

## **FORMS OF CIVIC PARTICIPATION IN AN INFORMATION SOCIETY IN THE CONTEXT OF THE USE OF INFORMATION AND TELECOMMUNICATIONS TECHNOLOGIES IN POLAND**

The development of information and communication technologies over the last few years, in particular, has changed the image of the contemporary society. Easier and faster access to information and knowledge has contributed to the increase of social awareness of both individuals and entire communities, in addition to the change of their expectations towards the state, its authorities and administration, decisions made by them, as well as to the shaping of a new outlook on the manner and form of individuals' engagement in issues of public concern. These changes mean that the previous forms of civic participation in the execution of public matters require revision and complementation by such forms of participation that would make use of solutions based on state-of-the-art techniques as well as IT and telecommunication tools. Supporters of using such modern technologies in democratic processes indicate a wide range of advantages related thereto, both individual and social. They include, among others, limitation of conflicts in societies, enhancement of effectiveness in decision-making processes and the quality of decisions, increase in credibility and reinforcement of the image of authorities and their administration, as well as boosting the motivation and engagement of individuals in issues of public concern. Are these the only advantages? Are there any disadvantages or risks entailed by the use of these solutions? The following article is an attempt at providing answers to these questions. This paper primarily presents the Polish experience in the implementation of individual forms of participation with the use of IT and telecommunication solutions, and in particular their nature, prerequisites for use, pros and cons involved their meaning in democratic processes and finally, influence on individual - public authority relations.

**Key words:** information society - civic participation - information and telecommunication technologies.

### **Introduction**

Over the course of the last few decades, we have observed not only political or economic, but also societal transformations in the individual countries. In this last area, a certain kind of transformation is commonly observed in the literature of the subject<sup>1</sup>, which results in the emergence of the so-called information society. It is a society in which broadly defined information and knowledge are in the center of attention. These goods, extremely valuable for the fulfilment of the interests of individuals and the groups formed by them, are not only valuable in and of themselves, but they also have a significant impact and importance for the development of modern states, the functioning of their governments and administrative structures, for economic progress and the broadly understood progress of civilisation. The emergence of an information society means that the society has reached a stage of development, in which a need of collecting, processing, transferring and using huge amounts of information generated by the societal, economic or political (systemic) processes arises in the consciousness of both individuals as well as the communities formed by them<sup>2</sup>. It should be noted that the course of these processes is largely determined by the quantity and quality of the above mentioned information and knowledge.

The issue of the information society is multifaceted. The majority of studies, devoted to the analysis of this issue highlight the properties, functions, multidimensional nature and complexity of the information society. The aforementioned complexity of this issue can be found in exemplary definitions of the concept of information society, which have appeared in the literature. In these definitions an information society is seen as one which:

- 1) has the skills and the ability to use IT solutions and technologies; it is computerized and utilizes solutions for collecting, processing, transferring and using information;
- 2) makes use of information technologies at work, school or in other areas of life (in everyday social, cultural, economic and political life);

<sup>1</sup> For more information on the subject see, among others T. Goban-Klas, *Media i komunikowanie masowe*, Warszawa 2004, pp. 294 – 300; K. Celarek, *Prawo informacyjne. Problem badawczy teorii prawa administracyjnego*, Difin, Warszawa 2013, p. 42-43.

<sup>2</sup> T. Zasepnny, *Internet fenomen społeczeństwa informacyjnego*, Częstochowa 2001, p. 179-180.

3) treats information as an indispensable element of social, political and economic activity and changes;

4) is characterized by a high level of information culture, where information is treated as goods with tangible economic value, as strategic goods or a commodity<sup>3</sup>;

5) is equipped with advanced means of communication and information processing, which form the basis for the creation of national income and provide the livelihood for the majority of the population<sup>4</sup>;

6) is characterized by, among others, a highly developed sector of modern services, an economy based on knowledge and information, universal education on various levels, an advanced process of decentralization of society and its involvement in public affairs.

That civilizational progress, manifested among others in the development of IT and ICT technologies, allowed for easier and more efficient collection, processing and use of information and knowledge in the society. Accordingly, the view that “the information society is one in which every citizen has access to information and communication technologies (i.e. computers, the Internet and other networks, phones, smartphones, tablets, servers, terminals, smart TV) and has the skills, awareness and the possibility of using ICT to effectively acquire reliable information in order to achieve their goals in the best way”<sup>5</sup> is not surprising.

This development of IT and communication technologies, particularly in the past 20 years since the emergence of the Internet, has changed the shape of modern society. Easier and faster access to information and knowledge has, in my opinion, contributed to an increase in the social awareness of both individuals and entire communities, to a change in their expectations of the state, its authorities and administration, and the decision-making processes conducted by them, and to the development of a new outlook on the methods and forms of participation of individuals in dealing with public affairs. It is for good reason, therefore, that opinions have been appearing in the public debate concerning the need to change the current approach to civic and public participation. These aforementioned changes do not mean, however, that the existing methods and forms of activity of public institutions should be subjected to a total revolution. I believe that it is necessary to reconsider the existing solutions and then supplement them with such forms of citizen participation in the ongoing decision-making processes that will use modern IT and communications technologies and tools.

The literature on the subject has been pointing to a number of benefits, both individual and societal, resulting from the use of information technology in the process of citizen participation, practically since the emergence of these solutions and their popularization. They include, for example, a reduction of conflicts in communities, an improvement of the efficiency of decision-making processes and the quality of the decisions, an increase in credibility and strengthening of the image of the authorities and their administration, as well as an increase of motivation and involvement of individuals in public affairs<sup>6</sup>.

In light of the foregoing, and especially the understanding of the concept of the information society as a community and its constituent individuals using modern technologies in order to exercise their rights and protect their interests, my intention in this paper is to present the use of IT and telecommunications solutions in the most commonly found forms of civic participation, along with their nature, conditions for their application, the benefits and drawbacks associated with them and their significance in democratic processes. In this paper the general origin of the application of modern technology in the democratic processes in selected countries will be outlined only in order to provide context for more detailed deliberations. However, the main part of my deliberations shall concern the Polish experiences concerning the use of information and communication technologies in the implementation of the individual forms of civic participation. The selected examples from

<sup>3</sup> A. Pawłowska, *Zasoby informacyjne w administracji publicznej w Polsce – problemy zarządzania*, Lublin 2002, pp. 32-33.

<sup>4</sup> K. Krzysztofek, M. Szczepański: *Zrozumieć rozwój. Od społeczeństw tradycyjnych do informacyjnych*, Katowice: 2002, p. 170.

<sup>5</sup> R. Żelazny, *Raport Obserwatorium ITC. Społeczeństwo informacyjne*, Gliwice 2013, p. 9.

<sup>6</sup> See: *Komunikacja i partycypacja społeczna. Nowoczesna Gmina – jak wykorzystać komunikację i partycypację społeczną jako skuteczne narzędzia zarządzania jednostką samorządową*, [http://www.cds.krakow.pl/komunikacja\\_i\\_partycypacja\\_spoleczna,125.html](http://www.cds.krakow.pl/komunikacja_i_partycypacja_spoleczna,125.html). (accessed on: 15.09.2014). For more information on the subject see: M. Marczevska-Rytko, *Demokracja elektroniczna jako próba urzeczywistnienia idei greckiej agory*, [in:] *Społeczeństwo informacyjne: wizja czy rzeczywistość?* v. 2, ed. L. H. Haber, Kraków 2004.

other democratic countries and, above all, the actions of the Polish authorities (both at the central and local level) described in the paper are intended to allow for a presentation of a number of significant dilemmas associated with the use of modern technologies in the individual forms of civic participation, and to enable the formulation of conclusions aimed at eliminating the possible risks associated with the use of the above mentioned technologies.

### **Forms of civic participation using information and telecommunications technologies**

The development of information technology has affected many areas of life, leading to changes, transformations and the emergence of new phenomena and institutions. The impact of these technologies can, without a doubt, be seen in the democratic processes, in particular in the case of the forms of citizen participation in these processes. In the majority of views represented in the literature, the use of information and telecommunications technologies, and especially the Internet, in democratic processes in order to facilitate and increase the involvement of citizens in public affairs is referred to as e-democracy<sup>7</sup>. Other terms used to identify this process include: electronic democracy, tele-democracy, digital or virtual democracy.<sup>8</sup> Such a stage of development of democracy is not only the result of actions undertaken by the authorities but is also an expression of the activity of the individuals and the groups and communities formed by them. Observing the undertakings and projects of using information technology in democratic processes in selected democratic countries, we can conclude, that they were primarily used in previously existing forms of participation, such as elections, referendums or public consultations. At the same time, as some researchers claim, the purpose of using these technologies is not to supplant or replace the traditional methods of participation. New forms of participation using the solutions of new IT technologies in the democratic processes should rather be regarded as another, additional opportunity for participation, facilitating the participation of those who, for various reasons, haven't participated in them until now.<sup>9</sup> Following the subsequent elections or referendums in Poland or in other countries, we can observe the phenomenon of declining interest resulting in a decreasing turnout at these events on the part of the society and its members. The reasons for the intensification of this phenomenon can be found, among others, in the processes of globalization, in the skeptical attitude and a certain kind of disaffection presented by the electorate towards the existing political parties. Therefore, the implementation of information technology in certain democratic countries in order to facilitate the use of the forms of participation, especially under the auspices of the authorities and their administration, is supposed to encourage contemporary society - as has been already presented - the information society, to become more involved in public affairs and to resolve the crisis of democracy.

There is no exhaustive list of the forms of civic participation. In the legal systems of individual countries, including Poland, we can see that some of these forms, such as: elections, referendums, the civic right to a legislative initiative, the right to public information, are precisely regulated by law. Others were only briefly mentioned by the legislature, but left without detailed legal regulation, such as in the case of public consultations. Still others weren't even mentioned by the legislature and in a way remained outside of the explicit regulation of the legal system, e.g. the civic resolution initiative. The reasons for this state of affairs can be found, among others, in the importance of the individual forms of participation, and namely their intensity and the extent to which they allow the individual and the society to influence the actions of the authorities and the performance of public tasks. The bigger and the "deeper" their potential impact on public affairs, the more frequently they are regulated. Furthermore, it seems that in many cases the legal regulation of a given institution of participation results from the desire to provide the individual with legal guarantees of its implementation by the state.

Just as the level of interest in various forms of participation on the part of the legislature varies, there is also a variation in terms of the possibility of applying information technologies and solutions in relation to these forms. Following both the experiences of other countries and the actions of the Polish authorities in the application of information technologies in the forms of civic participation,

<sup>7</sup> M. Marczewska-Rytko, *Idea...*, p. 25.

<sup>8</sup> M. Nowina-Konopka, *Spółeczeństwo informacyjne a teorie demokracji*, [in:] *Spółeczeństwo informacyjne: istota, rozwój, wyzwania*, ed. T. Białobłocki, J. Moroz, M. Nowina-Konopka, L. W. Zacher, Warszawa 2006, p. 93.

<sup>9</sup> M. Musiał-Karg, *Demokracja bezpośrednia w Szwajcarii. Wykorzystanie ICT w procedurach głosowania*, [in:] *Demokracja bezpośrednia. Wymiar globalny i lokalny*, ed. M. Marczewska-Rytko, A. K. Piasecki, Lublin 2010, p. 57.

as well as analyzing a number of publications on this topic in the literature of the subject, we can see that IT solutions are most frequently found in such forms as: elections, referendums, broad public consultations or obtaining information concerning public affairs. The question is whether this is only a “technologization” of traditional forms of civic participation or whether we are rather dealing with so-called e-participation, which signifies “something more than the electronic dimension of procedures - a deeper civic involvement mediated by new communications technologies”<sup>10</sup>.

### 1.1. E-voting

E-voting, or electronic voting consists of voting with the use of special electronic devices in the polling station, as well as voting in special Internet kiosks located in various public locations, or with the use of a mobile phone or a computer connected to the Internet. In the case of this form, the modern technologies are used not only in the process of casting votes, but also in the individual issues associated primarily with the organization of the voting, the elections themselves. For example, these tools are used for receiving and counting the votes, voting using the Internet (the vote may be cast remotely from any location using the Internet and then they are received and counted by a central computerized electoral system), the visualization of the election results<sup>11</sup>.

Looking back at the history of “informatization” of this form of civic participation, we can say that it first emerged at the turn of the 21st century. The classic examples include the implementation of IT solutions in the United States, Belgium, Estonia or Switzerland. The first instance of use of an electronic voting system took place in the year 2000 during elections in Arizona. The voters cast their votes using a website, and each vote cast on the Internet was appropriately encrypted and signed with a digital signature. In the United Kingdom, modern technological solutions were introduced in 2002 at a local level in some electoral districts, while maintaining the possibility of voting in the traditional manner. Another example is Belgium, where in the 2004 elections nearly half of the voters cast their votes using the electronic system in polling stations adapted for this purpose and equipped with electronic card readers and touch screens, among others. On the other hand, in Estonia e-voting consisted in sending a vote encrypted using a virtual double-envelope scheme. The verification of voters is carried out with the use of an electronic signature, which the voter had to use to sign the cryptogram. In order to protect the electoral process from improper influence, the mode of decryption was secured in such a way that no participant of the decoding process could simultaneously see the signed cryptograms and their corresponding votes<sup>12</sup>.

The provided examples indicate that the use of this form of voting creates the necessity of an unambiguous confirmation of the voter’s identity, which often takes place with the use of an electronic signature or an electronic identity card<sup>13</sup>. It should be added that the first method of verification of the voter is used relatively less frequently, due to the high costs generated mainly on the part of the voter and the technical difficulties associated with the implementation of the electronic signature. In contrast, verification with the use of an electronic identity card seems to be less problematic. This is also due to the fact that the issuing and the use of such a document is more practical in nature, as it can be used for various purposes, including the confirmation of a voter voter and the technical difficult.

As it was previously mentioned, a model of electronic voting was also implemented in Switzerland, so as to enable casting votes electronically from almost any location in which the voter is staying. The process of implementation of such a model started with a series of pilot programmes, including in such cantons as Geneva, Neuchâtel and Zurich. They included, i.a., the possibility of voting via the Internet, as well as the use of mobile telephony in the casting of the vote (sending of a text message). These were alternative methods provided in addition to voting at the ballot box and voting by mail<sup>14</sup>.

<sup>10</sup> E. Stokłuska, E-partycypacja – o co właściwie chodzi i jak to może wyglądać, <https://www.technologie.org.pl/artykuly/e-partycypacja-o-co-wlasciwie-chodzi> (accessed on: 17.09.2014).

<sup>11</sup> See on the subject, among others S. Koczubiej, E-głosowanie jako element demokracji w społeczeństwie informacyjnym, „Problemy Humanistyki”, 2003/2004, no 8/9, p. 261-273.

<sup>12</sup> M. Kutylowski, E-voting: głosowanie elektroniczne, „Infos” No. 10 (57), p. 2.

<sup>13</sup> These methods of verification of the voter were used during subsequent elections in Estonia.

<sup>14</sup> See more on this topic: I. Wróbel, Szwajcarskie doświadczenia w głosowaniu przez Internet na przykładzie kantonu Zurych – wnioski dla Polski, Centrum Badań Prawnych i Ekonomicznych Komunikacji Elektronicznej, e-Biuletyn 3/2008, [http://www.bibliotekacyfrowa.pl/dlibra/docmetadata?id=34345&from=&dirids=1&ver\\_id=&lp=1&QI=3D5E0A7FE21CDCC-B96474A99A7AFE220-2](http://www.bibliotekacyfrowa.pl/dlibra/docmetadata?id=34345&from=&dirids=1&ver_id=&lp=1&QI=3D5E0A7FE21CDCC-B96474A99A7AFE220-2) (accessed on: 20.09.2014).

In the aforementioned cases, we are not only dealing with solutions that include the electronic support of voting with the use of computerized systems used for receiving and counting votes. On this occasion it should be mentioned that in the event of using the above mentioned solutions, the degree of this support can be highly varied - from the use of IT solutions exclusively for the needs of the bodies organizing the elections, to solutions which allow the voters to cast their votes in polling stations on devices prepared specifically for this purpose. In such a case, usually all the devices located in the polling stations form a kind of a closed network, managed and controlled by the authorities. The second type of solution is voting over the Internet or through other telecommunications tools. This solution usually means that the votes can be cast remotely from any location and any computer with an Internet connection. In turn, the receipt and counting of the votes cast in this way is carried out by a central computerized electoral system. "In this case the organizers of the elections determine only the software standards, but don't have any influence over the type of infrastructure in the places where the votes are cast and its configuration"<sup>15</sup>.

The implementation of information and telecommunications technologies in Poland is still only in the initial phase. Thus far, the only technological innovation used in Poland during the general voting is the electronic transmission of the results from the precinct electoral commissions to the central commission<sup>16</sup>. Then the collected results need to be further confirmed by the members of the commission. The applicable legal provisions indicate that information technology in Poland in relation to the elections is merely subsidiary and fragmentary in nature. IT systems are used, among others for maintaining a voter register<sup>17</sup> or supporting the activities of the National Electoral Commission. Therefore, the provisions of the Election Code Act provide for the use of modern information and telecommunications technologies, in such cases as:

- 1) an electronic application for a certificate of the right to vote in the place of residence on election day by a voter changing his place of residence before the date of the election;
- 2) an electronic application for being added to the list of voters who reside abroad and have valid Polish passports or, in the case of European Union citizens, who are not Polish citizens, and have a valid passport or another document confirming their identity;
- 3) the electronic transmission of information regarding the organization of elections to voters with disabilities by the employees of the municipal office;
- 4) reporting the intention of voting by mail in electronic format;
- 5) the possibility of using electronic technology to provide support and technical and material conditions of work for the precinct and territorial electoral commissions;
- 6) the possibility of using electronic technology in determining the results of the vote, the preparation of protocols by precinct, territorial, district and constituency electoral commissions and the National Electoral Commission, in checking the arithmetic correctness of the determination of the results of voting in the precinct, in determining the election results, in transmitting the data from the protocols;
- 7) the publication by the National Electoral Commission in the form of an electronic document of statistical studies containing detailed information on the results of voting and elections and in thus sharing the results of voting and election results.

Analyzing the above mentioned examples of the use of information technology in Poland, we can conclude, that in the case of the organization of the forms of civic participation based on voting, in Poland voting cards and protocols remain the foundation whereas IT solutions are only complementary, subsidiary in nature.

<sup>15</sup> M. Sztelmach, Wybory przez Internet – szansa czy zagrożenie? (Elections on the Internet - An opportunity or a threat?), <http://www.psl.garwolin.pl/index.php/e-wybory-szansa-czy-zagroenie> (accessed on: 20.09.2014).

<sup>16</sup> Article 230 Section 6 of the Act of 5 January 2011 - Election Code - The head of the constituency electoral commission shall immediately forward the data from the protocol summaries relating to the number of valid votes and valid votes cast for each list of candidates and the number of valid votes cast for individual candidates from each of those lists to the National Electoral Commission, in the manner prescribed by it, by means of electronic transfer of data. (Journal of Laws No. 21, item 112, as amended). See also: the Regulation of the Minister of Culture and National Heritage of 13 November 2013 on the methods of transferring, storing and sharing of documents from the election (Journal of Laws item 1488).

<sup>17</sup> Section 5 of the Regulation of the Minister of Internal Affairs and Administration of 27 July 2011 on the electoral register (Journal of Laws No. 158, item 942, as amended).

## 1.2. E-public consultations

Public consultation is a form of civic participation, which allows for opinions, views, proposals, etc. to be obtained from citizens and the communities formed by them, especially in the cases that will to some extent, directly or indirectly, affect them. "Consultations are also an exchange of information with the public opinion, a discussion, a sharing of knowledge and even (to some degree) a sharing of power. For social entities consultations create the opportunity to gain influence on the content of the solutions and for the administration a number of opportunities for improving its activities. Public consultation is therefore one of the most important means of achieving goals in politics"<sup>18</sup>. It should also be noted, that this form of participation has a broad application and is used not only for consulting the opinions of citizens by the authorities, but also by other entities, such as political parties, NGOs, enterprises.

The basic objective of public consultations primarily is the gathering of opinions of certain subjects by the public authorities. The inherent features of consultations include listening, sharing knowledge and information, dialog, debate and the analysis of the problems carried out by its participants<sup>19</sup>. In literature on the subject, public consultations are ranked somewhere between forms of participation in decision-making and informing and the right of access to information; it is a certain kind of "intermediate" form of citizen involvement in public affairs. The basis of the use of this form of participation is certainly information and knowledge, however, it differs from the above mentioned forms primarily due to its objective - to reach the widest possible audience and learn about their opinions concerning the plans of specific undertakings or projects. The reasons for learning about public opinion can be varied, e.g. to improve the quality of the proposed solutions, to gain public support for the planned projects. "Consultations may be of particular significance in the preparation and implementation of large, complex, multi-annual public programmes which affect wide social circles - the development policy, social policy, public safety etc."<sup>20</sup>. An integral feature of consultations is the responsibility for the shape and content of the project subject to consultation which rests with its author, and also the non-binding nature of the opinions obtained in the process of consultations - their inclusion is not his duty but only a right.

Based on the examples of certain democratic countries, also including the Polish experiences, it could be concluded that the use of information and telecommunications technologies in the public consultation process is much more common and is implemented with the use of more diverse solutions than in the case of voting during elections or referendums. In comparison with elections and referendums, which are formalized, follow a relevant procedure and are usually governed in detail by the provisions of electoral law, public consultations usually do not have any such legal regulation. The provisions of the law often provide for the possibility or the obligation of carrying out public consultations in some defined category of cases only in general terms, but they do not regulate their course, organization and the form in which they can or should be conducted. Therefore, the decision on how public consultations are carried out and what standards are they subject to, largely depends on the entities that organize them, e.g. public authorities<sup>21</sup>. The use of modern technological solutions in the consultation process is also subject to the decision of the organizer. The interest in their use in the case of this form of participation stems from reasons similar to those previously presented in the article, including those dictated by the development of the information society and the accompanying civilizational development.

The most frequently used tools in the process of public consultations include:

1) e-mail - a solution that is the most prevalent, the least expensive and often the most effective; these advantages result from the fact that the expression of one's opinion as a participant in the consultation is independent from his current location, in order to take advantage of this tool it is sufficient to use one of the many, often free email programmes. A particular form of e-mail

<sup>18</sup> D. Długosz, J. J. Wygnański, Obywatele współdecydują. Przewodnik po partycypacji społecznej, Stowarzyszenie na rzecz Forum Inicjatyw Pozarządowych, Warszawa 2005, p. 23.

<sup>19</sup> Ibidem, p. 23.

<sup>20</sup> Ibidem, p. 24.

<sup>21</sup> More on the standards concerning the organization and conducting of public consultations among others in: D. Długosz, J. J. Wygnański, Obywatele współdecydują. Przewodnik..., p. 23-45.

communication is the creation of a so-called mailing list, meaning a common email address. The advantage of this solution is the quick and easy dissemination of information, opinions contained in an electronic letter among the participants of a discussion, as sending it using the method indicated above results in it reaching many participants.

2) a more advanced form is the exchange of opinions, positions, information using an Internet forum (so-called e-groups). Such Internet forums can have a varied nature, from those addressed to all people interested in a given topic, to forums dedicated only to invited participants or ones whose presence and participation has been accepted by the host of the group; they can be either private or public. The exchange of opinions, positions and information is performed with the use of an electronic form. This method of exchanging opinions, positions and information also provides the ability of following threads, as well the exchange of documents, files or other materials between the participants.

3) another solution allowing for the exchange of opinions, positions and information in the consultation process is, without a doubt, the popular social networking websites, such as Facebook or Twitter. Without going into details concerning their origin and essence of functioning, it can be concluded that their use provides the possibility of sending free comments or short messages, which can be read by other people following the given profile and provides the ability of starting a discussion by responding to other users. Another advantage of this solution is also the fact that due to the extremely intensive development of communication technologies, the possibility of exchanging opinions, positions and information is available not only by sending them from one's profile through the website, but also using text messages or through mobile applications running on mobile devices such as mobile phones, smartphones, personal digital assistants and tablets, which are created using various platforms and programming languages. This provides the possibility of taking part in consultations regardless of the location of the participant of the discussion and the software owned by him.

4) instant messengers - are computer programmes enabling the sending of instant messages between two or more computers through a computer network (usually the Internet). This tool allows for the exchange of information, which is similar to having a direct conversation. Messengers send information according to principles resulting from the communication protocols in such a way that publicly documented protocols are usually implemented by many messengers, providing an almost unlimited audience. Their advantage is also the lack of fees for the conversations - "regardless of whether these are text chats, voice calls or video calls".<sup>22</sup> Due to the above mentioned advantages, the most frequently used instant messengers include: Skype, Gadu-Gadu, Tlen, or Facebook Messenger, etc.

5) online surveys – is a tool for gathering opinions, positions – and information using the Internet websites. It allows for performing certain kinds of statistical surveys, which are intended to determine the preferences of the individual social groups. This tool doesn't usually provide a full picture of the views on a given topic, but only an approximation. However, it undoubtedly constitutes an indication of the occurrence of certain trends. These Internet surveys are often one of many components of existing websites or are their main subject, such as for example SONDA.pl as a free, fast and easy-to-use tool for building interactive surveys and questionnaires, which enables users to evaluate, vote and express opinions<sup>23</sup>, or e-wybory.eu<sup>24</sup>.

While even a few years ago IT solutions were rarely used by public authorities in Poland for the purpose of public consultations, e.g. on a project of some undertaking or a legal regulation,<sup>25</sup> we can currently see an increased interest in the use of modern technologies for the organization of this form of participation. This tendency is manifested for example by the Internet service of the Municipal Office of Kraków entitled [www.dialogspoleczny.krakow.pl](http://www.dialogspoleczny.krakow.pl), used not only for sharing information on conducted public consultations, but also allowing for consultations to be carried out online. According to the creators of the service, "only a shared conversation, a widely understood

<sup>22</sup> D. Socha, 10 najlepszych darmowych komunikatorów internetowych (10 best free internet messengers), [http://www.benchmark.pl/testy\\_i\\_recenzje/najlepsze-darmowe-komunikatory-internetowe.html](http://www.benchmark.pl/testy_i_recenzje/najlepsze-darmowe-komunikatory-internetowe.html) (accessed on: 25.09.2014).

<sup>23</sup> <http://www.sonda.pl/> (accessed on: 26.09.2014).

<sup>24</sup> <http://ewybory.eu/> (accessed on: 26.09.2014).

<sup>25</sup> For more information on the subject see: D. Długosz, J. J. Wygnański, Obywatele współdecydują. Przewodnik..., p. 50-51.

social dialog, expressing one's own opinions and views, sharing one's comments and alternative solutions will enable us to learn about the position of all the interested parties. This, in turn, will allow for selecting the best solutions that will benefit the greatest number of citizens of Kraków. However, this is possible only with a smooth flow of information between the residents and the local government - and that will be the purpose of the service"<sup>26</sup>. The service describes the projects which are the subject of both full public consultations as well as limited consultations. The latter, conducted from May 16 to July 4 of 2013, were supposed to allow for a preliminary survey of the attitudes of the residents of Kraków towards planned municipal investments and were carried out using such tools of public dialog as the [www.dialoguj.pl](http://www.dialoguj.pl) website, the consultation point active during the Festival of Science at the Main Square, the consultations with the District Councils (and the adoption of a resolution by the District Councils), survey forms<sup>27</sup>. In the service the consultations are divided into ones that are ongoing and those that were completed. In the case of the former, the pages of the service contain the full range of information about the consulted project, and also a consultation form which allows the user to express his opinion in the case. An example of such a project is the programme of care for homeless animals and the prevention of animal homelessness for the year 2015, the public consultations for which are organized by one of the organizational units of the Municipal Office of Kraków, namely the Department of Environmental Management. By completing a consultation form available on the site, any interested person has the opportunity to present their views on the programme, the content and assumptions of which have been posted on the website, along with the date of the consultations and the methods of delivering the form (to the [ws.umk@um.krakow.pl](mailto:ws.umk@um.krakow.pl) e-mail address, at fax number 12 616 88 91, or to the following address: Department of Environmental Management of the Municipal Office of Kraków, oś. Zgody 2, 31-949 Kraków)<sup>28</sup>. In the case of the completed consultations, such as for example the public consultations on the project of expansion of al. 29 Listopada<sup>29</sup>, the pages of the service contain not only the detailed description of the project and the course of consultations concerning that project, but also - which deserves credit and is worthy of emulation - a report from the carried out consultations, along with a summary of the requests submitted by the residents, their analysis and a description of how they were taken into account<sup>30</sup>. This way, each participant of the consultations also has the ability to learn about the proposals of the others, and to learn about the position of the authorities towards his proposals and opinions, whether they were met with approval from the authorities and how will they be integrated in the framework of implementation of the given project.

The use of information and telecommunications technologies in the process of public consultations is also included in the policy assumptions of the central government authorities in Poland. At this point it is worth mentioning the example of the assumptions of the "Programme of the Integrated Computerization of the State"<sup>31</sup>, which include plans for the creation of a freely accessible web-based platform for the purposes of development of on-line consultations<sup>32</sup>. This solution is supposed to enable the public dissemination of draft legislation and other proposals of programmes and activities undertaken by the public administration, and is supposed to become the platform of dialogue with the citizens about legislative projects. It is clear that the actions of the authorities should not be limited to technical and organizational activities, consisting in the creation of such an electronic platform, as it is necessary to launch information campaigns aimed at encouraging citizens and

<sup>26</sup> [http://www.dialogspoleczny.krakow.pl/Strona\\_g%C5%82%C3%B3wna/O\\_nas/](http://www.dialogspoleczny.krakow.pl/Strona_g%C5%82%C3%B3wna/O_nas/) (accessed on: 02.10.2014)

<sup>27</sup> [http://www.dialogspoleczny.krakow.pl/Konsultacje\\_Spo%C5%82eczne/Katalog\\_Inwestycji\\_Miejskich\\_wybranych\\_do\\_pe%C5%82nych\\_konsultacji\\_spo%C5%82ecznych/](http://www.dialogspoleczny.krakow.pl/Konsultacje_Spo%C5%82eczne/Katalog_Inwestycji_Miejskich_wybranych_do_pe%C5%82nych_konsultacji_spo%C5%82ecznych/) (accessed on: 19.10.2014).

<sup>28</sup> [http://www.dialogspoleczny.krakow.pl/Konsultacje\\_Spo%C5%82eczne/Aktualne\\_konsultacje/7369Konsultacje\\_programmeu\\_opieki\\_nad\\_zwierz%C4%99tami\\_bezdomnymi\\_oraz\\_zapobiegania\\_bezdomno%C5%9Bci\\_zwierz%C4%85t\\_na\\_rok\\_2015.html](http://www.dialogspoleczny.krakow.pl/Konsultacje_Spo%C5%82eczne/Aktualne_konsultacje/7369Konsultacje_programmeu_opieki_nad_zwierz%C4%99tami_bezdomnymi_oraz_zapobiegania_bezdomno%C5%9Bci_zwierz%C4%85t_na_rok_2015.html) (accessed on: 19.10.2014).

<sup>29</sup> [http://www.dialogspoleczny.krakow.pl/Konsultacje\\_Spo%C5%82eczne/Zako%C5%84czone\\_konsultacje/2013/6499-Konsultacje\\_spo%C5%82eczne\\_rozbudowy\\_al\\_29\\_Listopada.html](http://www.dialogspoleczny.krakow.pl/Konsultacje_Spo%C5%82eczne/Zako%C5%84czone_konsultacje/2013/6499-Konsultacje_spo%C5%82eczne_rozbudowy_al_29_Listopada.html), (accessed on: 19.10.2014).

<sup>30</sup> E.g. in the report on the public consultation on the project of expansion of ul. 29 Listopada, in relation to postulate no. 12: "change of the location of the transformer station on lot no. 143/4, precinct 28 Krowodrza, in connection with the planned road system. The transformer station on plot no. 143/4, precinct 28 Krowodrza, which collides with the planned road system, will be moved to a new location within the range of the new roadway".

<sup>31</sup> [https://mac.gov.pl/files/pzip\\_ostateczny.pdf](https://mac.gov.pl/files/pzip_ostateczny.pdf). (accessed on: 20.10.2014).

<sup>32</sup> This is an expression of the implementation of the postulates of the Efficient State Strategy 2020.



community groups to use the electronic system for the consultation and analysis of the applicable law, in order to provide conditions enabling the genuine utilization of the above mentioned solution<sup>33</sup>. According to the authors of the said programme, “the involvement of citizens in governance marks the transition from unilateral informing of citizens to participatory forms of communication such as the consultation of decisions, co-deciding and even the transfer of the full decision-making authority on certain issues into the hands of the citizens. (...) The further development of the possibility of consulting legislative acts on-line will allow for a greater involvement of citizens in the areas that concern them or are of interest to them. The entrepreneurs, who will be able to use the web portal to report regulatory burdens adversely affecting their business activities, are another important group<sup>34</sup>.”

### **1.3. Informing with the use of modern technologies**

In literature on the subject it is widely accepted that informing is one of the simplest forms of participation, in the sense that it is characterized by the lowest involvement on the part of the citizens.<sup>35</sup> Essentially, this form consists in the transferring of information by a public authority (the passive dimension) or obtaining information from the authorities by the citizens (the active dimension). Informing, both in its passive and active dimension is often subject to relevant legal regulations, which govern issues associated with the provision of public information with various levels of detail.

An example of such regulations in the Polish legal system is - in addition to the provisions of the Constitution of the Republic of Poland of 1997<sup>36</sup> - primarily the Act of 6 September 2001 on Access to Public Information<sup>37</sup>. This act sets out, among others, the concept and scope of the shared public information, the subject party of the right to information, methods of sharing information.

In relation to the methods of sharing and obtaining public information, the Polish legislature adopted a variety of forms, however, taking the rules of language interpretation in relation to this regulation into account, it should be considered that the Public Information Bulletin (hereinafter: PIB) and the central repository was adopted as the primary method of sharing information. The former is an official tele-information publication in the form of a unified system in the tele-information network, set up with the goal of universal access to public information.<sup>38</sup> On the other hand, the central repository collects and shares public information of significant importance for the development of innovation in the country and the development of the information society, which, due to the method of storing and sharing can be re-used in a useful and effective manner<sup>39</sup>. The fact that this is the basic method of sharing information is evidenced by the contents of Article 10 Section 1 of the Act on Access to Public Information, which states that the sharing of information upon a written request applies primarily to all the public information, which has not been published in the Public Information Bulletin or the central repository. When analysing the provisions of the Act, we should point out one more way of sharing information, related to the possibility of using modern technology, namely the sharing of public information by installing devices that enable becoming acquainted with this information in places of general access<sup>40</sup>.

The information contained in the Public Information Bulletin can be accessed via:

- 1) the main page of the Bulletin at [www.bip.gov.pl](http://www.bip.gov.pl), covering the basic information about entities (data such as: name, contact details, information on the page editor), together with references to the entity pages;
- 2) entity pages, which were prepared by entities with a statutory obligation to operate them, along with information about their activities. The addresses of the entity pages mentioned above can be found on the main page of the Public Information Bulletin<sup>41</sup>.

The obligation of creating PIB entity pages rests in particular with such entities as: public authorities, economic and professional self-government bodies, entities representing the State Treasury under

<sup>33</sup> Programme of the Integrated Computerization of the State, p. 53.

<sup>34</sup> *Ibidem*, pp. 52-53.

<sup>35</sup> See such views in, among others, A. Olech, P. Sobiesiak – Peneszko, *Partycypacja publiczna w Polsce. Diagnoza i rekomendacje*, Instytut Spraw Publicznych. Analizy i Opinie, Special issue 3, February 2013, „Decydujmy razem”, p. 3.

<sup>36</sup> In particular Article 61 of the Constitution of the Republic of Poland of 2 April 1997 (Journal of Laws of 1997, No. 78 item. 483, as amended).

<sup>37</sup> I.e. Journal of Laws of 2014, item 782.

<sup>38</sup> Article 8 Section 1 of the Act on Access to Public Information.

<sup>39</sup> Article 9a Section 1 of the Act on Access to Public Information.

<sup>40</sup> Article 11 point 2). of the Act on Access to Public Information.

<sup>41</sup> *Ibidem*.

separate regulations, state legal entities, local government legal entities, state organizational units, local government units using public funds, trade unions and their organizations, political parties and other entities performing public tasks. The above mentioned entities are also responsible for the creation, maintenance and updating of the content contained on the PIB entity pages. In turn, the competent central government authority, i.e. the Minister responsible for computerization is obliged to build and maintain the Bulletin's main website. The PIB entity pages shall contain data that will serve all the interested parties, such as data on: the legal status or legal form, the subject of activity and competences, the bodies and the persons carrying out the functions and their competences, the assets at their disposal, the mode of operation, the methods of accepting and handling matters, information on the maintained registers, records and archives and the methods and rules of sharing data contained therein. All pages of the Bulletin must be prepared in accordance with the conditions set out in the provisions of the Regulation on the Public Information Bulletin<sup>42</sup>. In regards to the central repository, the standards for its operation are set out in the Regulation of the Council of Ministers of 12 March 2014 on the Central Repository for Public Information<sup>43</sup>. In addition, the Bulletin and the central repository, as public registers and systems for the exchange of information in electronic format and tele-information systems, must meet the minimum requirements provided for them in the regulation of the Council of Ministers of 12 April 2012<sup>44</sup>.

The solutions indicated above, based on information technology, are the primary method of sharing information about the activities of public authorities. It should be noted, however, that these are not the only methods of sharing information with the use of these technologies, provided for by the applicable law. These methods also include, for example the cases of performing procedural acts (provided for in the provisions of the Act of 14 June 1960 - Code of Administrative Procedure)<sup>45</sup>, including those consisting in the sharing of information, in the form of an electronic document authenticated with the use of mechanisms set out in the Act of 17 February 2005 on the Computerization of the Operations of Entities Performing Public Tasks<sup>46</sup>. For example, such a form is provided for in the awarding of the power of attorney, serving of papers and documents in the proceedings, submitting applications, requests and other writings by the parties to the proceedings, reviewing the case files, preparing notes, copies or excerpts from them, issuing of decisions, certificates etc. It is also worth mentioning that the use of modern technologies in obtaining and sharing information is provided for by a number of regulations of the substantive administrative law, such as for example, the Act of 24 September 2010 on population records<sup>47</sup>, or the Act of 3 October 2008 on Providing Information on the Environment and Environmental Protection, Public Participation in Environmental Protection and Environmental Impact Assessments<sup>48</sup>. The latter regulation envisages, among others, the provision of information on the environment and environmental protection through tele-information systems, in particular with the use of electronic databases<sup>49</sup>.

### **The pros and cons of computerization of the forms of civic participation**

As has already been mentioned several times in this paper, the formation and development of IT and telecommunications technologies had and still has a significant impact on social changes. Their use undoubtedly allows for an easier and faster flow of information and knowledge, which in fact constitutes the foundation of the development of the information society. Moreover, the use of the above mentioned technologies creates the possibility of the emergence of a new concept on the position of the individual in the society and the State and on the method of participation of individuals

<sup>42</sup> Regulation of the Minister of Internal Affairs and Administration of 18 January 2007 on the Public Information Bulletin (Journal of Laws No 10, item 68).

<sup>43</sup> Regulation of the Council of Ministers of 12 April 2012 on the National Interoperability Framework, minimum requirements for public registers and information-sharing in electronic formats and minimum requirements for IT systems (Journal of Laws of 2014, item 361).

<sup>44</sup> Journal of Laws of 2012, item 526.

<sup>45</sup> The Act of 14 June 1960 - Code of Administrative Procedure (i.e. Journal of Laws of 2013, item 267).

<sup>46</sup> I.e. Journal of Laws of 2013, item 235, as amended.

<sup>47</sup> Journal of Laws of 2010, No. 217, item 1427, as amended. This act provides for the use of IT solutions among others in the performance of the registration obligation by the citizens or in the provision of information from the population register.

<sup>48</sup> I.e. Journal of Laws of 2013, item 1235, as amended.

<sup>49</sup> Article 24 section 1 of the Act on Providing Information on the Environment and Environmental Protection, Public Participation in Environmental Protection and Environmental Impact Assessments.

and communities formed by them in dealing with public affairs. The popularization of modern technologies in various aspects of the lives of individuals and communities leads to the emergence of demands as well as plans on using IT and telecommunications solutions also in democratic processes, with a particular emphasis on the forms of civic participation. It could be assumed that since these technologies have proven useful in such spheres of life of the individual as for example, education (so-called e-learning), access to culture, the expression of one's views or works, then they may as well find their application in the implementation of the individual's right to participate in public life and to deal with public matters. According to the views represented in the literature, "what seemed like a fantasy only a few years ago is today becoming a reality. The development of technology has and will continue to have huge significance for the functioning of the state and its relations with the citizens, as entirely new mechanisms are emerging, both in terms of dissemination of information as well as consultations and even co-deciding (electronic referendums)"<sup>50</sup>.

The most commonly listed advantages of these technologies include:

1) the widening of the access to information about public affairs and the increase in the transparency of government actions;

2) the economic aspect, characterized by low cost of implementation of these technologies and their use<sup>51</sup>;

3) the increase in the pace of democratic processes, ranging from co-deciding, through consultations and ending with obtaining information;

4) the increase in interactivity between the participants of democratic processes - in the sense of acceleration and facilitation of the processes of communication and interaction between their participants;

5) the ongoing provision of up to date information and knowledge about public affairs;

6) the increase of interest in participation in the democratic processes and the forms of civic participation used in their framework, especially among young people<sup>52</sup>,

7) ensuring the conditions for participation in public affairs to those persons, who due to obstacles such as disability, illness, old age, residing away from the seat of the relevant polling station, could not previously participate in these forms of democracy, etc.

Of course, this is not a closed list of the positive aspects of the use of modern technologies in civic participation. I believe that for each of the previously described forms of social and civic engagement in public affairs, we could also point out other advantages, closely associated with the given form.

In order to present a complete picture of the problem, attention should also be paid to the drawbacks and limitations associated with the use of information technology in the democratic processes. In literature on the subject, attention is usually paid to the barriers in the access to the appropriate information technology which result from differences in the quality of access, the lack of widespread skills of using modern technologies among the members of the community, from the high cost of implementation of the technologies (especially if the implementation process is not carried out in stages, but is immediately introduced in whole), from the unreliability of the solutions of modern technologies<sup>53</sup>, etc.<sup>54</sup>. In response to the arguments of the supporters of the application of modern technologies, claiming that they allow for increasing the level of participation, the opponents assume that the occurrence of such a phenomenon cannot be taken for granted. This depends to a large extent on the conditions of each country and the attitude presented by the members of the given community. In fact, in the experiments involving the use of these technologies in participatory processes we can find cases where their introduction increased the participation of citizens in these processes by several times,<sup>55</sup> as well as cases in which there was indeed an increase in the involvement of

<sup>50</sup> D. Długosz, J. J. Wygnański, Obywatele współdecydują. Przewodnik..., p. 46,

<sup>51</sup> Ibidem, p. 46.

<sup>52</sup> See on this topic also: E. Benedyk, Niezapowiedziane rewolucje, „Polityka. Niezbędnik Inteligenta” (supplement), 2004, no. 27; M. Marczevska-Rytko, Demokracja bezpośrednia w teorii i praktyce politycznej, Lublin 2001.

<sup>53</sup> See on the topic of the dangers associated with electronic voting: A. Kukwa, E-wybory? Bezpieczeństwo głosów w wyborach elektronicznych wciąż zawodne, <http://www.spidersweb.pl/2012/11/e-wybory-bezpieczenstwo-glosow-wyborach-elektronicznych-wciaz-zawodne.html> (accessed on: 26.10.2014).

<sup>54</sup> D. Długosz, J. J. Wygnański, Obywatele współdecydują. Przewodnik..., p. 46.

<sup>55</sup> For example, the use of the Internet in the Democratic Party's primary elections in Arizona resulted in citizen participation six times larger than in the case of using traditional methods. (R. Lawson Mack, The Digital Divide: Standing at the Intersection of Race and Technology, Durham 2001, p. 143, as cited in: P. Maj, Reprezentacja, partycypacja i transparentność systemu – zmiany w rozum-

citizens in public affairs, but these changes occurred in small increments, and in such a situation a single-digit or even double-digit percentage increase in the involvement in elections, referendums or other forms of participation is difficult to unambiguously assign the use of modern technologies<sup>56</sup>. According to L. Kolarska-Bobińska, “there is no evidence that voting on the Internet will mobilize a lot of people. It may however halt the downward trend. (...) over time the group of people who use online voting will grow. Especially if it’s much talked about it”<sup>57</sup>.

The biggest number of downsides of using IT technologies is perceived in relation to these forms of participation, the essence of which consists in deciding or co-deciding about public affairs, e.g. during elections or referendums. Attention is drawn to such negative aspects as:

- 1) threat to voting secrecy;
- 2) reduction of transparency of the voting process (lack of possibility of tracking the process of voting, counting votes, etc.);
- 3) the risk of technical interference during the voting, which could hinder not only the course, but also affect the outcome of the voting;
- 4) difficulties in identifying voters;
- 5) high costs of implementation of the technological solutions;
- 6) the threat of “selling votes”, etc.

These types of fears are far less common with other forms of participation, which are characterized by a lower degree of public involvement. As has been previously described, the application of IT solutions in broadly understood public consultations is increasingly common. In fact, in the field of obtaining public information we can even observe a trend in which sharing information via the Internet is treated as one of the basic forms of implementation of the right of access to information.

### Summary

Taking the considerations presented in this paper into account, we should once more emphasize the growing importance of the use of modern technologies in democratic processes. However, due to the risks presented in this paper, the implementation of these technologies should be carried out with caution. Therefore, the view according to which the decision on the use of IT solutions, especially in voting during elections or referendums, should be preceded by a series of preparatory activities in the framework of so-called pilot programmes deserves support.<sup>58</sup> The benefits of these technologies are without a doubt very important, but we should also never forget about their accompanying negative aspects, the threats to the proper use of the individual forms of civic participation, and even to the interests of the state.

When deciding on the use of such technologies, we should also take how the individual forms of participation implemented in the “traditional” way are perceived into account. Some scientists accuse contemporary public administration, as well as the citizens of not only weak and infrequent use of the forms of participation, but also of limiting themselves to using primarily conventional methods for their implementation<sup>59</sup>. I believe that the use of conventional methods in order to ensure the participation of citizens in the implementation of public tasks should still be regarded as important and valuable to the citizens themselves, to the authorities or to the democratic processes. For some of the participants of the public life, the conventional methods of implementing the forms of civic participation may be “perceived as a kind of ceremony” and the use of IT solutions which eliminates this feature, as a certain kind of trivialization and lowering of the rank of civic participation<sup>60</sup>.

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ieniu zasad demokracji w kontekście funkcjonowania sieci globalnej, *Annales Universitatis Mariae Curie – Skłodowska, Lublin – Polonia*, vol. XVI, 1, 2009, p. 167.

<sup>56</sup> Such conclusions may be drawn from the example of Estonia - a pioneer in the application of information technologies in participatory processes. During the local elections in Tallinn in 2005, 1.84% of voters chose this form of voting. In the parliamentary elections in 2007 - 5.5% of the electorate voted electronically, in the elections to the European Parliament in 2007 - 14.7% of the votes were cast on the Internet, and in the parliamentary elections in 2011 - 24.3% of voters used the Internet. See on this topic: Czy e-głosowanie pomoże zwiększyć wyborczą frekwencję? <http://www.europarl.europa.eu/news/pl/news-room/content/20110321STO15986/html/Czy-e-g%C5%82osowanie-pomo%C5%BCe-zwi%C4%99kszy%C4%87-wyborcz%C4%85-frekwencj%C4%99> (accessed on: 27.10.2014).

<sup>57</sup> Debate of „Gazeta Wyborcza” on the topic: E – głosowanie? Wybory przez Internet w Polsce [E-voting? Elections over the Internet in Poland], [http://wyborcza.pl/dziennikarze/1,96017,5365681,E\\_glosowanie\\_\\_Wybory\\_przez\\_internet\\_w\\_Polsce\\_.html](http://wyborcza.pl/dziennikarze/1,96017,5365681,E_glosowanie__Wybory_przez_internet_w_Polsce_.html) (accessed on: 27.10.2014).

<sup>58</sup> Ibid.,

<sup>59</sup> See: A. Olech, P. Sobiesiak – Peneszeko, *Partycypacja publiczna w Polsce. Diagnoza...*

<sup>60</sup> M. Sztelmach, *Wybory przez Internet...*

According to the report of the Central Statistical Office entitled „Społeczeństwo informacyjne w Polsce w 2014 r.” (Information Society in Poland in 2014),<sup>61</sup> the process of computerization of the Polish society is characterized by dynamic development and a growing demand for an increasingly better quality of ICT products and services. However, many households still do not have computers or other devices based on information technology (approx. 30% depending on the region of Poland) and many of them do not have access to the Internet (from approx. 22% to 37% depending on the region), which results, among others, from the lack of need to use the Internet (59.1%), the lack of skills (44.8%), excessive costs of equipment (28.7%) or excessive costs of access (22.4%). Other provided reasons include: reluctance towards the Internet, having access to the Internet in another location, disability, privacy or security considerations, lack of technical possibility of using and connecting to the Internet.

The considerations presented above lead to the conclusion that information technologies cannot replace traditional methods of civic participation and if this were to happen, then such a process should be spread out over time. That is why the current forms of participation using modern technological solutions should be considered as another, extremely useful, but as of yet, only supplementary method, facilitating and complementing participation in the traditional form.

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<sup>61</sup> <http://stat.gov.pl/obszary-tematyczne/nauka-i-technika-spoleczenstwo-informacyjne/spoleczenstwo-informacyjne/spoleczenstwo-informacyjne-w-polsce-w-2014-r-,2,4.html> (accessed on: 27.10.2014).