

Electronic Services Delivery

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Abstract

This paper deals with Electronic Services Delivery, a form of Electronic Commerce in Services Sector. Firstly, it defines Electronic Commerce and Electronic Services Delivery and secondly, it presents the Current State of either both in Slovenia and in the World. The second part of the paper briefly presents the most interesting findings of an electronic Services Delivery and Electronic Commerce survey, exploring the current Electronic Services Delivery situation among the target group population in Slovenia. At the end, there are some recommendations to the organizations and to the government considering EC and ESD development.

Key Words: *Electronic Commerce, Electronic Services Delivery, Internet, Survey*

1. Electronic Services Delivery

1.1 Terms Definition

Electronic services delivery is a form of electronic commerce, electronic commerce in Services sector. The Term is commonly used in connection with government services, but it refers also to the banking, insurance, tourist, entertainment, education and some other services, which can be delivered electronically (Clarke, 1999b).

Dependent on the number of organization - services providers, we speak of single- or multi- Organizational ESD. First, organizations used the ESD technology to get closer to their customers by providing the existing services in a more efficient way. They saw the customers' needs only through the perspective of their existing

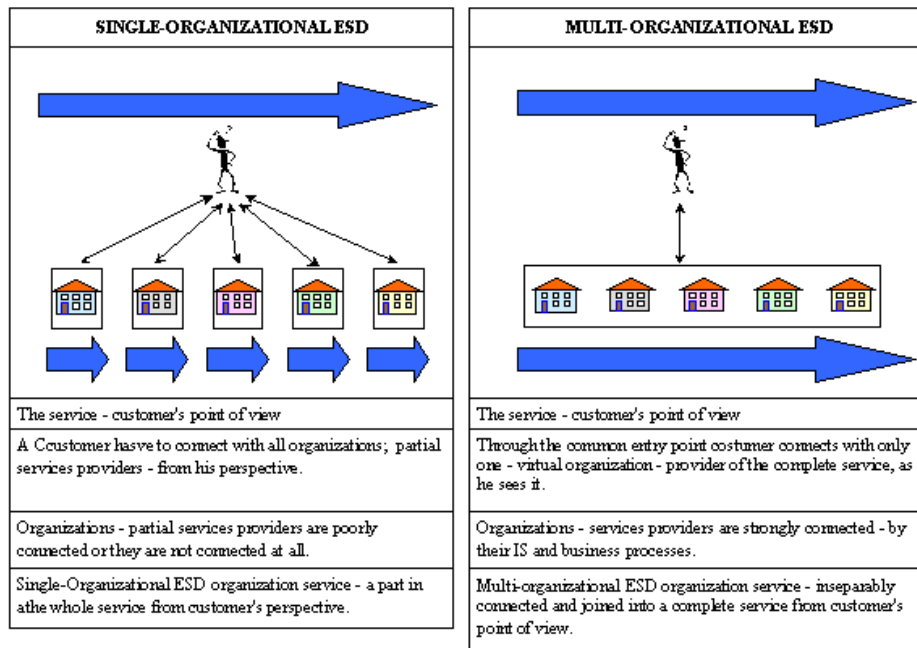
services. Single-organizational ESD can be efficient solely when the ties between the services provider and the customers already exist, when the customers know the organization and they use its services independently of the similar organizations' services. However, the organizations are not set up to support some process or service from the customer's point of view as a whole. Services they provide usually form only a part of the whole service from the customer's point of view. Organizations are organized to provide services as it suits them, and in consequence, customers have to connect with more than one organization and use their partial services in order to get the complete service they need. Often, especially by government services, customers have to search for the appropriate organization in the swamp of numerous offices, agencies, funds etc, which are organized in three or more levels of administration, and which, quite frequently, don't even know about each other, although they provide parts of the same services. Single-organizational ESD leads to mismatches between the customers' needs and the services providers perspectives.

The idea of multi-organizational ESD is, simplified, the following: why should the customer know all organizations on different levels and even the necessary order of connecting with them to obtain a complete service, for instance a building-lease? Should he or she really desperately and painfully fish in the ocean of institutions to hook the right organizations and try to puzzle their partial services into the desired service with a capital S?

Definitely not! Let organizations - services providers - organize themselves around such complete services, build a common entry point and offer services as customers see them. In the background they may still connect with each other and furl their partial services, but that does not concern the customer.

Multi-organizational ESD means to use the ESD technology to overcome mismatches between market segment needs and provider segment perspectives (Clarke, 1999b). Today customers have to overcome these mismatches by themselves, or by hiring business advisors, accountants or lawyers, which both cost time or money.

Awareness of the need for multi-organizational ESD in the government agencies and public sector is high; everybody knows that such complete services oriented entry points can assist business in a much more efficient and cheaper way - although maybe not in the beginning. It certainly helps that the new technologies, internet and electronic commerce, are "in," and that politicians see them as an opportunity, where they can do pretty much in relatively short time of their mandates. The fact that the private sector develops ESD solutions quite as fast as government and public administration organizations (see the survey results) shows that ESD lowers costs and brings instant profit not only to the Services consumers but also to the providers, despite relatively high initial costs.



Picture 1: Single- and multi-organizational ESD

An entry point or a portal should be designed to service the needs of different market segment through the specific market segment oriented channels (Clarke, 1999b). An entry point ought to be a reliable destination for all market segments, which means that in the design phase they should be considered equally. No specific market segment (our organization users) should be more important than others if that goal is to be achieved. Of course, services providers must apply common standards on the level of the entry point.

Although the web certainly is the most important distribution channel the others must not be neglected. Internet penetration in Slovenia is about 25% (RIS, 9/2000, www.ris.org), which suggests that in some cases, where the target population is wide, additional distribution channels, for instance WAP or GPRS mobile commerce solutions, interactive kiosks, IVR, interactive TV and others, should be activated (Multimedia Victoria 21, 1999).

Multi-organization ESD brings many challenges. Organizations first have to realize the advantages of participation or even initiation of such a feat. Significant problems in the fields of cross-organizational coordination and projects management, common standards adopting, heterogeneous hardware and software systems connecting demand enormous efforts to be satisfactory and timely solved. To achieve the common goal organizations must sacrifice some autonomous projects that wouldn't fit in the common frame. Employees and especially managers

must confront their fears, adapt to the changes and accept them. Obsolete statutory limitations can also slow down the enterprise (Clarke, 1999b).

The true value of the ESD is not only in the capability of providing services electronically, even more important is the establishment of the technology, which will empower providers to simply launch the new products (Multimedia Victoria 21, 1999,2, Department of Human Services, 1998, 2-6).

1.2 Electronic Services Delivery in the World

Australia is a three tiered federation of States and Territories with many agencies and other services providers. Consumers hardly navigate between different subjects with commonly overlaying domains. Australian government at all three levels started to work on the EC and ESD initiatives in wide variety of activities, such as procurement, payment, task collection, claims processing, general administration, social administration, etc. The Internet explosion strongly boosted this development. From hundreds of Australian government's ESD cases let's take a look at the Victorian Initiative (Jonas, 1999, 64-71).

Federal state Victoria started the ESD initiative to provide its citizens with the possibility to consume government services electronically and to ease and simplify the citizen to administration communication process. ESD is consumer-centered in contrast to Ordinary administration, which is prevailingly agency-centered. To implement such a model, designers choose the 'life-event' approach to the government services. So consumer only has to know, what happened to him or what he wants to do, and not which agencies or offices he needs to interact with, or which documents he must apply for. Examples of life events: to move, turn 18, to buy a car, to have a baby, to become unemployed, etc.

Different services are provided to different consumers through several channels; like citizens channel, business channel, land channel, health channel, tourism channel, education channel. G8 countries forum nominated the Victorian ESD initiative for the best of its kind. (Jonas, 1999, 64-71).

European countries are paying more and more attention to ESD. Numerous EC and ESD campaigns and services accessibility spread to all social groups have been started (Epolicy, 2000, www.ispo.cec.be/ecommerce/epolicy.html, Uncitral, 1998, www.uncitral.org, and others).

Of course, also the USA administration achieved some important successes by implementing ESD initiatives, both on federal and state government levels (De Conti, 1998, 1-7). Beside the above mentioned, there are many well-known and excellent ESD Initiatives in public administration, tourist agencies, insurance companies, banking, media and others.

EC and ESD grow exponentially. The global EC market value is estimated to reach more than 6300 billion \$ in the next three years. Three out of five US companies do their business electronically, the fourth is developing EC solutions. More than 80% of technology businesses are engaged in EC (PriceWaterhouseCoopers, 2000b).

Europe is slowly reducing its arrear behind the USA. Europe's most important comparative advantage is high penetration of mobile telephony with unified standards, what is an excellent opportunity for high-speed mobile commerce development. Better dynamics in EC and ESD development is also shown in Asia and Latin America. Therefore the USA share in the global EC revenues is estimated to drop in the next two years from 69 to 59% (eMarketer, 2000b).

The Scandinavian companies lead the way in terms of the percentage of total corporate sales attributable to the Internet; the UK and then the Italian companies follow them. That there is still some way to go before e-commerce dominates business dealings, is demonstrated by the fact that 37% of respondents said none of their sales were attributable to the Internet (corresponding figure for 1998 is 55%).

The average percentage of total corporate sales attributable to the Internet is 4.3% – up from 2.15% a year ago. This represents a 100% increase. In the leading region - Scandinavia, the percentage is more than twice as high (8,6%).

Over the last three years, 71% of respondents had launched a new product or promoted the existing one using e-commerce technologies. The most significant finding is that almost a fifth of all respondents had launched a product that could only be provided over the Internet (KPMG, 2000).

The number of financial services institutions in the United States may shrink by 75% over the next 5-to-10 years. The change has been underway since the early 90s. There has already been a 40% reduction in the number of banking institutions in the U.S. since 1990 (PriceWaterhouseCoopers, 2000a).

1.3 Electronic Services Delivery in Slovenia

In Slovenia we also know some successful ESD Initiatives. Slovenian Custom Administration substituted almost entirely the traditional duty declarations with their electronic successors (Košir, 1999, 138). The Health Insurance Institute introduced the health insurance card - a smart card for every insurant, which is an effective tool for communication between insurant, doctor, apothecary's shop, hospital and health insurance Institute (Košir, 1999, 161). The Payments Agency (ex monopolistic intermediary for domestic payments operations between business subjects) offered its first service in electronic way in 1996, since then the number of electronically provided services has increased. The whole payment order / received payment receipt / payment execution / payment execution receipt cycle lasted for three days in its traditional paper form; electronically processed it lasts about one hour (Brence, 1999, 72-80).

Among the most propulsive electronically services providers are banks. Slovenian banks offer most of their services electronically. They named their ESD or electronic banking systems differently (SKB Net, BANKA Net, Klik,...). However, the financial effects of ESD are not encouraging. The main reasons are probably the small size of the banks, poor level of cross-bank cooperation willingness and relatively low system conditions level for ESD development in Slovenia (Cetinski, 1999, 151).

There are many more interesting ESD initiatives in Slovenia, operative ones and under development. Let's mention, for instance, insurance companies, tourist agencies, libraries, media companies, emerging WAP services and other projects. The Slovenian government even established the new ministry for information society, which should play an important role by accelerating and promoting EC and ESD Initiatives.

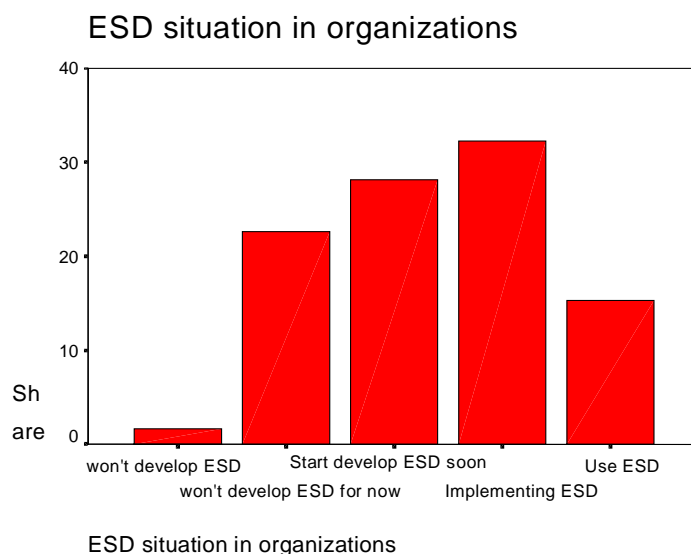
2. The Electronic Services Delivery in Slovenia Survey

The survey was carried between the random sampled organizations from the ESD target group population. It took place from January 28th to March 11th 2000. 307 organizations were invited, 127 of them participated. The response rate was 41,37 percent.

2.1 The Survey Findings Summary

➤ Demographics

- 58,3% of respondents stated public administration as their primal business activity, 14,2% tourism, 10,2% culture or education, 3,9% social care, 3,2% jurisdiction, 2,4% banking, 1,6% insurance and 6,3% of respondents stated other primal business activities.
- 44,9% of respondents employed from 10 to 50 employees, 24,9% 1 to 10, 13,4% 50 to 100, 9,4% 100 to 200, 3,1% 200 to 500 or more than 1000, and, finally, 1,6% of respondents employed 500 to 1000 employees.



Graph 1: ESD situation in respondent organizations

➤ **ESD situation in the surveyed organizations**

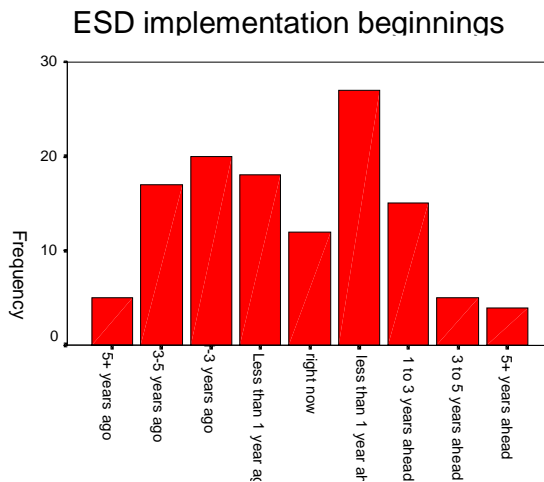
15,3% of respondents provide their services electronically. Almost twice as much (34,6%) of them use electronic commerce.

76,4% of respondents are already using, implementing or they will soon start to implement ESD solutions. 22,6% of respondents won't implement ESD for now, 1,6% of respondent organizations don't have any intentions to implement ESD into their companies.

➤ **The ESD development pace considering the implementation time**

48,2% of respondent organizations have already started to implement ESD solutions, 9,8% were going to start right during surveying, 22,0% intended to start in a 1 year time.

46,4% of respondents have started or will start to implement ESD solutions in minus/plus 1-year time interval. Thereby it can be concluded that the share of the organizations that use ESD solutions will grow fast in the near future.



Graph 2: ESD implementation beginning

➤ **The Influence of the ESD implementation on business processes, services accessibility and usage**

71,9% of respondents, who have implemented ESD solutions to the point that they could judge its effects, stated that the ESD solutions implementation improved their business.

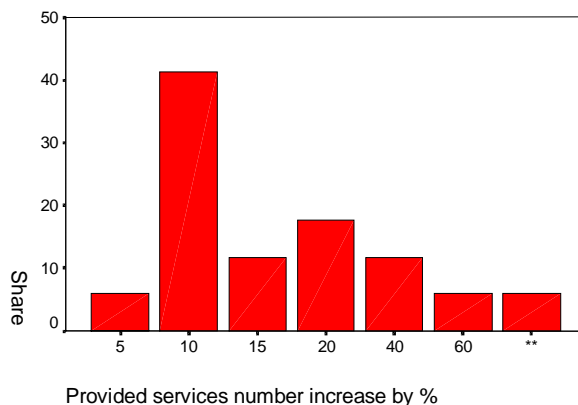
The typical increase rate of the provided services number due to ESD implementation is 15%.

The typical increase rate of the services consumers number due to ESD implementation is 10%.

Typical estimate of the increase rate of the potential services consumers number due to ESD implementation is 20%.

ESD implementation improves business, services accessibility and usage.

Provided services number increase



Graph 3: Provided services number increase after ESD implementation

➤ Respondents' EC and ESD security risks perception

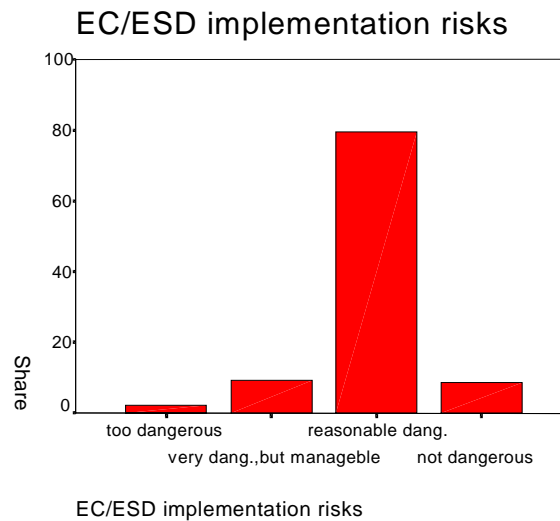
79,5% of respondents believe that the EC and ESD risk regarding the data and IS security are reasonable - if the right approach is chosen. Only 2,4% of respondents stated that the risks are too high. Respondents show no or little irrational fears, therefore it can be concluded that they are highly sensible of the EC and ESD realities.

66,7% of respondent organizations have implemented or were implementing EC and had no security problems, however, 8,3% of respondents who have implemented EC were confronted with security troubles. Only 0,8% of respondent stated that they haven't implemented EC because of security risks fears.

The typical respondent organization has implemented or was implementing EC and has no security troubles.

Although almost every tenth organization encounters some security turbulence, the security risks fears are relatively low importance factor of EC and ESD non-implementation.

EC and ESD security risks opinions are correlated to EC and ESD situation in organizations. Respondents who better know EC/ESD have less fear of security risks.



Graph 4: EC / ESD implementation risks

➤ **Attitudes toward ESD implementation necessity and benefit estimates in organizations with implemented ESD solutions**

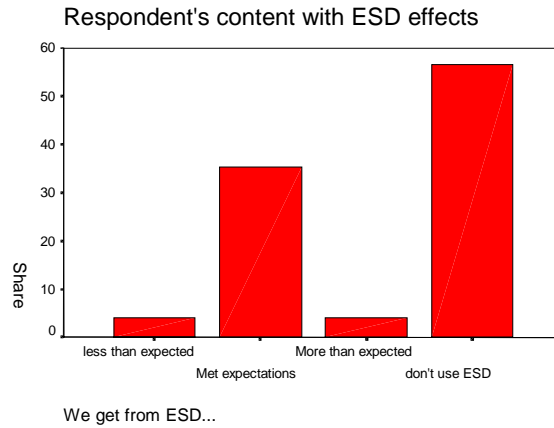
83,3% of respondent organizations feel their key service providing over the Internet would be useful or/and necessary, while 4,6% find it unproductive. Typical respondent believes that the ESD implementation in their organization was (is) useful or necessary. It can be concluded that respondents fully realize the utmost ESD importance.

The respondents who developed the ESD solutions to the point that they could make their satisfaction grade estimates were prevalently content with ESD. 81,1% of respondents feel that ESD met their expectations, by 9,4% of respondents received from ESD more and less what they had anticipated.

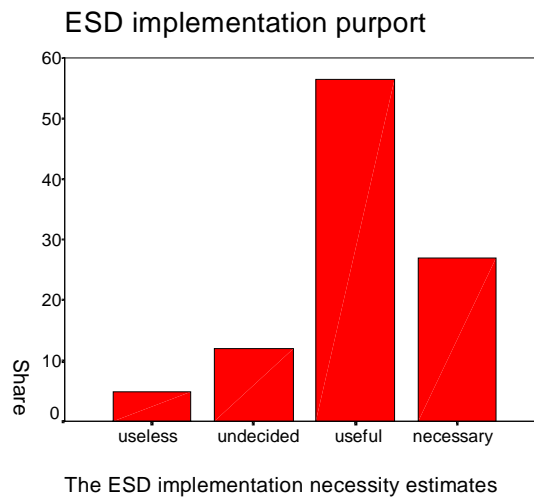
Organizations prepare themselves for the ESD implementation thoroughly and therefore they cherish very realistic prospects of it, which can become real.

53,2% of respondent organizations invest in ESD not to fall behind the competition; 11,7% expect to get the leading role in the market. On the other hand, 13,0% of respondents don't invest in ESD and they think it won't worsen their competitiveness.

The fact that the main ESD investments motive is the fear not to fall behind the competition, leads to the conclusion that ESD development in Slovenia has already reached the phase when organizations can't get the leading market position simply by ESD solution development. However, they can deteriorate their situation seriously by inactivity.



Graph 5: ESD implementation purport estimates



Graph 6: Respondent's content

➤ **Differences between groups of organizations**

No statistically significant differences were found between groups of organizations (formed by several factors, for instance public - private, big - small, etc) regarding the research questions. Therefore it can be stated, that the sample of respondent organizations is pretty homogeneous, despite its diversity.

➤ **Limitation statement**

The survey results (EC:ESD relationship) should not be generalized to other countries without further research on eventual general connections between EC and

ESD. The findings value to the international readers is mainly informative, to look at the ESD and EC situation in Slovenia.

3. Recommendations

3.1 Recommendations to the Organizations

Don't delay!

Only 18 percent of the surveyed organizations haven't yet started with the ESD or EC solutions development. Don't sentence yourselves to the role of tomorrow's losers! An immediate start doesn't assure you the leading position, but maybe it can provide you with the ticket for one of the last cars of the survival train.

Get ready for the change of all changes

Before you start developing ESD you should be aware of the fact, that if you do it well, nothing will be the same as it was before. Namely, you will turn the business processes upside-down, make them better, cheaper, more transparent and flexible. You and your collaborators will get accustomed to the idea that the only certainty in the future is the turbulence of persistent changes. However, if you are 'the right men (and women) for the job', this will make you feel good. In the whirl of changes there are both, danger and opportunity. The good ones choose opportunity.

Demand integrity

Don't be satisfied with presentational web sites and pay on delivery selling. Technology for on-line transactions is mature and present in Slovenia too - use it - squeeze the EC and ESD potential to the utmost. The ESD investment pays back quickly only if you gain all the profit you can, therefore half - way ESD approach can be very expensive.

Look around

Before you decide for an EC or ESD solution use the Internet and look to the competition all around the world. Fastidiously choose only the best, since today's most advanced solutions will tomorrow be just good enough.

Think like you were a customer

Forget your organization's structure and business process when designing the ESD solutions. Put your self into the role of your customers and bring the solutions that will be close to them.

Combine complementary solutions

If you decide to develop an ESD solution and you know that the complementary service providers exist, invite them to the project. Common development will be

cheaper and, far more important - customers will be delighted with the common entry point where they will be able to get different related services.

3.2 Recommendations to the Government

Upgrade EC development strategy with the ESD concept

The government should renew its EC development program and include the concept of ESD. By implementing EC solutions into its agencies it should derive from the services consumer needs instead of the public administration structure. The government should focus its efforts on the central multi-organizational ESD government entry point with different channels, designed to satisfy different needs of the specific market segments. A citizen who would like to, let's say move, won't have to know to which government agencies he or she will have to communicate. They will just choose the citizen's channel on the government entry point, click the 'move' button and fill in an e-form. All the necessary communication between different agencies will run in the background; the citizen will get all the services that the change of the place of living requires without any additional effort. Similarly, through the organization's channel, companies will be able to use complex services, provided by different agencies, etc.

The ESD development expansion

In the next step, the government should form consultant teams who will spread the ESD concept over the so called 'semi-public' organizations, like institutes, agencies and other providers of public interest services, which are not directly engaged into the first phase of the government ESD development program. These organizations should join the government program and enrich the common entry point with new services. Under appropriate conditions the government could also entirely include into its program the commercial services providers who could help to finance the program and, at the same time enrich the services collection.

The Services distribution channels extension

After the public administration ESD is developed to the point where it's widely applicable, the government should think of how to increase the usage of electronically delivered services. Besides the Internet on the customer's PC's at home, in the libraries, cyber cafes and at work, interactive kiosks and automates, where the users who don't have access to the internet could use electronically provided services should be built. However, the Internet must not remain the only distribution channel; other options like WAP, GPRS, UMTS and similar mobile phone protocols, IVR, interactive television and other possibilities should be considered and used.

The widest Internet usage incentives

The Internet usage program shouldn't stop by EC and ESD promotion. The Internet usage means education, and its widening can be seen as an investment

in the knowledge and in the future. Slovenia needs an integral program, which will enable all citizens to access the Internet at a low cost. Specific attention should be paid to the most vulnerable groups of citizens, for example poor, older, undereducated, who are facing the threat of technologic revolution avoidance.

4. Conclusion

The Electronic services delivery is an important electronic commerce segment. Almost every second a respondent starts to implement ESD solutions and every sixth respondent organization already uses them. The share of the organizations which use ESD solutions will raise steeply in the next years since in the plus/minus one year time interval almost every second organization started (will start) to implement ESD solutions. The ESD implementation improves business, believe more than 70 percent of the respondent organizations, based on their own experiences.

ESD is an important development factor; not only for its direct effects, but also because of the new technology usage impulse it sends to all groups of the population. The need for the comprehensive organizations connecting, combining their related services and reorganizing business processes in order to approach the customer's point of view is the matter of greatest importance too. It seems the organizations in Slovenia are pretty much aware of these questions. Therefore they are developing ESD solutions at accelerated pace. However, the government has to support their efforts strongly - with the establishment of an entirely new Ministry for the Information Society it looks like the government is serious about that too.

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