

8. Safety of e-commerce – How to fight corruption effectively

8.1. Trade, its beginnings, development and characteristics

Trade is one of the oldest professions in the world. This branch of economy has been developing for a thousand years, almost since the beginning of mankind, along with the development of the oldest civilizations. The people of ancient Egypt and Mesopotamia sold goods in remote places and transported them using camels, on horseback, by ships and boats. With time, the first trade route developed. The most known was the Silk Route, which covering the distance of 6500 km, connected China with the ancient Rome. Trade encouraged learning about the world, created the necessity to mark new routes and eventually contributed great geographical discoveries. People were also looking for new goods and new markets. The geographical discoveries and trade development had serious consequences appearing as conquests and colonization of new lands¹⁵².

Nowadays, trade is defined as an economic process of selling or exchanging goods and services for money. This process is completed generally by professional brokers for financial profits. The basic functions of trade are:

- ◆ Agreeing on structural typology of goods,
- ◆ Controlling movement of goods in time – the discrepancy between production and consumption,
- ◆ Controlling movement of goods in space – production places, market places, and point of consumption and utility are not the same locations,
- ◆ Forming the structure of assortment of products – some goods are classified by the needs they fulfill, while moving from production stage to consumption.

International trade is a type of trade which is about the international exchange of goods between companies in various countries. A crucial factor for the development of trade was the Industrial Revolution of the 19th century. Newly founded factories produced new goods for new markets. To produce those goods, the raw materials were imported from the conquered countries and overseas colonies. The colonies were not only the source of resources but were also important market places. The merchandise, mostly exported overseas, comprised materials and clothes¹⁵³.

The definition of *fair trade*, currently accepted by World Fair Trade Organization (WFTO), reads as follows: “*Fair Trade is a trading partnership, based on dialogue, transparency and respect, that seek greater equity in international trade. It contributes to sustainable development by offering better trading conditions to, and securing the rights of, marginalized producers and workers – especially in the South. Fair Trade Organizations, backed by consumers, are engaged actively in supporting producers, awareness raising and in campaigning for changes in the rules and practice of conventional international trade*”¹⁵⁴. Fair Trade products are produced and traded in accordance with these principles¹⁵⁵:

- ◆ Market access for marginalised producers,
- ◆ Sustainable and equitable trading relationships,
- ◆ Capacity building and empowerment,

152 <http://www.handlowe.szkolenia24h.pl/poradnik/handel-historia-i-wspolczesnosc/1100/> [dostęp: 15.01.2013].

153 <http://pl.wikipedia.org/wiki/Handel> [dostęp: 15.01.2013].

154 http://www.wfto.com/index.php?option=com_content&task=view&id=1082&Itemid=334&limit=1&limitstart=2 [dostęp: 4.12.2014].

155 http://www.wfto.com/index.php?option=com_content&task=view&id=1082&Itemid=334

- ◆ Consumer awareness raising and advocacy,
- ◆ Fair Trade as a “social contract”,
- ◆ Decent working conditions as defined in ILO Convention,
- ◆ Environmental sustainability,
- ◆ Monitoring and evaluation.

Fair trade is perceived as a wider strategy of cooperation which was signed in 2001, and emphasizes the international trading partnership with producers, based on dialogue, transparency and respect.

The widely accepted division of trade is as follows:

- ◆ Retail,
- ◆ Wholesale,
- ◆ International,
- ◆ Electronic.

Retail trade is the last link in manufacturer-wholesaler-customer chain and usually sells small amounts of a product to individuals. Retail trade is of two types: store and non-store retail outlets. Store-based retail outlets use a fixed location to sell goods. Non-store retail businesses use other forms of sales techniques such as online catalogs, portable stalls. The basic tasks of trading are¹⁵⁶:

- ◆ Delivering goods to consumers to satisfy their needs and offer additional services (free home delivery, credit, telephone orders, right packaging),
- ◆ Creating consumer need by marketing, advertising, additional services, promotions accompanying purchase, etc.,
- ◆ Dictating competitive prices and goods based on previous market analysis,
- ◆ Delivering licensed products and supporting clients with sale and after-sale service and guarantee,
- ◆ Producing and processing own products to complete and extend the offer,
- ◆ Planning localization of outlets, training staff and managers.

Retail trade can be divided by its form:

- ◆ Store,
- ◆ Concentrated,
- ◆ Dispersed,
- ◆ Non-store,
- ◆ Door-to-door,
- ◆ Hawking,
- ◆ Peddling,
- ◆ Mail order.

Wholesale trade is the sale of goods in large quantities and warehousing, sorting and packaging for resale to a retailer. The main tasks are as follows:

- ◆ Provide retail outlets with goods,
- ◆ Ensure the high quality and utility value of goods,
- ◆ Organize the goods cycle,
- ◆ Bridge the time gaps between production and sale (e.g. with warehousing),
- ◆ Cooperate with manufactures to provide goods which satisfy their demands¹⁵⁷.

¹⁵⁶ <http://www.handlowe.szkolenia24h.pl/poradnik/handel-historia-i-wspolczesnosc/1100/> [dostęp: 20.03.2013].

¹⁵⁷ http://pl.wikipedia.org/wiki/Handel_hurtowy_i_detaliczny [15.01.2013].

The wholesale trade changes the production assortment into the sale assortment by sorting and delivery in line with the recipients' needs. With modern technology at hand, e-commerce organizes movement of products from production point and import to a retail network fast and efficiently, chooses best means of transportation and best business conditions.

The international trade is selling or purchasing goods or services to business partners registered beyond the customs borders of a given country. International trade involves also property, credit and current turnover, selling and purchasing services, intangible goods and commitments about movement of people across borders, maintaining diplomatic posts and others¹⁵⁸. The forms of international trade are:

◆ **Export** (Latin: ex beyond and portare carry) shipping goods produced in a given country abroad. For the EU member states, export means selling goods and services beyond the EU borders. Selling and purchasing among the member states is not export but within the Community trade¹⁵⁹.

◆ **Import** (Latin in to and portare "carry") – shipping goods, services or capital from abroad to the domestic market. It involves purchasing (shipping) goods and services produced abroad (beyond the customs borders of a country). Generally, this is a territory of the country, however, for the EU states, import means the purchase of goods and services beyond the EU borders. Purchasing within EU is not import, but the within the Community purchase¹⁶⁰.

◆ **Transit** – trade exchange of goods between companies organized by the third party which is not registered, either in the exporting or importing country. It is a passage of commodities through the territory of a state which serves as a broker¹⁶¹.

◆ **Electronic commerce** is a part of e-business. Computers were first used for commercial purposes back in the 1960's. The Bank of America, making use of *The Electronic Recording Machine Accounting* (ERMA) system and performing the automated functions, needed only nine employees to do the job previously done by fifty clerks. Computers spread throughout companies and automated payment, reporting, production and planning¹⁶². The beginnings of electronic commerce date back to the 1970's when electronic networks started to be widely used for financial transfers between banks and companies. In 1970's the first industrial standards for documents exchange were developed. In 1975 the first "air, motor, ocean, rail and some banking applications" industrial standard was created. ANSI X12 appeared in 1979. On-line shopping was probably invented in 1979, in the UK, by M. Aldrich¹⁶³ while Ford, Peugeot-Talbot, General Motors and Nissan adapted it in 1980. In 1990 on-line shopping was connected with the ERP systems of resource planning, data exploration and warehouses. E-commerce developed fast in the USA and Scandinavia in 1995 and later in the UK, Germany and Singapore in 1997. On the turn of 1999 and 2000, e-commerce appeared in Southern Europe. Dynamic development of the Internet throughout 1990's resulted in globalization and fast development of electronic contacts, mainly in the commercial branch as well as relations between companies and users. New quality business contacts helped to connect and automate information systems and perform tasks in any place at any time. It optimizes the fixed costs management: reduction of office, commercial and warehouse space, transactional costs and completing orders over the network. This led also to reduction in personnel costs. Electronic banking limited the costs of financial transactions and fostered procedures of finding a good product at a good price. Implementation of a modern decision-making environment – the integrated (multilevel) IT

158 http://pl.wikipedia.org/wiki/Handel_zagraniczny [15.01.2013].

159 S. Chudy, M. Pietraszewski, *Ekonomika handlu*, cz. 1, Wyd. empi2, p. 45.

160 <http://pl.wikipedia.org/wiki/Import> [10.02.2013].

161 http://pl.wikipedia.org/wiki/Handel_tranzytowy [10.02.2013].

162 <http://www.e-mentor.edu.pl/artykul/index/numer/3/id/35> [10.02.2013].

163 http://en.wikipedia.org/wiki/Michael_Aldrich [15.01.2013].

systems and applications for e-commerce, enhance effectiveness and performance and foster introduction of professional, automated processes of asset management.

For comparison, traditional commerce needs paper documents. The basic flow channels of information are letters, phones and fax. Such connections between suppliers and recipients are poor and the communication channel appears narrow. Confidentiality of prices is of top importance. A company-oriented policy is the basic philosophy. Whereas e-commerce has different characteristics: multimedia instead of paper documents, electronic communication channels, strong cooperation between entities and wide communication, continuous interaction between business partners and transparency of transactions which help to eliminate the part of a broker. The basic philosophy appears as the focus on general problems of the logistic chain.

8.2. E-commerce, electronic exchange and electronic auction

E-commerce¹⁶⁴ has proved highly successful nowadays, leaving behind other traditional forms of transactions developed with the Internet. The global computer network gave limitless opportunities for fast, simple and safe transactions between different business entities. E-commerce is a more and more popular way to do business because of its range and flexibility. Many companies which based their business on direct and personal interaction with a client decide to launch the Internet shopping service. E-commerce has numerous advantages such as market analysis and modification of the service to satisfy the client's demands.

Basically, e-commerce refers to any transaction completed on the Internet, yet it defines a lot of different aspects: from a single WWW page, which offers a few items, to strictly commercial companies.

At present e-commerce offers many possibilities not available before. People can buy from any place at any time, comfortably and not leaving their home or working desk. The best traditional sellers do not impose themselves on clients, allow them to look through their offer in a convenient time, and stand by to be quick to respond. E-commerce works in the same way. Clients browse pages, choose the product and put them into a virtual trolley. Full information at the selling point helps to persuade those who hesitate. Photos and detailed information present the full value of the product to prove that it is the best choice. However, placing an order may be difficult in practice, as many clients leave their trolleys without accepting the purchase. Therefore, clear instructions on company's reclaims and safe transactions policy are crucial at this stage. E-commerce may be divided according to several criteria.

Distribution of goods divides e-commerce into:

◆ Direct, where the whole process of purchase, from placing the order, payment to delivery is completed electronically by the computer network (goods and services can be sent electronically, e.g. computer programs, records, information services)¹⁶⁵,

¹⁶⁴ W. Chmielarz, *Handel elektroniczny nie tylko w gospodarce wirtualnej*, **Electronic commerce – EC, e-commerce, commerce online** is a concept of practically describing The processes of purchasing, buying, providing products, services, and information by individual or group business partners on the territory of the state (national commerce) or residents of two or more countries (international and global commerce), secured by financial means (traditional and electronic) and performed with technical-organizational infrastructure, mainly computer networks including the Internet to gain expected profits. E-commerce - is trading in products or services using computer networks, such as the Internet. Electronic commerce draws on technologies such as mobile commerce, electronic funds transfer, supply chain management, Internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection systems. Modern electronic commerce typically uses the World Wide Web for at least one part of the transaction's life cycle, although it may also use other technologies such as e-mail, mobile devices, social media, and telephones. <http://en.wikipedia.org/wiki/E-commerce> [12.08.2014].

¹⁶⁵ C.M. Olszak, *Systemy e-commerce: technologie informatyczne w biznesie*, Wydawnictwo AE, Katowice 2004, p. 24.

◆ Indirect, which includes activities such as choosing the product or service, ordering entry, transaction processing and payment authentication carried out in the computer network. Production and delivery are completed in a traditional way, e.g. by a messenger, forwarding company, post or direct contact with a seller,

◆ Hybrid, where an activity always completed electronically, is accomplished in a traditional way, e.g. the whole process of product purchase is completed electronically, except payment¹⁶⁶.

The areas of e-commerce transactions¹⁶⁷:

◆ In the territory of one country (domestic trade),

◆ In the territory of two or more countries (international or global trade).

Technical infrastructure and its influence on the development of e-commerce:

◆ Global network – the Internet¹⁶⁸,

◆ Internal network – intranet¹⁶⁹,

◆ External network connecting intranets – extranet¹⁷⁰.

Technical requirements for client and supplier:

◆ Standard computer equipment (PC),

◆ Qualified electronic signature,

◆ Internet access (online),

◆ Contract for online services:

– Auctions and tenders, e.g. annual subscription,

– Catalog purchasing and document transfer service,

– Analysis and process support,

◆ Trained expert responsible for the system and data,

◆ Approved regulations on e-tenders and e-purchase with the description of procedures and processes.

Trade with modern technologies creates the *electronic marketplace* (net place). Electronic marketplace integrates the buyers and sellers and helps to find and choose the right suppliers. The following markets exist:

◆ Vertical – of one branch,

◆ Horizontal – of many branches.

E-commerce can be also classified by entities which participate in it. The literature available points to the following relations: B2B, B2C, C2B, and B2E.

166 W. Chmielarz, *Systemy biznesu elektronicznego*, Difin, Warszawa 2007, p. 20.

167 http://portalwiedzy.onet.pl/134697,rynek_elektroniczny,haslo.html [20.03.2013].

168 **Internet** is the single worldwide computer network that interconnects other computer networks using TCP/IP, which stands for Transmission Control Protocol/Internet Protocol, a set of standards for transmitting and receiving digital data. The Internet consists primarily of the collection of billions of interconnected webpages that are transferred using HTTP (Hypertext Transfer Protocol), and are collectively known as the World Wide Web. The Internet also uses FTP (File Transfer Protocol) to transfer files, and SMTP (Simple Mail Transfer Protocol) to transfer e-mail. <http://dictionary.reference.com/browse/internet> [12.08.2014].

169 **Intranet** - any network which provides similar services within an organization to those provided by the Internet outside it but which is not necessarily connected to the Internet. The commonest example is the use by a company of one or more World-Wide Web servers on an internal TCP/IP network for distribution of information within the company. <http://dictionary.reference.com/browse/extranet?s=t> [12.08.2014]

170 **Extranet** – The extension of a company's intranet out onto the Internet, e.g. to allow selected customers, suppliers and mobile workers to access the company's private data and applications via the World-Wide Web. <http://dictionary.reference.com/browse/extranet?s=t> [12.08.2014]

B2B (business to business) is a relation between companies, often referred to as “classic” e-business and involves: transaction processing, looking for partners, building the supplier and client chains and business information. This is the fastest developing sector of e-commerce and it involves various business contacts between companies, mainly international, financial and commercial transactions. It uses IT infrastructure: extranets, business portals, market chains, commodity exchange, etc. The biggest branch of the world business to business market is business information (reports, market research and analysis, information about social networks). Online business within this sector can be performed within a dedicated part of the Internet the so-called business intranet, the fastest developing branch of e-commerce. B2B comprises:

- ◆ Preparing offers,
- ◆ Preparing orders,
- ◆ Accepting orders,
- ◆ Payments,
- ◆ Processing and completing transactions,
- ◆ Looking for new offers,
- ◆ Issuing transactional documents,
- ◆ Marketing.

The basic models of e-markets for B2B e-commerce¹⁷¹:

- ◆ Horizontal markets – comprise many branches. Products and services on this market are usually not connected directly with production, i.e. *indirect goods*. Horizontal platforms are built by international corporations or big companies associated with a large geographical region,
- ◆ Vertical markets – within one branch (e.g. motor industry) and concerns goods connected directly with production, i.e. *direct goods*.

There are two basic purchase models in B2B:

- ◆ e-Procurement defines automation of an organization’s procurement processes with web-based applications to execute purchase transactions directly over the Internet. Each step in the process occurs electronically: from creating and submitting POs to receipt and payment for goods – all transactional data is processed electronically¹⁷².

E-bidding and auction model for single purchase of goods or negotiating conditions of contract for repeated purchase. Transactions are executed according to the auction procedures, i.e.: choosing the best offer from the submitted ones. It has strictly defined time and offers can be modified during the process.

B2C (business to customer) sells products or provides services to end-user consumer, retailing on-line. It is performed by producers, as well as brokers, in e-kiosks, online shopping malls and portals. B2C defines relations between a company and the end-user, built online. The party which starts the transaction is a company, as opposite to C2B¹⁷³ where transactions are initiated by a client. C2B (consumer to-business) involves submitting offers for purchase by clients and waiting for companies to reply. Electronic B2C relations are developed in small business environment¹⁷⁴. There are several business models:

- ◆ Information sites which can be widely used for multitude of applications, including the educational sector, traffic control, banks, public advertisements, stock exchange, private users, etc. At present, job advertisements or “buy or sale” notices are most popular. More and more information sites charge for placing a notice. These can be divided by the merchandise they offer:

171 http://pl.wikipedia.org/wiki/Handel_elektroniczny [15.01.2013].

172 <http://www.materialsmanagement.info/procurement/e-procurement/definition-of-e-procurement.htm>

173 <http://pl.wikipedia.org/wiki/B2C> [15.01.2013].

174 C.M. Olszak, *Strategie i modele gospodarki elektronicznej*, Wydawnictwo Naukowe PWN, Warszawa 2007, p. 106.

- ◆ horizontal, widely available for the Internet users in B2C and C2C business,
- ◆ vertical, directed to strictly defined group of registered users (B2C and B2B)¹⁷⁵.
- ◆ The Internet portals offer the users the access to organized information about products and the advertising opportunities, communicate interactively in chat rooms, sell online from online mall, bazaars or auctions. The biggest Polish platforms are onet.pl and interia.pl. To search for information on portals, specialized software, called browsers or search engines, is used¹⁷⁶.
- ◆ E- shops – the most popular form of e-commerce in B2B sector. E-shops comprise small and simple solutions for more attractive standard distribution channels as well as extended networks, integrated with systems for logistic support. E-shop is a special dedicated www page where goods are presented with prices and description. The client is equipped with a virtual trolley (and system to control its content) where they put selected products. An e-shop operates according to pre-defined norms. Purchase in an e-shop is a contract with a client, without another party present, made by means of distance communication. It is worth pointing that e-shops appear generally as an additional form of sales to a regular shop. E-shops can be divided by the range of offer:
 - Horizontal – wide and popular range of goods for a big group of clients,
 - Vertical – professional assortment for a restricted group of experts.
- ◆ E- malls accumulate the offer of many e-shops. This can be a simple solution which presents the most attractive products on the web page and links to independent shops, ordered according to goods they sell. The more advanced applications integrate shops in one hypermarket. They can be divided into:
 - Open e-malls - every shop can join them, usually the shops receive personal invitations. They are open also to a wide range of customers, as their products are available.
 - Closed e-malls – the access is granted after logging with a password.
- ◆ Internet auctions - are an important aspect of electronic commerce and typical form for B2C, C2C and C2B. It is an open process in which thousands of goods (from books to vessels) and services (from air travel to legal counseling) may be offered through bidding on websites, by anyone from any location and at any time¹⁷⁷.

B2E (business-to-employee) is an exchange of intra-company information (such as terms of employment, benefits, policies, operating manuals, company newsletters) with employees over the Internet or intranet¹⁷⁸. More advanced B2E systems which are integrated with IT systems, supporting employees and candidates, simplify the administrative processes, streamline personnel management and HR. One of the examples of B2E model is telework, a synonym for telecommuting, which refers to a working arrangement or work style where an employee regularly performs his work off-site, or outside the office. Teleworkers typically work from home, report and communicate with the office using telephones and over the Internet¹⁷⁹.

Other relations are characterized below¹⁸⁰.

- ◆ C2C (*consumer-to-consumer*) - many sites (e.g. Wirtualna Polska, Onet) offering free classifieds, auctions, and fora, where individuals can buy and sell using online payment systems, like PayPal, where people can easily send and receive money online. eBay's auction service was a pioneer and has been the best example of person-to-person transactions taking place on everyday basis¹⁸¹,

175 C.M. Olszak, *Systemy e-commerce...*, cit., p. 58.

176 *Ibidem*, p.107.

177 C.M. Olszak, *Systemy e-commerce...*, cit., pp. 60–73.

178 <http://pl.wikipedia.org/wiki/B2E> [15.01.2013].

179 *Ibidem*.

180 <http://pl.wikipedia.org/wiki/E-biznes> [15.01.2013].

181 C.M. Olszak, *Systemy e-commerce...*, cit., p. 44.

- ◆ B2P (*business to-public*) comprises relations between a company and its social surrounding,
- ◆ G2C (*government-to-citizen*) is communication between public institutions and citizens,
- ◆ G2B (*government –to-business*) is communication between public institutions and business (industry),
- ◆ A2B (*application-to-business*) hiring software or computer services on the Internet to businesses,
- ◆ B2A (*business-to-administration*) is a model of e-administration for communication between business and government and administrative units at all levels: local, regional and countrywide.
- ◆ C2A (*consumer-to-administration*) is a relation of clients with the government and administrative units for auctions and payments,
- ◆ F2B (*finance-to-business*) is a financial service for clients and additional services such as: banking, insurance, brokers and investment consulting,
- ◆ F2C (*finance-to-customer*) similar to F2B model, but dedicated to individuals.

Both, worldwide and in Poland, e-commerce develops rapidly. That is why there have been so many attempts to describe, characterize and categorize it. A. Grudzień presents the following division in *NetForum* magazine:

- ◆ E-shop –basic business model to promote goods and services, which may be connected with a shop,
- ◆ E-procurement –offers are submitted electronically and traditional goods and services delivered traditionally,
- ◆ E-mall – type of e-shops comprising many electronic shops (run independently) which cooperate to deliver goods and complete payments,
- ◆ E-auction – electronic mechanisms for bidding. The Internet can offer many kinds of auctions, including reverse auctions,
- ◆ Virtual community – this is the Internet phenomenon, rather than a business model. A group of people or entities concentrate on a given topic or within one sector and communicate using the Internet tools (a kind of thematic portal or forum),
- ◆ Collaboration platform provides the Internet tools and environment for companies to cooperate. This platform is usually administered by a third party which leases it to other business entities,
- ◆ Value-chain integrator – integrates the whole value chain and provides services (e.g. e-payments),
- ◆ Information brokerage – this kind of companies offer the service of searching and providing clients with the required data, e.g.: searching for information on the Internet or creating a customer profile,
- ◆ Trust services – similar to the model described above. It provides defined information and ensures confidentiality by issuing or authorizing certificates¹⁸².

Another classification has been presented by N. Kirov, A. Kuśmierz and R. Rządca in *PCKurier* magazine. They proposed eight categories (mentioned only seven, is it a complete list or something is missing?) which only partially correspond to the previous classification:

- ◆ Directly to client – the company omits traditional distribution channels and delivers goods and services directly to a client,
- ◆ Supplier with a full range of services – a producer's profile is not restricted to selling his own products as he builds a thematic portal to offer products of other companies, which offer related products, e.g. a producer of knives offers also pots, spices, etc. supplied by other companies,

¹⁸² A. Grudzień, *Modele biznesowe e-gospodarki*, „Net Forum” nr 12/2000, p. 26–28.

- ◆ Content supplier – the company provides content for bigger (more general) portals which pay for this product and information and distribute it among their customers,
- ◆ Common infrastructure – to reduce costs, the companies can create a common portal for communication with clients,
- ◆ Company – the company with many business units (factories) each offering their own products. The company creates one contact point for all products. Such service helps to navigate and to select products for clients,
- ◆ Value-chain integrator – this integrator operates only in a virtual value chain and data is its strength,
- ◆ Broker – provides a contact point for a seller and buyer and collects information¹⁸³.

E-marketplace¹⁸⁴ and e-auction¹⁸⁵ are also characteristics of the information society¹⁸⁶. In e-auctions, bidders and sellers buy, sell and deliver tangibles and intangibles, services and information, according to the defined procedures. They use tools and electronic equipment to execute financial transactions. At present, the technical-organizational infrastructure, mainly the Internet, allow to organize public procurements and effective management of public spendings. In practice, modern technologies for public procurement procedures streamline completing business transactions over the Internet (e-mail, www browsers, portals, vortals and other communication tools). The most popular method of e-commerce is online shopping, where buyers and sellers complete business transactions. Public procurements in institutions and companies are organized along e-auctions procedures so that participants can buy and sell different kinds of goods and services.

E-auction is a **four-stage** process. During the first stage a tender is evaluated and suppliers who qualify are invited to compete in the electronic auction. In **the second** stage, the auction is open on the date quoted in the invitation. In **the third** stage, the auction is closed and results announced to the participants; finally, in **the fourth** stage, the contract is signed. Following the procedures, the suppliers receive data to log onto the system to submit further, more competitive offers, directly to the website at a defined time. The winner receives the highest number of points in automatic offer evaluation.

E-tendering is a system in which the price of the service or product is gradually lowered, until it meets a responsive bid, and is sold. It is used if a service or product can meet the specified quality standards, the costs are reasonable within the procurement volume limits and multiple suppliers are interested. Competitive suppliers and dynamic prices are other conditions. The procedures are more complex than those of e-auctions. First of all, contractors place their tender requests on the Internet. It includes, e.g.: the general rules, additional contract regulations and the terms of delivery. The suppliers submit applications and are accepted if complying with the requirements. Then the e-tender can start. The price is lowered until it gets a bid. The winner is announced and the contract signed.

183 N. Kirov, A. Kuśmierz, R. Rządca, *Jak się kręci e-biznes*, „PC Kurier” nr 8/2003, p. 36–39.

184 **E-marketplace** – virtual, online environment (e.g.: a website) that allows individuals or firms to conduct business electronically: from buying and selling, supply chain planning to common research and development of a product.

185 **E-auction** – mirrors traditional auctions in which auction users or participants sell or bid for products or services via the Internet (the procedures are as for open tenders, restricted tenders or advertised tenders). The auction starts after submitted paper offers are evaluated. E-auctions can be conducted using non-price criteria which are evaluated prior to the auction and the results converted to a price equivalent, which is translated into a formula using weights, for the auction. Or, other elements can be included in the auction by expressing them as a price equivalent.

186 **Information society or Virtual society** is a large social grouping sharing the same distinctive interests, culture, convictions, needs and lifestyle, concentrated in the virtual space of network structure, irrespective of a physical position of its individuals.

A dynamic purchasing system is a fully electronic process to accomplish common used purchases for a period of up to four years. A contract notice invites indicative tenders, which must be evaluated within 15 days. Tenderers that comply with the specifications are admitted to the system. The contract will be signed with a tenderer offering the best value for money, as per criteria specified in the contract notice¹⁸⁷. A dynamic purchase system is an open tender with a time limit. It is efficient for repetitive purchases or multiple purchasing of the same products or services (stationery, computers, fuel). The regulations do not define the maximum value of purchase. In case of an open tender, any criteria ensuring conformity with the law can be adopted to select the best offer.

E-catalogue called also the online catalogue is the Internet-based presentation of a set of goods and services, available for purchase, including description, price, and ordering information. E- catalogues give the marketer a worldwide exposure, 24-hour accessibility, and opportunity of prompt changes of price and product or service like in a real, big shop. The marketing elements of a successful on-line catalogue are: a strong brand name, customer service representatives, relevant editorial content, interactive features that get viewers involved in the site, easy navigation, and security of purchase transactions. There are two kinds of e-catalogues: local and public. Local e-catalogues are dedicated to defined clients and include product and service description, their price and purchasing conditions. The clients sign the delivery contracts. Public catalogues are available to any client.

E-commerce operates in various areas. According to the range criterion, e-commerce can be divided into¹⁸⁸:

- ◆ e-commerce for individual clients,
- ◆ e-commerce for organizations, institutions and companies.

The most popular form of e-commerce for individual clients is e-shop, open 24 hours, 7 days a week, with a very wide range of products, quick access to limitless information (with photos, multimedia presentations) about a product and possibility of selecting the most convenient system of payment. Moreover, the assortment of on-line shops is generally wider than in traditional shops. In Poland, electronic financial transactions are executed more and more securely, as the customer purchases in the well-known shops or those with clearly defined regulations. The exchange of data between the financing, billing and payment aspects of electronic business transactions is authorized.

Electronic market creates **new economy** without any boundaries. Experts believe that such new economy will become a drive for constant and fast economic growth in the forthcoming decade. However, the problem of management on the Internet, placing orders and providing instructions, should still be the area of research and analysis.

New economy may become a science about a wider and more precise range of research, including: consumers' behavior, states, organizations, institutions or companies. Before the era of the Internet business, electronic business was long developing in corporations and companies in a form of *Electronic Data Interchange* (EDI).

The following part of the chapter presents solutions for e-shopping in Poland.

Polish Procurement Platform located in Polish Securities Manufacturing Company (PWPW) is an IT solution for comprehensive support of e-biddings and e-tenders. It guarantees the transparency of transactions and prevents corruption. Elimination of corruptive behaviors concerns the whole purchasing process. Minimization of the human factor contributes to shorter customer service time and cost reduction. Data transfer is coded and authorized with an e-signature, which guarantees full security of transactions.

187 [http://ec.europa.eu/europeaid/prag/document.do?chapterId=4.2.5.2.Practical Guide 2014](http://ec.europa.eu/europeaid/prag/document.do?chapterId=4.2.5.2.Practical%20Guide%202014)

188 J. Kuck, *Przejrzysta walka z korupcją, Przegląd Żandarmerii* nr 4/2009, pp. 7–15.

8.3. Legal regulations of e-commerce

E-commerce cannot develop and operate efficiently without proper legal regulations, universal to all EU member-states. Since 1997, the EU has been defining clear objectives for e-commerce to create universal and complete legal frames on the European level. The solution is the Electronic Commerce Directive¹⁸⁹ It aims at legal security and consumer confidence through coordination of national laws and free movement of ISS (Information Society Services), between the Member States. Examples of services covered by the Directive include: online information services (such as online newspapers), online sales of products and services (books, financial services and travel services), online advertising, professional services (lawyers, doctors, estate agents), entertainment services and basic intermediary services (access to the Internet and transmission and hosting of information). Such services include also the services free of charge and the funded ones, for example through advertising or sponsorship.

As indicated in the Introduction, services of the information society are, in principle, subject to the law of the Member State, in which a service provider is established. In turn, a recipient Member State cannot restrict the incoming services.

The Directive regulates also issues such as, transparency and information requirements for online service providers, commercial communications, electronic contracts and limitations of liability of intermediary service providers¹⁹⁰. A provider is obliged to produce basic information about the business, conditions of contract, procedures of error correction before placing the order, the language and the codes of conduct and its sources. An on-line contract is equally legitimate to traditional contracts at all stages. The Directive states that the Member States shall guarantee the execution of on-line contracts without any discriminating actions like: questioning reliability or legal viability of the contract signed on-line or limiting its legal effect¹⁹¹.

At present the Public Procurement Law in EU is shaped by the following directives and regulations:

- ◆ **EU Electronic Commerce Directive 2000/31/EC** of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market,

- ◆ **EU Procurement Directive 2004/18/EC** of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts, public service contracts,

- ◆ **EU Procurement Directive 2004/17/EC** of the European Parliament and of the Council of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors,

- ◆ **Council Directive of 21 December 1989** on the coordination of the laws, regulations and administrative provisions relating to the application of review,

- ◆ **Council Directive 92/12/EEC** of 25 February 1992 on the general arrangements for products subject to excise duty and on the holding, movement and monitoring of such products,

189 The **EU Electronic Commerce Directive 2000/31/EC** of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market http://ec.europa.eu/internal_market/e-commerce/directive/index_en.htm#maincontentSec1 [4.12.2014].

190 K. Kowalik-Bańczyk, *Sposoby regulacji handlu elektronicznego w prawie wspólnotowym i międzynarodowym*, Wolters Kluwer, Warszawa 2006, p.165. https://www.google.pl/search?newwindow=1&site=&source=hp&q=electronic+commerce+directive+2000%2F31&oq=Electronic+commerce+direct&gs_l=hp.1.5.0i22i30l10.1259.8004.0.35644.27.21.0.6.6.0.400.2951.0j20j4-1.21.0....0...1c.1.48.hp..1.26.2585.0.KMZRZBwSs5c [12.08.2014]

191 M. Zelek, *Sprzedaż przez Internet – Aspekty prawne*, Difin, Warszawa 2012, pp. 34–40.

◆ **Commission Directive 2005/51/EC of 7 September 2005** amending Annex XX to Directive 2004/17/EC and Annex VIII to Directive 2004/18/EC of the European Parliament and the Council on public procurement,

◆ Commission Regulation (EC) No 1422/2007 of 4 December 2007 amending Directives 2004/17/EC and 2004/18/EC of the European Parliament and of the Council in respect of their application thresholds for the procedures for the award of contracts

◆ Commission Regulation (EC) No 1564/2005 of 7 September 2005, establishing standard forms for the publication of notices in the framework of public procurement procedures pursuant to Directives 2004/17/EC and 2004/18/EC of the European Parliament and of the Council,

◆ Commission decision of 7 January 2005 on detail rules for application of procedures of EU Procurement Directive 2004/17/EC of the European Parliament and of the council of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors,

◆ eEurope 2005+ Program and i2010.

In May 2004, Poland joined the European Union and as a Member State was obliged to adapt provisions of the Community law. Yet, the European Union has several documents that regulate the movement of goods throughout the EU territory. The basic EU laws are:

◆ Council Regulation (EEC) No 2913 / 92 of 12 October 1992, establishing the Community Customs Code,

◆ Corrigendum to Regulation (EU) No 952/2013 of the European Parliament and of the Council of 9 October 2013, laying down the Union Customs Code (*Official Journal of the European Union L 269 of 10 October 2013, p. 1*),

◆ Commission Regulation (EEC) No 2454/93 of 2 July 1993, laying down provisions for the implementation of Council Regulation (EEC) No 2913/92, establishing the Community Customs Code,

◆ Council Regulation (EEC) No 2658/87 of 23 July 1987 on the tariff and statistical nomenclature and on the Common Customs Tariff,

The above mentioned legal acts regulate e-commerce on the European level, whereas Polish laws which govern contracts signed with electronic tools, are as follows:

◆ Electronic Commerce Law of 18 July 2002 on safe electronic commerce and efficient electronic delivery of public services to businesses and citizens, liabilities of service provider, restrictions and personal data security¹⁹²,

◆ Law of 10 November 2008 amending Electronic Commerce Law¹⁹³,

192 Ustawa z dnia 18 lipca 2002 r. o świadczeniu usług drogą elektroniczną, DzU 2002, nr 144, poz. 1204, art. 1.

193 **Electronic address** – the electronic mail designation for a recipient who uses that mail software; **Confidential commercial information** is the information known only to a limited number of persons and, if disclosed, be liable to cause serious harm to the person who provided it or to third parties with regard to interests which, objectively, are worthy of protection. **Business secrets** merit a very special protection. They are confidential information about an undertaking's business activity of which not only disclosure to the public but also mere transmission to a person other than the one that provided the information may seriously harm the latter's interests. Examples of information that may qualify as business secrets include: technical and/or financial information relating to an undertaking's know-how, methods of assessing costs, production secrets and processes, supply sources, quantities produced and sold, market shares, customer and distributor lists, marketing plans, cost and price structure and sales strategy. **Information society services** any service normally provided for remuneration, at a distance, by means of electronic equipment for the processing (including digital compression) and storage of data, and at the individual request of a recipient of a service. **A recipient of a service** any natural or legal person who, for professional ends or otherwise, uses an information society service, in particular for the purposes of seeking information or making it accessible. **Service provider** is an organization, business or individual that offers, provides some type of communications, storage, processing or content service or any combination thereof to others in exchange for payment. **'Recipient of a service'** covers all types of usage of information society services, both by persons who provide information on open networks such as Internet and by persons who seek information on the Internet

◆ Electronic Signature Law of 18 September 2001 on provisions relating to the admissibility of electronic signatures, supervision of certification-service-providers, their liability and data protection requirements for them¹⁹⁴,

◆ Public Procurement Law of 29 January 2004¹⁹⁵ lists basic e-commerce tools for a public sector (e-auction, e-bidding, dynamic purchasing system)¹⁹⁶,

◆ Consumer Protection Law of 2 March 2000 on consumer rights and liability for damage caused with the risk products.

Nowadays, each area of life is governed by legal acts. Generally, laws are divided into the national law and the EU law. These laws should be coherent and cannot be mutually exclusive. For Polish law, the superior act is the Constitution which guarantees free access to information, protection of consumer rights and equality, whereas the details are defined by laws and regulations of the Council of Ministers. EU Directives of April 2004 imposed on all the Member States a duty to prepare laws on electronic public procurement till 31 January, 2006. The Member States are obliged to provide public administration in Europe with instruments to complete procurement electronically (if legally acceptable) and at least 50% of public procurements with the value above the limit indicated in the EU Directive would have been executed electronically till 2010.

The recovery program for public finances defined implementation of electronic commerce as one of mechanisms for improvement. Public Procurement Law, which came into force on 2 March, 2004, provided the legal grounds for organization of electronic auctions in Poland. The introduced threshold of €60,000 and legal grounds for supplies only, makes the administrative bodies incapable of adapting e-auctions as a tool to eliminate corruption and to reduce costs. The areas of electronic public procurement are regulated by law which is applicable to public procurement conducted by:

◆ Entities of public finance sector:

◆ Public authorities, the government administration agencies, institutions of state inspection and law enforcement, courts and tribunals, municipality, counties and provinces, their agencies and unions,

◆ State budget units, local budget units, budgetary authorities and executive agencies,

◆ State dedicated funds,

◆ Public educational institutions,

◆ Independent public health care institutions,

◆ State and local cultural institutions and state movie agencies,

◆ National Insurance Company,

◆ Agricultural Social Insurance Fund with its subsidiary funds (KRUS),

◆ National Healthcare Fund,

◆ Polish Academy of Sciences along with its established organizational units

for private or professional reasons. **Means of distance communication** – any means which, without the simultaneous physical presence of the supplier and the consumer, may be used for the distance marketing of a service between those parties; http://ec.europa.eu/internal_market/publicprocurement/docs/guidelines/services_en.pdf [12.08.2014]; <http://www.pcmag.com/encyclopedia/term/51187/service-provider> [12.08.2014].

194 Ustawa z dnia 18 września 2001 r. o podpisie elektronicznym, DzU 2001 nr 130, poz. 1450, art. 1.

195 **E-auction** gives possibility of more beneficial transactions than traditional methods. **E-tendering** is governed by separate procedures. **Dynamic purchasing system** speeds and streamlines tendering process.

196 J. Kuck, *Handel elektroniczny – Przejrzyta walka z korupcją* [w:] A. Limański, Róża Milic-Czerniak. *Konkurencyjność podmiotów gospodarczych w warunkach niepewności*, Wyższa Szkoła Zarządzania Marketingowego i Języków Obcych, Katowice 2011, p. 46.

◆ other state or self-government legal personalities established under separate laws with the objective to perform tasks of public interest, except for commercial enterprises, banks or companies¹⁹⁷.

◆ State organizational units without legal personality,

◆ Legal persons, if 59% of their procurement is financed with public funds or these units or units with legal personality established, to meet public needs, with no industrial or commercial character, i.e. institutions under public law¹⁹⁸.

In December, 2008, the Council of Ministers approved the program for e-commerce and services support for 2009-2011, to streamline the business activities with the use of the Internet, design the law to adapt tele-information tools and organize e-learning training to develop skills and qualification. This was done to create convenient environment for e-business and e-commerce. In practice, there should be considerably bigger number of electronic applications in the industry with more extensive use of the electronic data. The program was implementing the plan of informatization for 2007-2010¹⁹⁹. **E-auctions guarantee complete transparency of transactions, eliminate corruption.** It is also due to elimination of the human element and ensuring transactional security (data are coded and authorized with e-signature).

8.4. E-commerce for individual clients. Online shopping

Each year more and more Poles turn to online shopping. Not only do we choose the product but also the place. The possibilities are tremendous. The Internet shops, e-auction services and selling services on social portals try to convince e-consumer to buy a chosen product only from them. They tempt with competitive prices as well as short delivery time or free delivery service. The Internet provides many tools helpful while shopping. Services that compare prices and aggregate opinions about shops or Internet forum – the Internet is a place where a consumer can exchange experience about a product, purchase and the completed transactions. A few years ago only some of the most eager supporters of the Internet knew about e-shops while today over 76% of network users buy in e-shops. Rapidly developing e-commerce and higher awareness forced the owners of Internet shops to extend their offer and enhance the quality of customer service. Without leaving home we can buy computer parts, radio and television products, household appliances, books, records as well as fresh fruit and vegetables. Besides big shops and shops selling radios, TVs, household appliances, and electronic parts there are also shops offering works of arts and crafts or educational toys, offered as products for a target-client²⁰⁰.

The biggest e-auction service in Poland is Allegro.pl. It is a safe place for buying and selling – safe transactions. On Allegro thousands of people sell new and second-hand items. Every day there is a bargain and some unique item to buy. Transactions are easy and safe and what is more important, a customer does not need to leave home as the product will reach the declared address.

The first step to buying is to select a product:

◆ Type in the name of the product in a *Search the product* tab to select the product and click the description of the selected product, or

◆ Select the category of the product, than a subcategory to read the list of offers.

197 inwestor.assco.pl

198 Ustawa z dnia 29 stycznia 2004 r. Prawo zamówień publicznych, art. 3 pkt 1.

199 <http://media2.pl/internet/45331-rzad-wspiera-handel-elektroniczny.html> [07.10.2013].

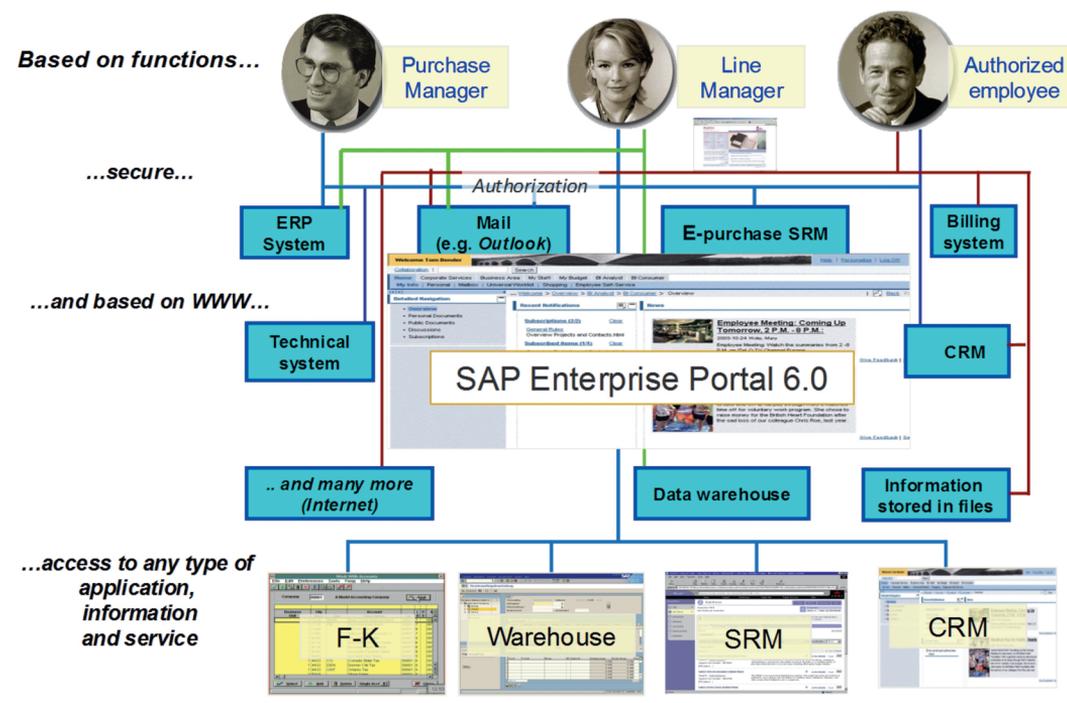
200 *E-zakupy oczami klientów. Niezależny ranking sklepów internetowych i produktów, 2011*, http://www.opineo.pl/upload/raport_jesien_2011.pdf [: 25.05.2103].

After the product is selected, check the credibility of the seller, read opinions, commentaries of other customers, read information about the offer, defined conditions (cost, form of delivery) of transaction. After e-bidding or purchasing is finished with a click of *Buy now*, the customer receives an e-mail confirmation. After receiving the product one can inform other Allegro users about the seller in the commentary tab²⁰¹.

8.5. Shopping on Polish Procurement Platform

In Poland, organizations, institutions and companies can do e-shopping on Polish Procurement Platform (PPP) located in Polish Securities Manufacturing Company. This application is composed of my SAP SRM 3.0 software, modern equipment and hardware indispensable for safe and efficient e-auction service and purchasing.

Portal infrastructure

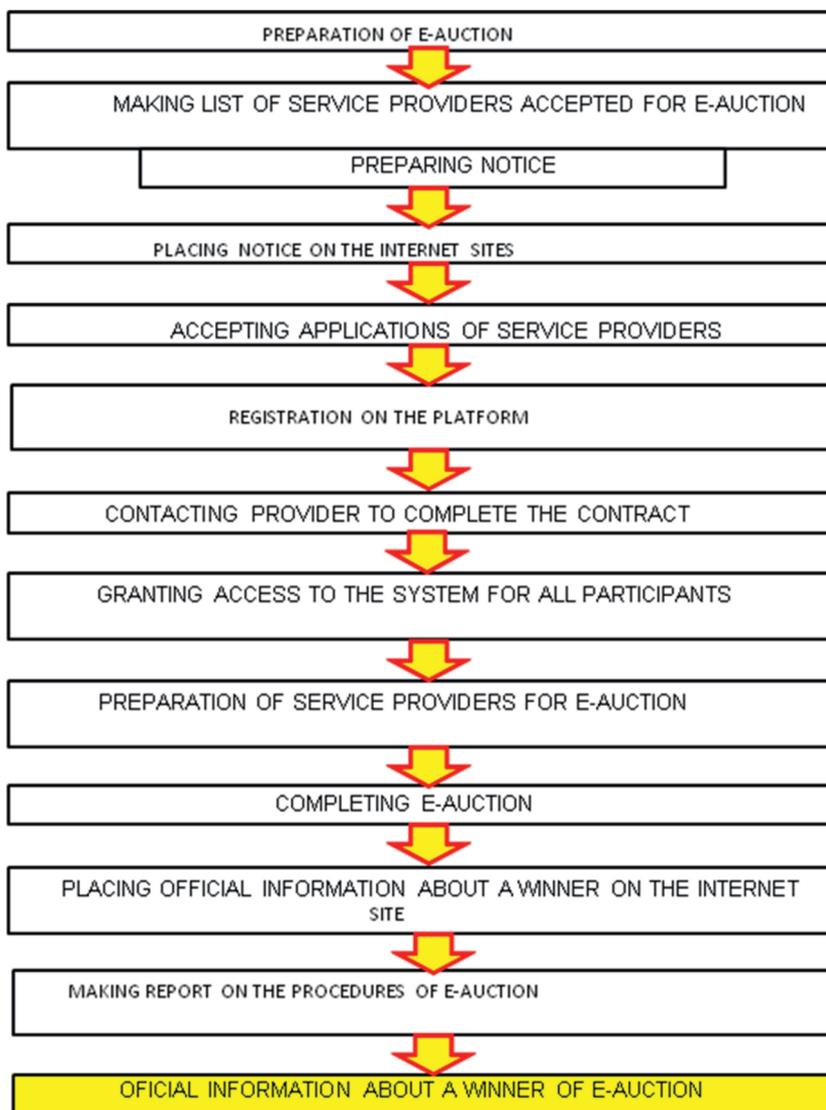


Source: K. Zalewski, *Perspektywy informatyzacji logistyki Wojska Polskiego – Aukcja elektroniczna, czyli jak zapobiec korupcji*, SG WP, Logis. Wewn. 4/2006, p. 75.

Fig. 41. Procurement Platform. Infrastructure of the portal

Every person has access to data and services base on the platform after the authorization procedures are completed. The access depends on the responsibilities and functions of the person. This access is safe and possible from any place on the globe, thanks to the Internet. SRM 3.0 system connects and integrates with other systems, e.g.: ERP, CRM.

201 www.allegro.pl [15.01.2013]



Source: he author's elaboration based on www.ppp.pwpw.pl/upload/pdf/Harmonogram_AE_PZP.pdf [15.01.2013].

Fig. 42. Procedures of e-auction

Clients of the public sector can conduct procurement at the e-auction or e-bidding on the PPP. PPP can be used in any purchasing sector. Moreover, it can group purchasers, giving them stronger negotiable powers to reduce the costs of purchase. First, the procedures of procurement with e-auctions are presented. The first step is to sign the contract with PWPW on PPP service or submit a contract notice with the application form. E-auction can be:

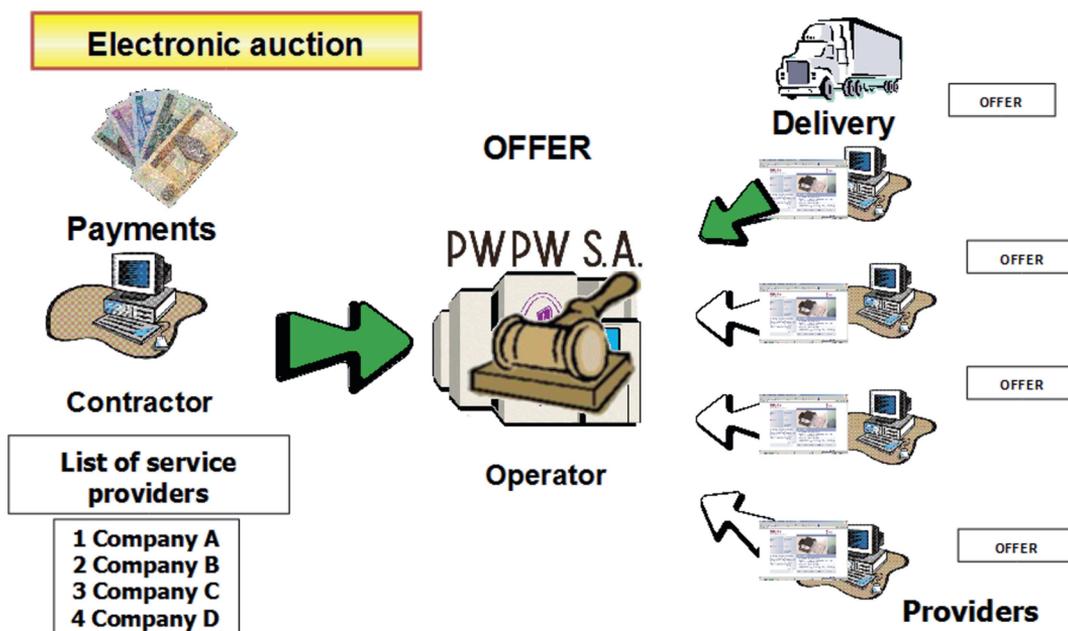
- ◆ Order e-auction: PWPW organizes e-auction in the PPP system. The condition to start the auction are: the correctly filled order and required documents submitted,

- ◆ Self-service e-auction: a person interested organizes e-auction on their own and defines the following parameters in the PPP: starting price, the **mathematical formula** that will determine automatic rankings, opening and closing time and date. A service-provider can be accepted as a participant only when the contracting entity submits the required documents not

later than 2 working days before the opening. The contracting entity sends an e-mail with qualified certificates of the service-provider to PWPW, not later than 1 working day before opening. For security procedures, PWPW issues the user ID and password. PPP system asks the contractor and service provider to change the password upon the first logging. The procedures of an e-auction are as follows:

- ◆ Contractor defines the opening and closing date and other conditions,
- ◆ Every service-provider accepts the conditions of an e-auction,
- ◆ Service-providers submit offers according to the instructions,
- ◆ The offer is accepted by the PPP server and registered in the system (confirmation that the offer has been submitted),
- ◆ The submitted offers are automatically evaluated and classified by criteria of the contractor; a mathematical formula will determine the automatic rankings upon each bidding round. The participants are able to check the ranking, compare the competitors, without learning their identity
- ◆ The service provider who submitted the most competitive offer before the closing time, wins the e-auction
- ◆ PWPW sends the contractor the report on procedures and outcome by e-mail or fax immediately after finishing the e-auction²⁰².

E-auction (Fig.42) is conducted in a specially created environment – on the platform, using the mechanism of the reversed auction. Sellers offer their items for bidding, and compete for the price which a buyer will accept (it may reach the break-even point, BEP). The buyer’s option is usually to accept any bid or reject all. At the end of the auction the seller with the lowest price wins. The auction works only if there are many sellers who offer similar goods and services. The contractor and service-providers may observe the procedures and put up the offer in real time to enhance competitiveness.



Source: K. Zalewski, *Perspektywy informatyzacji...*, cit., p. 76.

Fig. 43. Elements of e-auction

202 <http://www.ppp.pwpw.pl/regulaminy.html> [3.02.2013].

According to Public Procurement Law the providers are informed about the auction in a notice on the Internet site of the contractor and operator. On the client's demand, an operator may inform the indicated providers and (or) the cooperating parties with PPP. The PPP e-auction system uses the electronic signature which is safe, authorized and verified for the contract notice entered into the system. PPP system (Fig.43) allows to conduct many e-auctions simultaneously. When choosing the provider of the contract, including more than one activity, a few auctions can be organized, and after an analysis one or several providers may be accepted.

E-auction, as a method for choosing a provider, brings organizational and economic benefits. In addition, price reduction shortens the time of negotiation and meetings with providers. Possibility of participation in the auction of all providers in real time and open offering enhances competitiveness and the chance for better price. So far, price savings in the public administration sector from PPP e-auctions have amounted from 4% up to 65%. The level of savings depends on many factors, e.g.: the item (its availability, number of providers) and a starting price (must be reasonable, real close to the price for a similar item/service, not too low as it may discourage auctioneers.) Generally, the prices are reduced by 10-20%.

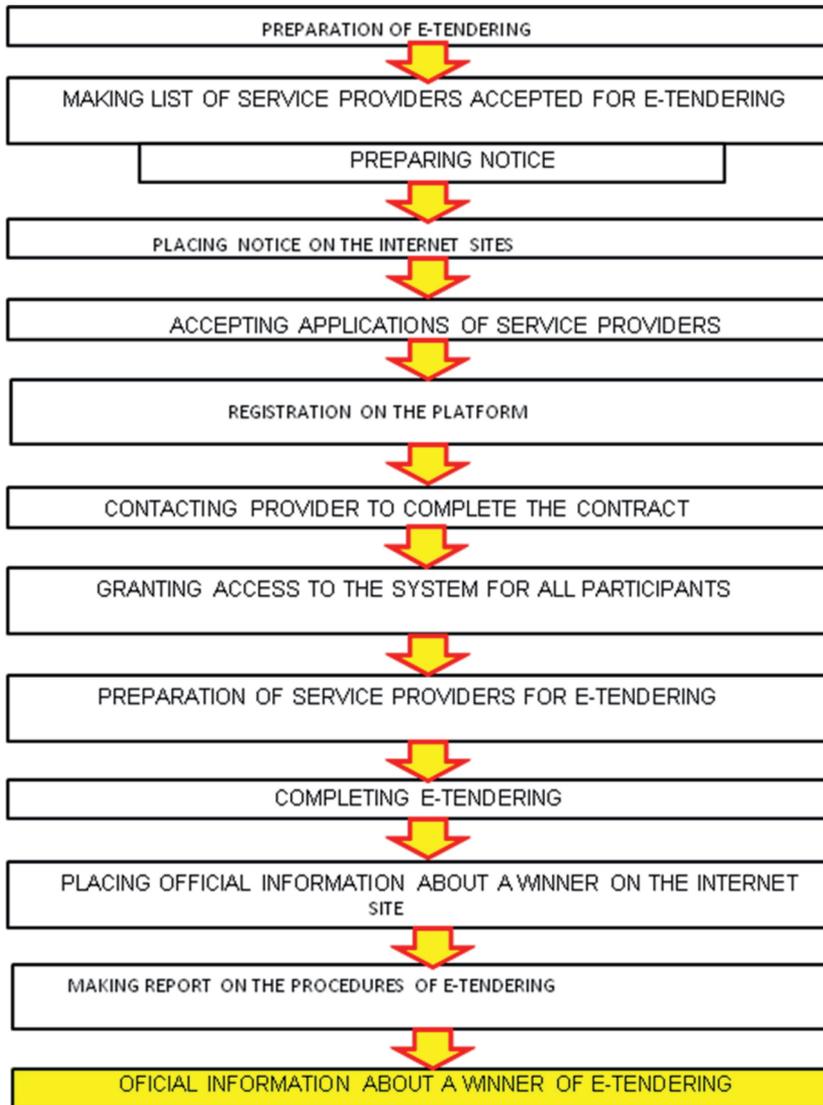
The second solution is **e-tendering**. Firstly, the interested parties should register. The procedures are the same as for e-auction. E-tendering can be of two types:

- ◆ Order e-tendering: PWPW organizes e-auction in the PPP system. The condition to start the tender are: correctly filled contract notice and required documents submitted,
- ◆ Self-service e-tendering: an interested person organizes e-auction on his own and defines the following parameters in the PPP:
 - starting price,
 - mathematical formula to determine automatic rankings,
 - number of bidding rounds,
 - opening and closing time and date.

If the contractor is subject to legal provisions of the Public Procurement Law, he is obliged to submit the contract notice to PWPW, not later than 23 days before the planned e-bidding. PWPW will place the notice on the Internet site. If he is not subject to regulations, he is obliged to submit the contract notice to PWPW, not later than 7 days prior to the planned e-bidding. The request should include:

- ◆ Contractor's name and address,
- ◆ Item/service for e-bidding,
- ◆ Starting price -mathematical formula to determine automatic rankings,
- ◆ Number of bidding rounds,
- ◆ Starting and opening date,
- ◆ Conditions and list of documents to submit,
- ◆ Date of lowest bidding offer,
- ◆ Delivery date,
- ◆ Provisions of the contract for selling the product/service.

The contractor is obliged to submit the list of providers approved for the e-bidding to the PWPW, not later than 4 working days before opening. The condition to approve the provider for e-tendering is submitting correctly filled in forms and required documents of the provider by a contractor, not later than 2 working days before the opening. Only the product and services not excluded by legal regulations can be put up for e-tendering. The procedures of e-tendering are as follows (Fig.44):



Source: the author's own elaboration

Fig. 44. Procedures of e-tendering

- ◆ E-tendering can be one or multi-stage process,
- ◆ Number of the bidding rounds, time, opening and closing dates and the remaining conditions are defined by a contractor,
- ◆ Every provider approved by the contractor for e-bidding receives a form with the conditions stated,
- ◆ The providers bid according to the instructions,
- ◆ The offer is accepted by the PPP server and registered in a system (confirmation that the offer has been submitted),
- ◆ The submitted offers are automatically evaluated and classified by criteria of the contractor - mathematical formula to determine automatic rankings in each bidding round. Participants are able to check the ranking, compared to the competitors, without learning their identity,

- ◆ A service provider who submitted the most competitive offer before the closing time wins the e-tender,
- ◆ The contractor confirms the choice of the offer with the lowest price by entering it to the PPP system and rejecting the remaining ones,
- ◆ PWPW sends the contractor the report on procedures and the outcome by e-mail or fax, immediately after finishing the e-auction.

8.6. Benefits and limitations of e-commerce

E-commerce brings numerous benefits, which would be not possible to gain with traditional methods. The benefits are the following:

- ◆ reducing transactions costs, shortening the time of order completion, bigger choices (many suppliers and wider range of products),
- ◆ automation of order placement and completion, permanent tracing purchasing processes, simple logistic and payment processes,
- ◆ reducing labor intensity of purchasing processes and prices in e-auctions,
- ◆ reducing office management and equipment costs, the number of personnel, shortening the distribution channels (simplifying circulation of documents),
- ◆ simplifying the customer service by collecting information about customer preferences easily which enhance the quality of customer service and brand loyalty,
- ◆ reducing stock, eliminating warehouses or reducing their number,
- ◆ transparency of transactional procedures to eliminate corruption,
- ◆ saving time and travelling to collect information and compare products and services.

However, there are some limitations of e-commerce:

- ◆ Lack of current solutions for legal problems due to dynamic development of e-commerce,
- ◆ No possibility to try out/on the product, except:
 - Virtual driving (also in computer games),
 - Selling products with photos or online camera,
 - Electronic catalogues,
- ◆ Lack of standards for communication (works on country telecommunication network are still in progress, difficulties to integrate commercial software with many applications and data bases).

The advantages of e-commerce on the Internet sites are the following: contact with a client 24 hours a day, 7 days a week, free access to the latest information about the company, descriptions of products and possibility to choose the form of communication (meeting, phone call, e-mailing, filling in a form on the web page). The provider should design and update their site (technological infrastructure and procedures) to perform these functions within the company. The Internet site has the advantage over an electronic catalogue or leaflet as the costs of design of the web page is lower and the preparation time is shorter, than the costs of printing. Also, the costs of making contact with a potential client are lower and making changes and corrections in the offers is faster. Thanks to technologies, like Adobe Acrobat, the marketing materials can be presented on the webpage with the contents and graphic design preserved. The second well developing area of e-commerce is a helpline or call centers which not only provide customer service but also perform the selling processes.

E-commerce is a part of e-business, understood as carrying out business over the Internet.

E-business also integrates functions on the Internet with every-day activities of suppliers, connects their services with internal systems for selling, finance and warehousing. The *website positioning* strategy is an optimization tool which drives relevant traffic to the website, the company can be noticed and depending on the offer prove competitive and successful. Website positioning also maximizes appropriate traffic to the customer website to find information, goods and services quickly. Interactive web applications control the access to information about prices, products, specifications and stock, which helps to complete orders successfully and to reduce considerably the cost of reclaims and additional dispatches. Moreover, such advanced tools for online processing of orders shorten the cycle of processing and completing orders and the delivery time. This makes no difference to the client. They search through the Internet service, buy and pay. To complete a payment they are transferred to another service which is controlled by a transactional company. In this service clients can type in their data, as previously. After a payment is completed, the client is directed back to the previous site and receives the order confirmation. The main advantage of this strategy is the possibility to open individual accounts in the transactional company. Another form of payment is e-money²⁰³. E-money is the digital equivalent of cash, stored on an electronic device or remotely, at a server, and used via mobile phones or internet-based payment accounts. E-money is also defined as an “electronic purse”, in which users store relatively small amounts of money on a smart card to use for small payments. E-money is still developing, nevertheless, it brings many advantages to both, buyers and sellers. Most commercial services are secured with a password which grants clients access to any information about their account. To enhance the sense of security of a client several techniques can be used, e.g.: when a client proceeds to the buying stage, the search engine informs about switching to the security zone, with a symbol of a blocked lock pad on the bottom toolbar. Moreover, there is no information about the security system of the commercial server.

8.7. E-commerce in organizations, institutions and companies

Organizations, institutions and companies do online shopping pursuant to the contract signed with PWPW in Warsaw where PPP is located. PWPW provides the technology and software for procurement and online purchase. This solution provides a ready - made system, reduces costs and prevents corruption. Moreover, every e-auction is observed by the contractor and the providers. The winner is the provider who offers the lowest price or the most satisfying offer. In organizations, institutions and companies, an e-auction is the final element of procedures, completed according to public procurement regulations. The procedures include:

- ◆ The contract notice with required information, e.g.: technical specification is published,
- ◆ The contracting party may use different criteria for evaluation - for example they may select according to the lowest price offered or use other criteria. In the latter case, each applicant should be informed of the different weighting given to the different criteria (for example price, technical characteristics and environmental aspects),
- ◆ In a negotiated procedure the contracting party invites at least 3 businesses to negotiate the terms of the contract.

E-auction lasts usually 30-90 minutes and consists of only one stage. Before starting the auction, the authority makes a full, initial evaluation of the tenders and allows only the qualifying ones to take part. The invitation to participate in the auction should state the date

203 https://www.google.pl/search?newwindow=1&q=e+money+definition&oq=e+money+definition&gs_l=serp.1.0.0i19j0i22i30i19i3.30057.36687.0.39197.12.12.0.0.0.133.1345.0j12.12.0....0...1c.1.48.serp..0.12.1338.pBDPJCi4AEY

and time of the auction and the number of bidding rounds. It should also define the mathematical formula to determine automatic rankings. Every participant is able to check the ranking compared to the competitors, without learning their identity. Using the e-signature participants can modify the conditions of their offer before the final bid is announced. The contract is awarded to the provider who submitted the best offer.

i2010 – *A European Information Society for growth and employment*²⁰⁴ initiative promotes an open and competitive digital economy. It provides a range of EU policy instruments to encourage the development of the digital economy such as regulatory instruments for e-bidding and e-shopping. This solution contributes to the reduction of cost and labor intensity of purchasing processes. It also offers more effective methods, including tracing purchasing processes and modern financial analysis, transparency of transactional procedures to eliminate corruption and increase savings by 10 -20 %. A coding system ensures the safety and reliability of transactions confirmed by the electronic signature.



204 http://www.eu-spocs.eu/index.php?option=com_content&view=article&id=15&Itemid=40 [4.12.2014].