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COMPLEX INFORMATION MANAGEMENT IN THE CONTEXT OF PUBLIC TRUST

1. Complex information management – key elements and determinants

In today's world, information is one of the most important values of public and economic life and is treated as a resource, likewise capital and natural resources. In the age of information society and knowledge-based economy, it has become a product which is considered as a special intangible good equal to tangible goods or even more valuable.

Information resource management as one of the functions of modern economic organisations is a necessity and an answer to a challenge brought by the information society. A condition for market presence and development of each economic organisation is the desired shaping of determined information resources considered in the categories of strategic resources.

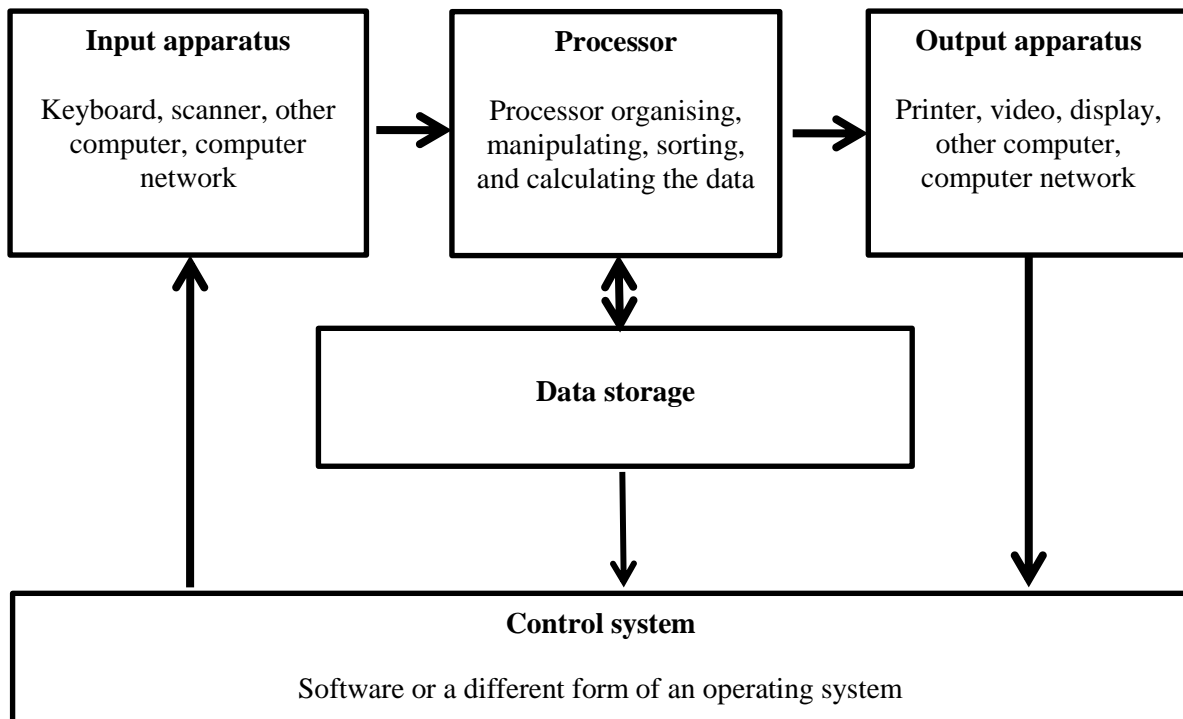
The term information resource should be understood as an item, information and human resources. *Item resources* consist of computer equipment along with any device allowing to implement and remove information, data carriers, and telecommunication tools. *Information resources* is to be taken as information processed in an organisation's information systems or in the environment, which is important for operating a business, and operating and system software. *Human resources* are the collection of knowledge, skills, as well as experience of users and administrators of information management systems.

1.1. Item resources and their determinants

The base shaping the *item resources* is the technical infrastructure which includes information technique and information systems. Information technique can be divided in two categories: manual and computer. Each information technique consists of five basic parts (this also concerns information systems defined by the technique). An input apparatus is an apparatus used to implement data and information into the system. First, data "entering" the system goes to the processor, which is a part of the system able to organise and sort data, or perform calculations or other conversions used. What is more, the majority of systems have one or more devices to store data; these are places in which data can be stored for later use. At the moment of data being converted into useful information, it is sent outside of the system with the help of output devices. The whole information technique system is controlled by a control system in the form of proper software.

Figure no. 1.

Construction elements of a computer information system (as the basis of the item resource)



Source: [Griffin 2004, p.728]

Economic criteria of item resource assessment concern software quality and functionality, flexibility, speed and costs of its development and modifications done by both the users and external suppliers.

1.2. Information resources and their determinants

Information is the basis of **information resources**. Information belongs to a category of terms which are difficult to define. In the common language information is an equivalent to a message or a hint, i.e. any content with a meaning. It is also the process of informing or communicating about something. The common, intuitive understanding of information related to everyday events does not raise any difficulties in using or understanding it and it appears to be obvious. However, terms used in scientific contemplations require clarification. In case of information, plurality of interpretations depends on the knowledge domain or even the scientific discipline. In technical science the term is understood as a signal or an impulse, data or a form of energy. In psychology it can be a stimulus, reduction of uncertainty, knowledge growth or content of a thought. [Ratajewski 1992, p. 10-11] In cybernetics, information is equated with a message about an item or a phenomenon, influencing the reduction of given uncertainty of a state, transferred from the sender to the recipient using a proper carrier and

language – a code which makes it clear for the recipient. The content of a message is a description, an order, an injunction, a ban or a piece of advice. [Dembowska 1979, p. 53] In information theory or in knowledge management, in order to organise the meanings of terms related with the term “information” a model of cognitive terms hierarchy is used, the so-called knowledge pyramid, or the DIKW (*Data Information Knowledge Wisdom*) pyramid. [Swoboda 2016, p. 239] The model facilitates defining of often interchangeably used terms: data, information, knowledge. Data represents facts and can take the following forms: signs, speech, graphs, or signals. In computer-assisted management systems, data is coded with the use of appropriate symbols. On its own it has no meaning or purpose but the selection of appropriate symbols may impose or suggest a determined interpretation. Information is data included in a message, which is interpreted by the recipient, has a meaning, and expands the recipient’s consciousness with a new element. Knowledge comes from information which is important for the recipient and was verified in practice. Verification consists in determining whether judgements and conclusions created in the process of interpretation are in line with reality. [Swoboda 2016, p. 240]

Dariusz Dziuba defines information as “a factor which expands our knowledge on the reality that surrounds us. Information, contrary to data, is sensitive to the context in which it was used”. [Dziuba 1998, p. 24] The context is a determinant of information value in use, which as a quality feature is defined for it contrary to data collection and storage costs. Information can be analysed in four aspects:

1. Item aspect – concerns content and is inextricably connected with the other aspects;
2. Auto presentation aspect – each piece of information, aside from content, has the sender’s presentation and explains the perception of the item aspect;
3. Relation aspect – information is a reference to the contact made between the sender and the recipient; for the shape of the relation, regardless of the content of information, the mutual attitude of the sender and the recipient is of importance;
4. Call aspect – each communication has its goal, influences the recipient, has an element of persuasion. [Pańkowska 2001, p. 14]

Other factors determining the communication efficiency include: perception, motivation level, behaviour shaping motives, subject’s personality, intellectual development, acquired knowledge and experience, values, opinions, attitudes, and beliefs. [Gros 1998, p. 46]

The value of information comes from the benefits it gives to the user. The more pleasing are the consequences of a decision taken on the basis of information, the more valuable it is. Properties defining the quality of information (treated as a quality meter) are:

1. Relevance – information needed in a given situation is received (relevance eliminates the excess of information);
2. Completeness – any information appropriate for a given situation is received (completeness eliminates deficiency of information);
3. Validity – any necessary information is received on time (validity eliminates a situation in which we receive the information too late or too early);
4. Shortness, succinctness – any necessary information is received in a clear and immediately usable form;
5. Usefulness – information received is necessary and useful in the decision-making process. [Pańkowska 2001, p. 15]

In addition, attributes determining the quality level of information – in the context of a modern, globalised world – include:

1. Safety – this attribute concerns protecting information against unauthorised access and natural danger (destruction). Information which is not properly secured is untrustworthy;
2. Reliability – this attribute can be considered in two points of view:
 - a. As a derivative attribute in the view of values mentioned earlier. In such case, reliability will be considered as an effect of information quality rather than an attribute deciding about its quality;
 - b. In the context of origin – source, information senders. A reliable sender (a reliable source) is a person (institution) which has appropriate qualifications and competences, and is trustworthy. [Swoboda 2016, p. 245-246].

Economic sciences implemented the term of economic information, which in reference to the cybernetic definition of information is defined as content contained in a message about a given subject's property state and about all phenomena which influence the changes of this state, transferred by the sender to the recipient in a determined form, and using any language or code. [Messner, Buchta 1978, p. 76] In this context, information, which is the subject of a market transaction, becomes a product. Information as a product occurs in the form of information products or information services. Information understood in such a way has a visible specificity which makes it stand out from other products and services:

1. The subject of transfer of property or rights to use is a material carrier with which the information is connected;
2. There is a technical difficulty securing the right to property or use;
3. A market transaction (buy-sale) of information takes place in conditions of complete information asymmetry of subjects implementing this transaction;
4. The buyer of information has no possibility to assess its quality or the possibility is marginal. The only warranty of quality of information is the buyer's reliability. [Oleński 1997, p. 32]

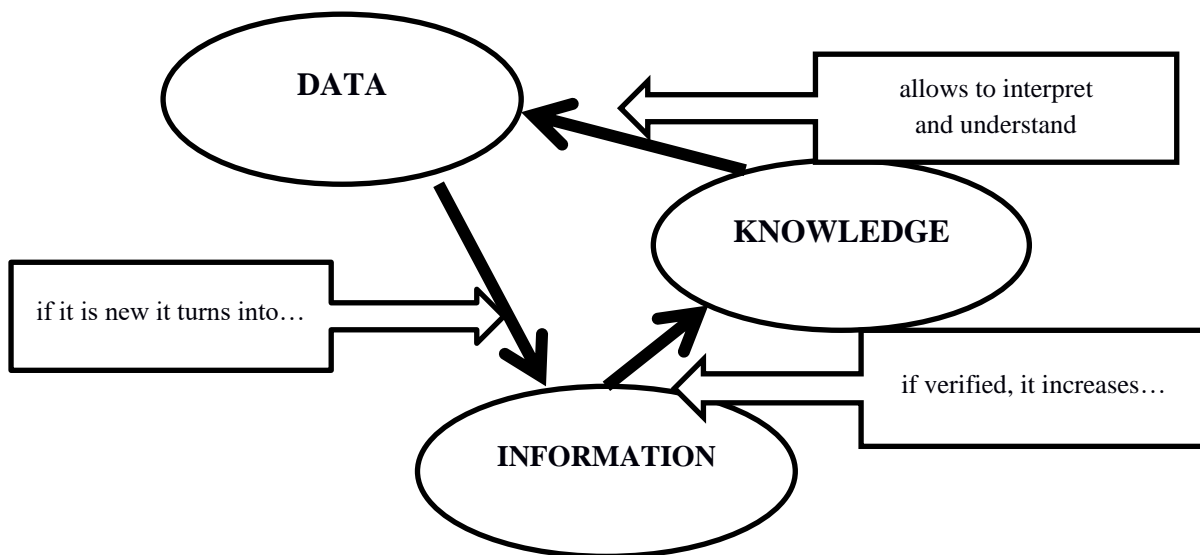
The economic meaning of information is emphasised by its interpretation as:

1. National good that requires upkeep and security, e.g. as an archival resource (Regulation of 14th July 1983 on National Archive Resource and Archives; Journal of Laws No. 38, item 173);
2. Common good, publicly available, regulations on library and information operation are based on this concept (Regulation of 27th June 1997 on Libraries; Journal of Laws No. 85, item 539);
3. Good of public law subjects of specific – often strategic – importance, protected against being revealed to unauthorised people (Regulation of 14th December 1982 on Protection of Official and Service Secrecy; Journal of Laws No. 40, item 271);
4. Manifestation (carrier) of values comprising personal goods (regulations on Personal Data Protection [Journal of Laws No. 133, item 883] and Regulation of 29th November 1990 on Social Security [Journal of Laws of 1993 No. 13, item 60]);
5. Factor determining the creation of programmes and action plans, as well as undertaking solutions (supplying planning and decision making processes with information); information is treated in such way mostly in administrative law, e.g. regulations on regional planning (Regulation of 7th July 1994 on Regional Planning, Journal of Laws No. 89, item 45 as amended);
6. Property good, information is a product or an intangible element of a company's value (intangible factor of commercial operation);
7. Copyright also refers to the information ownership concept (Regulation of 4th February 1994 on Copyrights and Related Rights, Journal of Laws No. 24, item 83). [Pańkowska 2001, p. 18-19]

Information management is set on undertakings or processes and focuses on the use, quality, and integrity of information. Information is treated as a strategic resource and

information management creates an integrated whole. The goal of information management is to ensure the functionality of information in any moment and on every level of competitiveness by finding and eliminating a gap which is caused by being unable to adapt this system to current and future organisational goals and environmental requirements.

Figure no. 2 *System of dependencies in the Data – Information – Knowledge sequence*



Source: [Swoboda 2016, p. 241]

1.3. Human resources and their determinants

Majority of experts agree that the market is not “run” by information itself but by information and the knowledge of how to use it. With information, especially one treated as a resource, are linked many competitive requirements which the subject must fulfil to use it. Competences are connected with the access to information (or data only), its selection, analysis, and use. A statement that in order to effectively use information you require skills allowing to search for it, collect it, process and assess its value, has become a truism. Therefore, *human resources* are a key element of computer resource. As Peter Drucker [Drucker 2009] noticed, the group of intellectual workers has become a group which acquired a dominant position at the end of the 20th century. The definition of knowledge-based economy followed this phenomenon. Currently, the main factor causing the increase of competitiveness is the ability of a given person, company, industry, or country to acquire and distribute knowledge, share it and use it. The effective flow of knowledge leads to the production of highest quality products and services by using possibly the best practices in the whole organisation. In addition, it facilitates the ability to make innovations and quick

changes. The basic task of knowledge management is to effectively exert pressure and use knowledge resources to achieve a competitive advantage. The knowledge-based economy and the use of an approach defined as knowledge management lead to the creation of the following tendencies in business communication:

1. Managers are currently responsible for knowledge being as most productive as it is possible, not the production process itself;
2. Informal groups, called “communities of practitioners”, are slowly being appreciated by companies for their possession of informal knowledge;
3. Employees have become more and more involved in company management processes;
4. Acquisition of knowledge throughout a whole life is a key factor in keeping up with changes;
5. The knowledge of facts is not as important as the knowledge of people and social processes any more;
6. Information and communication technologies are an important facilitation in knowledge creation and sharing. [Bell De Tienne 2009, p. 15-16]

Besides the tendencies shown above occurring in the range of business communication, it is worth noting the additional factors which exert influence on electronic communication in the nearest future in an important way. These changes will remain in strict relation with the increasing use of technology in communication processes.

1. Interactivity – a visible increase in two-way communication acts resulting from a simplified message-sending and opinion-expressing formula;
2. Mobility – increase in the use of apparatus allowing “remote communication”;
3. Conversion of various types of signals – ability to quickly transform information: conversion of visual, audial, and touch signals into signals of other types and formats;
4. Connection ability – high level of compatibility of apparatus allowing to use standardised information transfer protocols;
5. Ubiquity – increase in the number of people having access to electronic communication media regardless of their social and economic status;
6. Globalisation – commonness of information and knowledge leading to fading of cultural borders. [Bell De Tienne 2009, p. 22-23]

The tendencies above generate the necessity of implementing complex information management, connecting item, information, and human resources in a synergistic manner. The

complex information management requires co-operation of information analysis practitioners in the analytic teams which will result in the acquisition of the synergy effect, increasing the positive balance of information processes in the global system. Actions generating a positive value of information process include:

1. Merging the information from multiple sources, confirmed in the verification process by analysts from various institutions, ensuring objectivity of assessment;
2. Information analysis for goals implemented by various organisations and institutions, which ensures an interdisciplinary approach including the maximal use of information and its analysis in every possible view;
3. Use of many various analytical methodologies in the analytic process, allowing to draw out all logically possible conclusions from the available information resource. [Liedel, Piasecka 2012, p. 12-13]

During the actions undertaken by analytic teams, it is necessary to maintain common standards in at least few important dimensions: competences of the participating analysts, report formats of new and acquired information, and standards of analytic products.

In practice, it is possible to highlight at least three types of analytic teams the operation of which may result in significant benefits from the point of view of an institution basing its actions on the operational, tactical, and strategic levels on effective analytic mechanisms:

1. Traditional analytic team,
2. Special analytic team,
3. Team using high-end information technology. [Liedel, Piasecka 2012, p. 16-20]

Traditional analytic team executes a specific task. The team's manager may be appointed by the employer or selected by team members. All members are responsible for quality of the analytic product. In such a wide group team members can work on the contents of the whole analytic report but it is also possible to use a solution that is based on entrusting some "sections of responsibility", which are later combined into the final whole, to smaller groups. The project of the report is subject to agreements and is commented by employers. Following a specific procedure that usually includes information safety issues and confidentiality of content of the report, the project can also be consulted with the "external environment".

Special analytic team is usually appointed in a situation when it is necessary to provide analytic support in real time for a strategic employer who is operating in a critical situation and under the pressure of time. Due to difficult psychological conditions, the team

must maintain relatively close relations based on trust and an exceptionally strong analytic leadership.

Co-operation of the analytic team in terms of support provided by information applications is one of the most recognised methods of information acquisition. The method of operation of teams through the structure of Internet applications requires fulfilment of a few important requirements, including a strong analytic leader, careful creation of structures of work of the team, and quality control of analytic products. Usually, this type of teams co-operate in the conditions of geographical spread, which requires implementation of the following boundary requirements:

1. Mutual knowledge and trust of analysts;
2. Feeling of personal need to commit to the team's actions to carry out entrusted tasks,
3. Feeling of mutual benefit coming from mutual work,
4. Ease of remote connection with other team members on demand and a possibility to include new members,
5. Feeling of benefit from co-operation in terms of such a structure (e.g. time saving, use of knowledge and experience of other analysts, possibility to influence specific contributions to the team's work),
6. Sharing a mutual image of a problem and understanding it along with having a list of common terms and definitions. [Liedel, Piasecka 2012, p.19]

What is also worth considering is the fact that the usefulness of "networked" analytic teams concerns, among other things, their use at various stages of the analytic process to verify specific stages and achievements of which the final analytic product is composed.

Complex information management (infobrokering) was appreciated and, in recent years, institutionalised as one of the key processes regulating the mechanisms of the modern world.

2. Infobrokering as an element of the information services sector

2.1. Institutionalisation of information brokering

Infobrokering, in general and in a simplified meaning, is a professional and commercial brokering (mediation) in the world of information. Thus, an infobroker is a subject working on request which searches, assesses, elaborates, processes, and distributes information for money. During execution of work, a person holding the position of an infobroker bases, above all, on public document sources, both of free and restricted access.

This person (or organisation) mediates (that is why there is the term “broker” in the definition) – between the existing information source (that is why the term “info” is added to the definition) and the customer.

Figure no. 3 *Key elements of infobrokering*



Source: [own elaboration on the basis of Cisek, Januszko-Szakiel 2016, p. 13-29]

The economic phenomenon in the form of paid information searching and distributing is defined as the world’s third oldest job. [Fiałkowski 2006, p. 32] However, it is assumed that the first professional information brokers appeared in the United States of America in the 1960’s. It was a moment when the knowledge-based economy, in which information was a valuable product, became more and more important. In 1987, the first American organisation bringing together “commercial” information professionals was founded on Marilyn M. Levine’s initiative. The Association of Independent Information Professionals (AIIP) is currently the most recognised organisation bringing together several hundred infobrokers worldwide. The Association’s activity is focused around the following areas:

1. Distribution of knowledge on the subject of work of information professionals;
2. Promoting and maintaining high professional and ethical standards of AIIP members;
3. Inviting information professionals to unite and discuss common problems;
4. Promoting mutual information exchange between information brokers;
5. Promoting information exchange between infobrokers and organisations;
6. Informing the public opinion about the profession of an information professional and the range of provided services [Białos, Cisek, Januszko-Szakiel 2016, p. 17].

In Poland, the profession of an information broker was written down in the official Polish *Classification of Occupations and Specialisations* under number „262204 Information broker (researcher)” in section „2622 Librarians and information management specialists” on the basis of Social Policy and Decree of the Minister of Labour in 2010. [Social Policy and Decree of the Minister of Labour] In 2013, on the request of the Ministry of Social Policy

and Labour, the *National job competences standard for Information Broker (researcher)* was elaborated. This documents aims to facilitate the communication between participants of the labour market, and to focus their attention on new possibilities for both employers and people looking for work. [Ministry of Social Policy and Labour 2013]

2.2. A classic information broker and a system broker in the context of status and competences

Development of computer technologies implemented on a large scale in all domains of social and economic life initiated the process of demand for new competences:

1. Computer – related to service of technical apparatus and software installed on it;
2. Information – related to “information service”.

Contents related to computer competences were written down in the standard of competences of the profession of information broker. The expected skills of an information broker can be ordered in the following way:

1. Business competences – in the range of professional pragmatics – conducting operational activities;
2. Information competences of a broker:
 - a. Knows information resources, not only electronic,
 - b. Can identify real information needs of customers,
 - c. Can elaborate and use appropriate search strategy,
 - d. Can correctly select, choose, and assess information sources,
 - e. Can appropriately elaborate, process, present, and distribute information.
3. Communication competences – interpersonal communication with customers, marketing and PR;
4. Educational competences – leading courses, trainings, giving advices;
5. Technical competences – knowledge of information technology. [Białos, Cisek, Januszko-Szakiel 2016, p. 23]

Not only skills and knowledge on acquisition and processing of information, knowledge of information sources, and proficiency in using search techniques and tools decide about success in the profession of infobroker. Available technical solutions are important as well.

It is worth noting that tasks of a clearly infobrokering character often appear in the practice of modern organisations. These are information undertakings performed both occasionally and regularly on a large scale, but treated as partial, dependent activities without

an infobroker's identification and without professionally important competences assigned to them. Such way of performing activities is defined as system infobrokering, which means that an information broker operates in a defined system.

Table no. 1 *Comparison: classic infobroker and system infobroker – selection of features*

Domain	Classic infobroker	System infobroker
Profession status	<ul style="list-style-type: none"> • Realistic operational profession 	<ul style="list-style-type: none"> • Realistically operating tasks related to appearing problems executed on a large scale and concurrently by many employees on various working places and at different times • Competences from the range of information process technology are reduced to management competences (knowledge management) • Competences from the range of computer process technology are reduced to IT
Level of presence on the labour market	<ul style="list-style-type: none"> • New profession – information broker – of a spectacular character 	<ul style="list-style-type: none"> • Interdisciplinary tasks executed on a large scale – without identification of their differences
Specialisation	<ul style="list-style-type: none"> • Information process technology 	<ul style="list-style-type: none"> • Information process technology • Higher-level management competences allowing to perform non-routine tasks based on practical use of significant knowledge resources • Communication and cognitive skills based on self-reliance of thinking and problem associativeness
Role in organisation	<ul style="list-style-type: none"> • The role of a mediator between information and users 	<ul style="list-style-type: none"> • The role of an organiser of information processes focused on creation of knowledge resources adequate to the organisation's needs
Priorities in the knowledge area	<ul style="list-style-type: none"> • Relevant to task • Adequate to recognisable information needs of employer 	<ul style="list-style-type: none"> • Relevant to the organisation's problems • Products pertinent to the organisation's position

		needs
Form of employment	<ul style="list-style-type: none"> • Economic independence • Employment in an infobrokering company 	<ul style="list-style-type: none"> • Organisation's employee • Project team's member
Final product	<ul style="list-style-type: none"> • Response to task in a form adapted to the customer's recognisable needs 	<ul style="list-style-type: none"> • Response to identified information needs of currently solved problems • Response to identified information needs caused by routine tasks of specific working positions • Trees of problems • Trees of knowledge – report on the state of knowledge in the problem domain • Trees of values • Trees of decision-making arguments
Recognition of organisation	<ul style="list-style-type: none"> • Analysis of information needs of a specific recipient of a task 	<ul style="list-style-type: none"> • Analysis of information needs coming from the organisation or project team's specifics • Analysis of cultural and mental conditions of the environment of infobroker products
Priorities	<ul style="list-style-type: none"> • Interdisciplinarity • Workshop reliability • Individual work 	<ul style="list-style-type: none"> • Infobroker culture of the working environment • Interdisciplinarity • Workshop reliability • Holistic approach to problems • Teamwork

Source: [Wojewódzki 2016, p. 158-159]

A classic information broker is a specific profession, elite and real. On the other hand, a system broker executes tasks from the area of information technology processes, decision-making methodology, mind-set parameterisation, value prioritisation, etc. However, these activities are not associated with the block of modules of one profession.

It is certain that the infobroker's competences will change in the range of their necessity. From the point of view of institution's goals and activity strategies, competences covered by infobrokering are currently a tool kit of modern organisation's professional working competences. They are not called this way but they operate in the specific task's formula. Separation of the information broker as an independent profession created the possibility of founding and organising outsourcing companies that provide infobrokering

services. This situation leads to including infobrokering, as a permanent element, in the social and economic system shaping the social reality.

3. Infobrokering and public trust

3.1. Public trust

In current times, we can observe constantly increasing interest in the “trust” phenomenon. The reasons can be searched in some unique features characterising modern societies:

1. The world we are living in is becoming more and more dependent on targeted actions of people who actively choose orientation set towards the future and recognise their subjectivity.
 2. Specific elements of the modern world have become significantly interdependent. Differentiation and specialisation of roles, functions, professions, interests, lifestyles, and likings occur within each community, which causes the necessity of co-operation both international and within specific societies;
 3. The public life has more new risks and dangers to which we have contributed;
 4. The reality surrounding us offers people a constantly growing set of different possibilities with numerous potential choices;
 5. The complexity of institutional, organisational, and technical systems and the more and more globalised range of their operation make modern world’s regions unclear to its participants;
 6. The anonymity of people whose actions on which our existence and prosperity is dependent is increasing;
 7. The world we live in is filled by more and more people we do not know.
- [Sztompka 2007, p. 45-49]

It should be remembered that trust is not a new term; the idea of trust was already discussed in ancient times, and accompanied traditional societies. However, nowadays it gains importance with the development of modern social forms and becomes an element necessary in the current stage of modernity.

The definition of trust can be treated as an indissociable whole, defining it as “socially acquired and confirmed expectations that people harbour to each other, institutions and organisations they live in, and to moral rules of social life which define their basic rules of life” [Frykowski 2005, p. 14] or as “correct predictions of other people’s actions which

influence unit's actions in situations when an action must be chosen before it is possible to observe the actions of other people". [Sztompka 2007, p. 7]

Difficulties in the range of studying such a broadly understood phenomenon make the practice of characterising the types of trust (due to an item towards which it is directed) and then forming conclusions on a phenomenon as a whole more widely used.

A broad typology was proposed by Piotr Sztompka who highlighted six basic recipients of trust:

1. Personal trust – directed to specific and known people;
2. Positional trust – directed to specific social roles;
3. Commercial trust – directed to products and, indirectly, their manufacturers;
4. Technological trust – directed towards technical systems creating the necessary infrastructure of our lives;
5. Institutional trust – referring to the complex organisational beings, committing multiple collectives of anonymous participants;
6. System trust – directed to the whole social system and its participants. [Sztompka 2002, p. 312-313]

Stephen Covey, however highlighted five “waves of trust” covering:

1. Trust in ourselves;
2. Trust in others;
3. Organisational trust;
4. Trust in markets;
5. Public trust. [Hirsch 2010, p. 11-12]

Trust in ourselves is the first step in building confidence. Its indispensable element is credibility which allows to be trustworthy to ourselves and others. Lack of trust to ourselves influences our mistrust towards others. Determinants defining trust to ourselves are readiness to trust others conditioned by our culture, origin, and environment in which we grew up and the sum of our competences, character, and specific actions.

Trust in others is the consequence of an action based on openness, respect, clarity, loyalty, and keeping promises.

Organisational trust is characterised, above all, by support. It refers to how leaders build trust in different types of organisations and teams.

Trust in market is mainly based on reputation which influences consumers' behaviour and loyalty.

Public trust is creation of values for others and society.

As units we always have influence on the first two waves of trust; however, influence on the remaining three waves depends to a large extent on the occupied social position.

Every human action is directed towards the future and, at the same time, it is shaped by past experiences. Additionally, people live and operate in a world created mostly by other people and their actions. This means that we cannot predict what decisions and actions other people will take. Therefore, a risk that people surrounding us will take actions harmful to us appears. In this point of view, trust and mistrust are treated as ways to cope with uncertain past by forming positive and negative predictions and acting or ceasing actions accordingly.

3.2. Information broker as a socially responsible profession

Due to the constantly expanding base of commonly available and different information, a necessity for selecting and structuring them in order to generate useful information (including the interdisciplinary field) arises. The role of mediators between those different information worlds is fulfilled by information brokers. Brokers' actions not only provide knowledge but also "translate" it in the languages of three different worlds – science, politics, and social interests. This clearly points to the interactive character of a broker who connects stakeholders and draws the range of possible solution options, showing alternatives and possible compromises. In the opinion of Steve Cooper, different profiles (roles) of information broker's actions are clearly connected with the fields of practical actions:

1. In business, a broker is a dealer, a mediator who buys and sales,
2. In politics, a broker is a diplomat, a mediator, a negotiator,
3. In information technology, a broker is someone who can acquire information and has access to sources,
4. In education, a broker is a facilitator who connects people, organisations, and resources and creates conditions for development or giving new values and means to things that already exist,
5. In the field of healthcare, a broker is a translator, a mentor, an experienced and active practitioner who wakes the consciousness among co-workers, transfers the newest practices from the world of laboratories and science periodicals into the world of healthcare. [Haber, Olejniczak 2014, p. 65]

The multitude of roles carried out by infobrokers and their relations to the social and economic system created a necessity to elaborate ethical rules for the conducted operational activity, the goal of which is to maintain the status of the profession on a high level of social trust. Currently, on the infobrokering market there are three Ethical Codes in force prepared

by the Association for Information Science and Technology, Association of Independent Information Professionals, and Strategic and Competitive Intelligence Professionals. The structure of records in the Codes mentioned above divides the rules in force according to the subjects to which the information professionals are obliged, i.e. customers, employers, associations, and information resources as well. Although the groups in which the Codes divide infobroker's obligations do not overlap completely, in all of them we can find records on:

1. Opposing any form of censorship and caring about the truth of provided information,
2. Irrespectively following the rules of freedom in information access, treating customers and employers, and the duty of respecting their rights (e.g. right to confidentiality, right to protect personal data),
3. Following the rights of intellectual property and copyrights,
4. Following the rules of accepted Ethical Code by employees of a company or a unit run by an infobroker, and reacting to violations of these rules,
5. Sharing the consciousness about the importance of knowledge and information and appreciating the free access to it in society. [Pengal-Irlik 2016, p. 43]

In all the Codes, the obligation of caring about the credibility of provided information and the profession's good name is stressed above all. In addition, the Codes note that the local and international law, within which an information broker provides its service, may differ. In such case, records in the Codes advice to abandon commissions violating the law, and in a situation of a conflict of interests, an infobroker is obliged to inform the parties about the occurring conflict.

An extremely important problem that appears within reflections over the infobrokering's ethics is manipulation of information. First of all, an infobroker is required to have analytic and synthetic skills, not subjective derivative information creation skills. All aware, intended, and planned actions aiming to distort information and influence the customer's decision are manipulations. Information manipulation may consist of distributing false, out-of-date, intentionally selected, and ambiguous information.

Characteristics of sources and their information, as well as an infobroker's knowledge, skills, and competences, determine the quality of information elaborations. Desired (quality) features of an infobroker's messages are supposed to trigger the determined positive result, which is allowing to make a decision and actions that would maximise the benefits caused by the use of content of a message, and to reduce negative results inevitably accompanying the

decision-making processes and the information use practice. The content and form of elaborations should be adequate to the customer's information needs, defined and analysed in the initial stage of an infobrokering service. It should be remembered that redundancy of information should be avoided. Its excess may disrupt the decision-maker's rational analysis of information received. The responsibility and ethics of the profession of infobroker plays an extremely important role in all stages of an infobroker's work, i.e. during acquisition, processing, and preparation of information for the customer.

Conclusion

Modern reality, described by Anthony Giddens [Giddens 2004] as "escaping world", is marked by new types of risks and uncertainty. To maintain social balance, it has become necessary to strengthen public trust. Traditional forms of trust are depleting among sudden changes. Formerly, the foundation of trust was the local community. In the globalized world, trust means a belief in "abstract systems". Operating in the information age requires gaining the social reflection ability relying on a constant analysis of circumstances that determine our lives. The key "tool" allowing the social reflection is the process of complex information management. One of the ways to understand the complex information management is to understand it in the categories of risk. Many changes caused by the development of information technology puts an individual in front of new forms of risk, significantly different from the ones existing in previous ages. In its old form, risk determined causes and specific results; meanwhile, sources of modern risk forms are hard to be clearly determined and their results remain unknown. Modern forms of risk, as Giddens stresses, differ in quality of risk occurring in the past. "The risk of past" is defined as an external risk (i.e. danger depending on nature, not man). Currently, more and more risks created by man, i.e. resulting from peoples' impact on the natural environment through the acquired knowledge and technology, have become dangers. The key factor shaping modern dangers is also social events generated by actions of units, collectives, organisations, or institutions. People moving in the social space are subjects able to choose various actions, and the decisions made by them are unpredictable. Therefore, a risk exists that actions taken by other will be negative to us. In Sztompka's opinion, the risk grows as potential partners become more numerous, diverse, distant in space, less visible, i.e. when our social environment is expanding, becoming more complicated, less clear, and we control it to a lesser extent. Trust and mistrust, i.e. forming positive and negative predictions resulting in undertaking proper actions or ceasing any

actions, become ways of coping with the uncertain future. Therefore, complex information management becomes a key instrument of shaping the level of public trust.

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Abstract. *In the 20th century, the right to obtain information started to appear in legal regulations worldwide. The 1990's brought development of the right to information in countries of Central and Eastern Europe. In many countries, including Poland, the right to information was written down in the constitution. At the same time, the expanding information resources, mainly from the Internet, make it more and more difficult to search information which would allow to prepare a basis for effective and accurate decisions in a complex way. What is more, development of trade and economic contacts forces constant activity of companies not only in the strictly business field but also in the access to information on competitors, outlets, technological novelties, and new studies. These situations create the necessity of implementing complex information management along with legal and ethical regulations. The transparently shaped structure of complex information management will allow to execute tasks in the atmosphere of a high level of public trust.*

Keywords: *information, information technology, infobrokering, complex information management, public trust, risk management*