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Privacy Policy For Information And Communication Systems Of E-Business

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ABSTRACT

E-business offers huge opportunities, but his conduct involves a serious threat. Numerous studies have shown that internet fraud is one of the fastest growing types of crime and the losses caused by this practice are billions of dollars annually.

Purpose of this article is to introduce the basic principles of security policy in communication and information systems for e-business. The article presents the main types and sources of threats to information and information systems, and how to protect your software and personal data, for example, companies with Europe-wide operations. Pointed out ways to implement best practices that help to prevent any hazards. The domestic market for e-commerce is the fastest-growing sector of the trade. The fact is that the percentage of shops and online shopping is growing faster than the number of Internet users in Poland.

In order to maintain the current pace of development of e-commerce, however, is to build public confidence in the form of exchange of goods and services. This cannot be achieved without ensuring maximum safety in all processes related to e-shopping.

Keywords: information and communication systems, data protection, e-business

1. INTRODUCTION

Companies are increasingly implement information and communication technologies (ICT) to connect their processes and business systems. Basic ICT infrastructure, such as computer networks and Internet access are standard for most businesses and are essential for doing business (Qosasi at. el. 2019). In contrast, advanced infrastructure and information services play a critical role in today's economy, far beyond the systems and technologies: enable and stimulate new ways of managing business relationships and new business models for the evolving digital economy (Pan at. el. 2022; Sturgeon 2021). Larger companies are in a good position when it comes to the introduction and development of these models, smaller companies should follow their example, otherwise you run the risk of exclusion from the supply chain.

ICT solutions are still an effective means for reducing current operating costs, are increasingly also being used as a tool for innovation and to increase profits by introducing new services and ways of working within value chains and networks. With the development of these new activities to a large extent based on knowledge, not only in the case of services, this also applies to the production, we observe the emergence of new intermediaries who take non-core business processes to other companies, allowing them to focus on their core business. This situation forces the companies to use a proper security policy, which on the one hand protect the interests and security of customer data and contractors, on the other hand will allow you to safely extract out of the process. In the last years, the quality of the ICT infrastructure companies improved significantly, especially among small and medium-sized enterprises. Companies are better prepared for more advanced forms of e-commerce, including those of the productive sectors, are increasingly devoting more attention to the use of e-commerce in order to better serve our customers, with the aim of creating sustainable relationships with them. E-commerce goes far beyond simple transactions (Babenko at. el. 2019; Mohdhar, Shaalan2021). Increasingly, cloud computing (Almarabeh, Majdalawi 2019; Tang, Zeng (2021), the Internet of Things

(IoT) (Sun, Ji 2022; Prajapati at. el. 2022), Blockchain (Lee, Yeon 2021), Big Data (Behl at. el. 2019) or artificial intelligence (AI) solutions (Moriuchi at. el. 2021; Pallathadka at. el 2023) are being used in e-commerce. Sekar at el. (2022) bring it up to design the autonomous transaction system for e-commerce applications; because of the dramatic increase in IoT devices, communication between physical things is enabled.

Regardless of the trend, focusing on customer service, an important objective of ICT to increase efficiency of internal processes. Case studies have shown that the main potential of ICT in this context is to improve the transparency of processes and information management, which improves the planning and decision making.

The transport and logistics sector shows huge differences in the advancement of information technology use between large and small companies. Large companies use sophisticated ICT systems to manage their business, and small using more traditional communication tools. But regardless of how the use of advanced tools company, they must take into account the appropriate security policy data that is stored on their servers in electronic form.

The case studies show that ICT has become a general-purpose technology (Liao at. el. 2016). They are widely used in all business functions. For many companies, e-commerce has become an important instrument through which implement its strategy. Specific goals and applications of e-business, however, differ considerably depending on the model in which they work, but in all business sectors ICT has a major or moderate impact on their business. This is practically all areas, including primary functions such as production, marketing and logistics, as well as support functions like controlling, human resources and accounting.

In most industries, key subjects did not take place around ICT. However, without focusing on safety and customer service processes through ICT and e-business companies can get into serious trouble with a loss of customer confidence in the security of the data. Thus, security policy-makers is still the task of promoting the adoption of ICT security policy and e-business, but during these operations, they must pay close attention to the specificities of the areas that must be protected.

Information and communication conditions of e-business

Electronic business covers all business processes conducted electronically. For many years, is a major part of medium and business processes in almost every company. Electronic business is not only about the transactions electronically, but also includes all the processes that lead to such a transaction.

The definition of e-business is any form of exchange of resources between the participants of the project carried out by electronic links and exchange of information with the use of electronic media, the exchange is regulated through special schemes agreed upon within each organization and between them, as well as through general agreement adopted based on domestic or foreign. E-business is to conduct online business with the use of information systems, the Internet technology. E-business is made up of elements such as e-commerce, business intelligence and technological capabilities of most of the self-service business processes. The use of e-business in practice such activities as: motivation, trade, and analysis. The concept of engagement lies the need to create cost-effective commercial websites and applications, targeted marketing, advertising networks, and specialized promotional tool. Trading online means doing business with attaining measurable and secure orders. The analysis is based on an understanding of the attitudes and motivations of customers purchasing and using this knowledge to improve the quality of service (Gregor, Stawiszyński 2002).

In the literature, see also the narrower approach of e-business, limiting them to any of the Internet, tactical or strategic, depending on which transforms business between the parties (Hartman, Sifonis, Kador 2001). It follows that the manager who sees e-business as the sale of products by the network, is

not overwhelmed by the whole picture. E-business is in fact a powerful source of efficiency, speed, innovation and new ways to create value in the organization (Hartman, Sifonis, Kador 2001; Kollmann, 2019).

Definitions cited above confirms that e-business is a very general and broad and the Internet plays a major role in its development. This global network has contributed and continues to contribute to the progress that is taking place in e-business. Since the nature, language and limitations networks are not well understood, in addition to the purely technical exception it is probably not possible to know all forms of e-business due to its speed of development and changes therein (Castells 2003; Nojszewski 2004). E-business can be successfully carried out in areas such as finance, marketing, communications, logistics, customer relationship management, distribution and training. Because of those involved in e-business transactions can be divided into four sectors: B2B where there is the greatest volume of trading, they include commodity exchanges, the most famous area of B2C e-business and includes all types of online stores for consumers, C2C is a trade between individual users, such as auctions, mailing lists with announcements and C2B most rare area as its object the posting of offers by potential buyers special services.

The establishment of e-business is not just the Internet itself, are also necessary communication and information systems that support business activities in many ways. They span a number of years and have evolved with the changing conditions of the business and its environment. Due to the evolution of information systems to support management can be divided into (Szpringer 2003):

TPS-Transaction Processing Systems - they are oriented to the current record of a business object and transaction support. Examples include systems: record sales and cost accounting, asset management, materials management, financial records, employment records, payroll records, etc. Due to the fact that the information provided by such systems with a long delay they have little value for the management of

MIS - Management Information Systems - these systems to ensure efficient data collection company, organization, their flow and efficient access to data using large computer systems. They operate on the basis of the database, which can easily process and present the results in the form of reports. Examples are here among other systems: accounting and finance, HR-payroll, warehouse management.

DSS-Decision Support Systems - are systems whose main mission is to help make strategic and tactical decisions. In these systems, the database uses methods that are focused on making decisions with a partially or poorly problems. The main areas supported by these systems include: business planning, investments, purchases, sales of products and services, the financial economy.

IMIS-Integrated Management Information Systems - These systems require a combination of several levels of integration: Integration of information - that is, integration of functions, business performance, organizational structure, integration of applications - including the integration of application software, means of communication with users, data integration - understood as integration with the database data dictionary, system integration - in terms of network systems, system software, communication software.

The Integrated Systems enjoying great success include ERP systems (Enterprise Resource Planning). They are defined as systems that optimize business processes both internally within the company (bank), as well as occurring in its immediate vicinity, through the use of ready-made tools to automate the exchange of data with allies throughout the logistics chain.

EIS - Executive Information Systems - these systems to focus more on general smooth operation of the company, than to optimize decisions. Serve the complex systems and customization requests submitted reports and communication tools with the system. Mainly provide information to top management.

ES-Expert Systems - are often referred to as computer systems for solving problems using the description (representation) of knowledge and reasoning process. These systems generate their decisions based on the knowledge base and mechanisms of artificial intelligence. This allows them to create a variety of models of decision situation, emerge resulting solution and explain them. To resolve the issue use the programs containing the so-called. Heuristic rules that reflect the knowledge domain experts.

AIS - Artificial Intelligence Systems - they are learning systems based on their own experience. The basic tools are now called SSI. neural networks which consist of artificial neurons processing input signals into a single output signal. Collection of interconnected neurons form a network whose structure and organization is the result of learning and the accumulation of experience. They can support decision-making in many areas: financial services, marketing, analysis of the production process, etc. (Olszak, Sroka 2001; Song at. el. 2019).

The nature and objectives of the privacy policy

ICT solutions have led to a global market, which provides access to a wide range of information, goods and services. ICT companies open up many opportunities to accelerate its own development.
Business on the Internet is a good alternative to the sale of goods or services in a secure manner. Buying on the web can be cheaper, faster, more convenient, and the consumer market increases several times in relation to traditional. Unfortunately, there are problems there as well, often associated with inadequate protection system, based on which the work shop or e-business platform. Problems of security of e-commerce can have many different causes. Businesses are focused mainly on finding the lowest cost provider that will provide a fully functional system and do not settle for them to give priority to safety issues.
Too much attention is paid to the time pressure to provide a system, assuming that, the sooner you will start to bring us profits, but forget about a very important issue which is the security policy of the system.
Material security is complicated and not every provider of e-business is aware of the complexity of these issues. Little known and sometimes difficult to understand legal issues, few programmers and analysts understand the business aspects of running an e-commerce (Kepa, Tomasik, Dobrzyński 2010).

Running business on the Internet is becoming increasingly important for business owners. The network creates opportunities such as acquiring more customers, advertise your business. However, the Internet does not provide just as many opportunities, thanks to the Internet as the largest e-business can lose its reputation. Operation of the Internet leads to the fact that expose it to attack. Not once, at times, so that websites and portals have become a victim of hackers. I have been a successful attack. Each of them hide their losses in financial and reputational company.
Polish and European law provides for the necessary legislation for the protection of personal data, we can include them act such as (Matusiak, Kuciński, Gryzik 2009): The Act of 18 July 2002 on the provision of electronic services uses the definition of "personal data" shall be determined by the law on the protection of personal data and the processing of these data requires the use of its own rules. The first difference, having the nature of the restrictions in relation to the principles laid down in the Law on the protection of personal data is to extend (the Act on Electronic Services) data protection, regardless of whether the processing is carried out in the data set. The purpose for which the service provider may process personal data recipient, is to establish, shape the content, modify or terminate a legal relationship with the recipient, and the personal information that the service provider can process are: the name and the names of the recipient, the registration number or social security number - if this

number is not was given-passport, identity card or other identity document, address of permanent residence, mailing address, if different from the address of permanent residence, the data used to verify the digital signature recipient, the recipient's e-mail addresses.

The processing by the service provider other personal information is acceptable as long as these data are essential to the performance of other than designated legal action or to carry out the contract. In this case, the service provider is obliged to mark the data as necessary to achieve these objectives. In addition, it is possible the processing of personal data by the service provider, which are not necessary to provide the service, if the customer agrees.

Obligation to provide information provider within the meaning of the Act on Electronic Services is to provide a permanent customer and can easily be accessed via the communication system used by the customer, to information on:

- possibility of using the service provided by e-mail anonymously or under a pseudonym (a service provider cannot collate personal information of the recipient-taken by his stage name),
- provided by the service provider of technical measures to prevent the acquisition and modification by unauthorized persons personal information by electronic means,
- the entity in charge of data processing, their scope and intended date of transfer, if the service provider has made with this entity an agreement on the processing of data, such as name and the names of the recipients, the registration number or social security number - if the number was not assigned - passport, identity card or any other documentary proof of identity, address, as well as the data used to verify the digital signature recipient.

Act of 6 September 2001 on access to public information is an act exempting the application of the Law on the protection of personal data in relation to specific entities. According to the law on access to public information, to make the information public are obliged public authorities and other entities performing public tasks. The Act lists in art. Four paragraphs. 1 list of entities obliged to provide information specifically for the public, which include, among others.: Body representing, according to separate regulations, the Treasury and the entities representing the state legal persons or legal entities and local government bodies representing other state agencies or units of local self-government bodies representing other persons or entities that perform public functions or have a public property, and other legal entities in which the State or its local authorities or local economic or professional have a dominant position within the meaning of the rules on competition and consumer protection.

In relation to public office holders in the field of information relating to the duties of their rights are not limited to public information because of the privacy of the individual. In this sense, the provisions of the Law on the protection of personal data does not constitute a basis for refusing to provide information on such persons.

The Act of 16 July 2004, the Telecommunications Law regulates such the issue of the processing of personal data by providers of publicly available telecommunications services, stating that "the content or confidential information may be collected and telecommunications, is recorded, stored, processed, altered, removed or made only when these activities, hereinafter referred to as" processing "on a service user or are necessary for its implementation "and the directory listing of personal data, the processing of which supplier publicly available telecommunications services is entitled.

The specificity of privacy policies in e-business

Businessman run a business on the Internet should also be noted that identification is required to enter his e-mail address (e-mail), your name, place of residence and address or the name or business name and registered office and address information for proper authorization and permitting authority, if the provision of service requires, on the basis of separate provisions, such authorization (Kepa,

Tomasik, Dobrzyński 2010). In addition, if the provider of services on the Internet is a limited liability company, is in accordance with the provisions of the Act of September 15, 2000, the Commercial Code (Article 206 in respect Ltd. and Art. 374 with regard to SA), the above information should be supplemented the registration court, which keeps the records of the company and the number to which the company is registered, tax identification number, the amount of the share capital.

However, in the light of existing legislation there is no requirement by the website owner to create a document commonly known as privacy policy. It should be noted that the Inspector General for Personal Data Protection stresses the importance of such a document, as the place where the internet user / customer can find out what personal data will be used by the owner of the service, whether knowingly permits on the basis that an Internet user will express when registering if it automatically by placing cookies, IP storing, retrieving data on your browser. It can therefore be assumed that the good practice of doing business online is to publish a website privacy policy. Company when commissioning the creation of such a document, should the issues in it to look through the prism of their customers, who are the main users of the service platform. Privacy policy should explain who is the controller of personal data full name, address of its registered office, to which the personal data will be used: determination of the processing of data, the right to access personal data and the possibility of correcting them, to whom personal data may be made available, on which principles and under what conditions it may be, voluntary or mandatory nature of application data in the latter case it can only happen if it provides for an express provision of law, the rules applying cookies, remember the IP address, ads, statistics, methods of protection data, including meeting the requirements of the Act of 29 August 1997 on the protection of personal data (Plowiec 2010).

The entrepreneur who created the rules for your e-business and decided to develop a privacy policy must also bear in mind the principle of adequacy referred to in Art. 26 of the Act. Under this provision, the personal data processed by the controller owner of the service should be adequate for the purpose for which they are to be used. No problem, you can assume that data such as your name, address and other contact information (email address, phone number) will be necessary to ensure that the owner of the online store can perform the contract of sale. The gathering on this occasion information such as your Social Security number or mother's maiden name, in principle, directly violates the principle cited. With regard to online stores where you can directly analyze whether the scope of the data will be adequate to the purpose (World… 2011).

Businessman leading e-business is also required disclosure requirement. It results from Art. 24 on the protection of personal data, according to which the data controller company being compulsorily required to provide an individual some basic information about yourself, as well as on its processing of personal data. Under that provision, the obligation to inform the trader of the address of its registered office and its full name, and if the controller is a natural person - a place of residence, name and surname, to collect data, especially on known information at the time of the award recipients or categories of recipients, or to whom our data will be made available to other companies, the right of access to their personal data and the possibility of correcting them, a good practice is also an indication of how the Internet user can take advantage of this power, voluntary or obligation to provide the data, and, if so obligation exists, the owner must indicate for which provision of the law is clear, in practice, the requirement to provide the data we have in relations with the authorities, in turn, is rarely the case with private companies. The information obligation can be fulfilled with the registration form, the privacy policy or regulations.

In addition to those involving a data protection using specialized systems and software, e-business entrepreneur is required to use technical security, physical and organizational, in which besides the obligations regarding personal data, internet entrepreneur must be aware that these requirements are only a slice of the , which requires the Office for Personal Data Protection. Most of the obligations specified in the applicable data protection law, the terms of both the technical security safeguards such as logical servers, application password protection used for data processing, physical (such as protecting areas of data against unauthorized access, such as through a system of recording inputs I / O) and organizational (need for documentation of data protection, which includes a security policy, user management system used for data processing, authorized to process data, records of those who have been given the authority, a statement of the conduct of the secret .

All these rules and commitments mean that the privacy policy of e-business has become a specific form of protection that evolution is still progressing, and the company operating in e-business is required to adapt to the constantly changing regulations on the one hand, on the other hand to provide privacy protection to their customers and the credibility of a business.

Privacy in e-business as an example of VPK Packaging Group NV

Corporate ICT is the information and knowledge platform for sharing of VPK ICT Group established policies, procedures and other documents across the organization. The portal contains among others a structured database for communication and distribution of documents on ICT standards to be used by all sites in the group and a portfolio to keep track on the running projects and change request executed especially for ICT-HQ.

Figure 1 shows the structure of the organization department of ICT

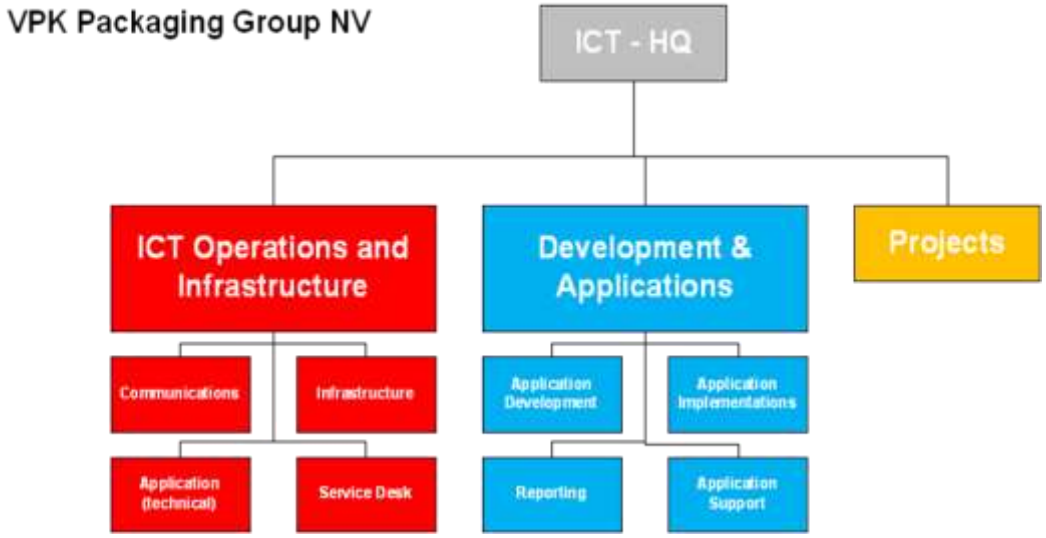

Figure 1. Structure of the organization department of ICT
Source: elaborate own, data from VPK Group

The company VPK. security policy covers all aspects of data security of its customers, suppliers and collaborators, both data processed in information systems, as well as in the traditional manner. Privacy policy e-platform belonging to the company adapted to the requirements of Polish and European Union requirements. For the privacy and security of data corresponds to the ICT manager, also known as data controller.

In preparation for a security policy administrator assigns responsibilities to individuals associated with the processing of personal data and specifies: personal resources, processes essential to the continued operation of personal data, the risks affecting the protection of data, and system vulnerability to threats, data protection mechanisms personal computer system and outside the system, the risk of the implementation of security mechanisms. Security policy processing customers include, among others definition of the data by preparing a list of buildings, premises, the premises in which the data are processed, regardless of whether the processing is done in the traditional manner or in a computer system, a list of data and display software used for data processing, description of the structure of the data sets, indicating the contents of each field of information and their mutual relations, as the flow of data between different systems, definition of technical and organizational measures necessary to ensure the confidentiality.

User management computer system used to process the data, you can include determine the procedure for granting a user ID in a computer system or to grant permission for the processing of information, methods and means of authenticating users of such a system backup procedures, etc. User can also include the procedure to be followed in the event of a security breach computer system processing sensitive data.

Documentation indicated above leads in writing and implemented by a controller. Through the implementation of the company is to be understood read the documentation and publication of her person authorized to process customer data and those that may affect the security of the data being processed. The controller also organizes training for persons authorized to process the data to their respective responsibilities include those set out in the policy.

An additional element of strictly protected in the enterprise is the protection of personal data and the obligation to inform of the fact that the processing of personal data in the company imposed on the entity processing personal data which the controller. The data undergoing processing may be acquired by the data in two ways: directly from the data subject or of a third party. If the processed data is not provided directly from the person concerned, data processor (controller) is also obliged to inform the source of the data being processed.

The information obligation arises at the time of collecting personal data. This means that immediately after the recording of data by the processor, to the data subject is entitled to obtain information on the name and address of the entity processing the data, the data collection and the extent of rights of persons involved in processing, it is, the right of access to data and the right to correct them, as well as voluntary or obligation to provide information. In the case of obtaining data not from the data subject, including the source from which the data was collected. Failure to information may be the basis for bringing a person who has not received information in this regard, a complaint to the Inspector General for Personal Data Protection, so this requirement is strictly enforced in the company.

Therefore, the data protection policy has a number of organizational and technical issues of data processing. ICT Manager is required to use technical and organizational measures which, depending on the category of processed data and the risks, provide adequate protection for the processed data. Also ensures proper circulation of documents shown on the figure 2. Controller shall keep the documentation that describes how to process the data and the measures taken to protect them. In particular, the data controller should protect the data against: unauthorized disclosure, takeover by an unauthorized person, treatment in violation of the law, change, loss, damage or destruction. The data can be released only by persons authorized by the controller. The administrator is obliged to keep records of persons authorized to process personal data. It also has a duty to ensure control over who, when and what data is entered into the system that processes customer data and to whom they are transferred.

Data collected from the customer usually divided into data collected actively and passively. Data collected actively to all the data that the client voluntarily provide on our website. The data is collected passively collected information about the client without requiring the input of these data on our website, such as data collected by the server.

For a client to use some functions must register. While registration is asked for your email address and password you will be using on our site.

Allows customers to log on to the system, and compulsory registration.

Figure 2. workflow
Source: elaborate own, data from VPK Group

The Portfolio is an overview of projects and change requests, mainly supported or executed by ICT-HQ. ICT supports new and existing businesses by implementing proven solutions to increase customer service, reduce risks and support strategic moves of VPK.
A Project is led by a Project Manager, who has full responsibility, while Change Requests are led by a Project Leader under responsibility of the ICT Applications Manager or ICT Operations Manager. Please consult the RACI-matrix at ICT-HQ for a descriptions of roles and responsibilities.
The Portfolio will be updated after approval of ex-com at least every quarter.

	Must To	Promised	Business deadline	Status Prep	Init	Exec	Close	Q4	Q4 oct Tech	Funct	Abap	Q1	Q1 jan Tech	Funct	Abap	Q2
Aquila 2	x		1/03/2009			x			2	20	30		25	100	20	
Corex PL		x	best effort	x												
Integration Ondulys		x	best effort		x				5				15			
New Datacenter	x		best effort			x			20				85			
Roumenia (Basic)	x		1/03/2009			x			30	100	40		10	50	5	
Forecasting (MPS)		x	tbd		x					25				80	5	
WAN redesign		x	best effort	x					30				20			
Server Based Computing		x	best effort			x			60				80			
MKII (R&F)	x		1/04/2009			x							20			
Autorisations	x		1/06/2009													
man days									147	145	70		255	230	30	
FTE beschikbaar									455	520	98		455	585	98	
Support									325	358	78		325	423	78	
md delta									-17	18	-51		-125	-68	-11	
FTE delta									-0,3	0,3	-0,8		-1,9	-1,0	-0,2	

Figure 3. portfolio ICT
Source: elaborate own, data from VPK Group

Added value for the group by supporting financial systems and the consolidation of the business units supporting and enabling intercompany processes making ICT systems sustainable. For the business units by providing effective solutions to guarantee competitiveness through understanding the business needs providing services in knowhow, infrastructure and applications gate keeping new technologies and applications.

CONCLUSION

The issue of security is of paramount importance for the development of the company, since cybercrime such as hacking into computer networks, the proliferation of computer viruses or misuse of personal data poses a serious threat to the enterprise based on its business information. The development of e-business and the increase in the number of electronic transactions make privacy and ensure the safe use of ICT are becoming an important part of a stable business. The emergence of legal problems posed by the use and misuse of data sent through ICT, with the need to develop appropriate solutions in the framework of laws, regulations and policies at the global, regional and national levels. A common standard for storing data already in the company's electronic form. Additionally, the computer that contains your image of this type of data is connected to a network which makes it a fairly high risk because they do not always have a properly good security from unauthorized access. First and the most important threat to the workers are computer users who often underestimate the safety or simply are unaware of the risks. Another oversight is not enough money spent on infrastructure security. Often companies allocate only one percent (it happens even less) of the budget for the security of your e-business. Most companies buy specialized equipment (such as firewalls) and think that it is enough regardless of other factors affecting safety. This thinking comes down to the fact that they have to pay various compensation of victims by Internet thieves who stole their data from the company. Not to mention the loss of the image of the company that carries such an event. It is worth noting that each company is required by law to appropriate to adequately protect customers' personal data. So let's not

just look at the risks in the use of information and communication systems but also take steps to secure data company in the best possible way.

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