

# BUSINESS DEVELOPMENT IN LITHUANIA THROUGH INNOVATIVE INFORMATION TECHNOLOGIES

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Information and Communication Technologies (ICT) play very significant role in logistics management, so trade companies and manufacturing industry have a big demand of such systems, because there exist lots of information, which must be quickly processed, evaluated and, if it's necessary, given to customers. The purpose of the current survey is to give an overview about the ICT situation, usage and development among Lithuanian companies, covering both infrastructure and service areas. The respondents of the survey were mainly SMEs from logistics, manufacturing, trading and other industries. From other results confirmed by this survey, including lack of ICT personnel, lack of tailored solutions for the companies and from the positive side open mindedness of Lithuanians for using ICT in their everyday work.

**Keywords:** *information technologies, business management, logistics, marketing*

## 1. Introduction

In the last decade, great changes were brought about in many business areas, including manufacturing industry and retail trade, by the use of information technologies. ICT resources are used everyday in the areas of Accountancy, Marketing/Sales, Finance Sourcing/Supply, Production Planning and Human Resources management. The biggest perspective is seen in production related areas which are at the moment too much focused on cost-saving issues and customers service [1–4].

## 2. ICT Survey

The ICT survey in Lithuania was performed at 2007. The survey aims were to reflect the use of ICT as interface between the private and public sector. It is also intended to describe the existing ICT infrastructure and services in the Lithuania, revealing up to what extent they meet with the companies' needs for further business development.

Near half of the respondents represented micro-sized companies. 35 % were small companies, 15 % medium-sized companies and only 7 out of 85 respondents – 8 % – represented large companies. The distribution of respondents between Senior-, Middle Management and operational staff is almost equal (~30 %). The predominance of the Senior Management responds to the dominant representation of micro-sized companies, where one of few employees is often owner or manager.

The manufacturing industry is represented by 25 % of the responses; 20 % are from the trading industry, and 22 % represent other industries. Logistics service providers represent 32 % of all respondents. The ICT survey was intended to cover sectors/industries that have an overview about everyday use of ICT means and developments in the companies; therefore the identical distribution among the different sectors/industries is an advantage.

## 3. Findings from the Surveys

65 % of the respondents assure that most of the company employees (>75 %) have access to Internet and 57 % have accordingly provided most of their employees with a company e-mail account. Less than half of the employees have access to Internet in 22 % of the companies and a considerably small group (18 %) of the companies has provided less than 25 % of their employees with a company E-mail account.

**Use of ICT systems.** ICT usage and Internet access is constantly monitored in Lithuania and has been highly appreciated at an international level. According to a TNS Gallup survey, 95 % of the companies in Lithuania have Internet access and at least one computer, although the use of the possibilities of e-commerce and e-business is not too common.

The relative contradiction between the high level of Lithuanian companies with Internet access and employees not having access to it can be explained by the division of industrial sectors shown in Figure 1. All companies in Lithuania determined that ICT means to be available mainly in the offices and among white-collar

workers, not in the plant or next to the counter. Still, the rate of Internet access in the companies can be considered high, and the access to company E-mail accounts acceptable.

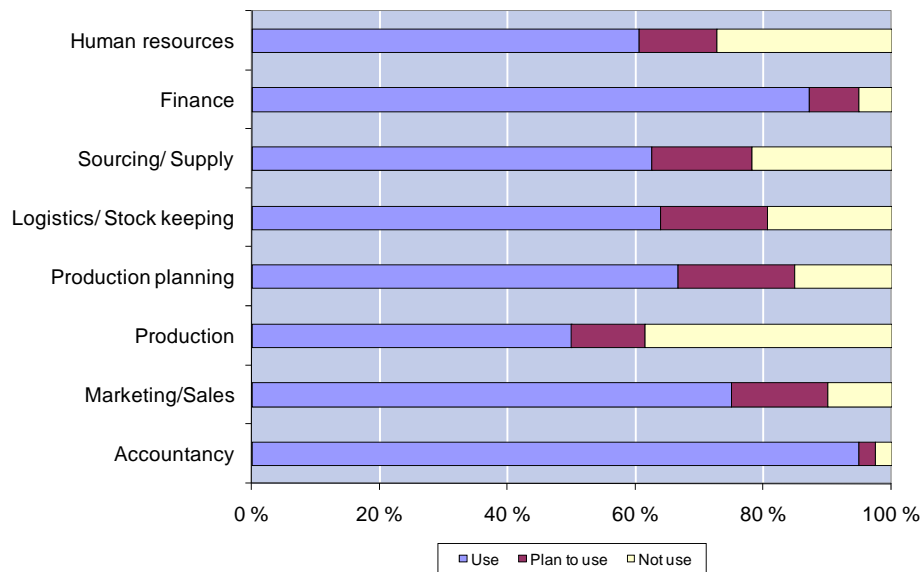


Figure 1. On which areas of business the companies are using ICT

The main business areas where ICT is used are Accountancy (close to 95 %) and Marketing/Sales (~75 %). In Finance ICT usage is over 85% and in the Sourcing/Supply, ICT usage is also over 60 %.

65 % of the companies use ICT means in Production Planning and just over 60 % in Human Resources. But at the same time, these are the business areas in several companies where the plans to start using ICT is the highest. The high usage of ICT means in the areas of Finance and Accountancy is not surprising, due to the high level of public services available via electronic channels in Lithuania – especially concerning the report of taxes and other financial/economical data compulsory to the companies. Also, the increasing usage of Internet in Lithuania is a key factor in high level Marketing/Sales activities done with the help of ICT. Companies have realized the importance of being visible in the Internet. Low usage of new solutions in Production (~50 %) and its related areas is also very typical for Lithuanian manufacturing industry which is still based on subcontracting and low price advantage, but the need for change is acknowledged. Close to 60 % of companies are using ICT for the management of the Human Resources, while 15 % are planning to use it. The number of companies planning to start using ICT in some of the areas is quite high, which shows that companies are informed about the possibilities and are willing to use new solutions.

From the survey we can deduce that there is high-competence among IT companies in Lithuania, who can implement modern IT software for other companies (logistics, trade). Regarding the outcomes, this still remains an open question: from one point of view, it is good because companies can implement specialized IT in their own field of activity, but from another point of view, IT specialists in many cases do not have enough knowledge about manufacturing, trading or logistics particularities, so that the implemented software does not completely satisfy the clients needs.

The overall trend shows that ICT expenses in the responding companies is less than 2.5 % of their turnover – this is the case in about 50 % of the companies, while another important proportion spend between 2.5 % and 5 % of their turnover for ICT. It is clearly shown that the least expenses are made in IT personnel and the same amount in the software and hardware (Fig. 2).

Many small companies exploit the knowledge of the younger generation generally capable of solving simpler ICT issues. Close to 75 % of the companies spend less than 2.5 % on personnel, which shows that most of the companies have very small departments or just one person employed in IT. The situation with software in Lithuania has progressed in recent years, but little expenditure in software is still an issue which comes from the society's relative tolerance towards illegal software (70–80 %). The companies also upgrade their software rarely, and usually buy new software with new hardware when the old computers are unusable. Very little is spent for special solutions developed according to the companies' own needs, and most of the software among micro-sized companies is for home-use.

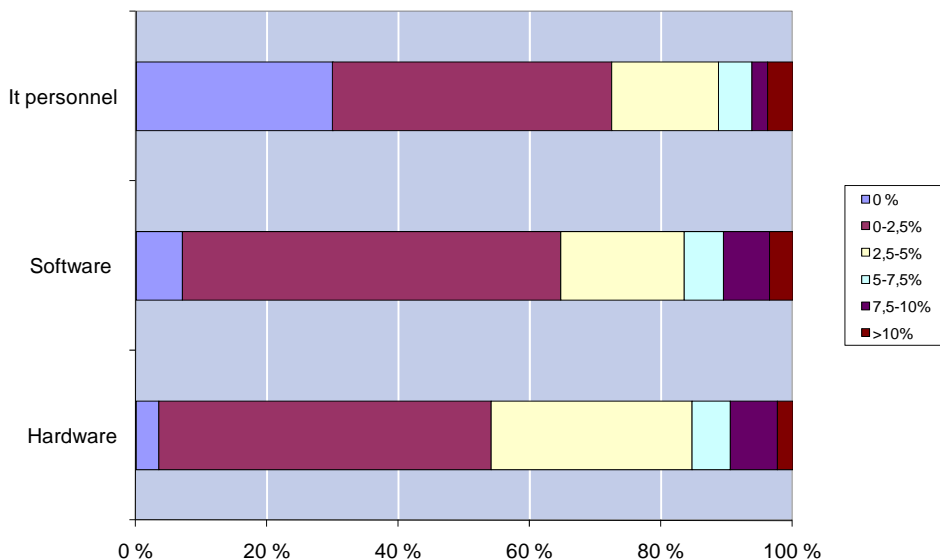


Figure 2. ICT expenses as a percentage of company turnover

**Use of Internet.** Over half of the respondents connect to Internet via modem; another 15 % have a broadband connection. Connections are state-of-the-art and correspond to the needs of the companies.

Concerning this question, terminology and knowledge may be an issue since the respondents are not qualified IT specialists and judge the connection type based on the very end of the line coming straight to their computer (modem needed even in the case of broadband, especially in private use, which is the case of most micro companies). The survey also covered the issue of the use of websites by the companies. 71 % of the respondents have a website, and 50 % of these sites are managed by IT service providers. For Lithuanian companies it would be useful to distinguish between “content of website” and “Design software” issues. Very often, small companies buy a ready-designed layout of the website and CMS (Content Management System) software to ensure independence from the providers and be able to administer the website content themselves.

Websites are generally used for marketing purposes – in over 80 % of the cases it is possible to find product/service information and also general information about the company. Contact/feedback forms are also common, but other information, such as online job application forms are quite rare. It is not surprising, considering that most of the respondents are SMEs, where the rotation of employees could be rather slow and therefore the need for this kind of application is also low (Fig. 3).

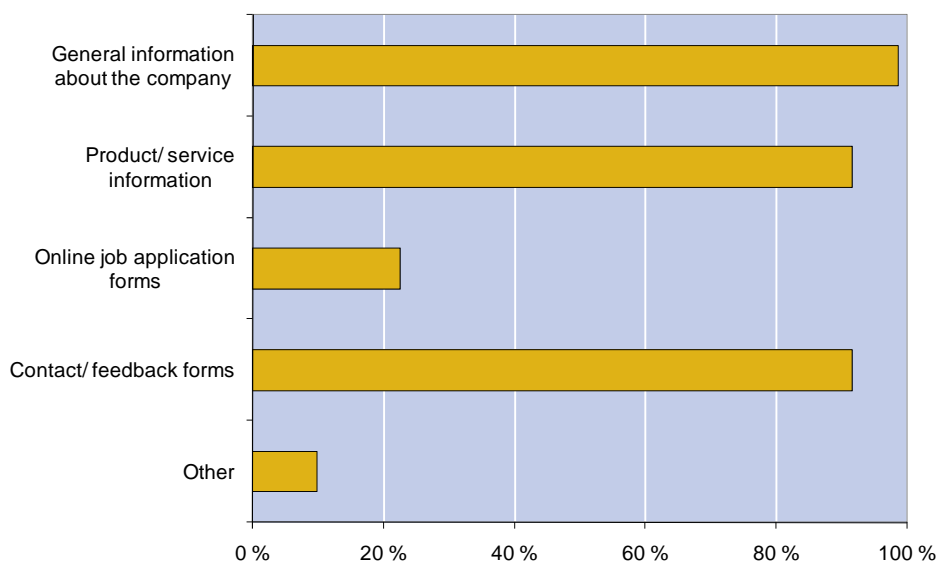


Figure 3. Different type of features that the company website includes

Over 50 % of the respondents use Internet to obtain information or complete/send online forms (Fig. 4). A high rate of online form usage is a result of a systematic e-Government development in Lithuania as it is

compulsory for the public institutions to accept digitally signed or any other type of electronic documents. Making online payments (over 50 %; third in importance) is explained by quite high internet banking rate in Lithuania. 18 % of the surveyed companies do not use Internet at all for communicating with public authorities.

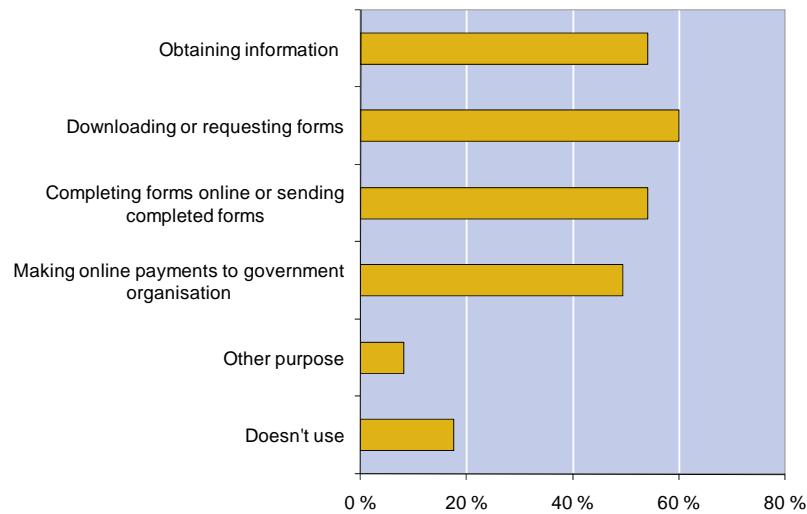


Figure 4. The different purposes companies use the Internet to interact with public authorities and government organisations

**E-commerce/E-business.** The importance of E-mail communication for Lithuanian companies is very high.

Traditional means like personal visits are used in over half of the companies simultaneously. Regular post is used approximately in 40% of the companies.

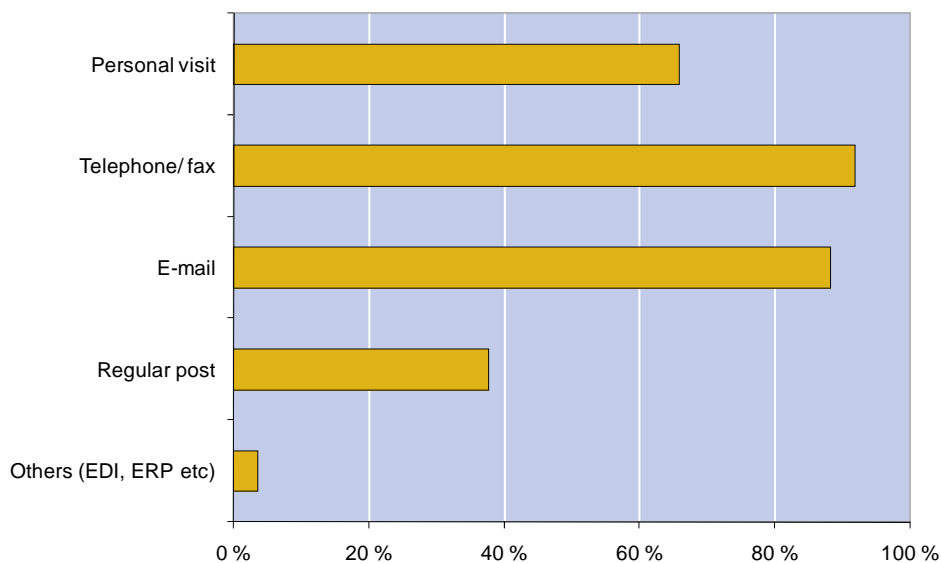


Figure 5. The type of communication methods the organisations use when communicating with customers and suppliers

Other possibilities are used rarely as they need special technology/software and training. Developing a special system just for the company is not considered reasonable among SMEs, but may be the case among large companies.

The survey identified that there is no remarkable difference in demands either from the customer or the supplier side concerning order placement or payment possibilities status. Both are commonly used among respondents and explainable by high level of E-mail and Internet banking usage.

There is more business handled electronically with suppliers than with end-users and customers. The low share of E-business with customers is a result of underdeveloped e-commerce systems and also national legislation and protection. Internet trading has not yet gained enough credibility among the people so that the companies would be willing to invest in developing Internet shops and other means for E-trading. The

development of e-commerce is seen similarly from the customers and the supplier's side. In both cases, about one third believes that the share will remain the same, and two thirds have prepared themselves for the increase.

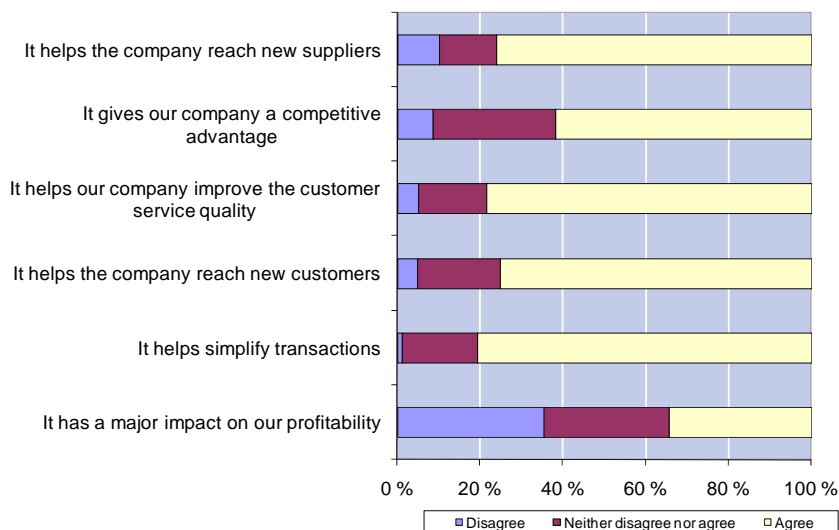


Figure 6. Companies views on the importance of e-commerce

Companies believe E-commerce has a significant effect on several perspectives of doing business (Fig. 6). The most important one is helping to simplify transactions and therefore speed up different processes. Nearly equally important are the opportunities of reaching new customers or suppliers and improving the service quality offered to the customers. The respondents do not agree that strongly about the competitive advantages and profitability e-commerce creates, but still about 30 % have a positive attitude towards this perspective.

#### 4. General Assessment of ICT Usage

The biggest and only barrier companies see on using Internet concerns security issues. Expenses on the development and data exchange are not seen as problems. Surprisingly neither is web surfing nor lost working time seen as problems concerning the use of Internet. There are no obstacles at all seen on the use of e-commerce solutions.

Payments and contractual issues are areas where providers of Internet banking or even the government have done the best job, reflecting a very high satisfaction amongst the users.

There are quite a few barriers on ICT use in general. Too high ICT expenditures, too many new software versions and updates, supply of ICT not matching the needs of the companies and difficulties to recruit qualified ICT personnel, are the main perceived barriers. Survey results also confirm another positive conclusion – the managers of Lithuanian companies are willing to use new solutions so that the reluctance of the personnel is not seen as an obstacle at all.

#### Conclusions

1. About 65 % of the respondents assure that most of the company employees (>75 %) have access to Internet and 57 % have accordingly provided most of their employees with a company e-mail account. The main business areas where ICT is used in the companies are Accountancy and Marketing/Sales; only a few use ICT in production-related areas, but they are planning to start using it soon.

2. One third of the companies regularly monitor their ICT costs and performance internally. Also, 37 % of the companies follow the same indicators on a client basis. Benchmarking is substantially less used, which may indicate that there is either no benchmarking information available, or the companies do not see the benefits of carrying out this analysis.

3. Websites are generally used for marketing purposes – in over 80 % of the cases it is possible to find product/service information and also general information about the company. Contact/feedback forms are also common, but other information, such as online job application forms are quite rare.

4. The pressure coming from both customers and suppliers concerns online order tracking, which is forecasted to develop the most within the next three years, and most likely will demand investments. Some possibilities for further development are seen in After Sales support which concerns more suppliers than customers.

5. The development of e-commerce is seen similarly from the customers and the supplier's side. In both cases, about one third believes the share will remain the same, and two thirds have prepared themselves for the increase. The simplification of transactions, the opportunities to reach new customers or suppliers, the improvement of the service quality are some of the benefits the companies perceive from e-commerce.

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