the electronic communication between offices and inhabitants is possible only by the integration of financial and human resources. The standardization of data flow is also crucial.

5. Conclusions

Modern solutions in the ICT area open up for organizations new perspectives and possibilities of operating. Also in the case of public administration we can observe the movement towards making realization procedures more modern and modifying processes so that they are more friendly to the users. Computerization of external processes between office and client brings a lot of profits which can be felt by the citizens (easy access to the office, shortening the time of interaction and having things done in the office) as well as for the administration – clerks can work more effectively because they may devote their time to doing important things instead of inputting the data to the system [Budziewicz-Guźlecka 2008, p. 129].

As it results from the NIK report quoted in this article as for the level of implementation of STAP and e-PUAP in the years 2005–2008, in the area of local computerization there has been the biggest improvement. In the report NIK says that in spite of some revealed mistakes, in controlled units there are realized:
– getting documents in an electronic way,
– publishing legal documents in an electronic way,
– providing public services in an electronic way [*Informacja o wynikach…* 2009].

As the results of the research and reports have shown, most of the offices are at the interactive level. The biggest barriers in reaching next levels were connected with cultural and social aspects. It means that one of possible solutions of the problem may be implementing modern techniques and methods of management. This may result in creating more open and flexible governments' staff – ready to carry out significant changes, also in the area of the e-administration.

The problem which appears here is definitely connected with limited knowledge that public managers have of modern management tools. They hardly know the theoretical basis of modern management concepts, not to mention being able to implement them. Thus, it is necessary to take further intensive steps to enlarge the knowledge in that area among local managers. This will surely help to avoid many of the problems listed above.

Moreover, reaching next levels of using the technology is only possible when the social awareness appears. Thus, agreeing with W. Cellary, the authors of the article

think that it is not enough to improve only the administration itself. Implementation of described conceptions should be the strategic stimulation of economic changes and development in the whole country [Cellary 2010].

Finally, as in all the breakthrough changes, it is necessary to work out the possibilities to engage local societies in the process of planning, organizing, implementing and control of actions taken. Members of local communities – inhabitants and organizations – usually want to take active part in the management functions. The problem is that they are not given the opportunities to make any effort. Often it results from the local authorities' belief that they know best and do not need any help. Such attitude must be changed and local participation must be the main way to overcome the problems encountered.

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INFORMATYZACJA KIERUNKIEM DOSKONALENIA PROCESÓW W GMINIE

Streszczenie: Współczesne uwarunkowania, w jakich działają samorządy lokalne, przyczyniają się do rozwoju komunikacji z klientami zewnętrznymi i wewnętrznymi, nie tylko w sposób tradycyjny, ale także drogą elektroniczną. Celem artykułu jest wskazanie na kierunki i bariery w obszarze doskonalenia procesów komunikacji w administracji publicznej poprzez wykorzystanie narzędzi ICT. Informatyzacja urzędów administracji lokalnej może dotyczyć różnych obszarów funkcjonowania jednostek administracji. Natomiast autorzy szczególną uwagę poświęcili informatyzacji obszaru związanego z procesami obsługi klientów, traktując powyższe procesy jako główne procesy biznesowe.