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eBusiness in Enterprises in Slovenia and EU-27, 2004-2008

Ljubljana, February 2010

FOREWORD

eBUSINESS IN ENTERPRISES

Nowadays it is almost impossible to imagine enterprises that do not use information-communication technologies (ICT) in their business operations, for example for receiving or sending orders, e-mails or for managing administrative affairs with the help of eGovernment services or carrying financial transactions via e-banking. In order to use the mentioned services, enterprises need appropriate information-communication infrastructure and hardware and software.

With the purpose to stimulate economic growth and employment in Europe, the European Commission on 1 June 2005 adopted the i2010 strategy with the following priorities:

1. to create a Single European Information Space;
2. to strengthen investment and innovation in ICT research;
3. to support inclusion, better public services and quality of life through the use of ICT

and guidelines:

1. to expand and improve European infrastructure;
2. to promote innovation;
3. to enable flexibility of work (telework);
4. to stimulate education in regard of new needs of information society.

The stated i2010 strategy is applied within the EU, and the results of the strategy and progress have been measured since its adoption by a uniform statistical survey on the usage of information-communication technologies in enterprises. The Statistical Office of the Republic of Slovenia (SORS) has been conducting the survey since 2004.

With the survey the Statistical Office of the Republic of Slovenia gathers data on core indicators (i2010 benchmarking framework) and information on the influence of ICT in their enterprises on their operations. These are mainly data on:

- the equipment of enterprises with ICT (computers, access and types of Internet connections, usage of computer programs);
- the usage and intensity of usage of ICT in enterprises (why enterprises use the Internet, certain software);
- the influence of ICT usage in enterprises on business operations, income, development of new products and services and on the release of personnel and of financial recourses.

Besides the core indicators, certain questions are added that change annually and relate to certain themes linked to ICT. In the 2006-2010 period the following topics were (or will be) covered:

- 2007 – e-skills and digital literacy;
- 2008 – e-business;
- 2009 – e-commerce;
- 2010 – e-security.

This publication presents the progress achieved by Slovenian enterprises with 10 or more employees in the 2004-2008 period. Data refer to Slovenia and EU-27, together with values for the EU-27 average.

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Director-General

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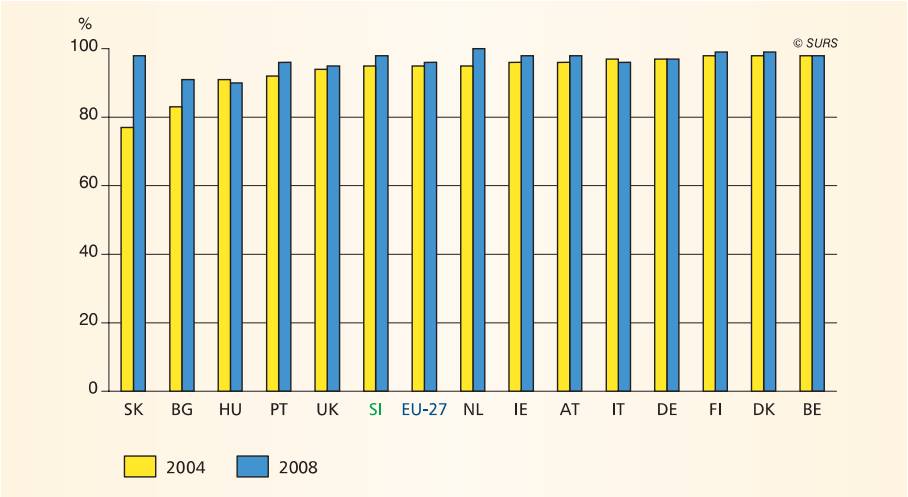


Source: Eurostat

Computers (personal or laptops) are for the users as well as for the service providers basic information-communication technologies. They facilitate automated data processing, storing or data transfer. In 2004, 95% of enterprises in Slovenia were using computers in a bigger or smaller scope; the percentage was equal to that of average usage in EU-27[1]. In 2004 the usage of computers was the lowest in enterprises in Slovakia (77%) and the highest in Denmark, Finland and Belgium (98%).

In the majority of EU Member States and also in Slovenia computers were used in all large enterprises (100%). There were exceptions in Latvia, Bulgaria, Slovakia and Estonia; in those countries 98% of large enterprises used computers. The usage of computers was 98% among medium-sized enterprises in Slovenia; the EU-27 average was 99%; in Austria, Cyprus, Germany, Denmark, Sweden and Finland the usage of computers was the highest in medium-sized enterprises, 100%, and the lowest in Slovakia and Bulgaria 94%. The scope of computer usage in small enterprises in Slovenia in 2004 was by 1 percentage point bellow the EU-27 average (95%).

In the 2004-2008 period the share of enterprises which used computers in Slovenia increased by 3 percentage points, to 98%, and Slovenia thus in 2008 raised by 2 percentage points above the EU-27 average (96%). Computers were used to the largest extent in 2008 in enterprises in Denmark, Finland (99%) and the Netherlands (100%) and to the lowest extent in Romania (80%). In Slovakia the share of enterprises that used computers grew from 77% to 98% in 2008.

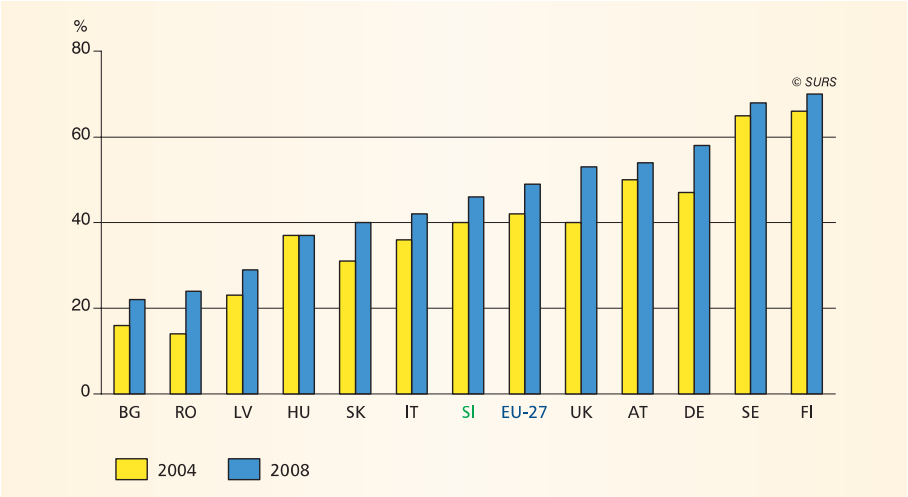
[1] To ensure comparability, statistical data that refer to periods prior to 2007 have been recalculated and are published by Eurostat for all EU-27 Member States.

EQUIPMENT OF ENTERPRISES WITH COMPUTERS AND COMPUTER USAGE IN ENTERPRISES

■ In 2008 the extent of computer usage in Slovenia among enterprises was equal among small and medium-sized enterprises with 98%; in EU-27 95% of small enterprises and 99% of medium-sized enterprises used computers in that year. In EU-27 as well as in Slovenia all large enterprises used computers in 2008 (100%). Slovenia was thus in 2008 lagging behind in the usage of computers in regard to the EU-27 average only in case of medium-sized enterprises.

■ The need for computer usage in enterprises depends to a large extent on the activity of the enterprise. Among enterprises in the activity construction in 2008 the share of those that used computers was the lowest, 91%, while among enterprises in other activities the share was between 98% and 100%.

Figure 2: Share of employees using computers at their work, European comparison, 2004 and 2008



Source: Eurostat

■ Besides the information on the share of enterprises that use computers in their work routine, we also learn a lot from the information on the share of employees that actually use computers at their work. In 2008 in the enterprises in Slovenia 46% of the employees used computers at their work, which is 6 percentage points more than in 2004. Although the share of such persons in Slovenia increased, it was still in both selected years lower than the EU-27 average (42% in 2004 and 50% in 2008); at the same time the lagging-behind in regard to the EU-27 average increased.

■ In 2008 the fewest employees used computers at their work in Bulgaria (22%) and Romania (24%). Slightly more employees than the EU-27 average (50%) used computers at their work in Ireland (50%), the Untitled Kingdom (53%) and Germany and Belgium (58%), and substantially more in Scandinavian countries (Sweden 68% and Finland 70%). The share of employees who use computers in their work routine increased in the 2004–2008 period most substantially in the United Kingdom - by 13 percentage points.

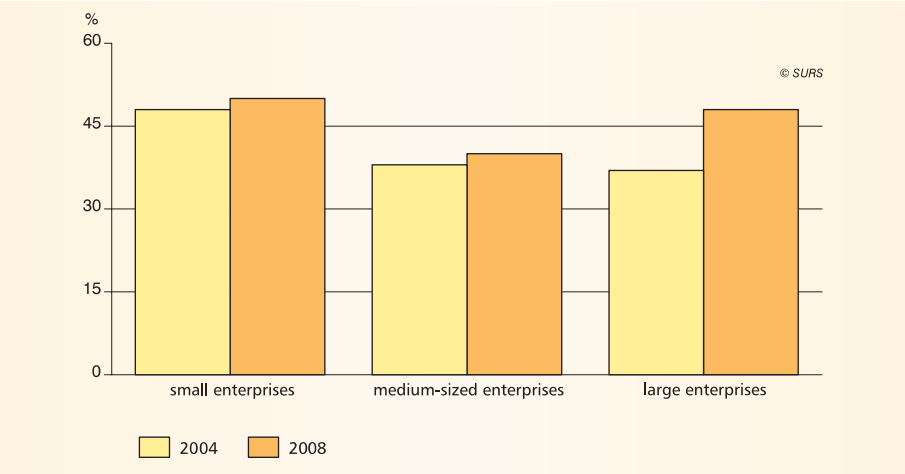
EQUIPMENT OF ENTERPRISES WITH COMPUTERS AND COMPUTER USAGE IN ENTERPRISES

Table 1: Number of employees using computers at their work by size of their enterprises, Slovenia, 2004 and 2008

	2004	2008	Index 2008/2004
TOTAL	**154,722**	**195,594**	**126.4**
Small enterprises	42,131	54,044	128.3
Medium-sized enterprises	42,820	49,932	116.6
Large enterprises	69,771	91,618	131.3

Source: Statistical Office of the Republic of Slovenia

Figure 3: Share of employees using computers at their work by size of their enterprises (in %), Slovenia, 2004 and 2008

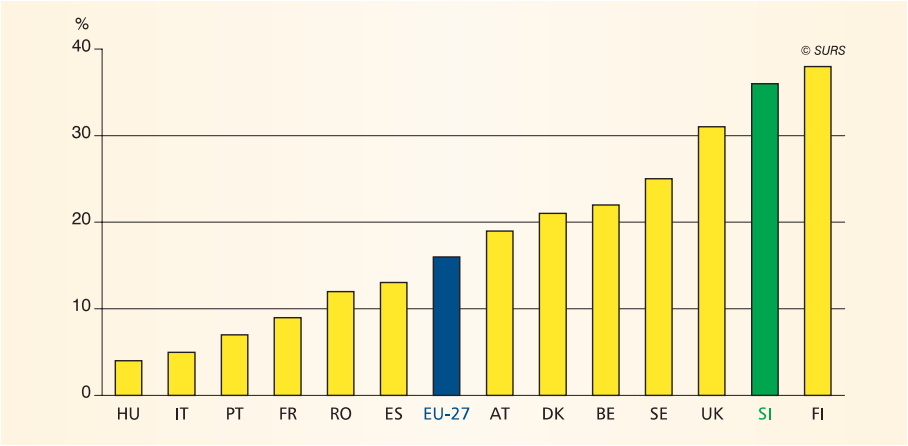


Source: Eurostat

- In the 2004-2008 period the share of employees using computers in Slovenia at their work increased the most in large enterprises (by 11 percentage points, to 48%).
- In 2008 in large enterprises in EU-27 there were 53% of such employees; Slovenia was therefore lagging behind this average by 5 percentage points. In medium-sized and small enterprises the share of such employees increased by 2 percentage points in 4 years: in medium-sized enterprises from 38% (in 2004) to 40% (in 2008) – which was 7 percentage points below the EU-27 average (47%) in 2008, whereas in small enterprises it increased from 48% to 50%. The share of employees using computers at their work was thus in Slovenia the highest in 2008 in small enterprises (50%) and at the same time 5 percentage points over the EU-27 average in small enterprises (45%).
- In Slovenia the fewest employees using computers at their work in 2008 were in the activity construction, 23%, followed by enterprises in manufacturing activities (manufacture of metal, non-metal products), 32%, where manual work prevails, as it does in the activity construction. Computers were used to the largest extent by persons employed in the activity post and telecommunications (69%), by employees in motion picture, video, radio and television activities (84%) and of course by employees in the activity computer and related activities (96%), as the computer is their basic working tool.

EMPLOYMENT OF PERSONS WITH ICT KNOWLEDGE AND TRAINING OF EMPLOYEES FOR ICT USAGE

Figure 4: Shares of enterprises that recruit persons with ICT knowledge, European comparison, 2006

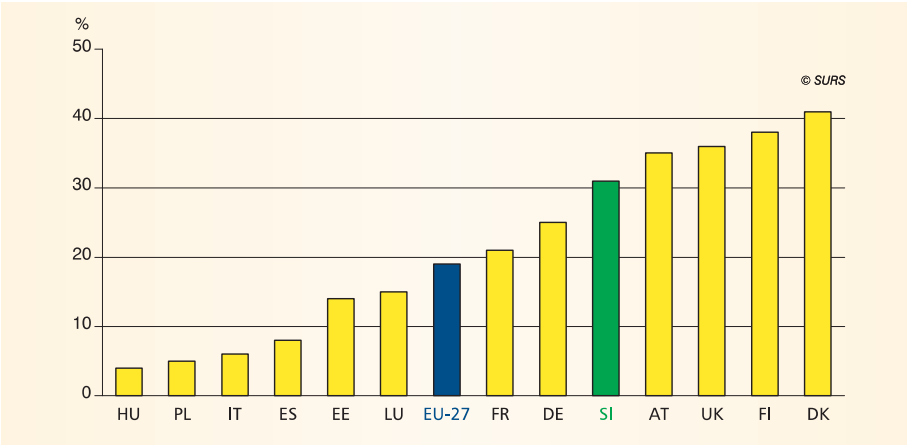


Source: Eurostat

- The usage of quickly developing information communication technologies, especially in the field of software, requires appropriate knowledge and constant updating of that knowledge. It is in the best interest of enterprises to recruit persons with basic or advanced computer knowledge and it is vital that they continually train their employees in the usage of ICT hardware and software.
- In 2006, 36% of enterprises in Slovenia tried to recruit personnel with ICT skills, which is 20 percentage points more than the EU-27 average. Among EU Member States the share of such enterprises was the highest in Finland (38%) and the lowest in Hungary (4%).
- In 2006 in Slovenia inquiries for personnel with ICT skills were most frequently made by large enterprises with 71% of them or 21 percentage points more than the EU-27 average; at the same time this is only 3 percentage points less than in Finland, where such inquiries were most frequently made. Among medium-sized enterprises in Slovenia there were 49% of such enterprises and once again more than the EU-27 average (28%); the share of such enterprises was once again the highest in Finland (60%) and the lowest in Hungary (only 8%). In terms of the extent of employment of personnel with ICT skills Finland ranked first also among small enterprises and was followed by Slovenia (31% or 1 percentage point less than Finland) - the EU-27 average was 13%.
- While attempting to recruit persons with ICT skills some enterprises encountered different problems (e.g. lack of appropriate personnel). The share of such enterprises was the highest in Slovenia with 10% or 7 percentage points more than the EU-27 average of 3% and 6 percentage points more than in Finland (4%). In view of the size classes of enterprises by persons employed, in Slovenia 22% of large enterprises faced such problems during recruitment and also 12% of medium-sized enterprises and 9% of small enterprises.

EMPLOYMENT OF PERSONS WITH ICT KNOWLEDGE AND TRAINING OF EMPLOYEES FOR ICT USAGE

Figure 5: Training of employees for development and advancement of their ICT skills, European comparison, 2006



Source: Eurostat

- By the share of enterprises that in 2006 organized for their employees development and advancement of ICT skills, Slovenia ranked with 31% of such enterprises in the top countries in EU-27 and over the EU-27 average (19%).

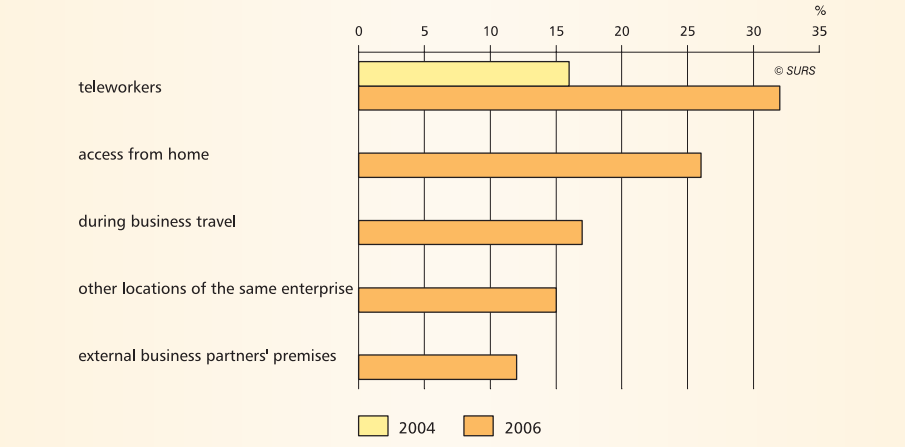
- Acquisition of ICT knowledge and skills was widely organised for their workers by enterprises from the Scandinavian countries (Denmark: 41% of enterprises; Finland: 38% of enterprises), and more modestly by enterprises in Hungary (4%), Poland and Romania (5%) and Italy (6%).

- The percentage of enterprises that provide to their employees training in the usage of ICT also depends on the size of the enterprise (number of employees); in Slovenia in 2006 it was 73% among large enterprises, 55% among medium-sized enterprises and 23% among small enterprises. The same order by kind of enterprises applied also in other EU Member States. The share of enterprises that organised such training was almost two thirds higher among large enterprises than among small enterprises. Thus the share of such enterprises in 2006 in Denmark varied from 79% in large enterprises to 36% in small enterprises.

- The decision of the enterprises to organize training in development and advancement of ICT skills depended also on the needs for such knowledge, on the usage or non-usage of computers at work (also on the intensity of usage) and on the activity of the enterprises. In 2006 training in development and advancement of the ICT skills was organised in Slovenia by enterprises for their employees and the results revealed that over 80% of enterprises organised it in the computer and related activities, more than 50% of enterprises in motion picture, video, radio and television activities, somewhat less than 50% of enterprises in post and telecommunications activities and also somewhat more than 40% of enterprises in manufacture of petroleum, chemical products (manufacturing activities), etc.

TELEWORK - WORKING AT A DISTANCE

Figure 6: Employment of teleworkers and places from where they access the computer systems outside the enterprise, Slovenia, 2004 and 2006

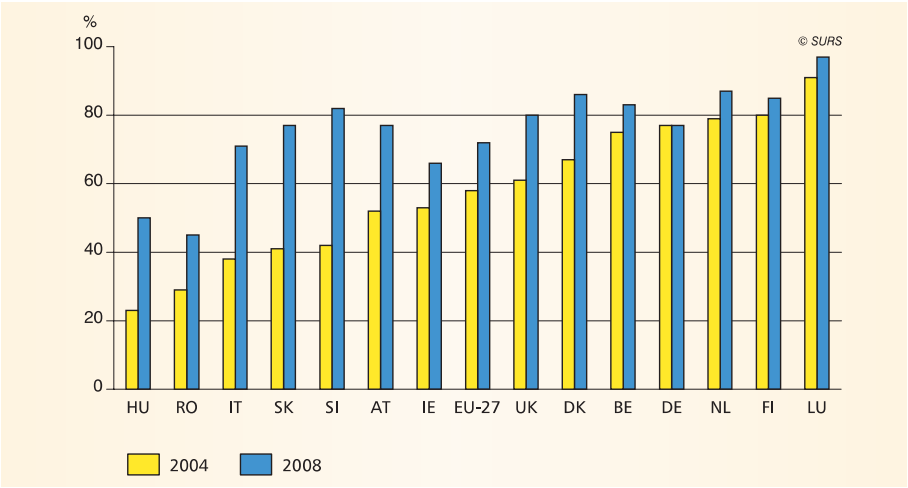


Source: Eurostat

- ICT, computer networks and Internet enable employees to access the computer system of the enterprise also from the place (location) outside their working place. They are the so-called teleworkers or distance workers. In 2006, 32% of enterprises in Slovenia employed teleworkers (**e.g. persons who have regularly conducted part of their work outside the enterprises premises and had at the same time distant access to the enterprise's computer system**), which is 11 percentage points more than the EU-27 average. Two years earlier (in 2004) the share of such enterprises in Slovenia was two times smaller (16%) and 1 percentage point over the EU-27 average.
- The share of enterprises that employed teleworkers and enabled them also access to the computer system of their enterprise outside the enterprise's premises was in Slovenia in 2006 the highest among large enterprises with 71% (33% in 2004).
- 26% of enterprises enabled teleworkers to access the computer system of the enterprise from home (17% in EU-27), 17% of enterprises enabled that during business travel (11% in EU-27), 15% of enterprises from other geographically dispersed locations of the same enterprise (group) and 12% from customers or other external business partners' premises.
- In 2006 in Slovenia teleworkers were to a larger or smaller extent employed by all enterprises in motion picture, video, radio and TV activities (100%). 61% of enterprises in this activity enabled their teleworkers to access the computer system during business travel, and 70% of enterprises enabled access from home. A high share of enterprises (86%) which employed teleworkers was also noted in the activity computer and related activities. 86% of enterprises in that activity enabled their teleworkers remote access from home and 58% during business travels.
- In 2006 most enterprises with teleworkers in EU Member States were located in Denmark with 55% (35% of enterprises enabled access to the computer system during a business trip and 53% from home), whereas the lowest share (4%) was recorded in Italy (3% of enterprises enabled teleworkers access to the computer system from home, 2% during business travel).

COMPUTER NETWORKS

Figure 7: The usage of LAN network in enterprises, European comparison, 2004 and 2008



Source: Eurostat

The acronym LAN stands for local area network. A local area network is a local community connecting at least two computers, which enables enterprises to share and jointly use hardware and databases in enterprises, exchange data and documents and allows for communication between employees.

LAN was used in Slovenia in 2004 by 42% of enterprises, which is 16 percentage points less than the EU-27 average (58%). The highest share of enterprises that used LAN was observed in Finland (80%) and in Luxembourg (91%) and the lowest in Hungary (23%) and in Romania and Bulgaria (29%).

In 2008 the share of enterprises in EU-27 that used LAN increased by 14 percentage points to 72%, whereas the share of such enterprises increased to 82% in Slovenia. So Slovenia rose in the value of this indicator over the EU-27 average and its position could thus be compared with those of Benelux and the Scandinavian countries. The share of enterprises with LAN increased also in Hungary - by 27 percentage points to 50%. Only in Romania was LAN used by less than 50% of enterprises. The majority of those enterprises were also in 2008 in Luxembourg, 97%.

In the 2004-2008 period the usage of LAN in Slovenia increased the most among small enterprises - from 33% to 79% of enterprises. In 2004 there were 20 percentage points less of such kind of small enterprises than the EU-27 average and 4 years later (in 2008) 10 percentage points more than the EU-27 average.

COMPUTER NETWORKS

Table 2: The usage of LAN in enterprises, Slovenia, 2004 and 2008

	2004	2008	Index 2008/2004
TOTAL	2,338	5,581	238.7
Small enterprises	1,434	4,197	292.7
Medium-sized enterprises	651	1,128	173.3
Large enterprises	253	256	101.2

Source: Statistical Office of the Republic of Slovenia

Figure 8: The usage of LAN and WLAN in enterprises in regard of their activity by NACE Rev. 1.1 , Slovenia, 2008

Source: Eurostat

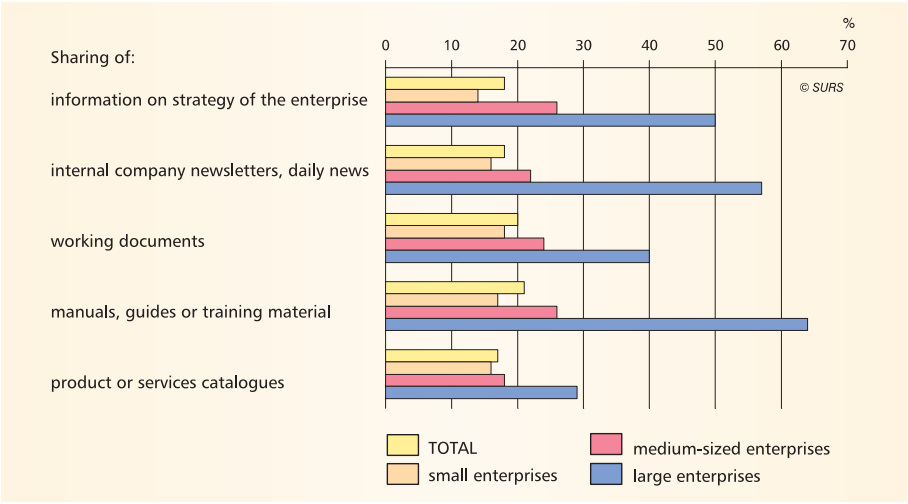
■ **WLAN is wireless LAN, thus a network that establishes connection between computers on the basis of radio waves, without the usage of cables.** In 2004 wireless LAN was used by 10% of enterprises in the EU-27 and 8% of enterprises in Slovenia.

■ In 2004 the share of enterprises that used WLAN was the highest in Sweden (17%) and the lowest in Hungary (2%). In the 4-year period the usage of wireless LAN heavily broadened. In Slovenia in 2008 32% of enterprises used WLAN, more than the EU-27 average (26%). The largest number of enterprises in EU-27 which used wireless connection in 2008 was located in the Scandinavian countries (Finland, 41%).

COMPUTER NETWORKS

The introduction on the newest technologies in Slovenian enterprises depends on the activity of the enterprises and whether the competitiveness of the enterprise is connected with the implementation of the latest technologies. The share of LAN and WLAN usage was in 2008 the highest among enterprises in telecommunications and computers; in the activity post and telecommunications LAN was used by 93% of enterprises and WLAN by 53% of enterprises; among enterprises in the activity computer and related activities the usage of LAN was 100%, whereas WLAN was used by 76% of enterprises; and among enterprises in the motion picture, video, radio and television activities LAN was used by 100% of enterprises and WLAN by 61% of them.

Figure 9: Different purposes for the usage of the Intranet in enterprises, Slovenia, 2008



Source: Eurostat

Intranet (enterprise's computer network, internal website of the enterprise) is a network that uses Internet technologies for informational needs of an enterprise. It enables efficient communication among employees.

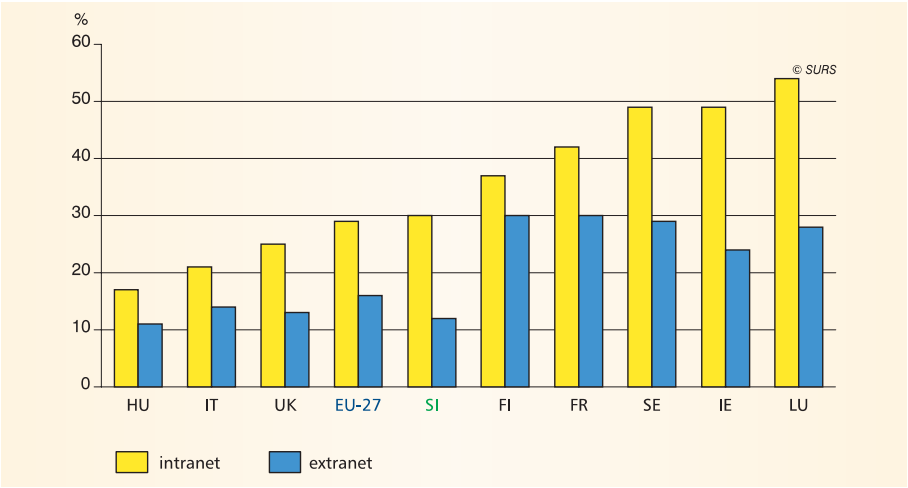
30% of enterprises in Slovenia had an internal website (Intranet) in 2008 (26% small, 40% medium-sized and 74% large enterprises). In EU-27 in 2008 most enterprises with Intranet were located in Luxembourg, 54% (EU-27 average was 29%).

In computer and related activities 72% of enterprises had an internal website, among enterprises in the post and telecommunications activities there were 63% of such enterprises, among enterprises in the manufacturing activities (manufacture of petroleum, chemical products) 42%, etc. The fewest enterprises with internal websites were in the activity construction and hotels and restaurants, 18%.

Among enterprises with Intranet, 21% used the Intranet for sharing manuals, guides or training material, 20% for sharing working documents, 18% for sharing internal company newsletters or daily news, general policy or strategy of the enterprise, etc.

COMPUTER NETWORKS

Figure 10: The usage of the Intranet and Extranet in enterprises, European comparison, 2008



Source: Eurostat

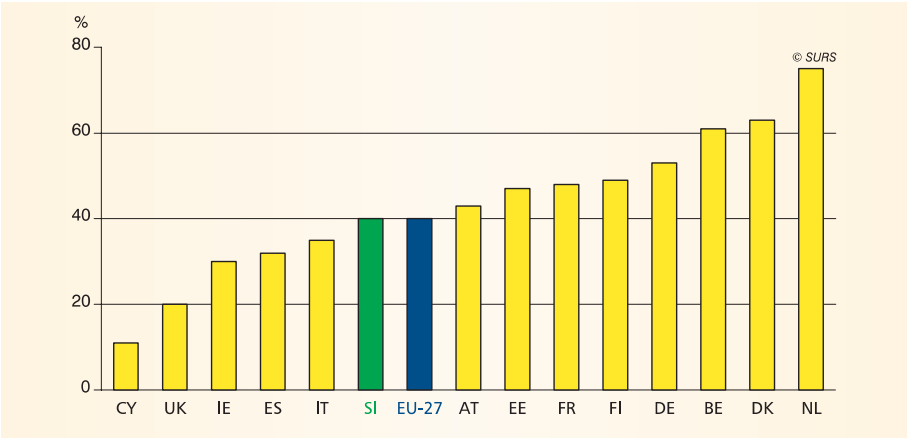
■ For communication with their partners or customers, enterprises make use of extranet as well. **Extranet is a closed network that uses Internet technologies. With the help of the extranet, enterprises grant to their external users either partial access to their Intranet (internal website) or to the private part of the website. In this case the access is possible with a password.**

■ In Slovenia 12% of enterprises had extranet in 2008, which is less than the EU-27 average (16%). The extranet usage also to a large extent depends on the activity and size of the enterprise. For instance: extranet was in 2008 used for communication with their clients or customers by 11% of both small and medium-sized enterprises and by 32% of large enterprises .

■ As regards the enterprise's activity, the enterprises with extranet were most numerous in case they performed computer activities (computer and related activities) - here 49% of such enterprises had extranet; 44% of enterprises were in the post and telecommunications activities, followed by manufacturing activities (manufacture of machinery, transport equipment) where extranet was used by 18% of enterprises; and among enterprises in the activity hotels and restaurants the extranet was used by the fewest enterprises, only 1%.

AUTOMATED ELECTRONIC DATA EXCHANGE

Figure 11: The usage of automated electronic data exchange between enterprises and ICT systems outside the enterprise, European comparison, 2008



Source: Eurostat

Automated data exchange between the enterprise and information-communication systems outside the enterprise enables exchange – sending or receiving - of messages (e.g. orders, invoices, payment transactions) in an agreed format (EDI, EDIFACT, ODETTE, TRADACOMS, XML, xCBL, cXML, ebXML) which allows its automatic processing. Messages are not entered manually and can be transferred via different computer networks (e.g. transmission of data for the annual report to the Agency of the Republic of Slovenia for Public Legal Records and Related Services).

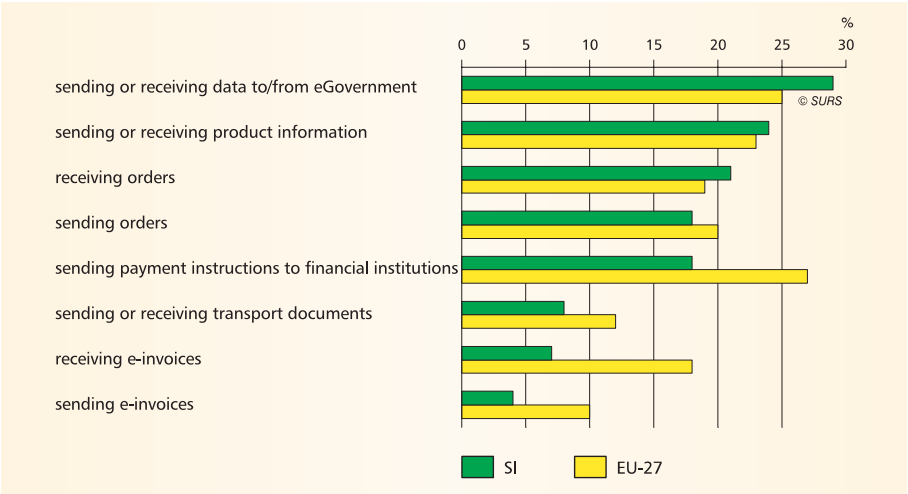
In 2008, 40% of all observed enterprises in Slovenia used automated exchange of data with an ICT system outside the enterprise. The share of enterprises that used on average this kind of electronic exchange of data in the EU-27 also amounted to 40%.

Among large enterprises (according to the number of employees) automated data exchange was used in 2008 by 72% of enterprises; this was the highest recorded usage in Slovenia and more than the EU-27 average (70%). Among medium-sized enterprises there were 44% of such enterprises (in EU-27 on average 52%) and among small enterprises there were 37% of such enterprises, which equalled the EU-27 average (37%).

The automated data exchange between enterprises and ICT systems outside the enterprises was used mostly by those enterprises that engaged in computer activities (computer and related activities), 63%. They were followed by those from the activity sale, repair of motor vehicles, retail sale of motor fuel activity (60%), and the least spread use was recorded among enterprises in the activity construction (27%); in all other activities there was over 30% of such enterprises.

AUTOMATED ELECTRONIC DATA EXCHANGE

Figure 12: Different purposes of the usage of automated electronic data exchange in enterprises, Slovenia nad EU-27, 2008



Source: Eurostat

29% of those enterprises that used automated electronic data exchange in 2008 used this kind of data exchange for sending or receiving data to or from public authorities (e.g. reporting the data to the Tax Administration of the Republic of Slovenia via web portal eDavki with the import of data from information systems of the enterprises in XML format); 24% of them sent or received product information; 21% of enterprises received orders in this way; 18% sent orders to their suppliers and payment instructions to financial institutions; 8% of enterprises sent or received transport documents, 7% received e-invoices in digital form and 4% of enterprises sent e-invoices.

E-invoices are invoices where all data are written in a digital format (e.g. XML) and they enable automated processing. The usage of this kind of conducting business saves time and lowers the material costs, simplifies the procedure of paying invoices and is at the same time ecologically friendly.

According to the share of enterprises that received e-invoices, Slovenia ranked - in comparison with other EU-27 Member States - only before Hungary and Cyprus; the leading countries in regard to the value of this indicator were Estonia (36%) and Latvia (34%), while the EU-27 average was 18%. Also at sending e-invoices Slovenia ranked only before Hungary and Cyprus. Most of the enterprises that sent e-invoices were from Denmark (30%), followed by enterprises from Estonia (28%). In EU-27 on average 10% of enterprises sent e-invoices.

AUTOMATED ELECTRONIC DATA EXCHANGE

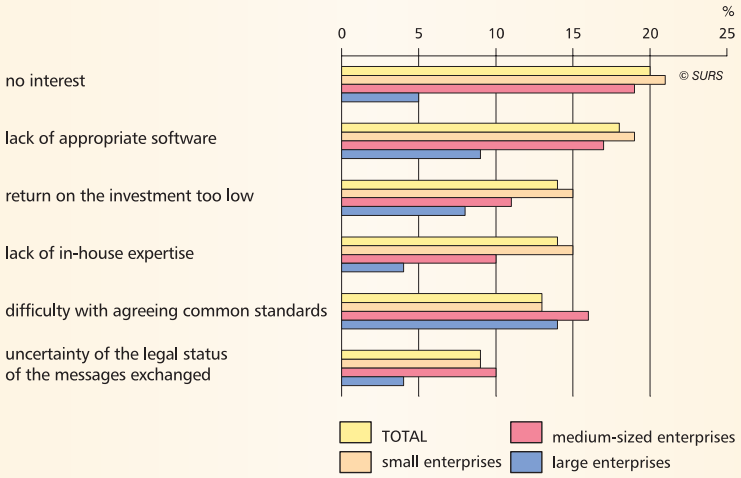
Table 3: Enterprises that send or receive e-invoices, European comparison, 2008

%

	AT	BE	DE	DK	EE	EU-27	FI	LT	LU	NL	SI	UK
Sending e-invoices	7	10	12	30	28	**10**	19	18	13	10	**4**	6
Receiving e-invoices	14	33	24	30	36	**18**	19	34	22	25	**7**	8

Source: Eurostat

Figure 13: Reasons why enterprises do not use automated electronic data exchange, Slovenia, 2008



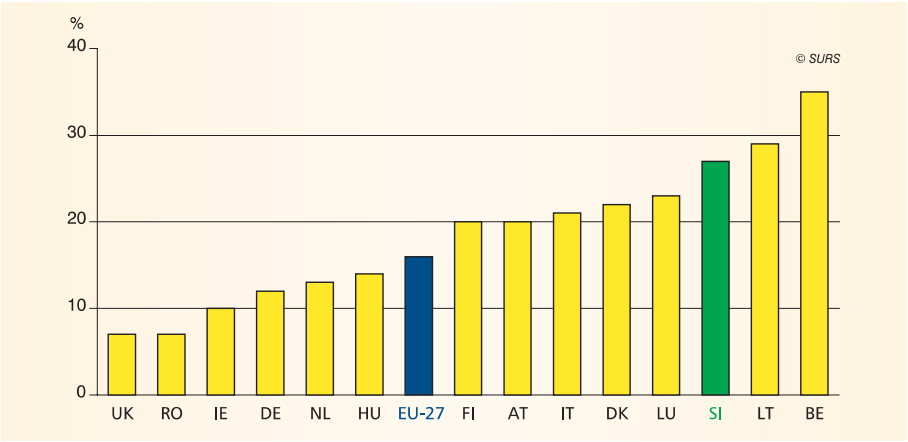
Source: Eurostat

The reasons why some enterprises in 2008 in Slovenia did not use automated electronical data exchange in their business operation were diversified: 20% of those enterprises had no interest in using it, because it wasn't relevant for the business; 18% of enterprises didn't have appropriate software; 14% of enterprises lacked in-house expertise for its implementation, and for the same share of enterprises the return on the investment would be too low or not clear; for 13% the issue were difficulties with agreeing common standards with a business partner; for 9% the barrier was uncertainty about the legal status of the messages exchanged.

An overwiev of the reasons by the size of the enterprise shows that 14% of large enterprises stated as a reason for not using this kind of business operation the issue of having difficulty with agreeing on common standards with business partners; and 9% lack of appropriate software. For 19% of medium-sized enterprises and 21% of small enterprises the main reason was no interest in using electronic data exchange. Among large enterprises this reason was stated by 5% of enterprises. Numerous enterprises, especially small and meduim-sized, stated lack of in-house expertise as a reason for not having implementated it and lack of appropriate software; among large enterprises such enterprises were fewer (because they had at their disposal knowledge and appropriate software to a larger extent).

SHARING ELECTRONICALLY INFORMATION ON THE SUPPLY CHAIN MANAGEMENT

Figure 14: Regular electronic sharing of information on the supply chain management with suppliers or customers in enterprises, European comparison, 2008



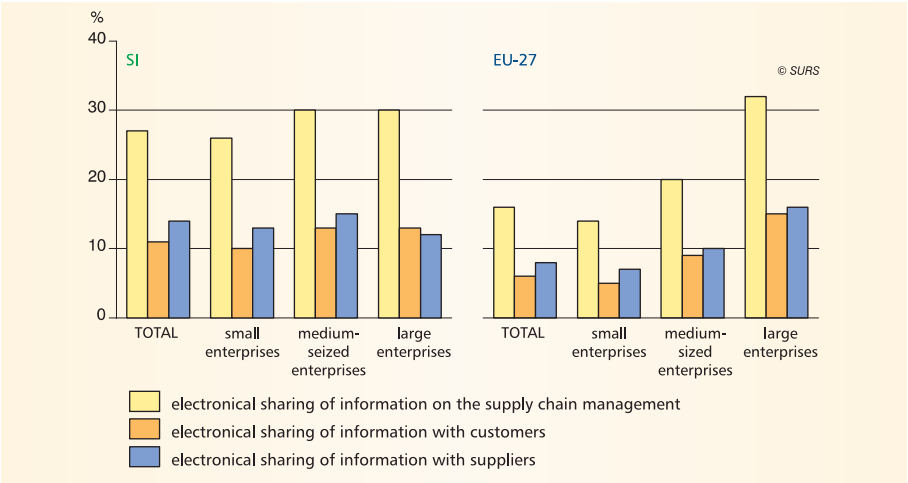
Source: Eurostat

The supply chain (flow of raw materials, information, means, services from the suppliers of raw materials to factories, warehouses and end consumers) includes the organisation and processes that create and deliver information, products and services to end users. The advantages of electronic exchange of information between suppliers and customers in the supply chain are: reduction of transaction costs, the improvment of the flow of data, elimination of paper business operations and the costs connected with it and simpler transfer and processing of information for users.
In the supply chain information with suppliers and customers is exchanged with the purpose to coordinate the delivery or accessibility of products and services. The flow of information about the distribution, production and inventories is conducted either via the Internet or computer networks between enterprises.

In 2008, 27% of enterprises in Slovenia electronically exchanged information in the supply chain management. In EU-27 information was mostly exchanged electronically in the supply chain management in enterprises in Belgium (35%), and the least frequently by enterprises (7%) in the United Kingdom.

SHARING ELECTRONICALLY INFORMATION ON THE SUPPLY CHAIN MANAGEMENT

Figure 15: Purposes of sharing information on the supply chain management in enterprises, Slovenia and EU-27, 2008



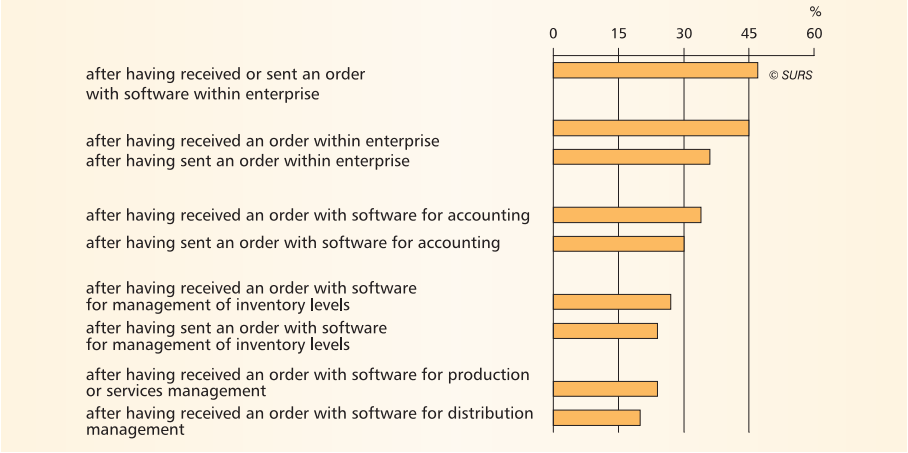
Source: Eurostat

- In 2008 in Slovenia 14% of enterprises shared information with their suppliers with the purpose to coordinate availability or delivery of products or services. 17% shared information on the inventory levels, production plans or demand forecasts (for raw materials, products or services) and 19% information on the progress of deliveries. The exchange of information with suppliers was most frequent (32%) in the activity sale, repair of motor vehicles, retail sale of motor fuel, followed by the activity wholesale trade, commission trade, except of motor vehicles (29%).
- 11% of enterprises electronically exchanged information with their customers on the availability of products or services and their delivery. 13% of enterprises shared information on inventory levels, production plans or demand forecasts and 16% shared information on the progress of deliveries. In the exchange of information with customers the predominant activities were sale, repair of motor vehicles, retail sale of motor fuel (22%) and manufacturing activities (manufacture of petroleum, chemical products) and manufacturing activities (manufacture of machinery, transport equipment) – each by 17%.
- In the exchange of information on inventory levels and deliveries with their customers Slovenian enterprises in 2008 were over the EU-27 average (6%). The share of enterprises in the EU that exchanged information with their customers was the highest with 15% in Lithuania and the lowest in Hungary, Cyprus and the United Kingdom (2% each). The share was also the highest in the exchange of information in the supply chain with suppliers in Lithuania (18%), while this share was the lowest in the United Kingdom (2%).
- For the exchange of information in the supply chain, 19% of Slovenian enterprises used websites (their own or the website of business partners, web portals) in 2008, and 8% of enterprises used automated data exchange (e.g. XML, EDIFACT). In the EU-27 the exchange of information via websites was more frequent than the exchange of information via automated data exchange (11% and 7% of enterprises, respectively).

AUTOMATED ELECTRONIC DATA EXCHANGE WITHIN THE ENTERPRISE

Automatic sharing of information within the enterprise relates to the usage of one single software application that supports and manages the different functions of the enterprise. Also a common database or data warehouse can be used which is accessed by different software applications (programs) that are used for carrying out the different functions of the enterprise.

Figure 16: Type of information that enterprises exchange electronically, Slovenia, 2008

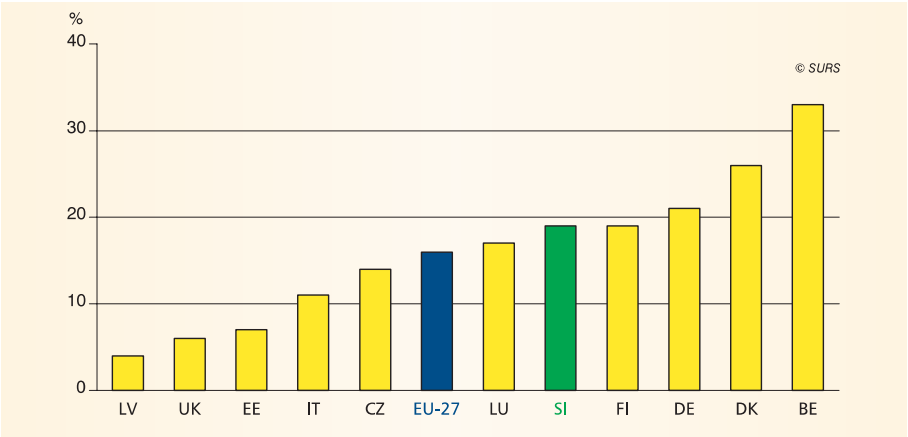


Source: Eurostat

- 47% of enterprises in Slovenia automatically exchanged information in 2008 within the enterprise after having received or sent an order. In EU-27 there were on average 41% of such enterprises (mostly in the Netherlands, 72% of enterprises, and the fewest in Lithuania, 23% of enterprises).
- 36% of enterprises in Slovenia exchanged relevant information electronically and automatically after having sent a purchase order with the software package in the enterprise and 45% of enterprises after having received a sales order.
- After having received a purchase order in 2008 the relevant information on the content was shared electronically and automatically with the software used for management of inventory levels in 27% of enterprises; in 34% of enterprises this was done with the software package for accounting; in 24% of enterprises with the software for production or services management and in 20% with software for distribution management. Enterprises exchanged information after having received a sales order mostly in activities of motion picture, video, radio and television activities - with 64%, the share was over 50% in manufacturing activities (manufacture of machinery, transport equipment) where it amounted to 57%; followed by activities of repair of motor vehicles, retail sale of motor fuel activity with 54%; transport and storage with 52% and manufacturing activities (manufacture of food, textile, wood products) with 51%.
- As the purchase order was sent, 24% of enterprises shared relevant information with the software package for management of inventory levels, 30% with the software package for accounting. Most of the (electronically and automatically) exchanged information in enterprises related to received or sent purchase orders which was exchanged with the software package for accounting within the enterprise.

AUTOMATED ELECTRONIC DATA EXCHANGE WITHIN THE ENTERPRISE

Figure 17: The usage of ERP software for exchange of information about sales or purchases in enterprises, European comparison, 2008



Source: Eurostat

ERP - Enterprise Resource Planning is a software application that integrates and stores data from different business functions. ERP integrates different enterprise departments, the majority of business processes, e.g. planning, procurement, sales, marketing, customer relationship, finance and human resources.

In 2008, ERP was used by 19% of enterprises in Slovenia for sharing information on sales and purchases with internal function of enterprises (16% in EU-27). The share of usage was the highest with 49% among enterprises in the activity post and telecommunications. Only 10% of enterprises used ERP in the activities construction, transport and storage.

Table 4: The usage of CRM software for management of customer relations in enterprises, European comparison, 2008

%

	Slovenia	EU-27
The usage of CRM	13	26
Analysis for marketing purposes	9	17
Access of data to other business functions within the enterprise	13	24

Source: Eurostat

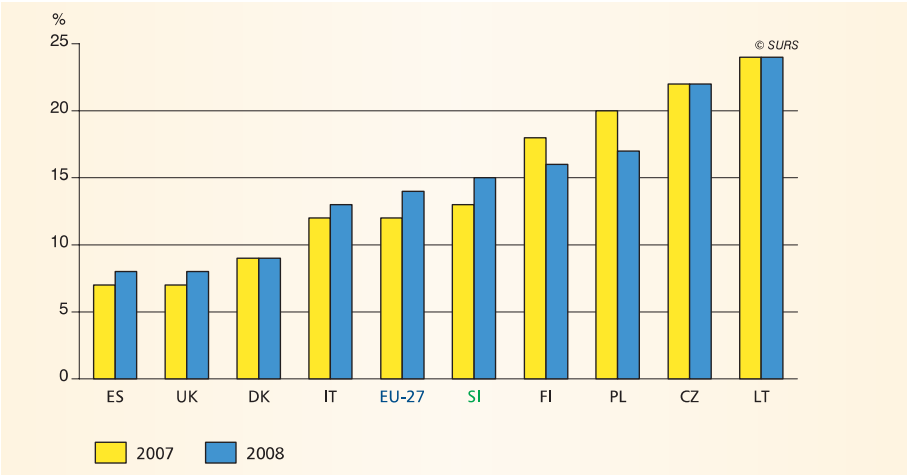
The computer program CRM (Customer Relationship Management) for management of customers relations enables access to key information about customers.

AUTOMATED ELECTRONIC DATA EXCHANGE WITHIN THE ENTERPRISE

- CRM software was used by 13% of Slovenian enterprises in 2008. With 13% of enterprises the program was mostly used for capturing, storing information on customers and making information available to other business functions within the enterprise. 9% of enterprises used the program for analysing information about clients for marketing purposes. In the usage of CRM Slovenian enterprises were under the average of enterprises in EU-27.
- The share of the usage of CRM software was with 29% the highest in large Slovenian enterprises and it was under EU-27 average of 47%. On the other hand, ERP software was used by 78% of large Slovenian enterprises and this was over the EU-27 average (59%).

THE USAGE OF OPEN SOURCE OPERATING SYSTEMS

Figure 18: The usage of open source operating systems in enterprises, European comparison, 2007 and 2008



Source: Eurostat

Open source operating systems are free of charge programs that allow access to the source code of the program and its modification.

Open source operating systems were used by 15% of enterprises in Slovenia in 2008, which was 2 percentage points more than in 2007; in both years there were by 1 percentage point more of those enterprises than was the EU-27 average. The leading countries in the usage of open source operating systems in EU-27 were Lithuania with 24% and the Czech Republic with 22% of enterprises.

In Slovenia the share of enterprises that used open source operating systems in 2008 was the highest among large enterprises (51%), and among them it also increased the most: from 2007 to 2008 by 14 percentage points. Among the Slovenian small enterprises the share of usage was equal to the EU-27 average (11%). In the usage of open source operating systems the enterprises in Slovenia were over the EU-27 average.

In view of the activity of the enterprise, the share of enterprises that used open source operating systems in Slovenia was the highest among enterprises in the activity motion picture, video, radio and television (61% of enterprises) and in computer and related activities (63% of enterprises), while it was the lowest among enterprises in the activity transport and storage (5% of enterprises).

Table 5: Enterprises that use open source operating systems, Slovenia, 2007 and 2008

	2007	2008	Index 2008/2007
TOTAL	**832**	**1 053**	**126.6**
Small enterprises	565	610	108.0
Medium-sized enterprises	179	313	174.9
Large enterprises	89	131	147.2

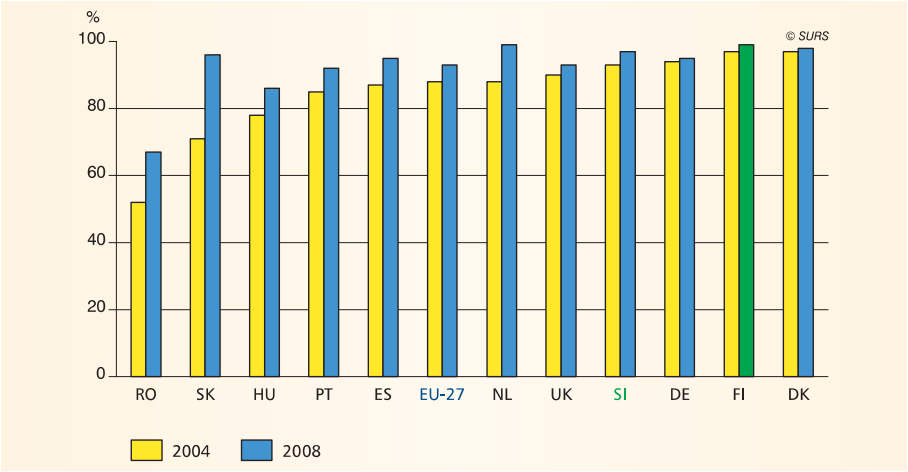
Source: Statistical Office of the Republic of Slovenia

ACCESS TO THE INTERNET IN ENTERPRISES

The Internet is a worldwide WAN (broader network) that covers large geographical networks. It enables users access to data, communication, and makes exchange of information over the world faster and at lower costs. The data packages are transported and received via Internet protocol (IP). One has to distinguish between the Internet and the World Wide Web (WWW). The Internet is a mechanism for transport of data and the World Wide Web is a program that makes the transport possible.

The Internet and access to the World Wide Web have become an important part of everyday business operations in enterprises. With the appearance of the electronic messages (e-mail) the way of communication significantly changed; it has become and is still becoming faster and more diverse.

Figure 19: Enterprises with Internet access, European comparison 2004 and 2008



Source: Eurostat

In 2004, 88% of enterprises in EU-27 had access to the Internet and in Slovenia 93% of enterprises, i.e. 5 percentage points more than EU-27 average. The share of such enterprises was the lowest in Romania (52%), followed by Bulgaria (62%) and Slovakia (71%), and the highest in Denmark (97%). The difference between the last country (Romania) and the first country (Denmark) in regard of the share of enterprises with Internet access was 45 percentage points.

Four years later, in 2008, 97% of enterprises in Slovenia had access to the Internet, in Finland and the Netherlands 99%, in the EU-27 93% of enterprises. The share of enterprises with Internet access significantly increased in Romania, namely by 15 percentage points (to 67%), and especially in Slovakia by 25 percentage points (to 96%).

The smallest differences among countries in the share of enterprises with Internet access were revealed among large enterprises. In the majority of EU-27 countries (99%) all large enterprises had access to the Internet, incl. those in Slovenia. Among medium-sized enterprises 98% of enterprises in Slovenia had access to the Internet, which is also the EU-27 average. More than the EU-27 average (92%) in Slovenia was recorded among small enterprises (96%).

ACCESS TO THE INTERNET IN ENTERPRISES

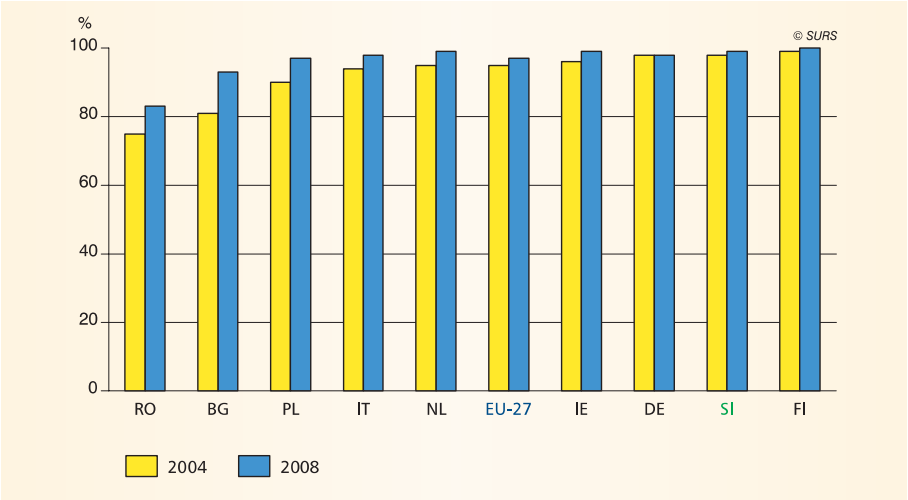
Table 6: Enterprises with Internet access, Slovenia, 2004 and 2008

	2004	2008	Index 2008/2004
TOTAL	5,231	6,568	125.6
Small enterprises	3,954	5,140	130.0
Medium-sized enterprise	1,000	1,171	117.1
Large enterprises	277	257	92.8

Source: Statistical Office of the Republic of Slovenia

- In view of size classes, in Slovenia small enterprises made the biggest progress in the 2004-2008 period as the share of those enterprises with access to the Internet increased by 5 percentega points (index 2008/2004 105.5).
- In view of the activities of the enterprises, the fewest enterprises with Internet access in 2008 in Slovenia were in the activity construction, 88%, followed by retail trade, except motor vehicles, repair of household goods and transport and storage with 96%.

Figure 20: Persons employed in enterprises with Internet access, European comparison, 2004 and 2008

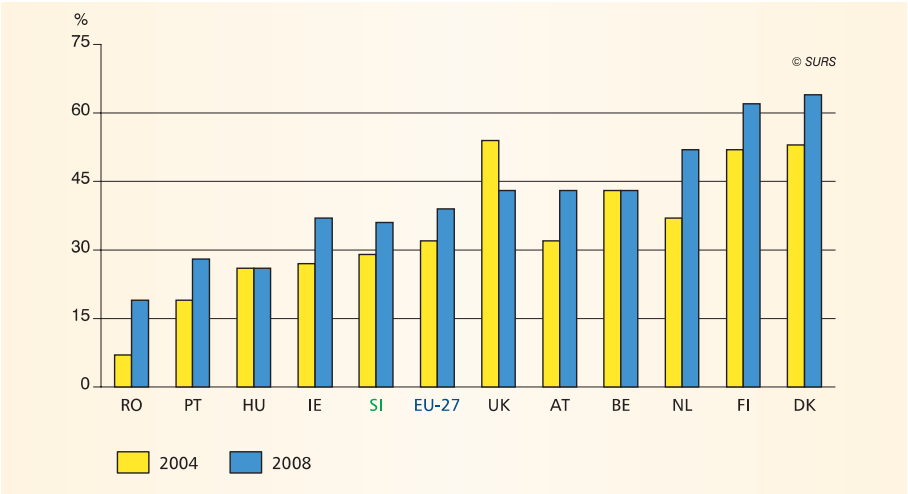


Source: Eurostat

- The share of persons employed in enterprises with Internet access was in Slovenia both in 2004 (98%) and in 2008 (99%) higher than the EU-27 average (2004: 95%; 2008: 97%).

INTERNET USAGE

Figure 21: Persons employed in enterprises that use computer with Internet access at their work, European comparison, 2004 and 2008



Source: Eurostat

In 2008 in Slovenia 36% of employees in the observed enterprises used computers with Internet connection (46% of employees used a computer at their work), which is a few percentage points below the EU-27 average (39%). In comparison with Denmark (where 64% of employees used computers with Internet access at their work) the share of those employees in Slovenia was almost halved. Scandinavian countries were therefore most successful in this area, while less successful were Bulgaria, Romania, Latvia and Hungary (in 2008 the share of employees who used computers with Internet access at their work was the lowest).

Table 7: Persons employed in enterprises that use computers with Internet access at their work, Slovenia, 2004 and 2008

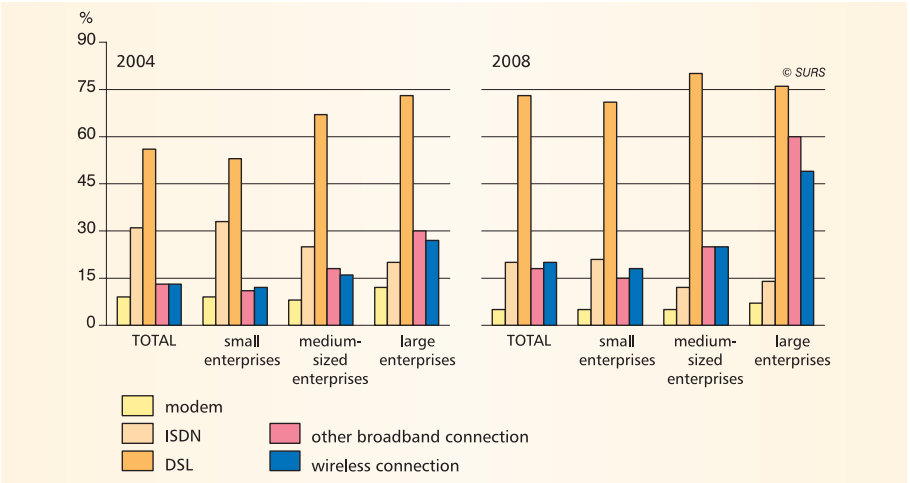
	2004	2008	Index 2008/2004
TOTAL	**110,437**	**154,036**	**139.5**
Small enterprises	32,574	48,696	149.5
Medium-sized enterprises	33,643	40,451	120.2
Large enterprises	44,219	64,889	146.7

Source: Statistical Office of the Republic of Slovenia

In the 2004-2008 period the share of employees who used computers with Internet access increased in all size classes of enterprises, the most in large enterprises, from 24% (in 2004) to 34% (in 2008).

INTERNET USAGE

Figure 22: Means of Internet access in enterprises with Internet access, Slovenia, 2004 and 2008



Source: Eurostat

To access the Internet, the majority of enterprises (73%) in 2008 used DSL. 20% of enterprises used ISDN and 18% of enterprises used other broadband connections (cabel, leased lines, optical networks). In four years the share of those that used wireless access also increased by 7 percentage points (to 20%).

Table 8: Means of Internet access in enterprises, Slovenia, 2008

	TOTAL	small enterprises	Index 2008/2004 medium-sized enterprises	large enterprises
Modem	76.6	78.3	78.2	55.9
ISDN	82.0	86.8	60.6	61.4
DSL	168.0	183.1	142.3	97.0
Other broadband connection	114.8	183.6	168.2	187.8
Wireless connection	198.0	208.4	181.0	168.9

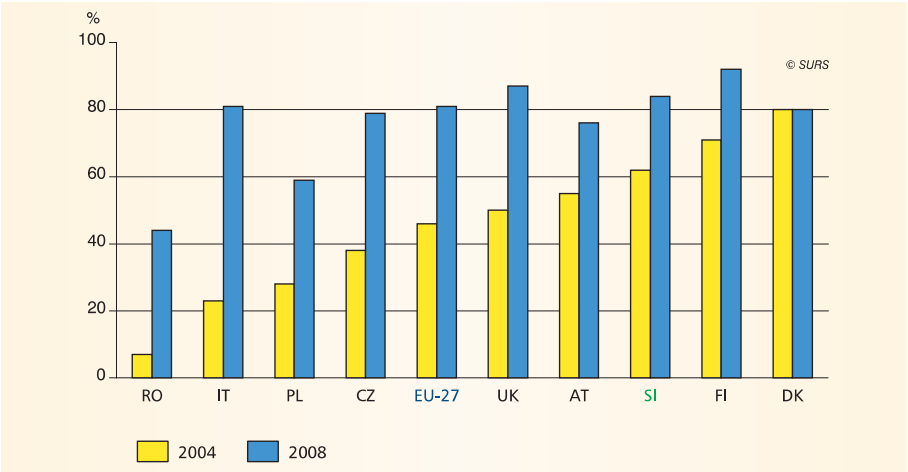
Source: Statistical Office of the Republic of Slovenia

From 2004 onwards the share of enterprises that used the narrowband connection (modem, ISDN) to access the Internet gradually decreased. So the share of Internet access via modem decreased from 9% (in 2004) to 5% (in 2008). The share of enterprises with access to the Internet via ISDN dropped in the 4-year period from 31% (in 2004) to 20% (in 2008). In 2008 Internet access via ISDN was used to the largest extent by small enterprises.

Enterprises that crossed from narrowband to broadband Internet access are granted faster transfer of data via the Internet.

INTERNET USAGE

Figure 23: Enterprises with broadband Internet access, European comparison, 2004 and 2008



Source: Eurostat

In 2008 broadband Internet access was used by 84% enterprises in Slovenia; this was 22 percentage points more than in 2004. In view of the share of enterprises with this kind of Internet access, in 2004 Scandinavian countries and Spain were in the lead among the EU Member States (Finland 71%, Spain 72%, Denmark 80%) and in 2008 Spain, France and Finland (92%). Italy advanced expediently: this kind of Internet access was used in 2004 by 23% of enterprises and in 2008 already by 81% of enterprises. In Slovenia the fewest enterprises with broadband Internet access were small enterprises, 82% in 2008, whereas the most numerous were large enterprises, as almost all large enterprises had broadband Internet access (99%). Thus the most noticeable change made in the access to the Internet (crossing to broadband access) in the last 4 years occurred in small enterprises, where their share increased by 26 percentage points.

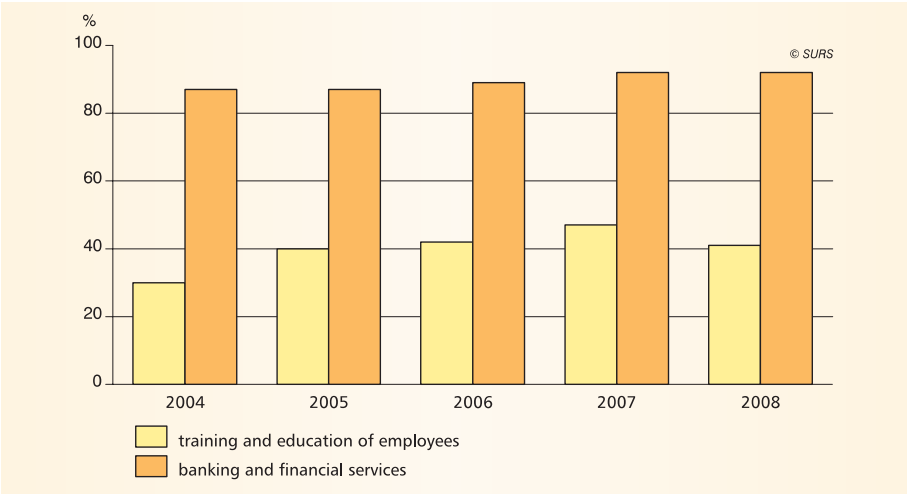
Table 9: Status of users of different means of Internet access, Slovenia, 1st quarter 2008

	2008Q1	
	Users - TOTAL	Business users
Number of broadband connections - TOTAL	**368,336**	**50,872**
Number of xDSL connections	260,614	45,456
Number of cable modem connections	86,461	3,172
Number of optical fiber access connections	20,214	1,928
Number of other broadband connections (including fixed wireless access)	1,047	316
Number of dial-up (narrowband) users	65,614	845

Source: Post and Electronic Communications Agency of the Republic of Slovenia

INTERNET USAGE

Figure 24: The purpose of Internet usage in enterprises with Internet access, Slovenia, 2004–2008



Source: Eurostat

- 87% of enterprises with Internet access in Slovenia used the Internet in 2004 for conducting banking and financial services (e-banking) via the Internet, while in 2008 there were already 92% of such enterprises (i.e. more than the EU-27 average of 78%). The usage of e-banking among Slovenian enterprises was over 90% regardless of the size of enterprise (among large enterprises it was 98%).
- Among enterprises in EU-27 the service of e-banking is a highly developed and frequently used service made possible by the Internet. This service was used in 2008 by the majority of enterprises in Estonia, 99%; according to the value of this indicator only Denmark (94%) and Finland (92%) ranked better than Slovenia. This service was used to the smallest extent (measured in percentages) in Romania (48% of enterprises), in Bulgaria (52%) and in Cyprus (54%). In other countries, with the exception of Greece, this service was used by over 70% of enterprises (in Greece 66%).
- In 2008 the Internet was used or was being used for training and education by 41% of enterprises in Slovenia, whereas the EU-27 average was 24%. Among small enterprises 39% of them used it in Slovenia for this purpose and among large enterprises it was used by 67% enterprises.
- In 2008, 70% of the Slovenian enterprises used the Internet for the monitoring of the market, e.g. of prices and of competition.
- The evolution of information-communication technologies and especially of the Internet significantly changed the way of communication in enterprises. In 2006 the following question was included in the questionnaire about ICT usage in enterprises: "In your communication with customers and other enterprises, to what extent has your enterprise substituted traditional postal mail (e.g. for sending invoices) by electronic means of communication (e-mail messages, Intranet, Extranet, and Internet), in the last 5 years?"

INTERNET USAGE

Table 10: Electronic communication in enterprises with business partners substitutes regular post, Slovenia, 2006

%

	Electronic communication substituted normal post			Only usage of electronic communication	No substitution
	from 0 to1/3	from 1/3 to 2/3	over 2/3		
TOTAL	**50**	**18**	**3**	**0**	**25**
Small enterprises	49	17	3	0	28
Medium-sized enterprises	55	25	2	1	18
Large enterprises	58	20	6	1	14

Source: Eurostat

By 2006 the majority of enterprises in Slovenia substituted one third of their communication with business partners over postal mail with communication via electronic media. This means that they still sent the majority of the documents via regular post. Among medium-sized enterprises the majority of documents (e.g. one to two thirds of documents) were sent via electronic media in 25% of enterprises. Almost all documents (two thirds) were sent electronically by 6% of large enterprises (this many large enterprises almost completely substituted communication via normal post with electronic media).

Most of the enterprises that did not change the set communication and sent documents only via normal post were small (28%).

The Internet also made possible the changes in communication via the telephone network**. The VoIP connection is ensured by broadband access to the Internet assuring access to the public telephone network and publicly available fixed telephone services including emergency services. Each connection has a telephone number allocated and enables the service of managed IP telephony, with which the operator prioritizes IP speech packages and supervises the quality of services. Unmanaged IP speech services enabled by computer software or other terminal equipment, where the communication is realized through the public Internet network without the supervision over the quality of services, are excluded.**

Table 11: Users of VoIP, Slovenia, 1st quarter 2007 and 1st quarter 2009

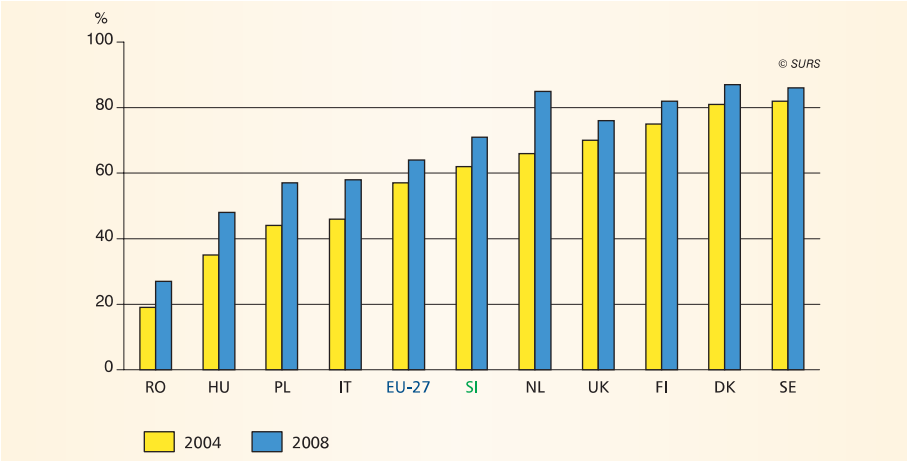
Number of VoIP connections	2007Q1	2009Q1	Index 2009Q1/2007Q1
Status of user - TOTAL	**74,775**	**268,446**	**359.0**
Business users	4,681	44,168	943.6

Source: Post and Electronic Communications Agency of the Republic of Slovenia

In the period from the first quarter of 2007 to the first quarter of 2009 the number of VoIP connections strongly increased in Slovenia, at business users by 843.6-times.

PRESENTATION OF ENTERPRISES ON THE WORLD WIDE WEB

Figure 25: Enterprises with a website, European comparison, 2004 and 2008



Source: Eurostat

- The World Wide Web offered to the enterprises new opportunities for the presentation of the enterprise, products, the possibility for greater recognition and at the same time access to new markets and consequently to higher earnings.
- The share of enterprises that had a website increased moderately in the 2004-2008 period in all EU Member States. The EU-27 average increased from 57% (in 2004) to 64% (in 2008). Among enterprises in Slovenia 71% of enterprises had a website in 2008, and 58% in 2004.
- From 2004 to 2008 the share of enterprises with a website increased most significantly among small enterprises – by 16 percentage points (to 67%); among medium-sized enterprises it increased by 6 percentage points (to 84%) and among large enterprises it increased by 7 percentage points (to 97%).
- In view of the share of enterprises that had a website in 2008 in EU-27 the first was Denmark (with 87%), followed by Sweden (86%), the Netherlands (85%) and Finland (82%), whereas at the bottom of the list Romania (27%), Bulgaria (33%) and Latvia (42%) were listed.
- With the development of the web and novelties in designing, e.g. Web 2.0, also what the website enables or makes possible became important.

Table 12: Sophistication of enterprises websites with options and content, Slovenia, 2008

%

	TOTAL	Small enterprises	Medium-sized enterprises	Large enterprises
Access to product catalogues or price lists	42	40	45	72
Possibility to customise, design the product	2	2	2	5
Online ordering	9	9	9	18
Online payment	2	2	2	5
Personalised content for regular visitors	7	7	6	14
Advertisement of open job positions, online job application	18	17	20	47

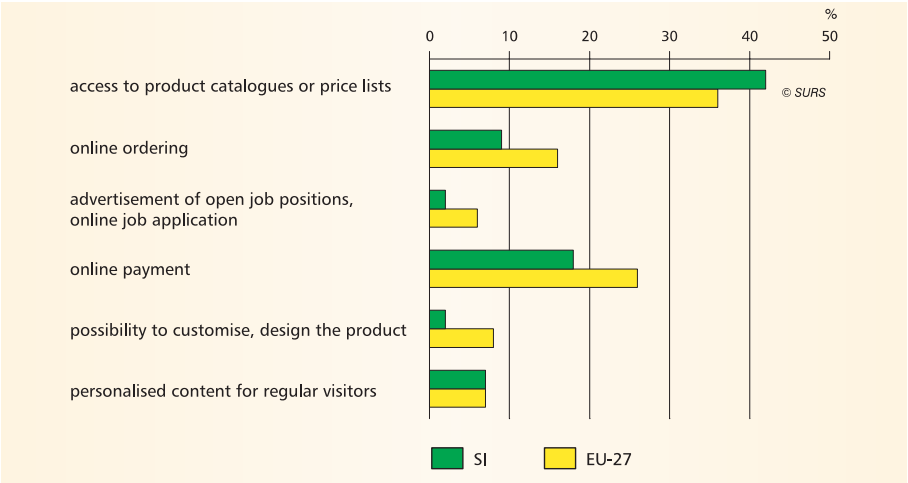
Source: Eurostat

PRESENTATION OF ENTERPRISES ON THE WORLD WIDE WEB

In 2008, 42% of enterprises in Slovenia published on the website their product catalogues or price lists, 18% of enterprises advertised open job positions or made available online job applications. In the first quarter of 2008, 17% of regular Internet users (users who used the Internet in the last 3 months) looked for employment or sent applications for employment via the Internet.

In 2008 only 9% of enterprises in Slovenia made electronic ordering or reservation possible. The share of enterprises that made electronic ordering via website possible was the highest in the activity post and telecommunications with 42%; there were 41% enterprises in the activity hotels and restaurants; and 21% in activity sale, repair of motor vehicles, retail sale of motor fuel. Most of the enterprises that made online payment possible were engaged in the activity post and telecommunications, 19%, and 6% in retail trade, except of motor vehicles, repair of household goods; in the activity of wholesale trade, commission trade, except of motor vehicles there were 5% of such enterprises.

Figure 26: Sophistication of enterprises websites with options and content, Slovenia and EU-27, 2008

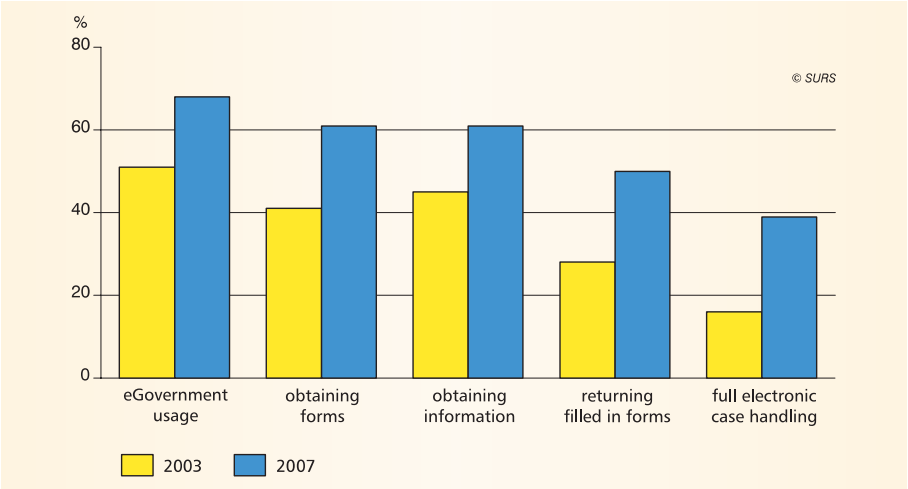


Source: Eurostat

As regards to website sophistication, in 2008 Slovenia exceeded the average in EU-27 only at the access to catalogues or price lists (42%) and at advertisement of open job positions or online job applications (18%).

eGOVERNMENT

Figure 27: The usage of eGovernment services in enterprises, EU-27, 2003 and 2007



Source: Eurostat

- Together with the broadening of services offered to enterprises by the public administration over the Internet, the shares of enterprises that used eGovernment services changed significantly in the 2004-2008 period and also the purposes of usage of those services.

- In 2003, 51% of enterprises in the EU-27 used eGovernment services. 45% of enterprises obtained information, and 28% of enterprises returned filled in forms. 16% of enterprises treated an administrative procedure completely electronically. In 2007, 68% of enterprises used eGovernment services. 61% of enterprises searched for information, while the shares of enterprises that returened filled in forms (50%) and of those that treated the administrative procedure completely electronically (39%) almost doubled.

- 47% of enterprises in Slovenia used eGovernment services in 2003. 46% of enterprises obtained information from eGovernment. A slightly lower percentage of enterprises in this way obtained forms, 43%. 36% of enterprises also returned filled in forms. More than a third of the enterprises treated the administartive procedure completely electronically. In the usage of eGovernment services, meaning treating the administrative procedure completely electronically, Slovenia already in 2003 reached the level of EU-27 in 2007.

- The share of enterprises that used eGovernment services increased in Slovenia in 2007 to 88%. At that time already 69% of enterpises returned filled in forms, while 60% of enterprises treated an adminstrative procedure completelly electronically (in EU-27 39%).

eGOVERNMENT

Table 13: The usage of eGovernment services in enterprises, Slovenia, 2003-2007

%

	TOTAL		Small enterprises		Medium-sized enterprises		Large enterprises	
	2003	2007	2003	2007	2003	2007	2003	2007
eGovernment usage	47	88	42	86	63	95	74	97
Obtaining information	46	85	41	83	61	93	73	96
Obtaining forms	43	82	39	80	54	90	67	96
Returning filled in forms	36	69	31	64	46	84	58	91
Full electronic case handling	34	60	31	55	43	76	49	84

Source: Eurostat

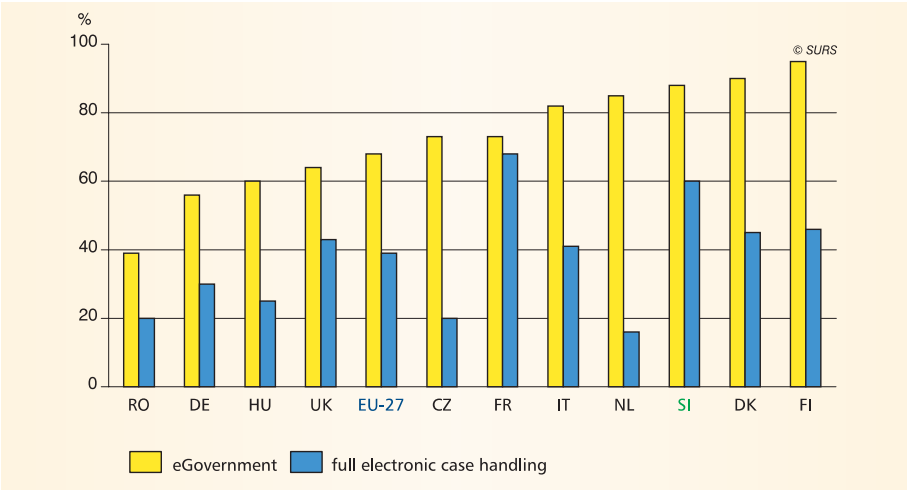
- From 2003 to 2007 the enterprises made noticeable progress in the usage of eGovernment services. In 2007 eGovernment services were namely already used by over 90% of large and over 90% of medium-sized enterprises. The share of those that treated the administrative procedure completely electronically also increased (e.g. electronic reporting of the balance of VAT to the Tax Administration of the Republic of Slovenia); here the biggest progress was achieved by large enterprises, as the share among those enterprises increased by 35 percentage points, to 84%.
- In the EU usage of eGovernment services ranked first in case of enterprises in Finland, 95%, and the last in Romania, 39%. The whole administrative procedure was treated electronically by the highest share of enterprises in France, 68% (73% of enterprises used eGovernment services), and by the lowest share of enterprises in the Netherlands, 16% (85% of enterprises used eGovernment services).
- With more intensive usage of eGovernment services and electronic treatment of the administrative procedure, the share of enterprises that used the digital signature (e.g. digital certificate) and methods of encryption with the purpose of assuring the authenticity and integrity of the message also increased. Slovenia ranked among the leading countries in the usage of digital signatures in the EU-27 in 2007 (50%) and in 2008 (68%).
- In a survey "Smarter, Faster, Better eGovernment" carried out for the European Commission in 2009 by Camgemini that included the area of EU-27, including Island, Norway, Switzerland and Turkey, the extraordinarily well developed supply of services that are provided by eGovernment in Slovenia was emphasised.

Slovenia ranked in regard of the sophistication (development) of eGovernment services among six leading countires (Malta, Portugal, Sweden, Austria, Slovenia, Estonia). The sophistication of eGovernment measures the degree of services that individual countries offer to their citizens, enterprises; from one-sided interaction (obtaining forms), two-sided interaction (returning filled in forms), and transactions (the services of treating administrative procedure completely electronically) to the personalised procedure that is automated and in electronic form.

In regard of full online availability of services offered via eGovernment, Slovenia also ranked among the leading countries in 2009 besides Austria.

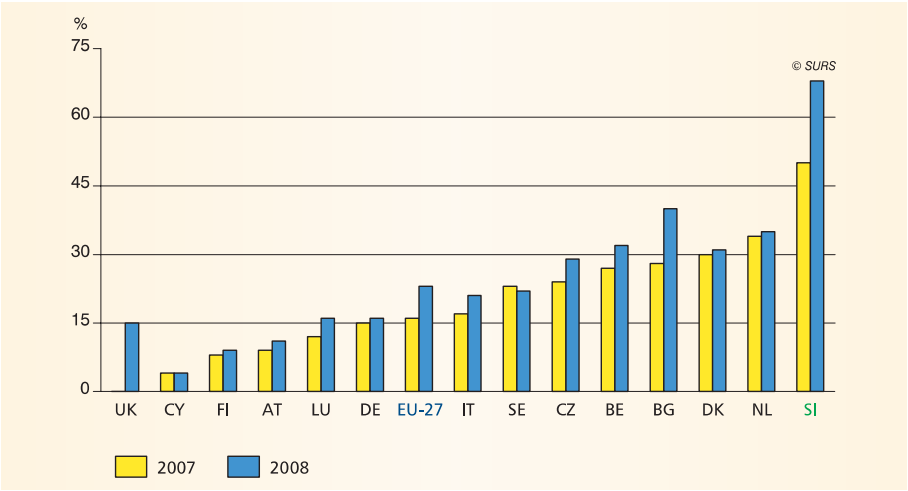
eGOVERNMENT

Figure 28: The usage of eGovernment services and electronic case handling in enterprises, European comparison, 2007



Source: Eurostat

Figure 29: The usage of digital signatures and methods of encryption in enterprises, European comparison 2007 and 2008

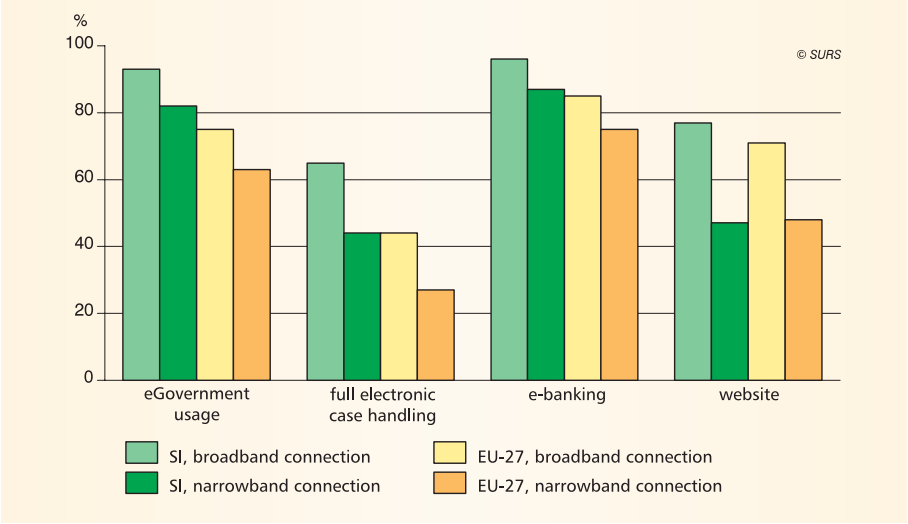


Source: Eurostat

INFLUENCE OF BROADBAND CONNECTION ON THE INTERNET USAGE

Broadband connections to the Internet enable rapid transmission of data, e.g. films, games, video-conferences, over the Internet (for example: ADSL, cable connection, UMTS, optical connection, VDSL, leased lines).

Figure 30: Influence of broadband connection on the Internet usage in enterprises, European comparison, 2008



Source: Eurostat

84% of enterprises in Slovenia had in 2008 broadband access to the Internet (or 3 percentage points more than the EU-27 average).

In Slovenia in 2007 eGovernment services were used by 93% of enterprises with broadband Internet connection and by 82% of enterprises with narrowband Internet connection. 65% of enterprises with broadband connection and 44% of enterprises with narrowband connection (without rapid transfer of data) treated the administrative procedure completely electronically.

E-banking was used by 96% of enterprises with broadband connection; among enterprises that used narrowband connection the share was 9 percentage points lower.

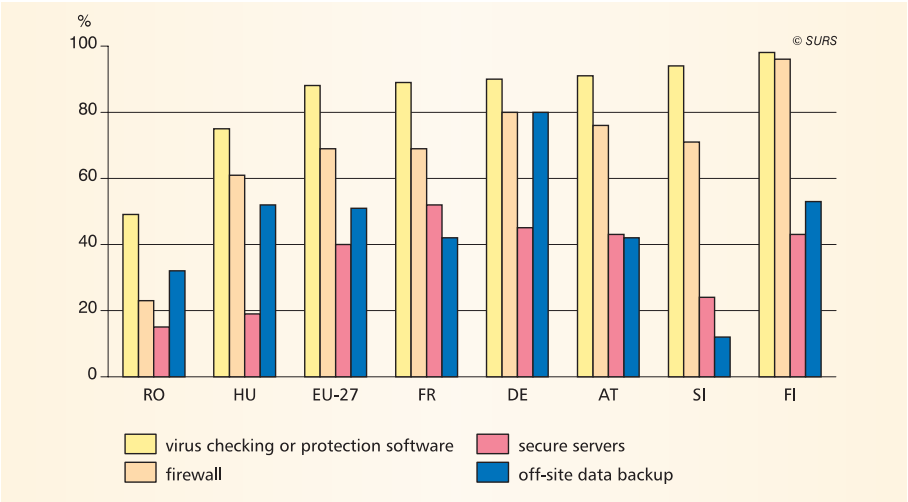
In 2008, 47% of enterprises with narrowband connection had a website (online ordering was made possible by 3% of enterprises). Among the enterprises that had broadband connection to the Internet 77% of them had a website (online ordering was made possible by 10% of enterprises).

SECURITY AND INTERNET

With the access to the Internet and the usage of the Internet new dangers appeared and are appearing that demand that the enterprises use new and appropriate ways of protecting their computer networks. In 2005, 32% of enterprises had (in the last 12-month period) security problems connected with ICT (e.g. virus) and thus suffered the loss of information or of working time. The majority of enterprises with this kind of problems were among large enterprises, 44%, as they were the biggest users of ICT.

In 2005, enterprises (in the last 12-month period) encountered the following security problems: computer virus, worm or Trojan attack caused trouble in 30% of enterprises; 2% of enterprises had difficulties because of unauthorised access to the enterprise computer systems or data.

Figure 31: Used means of ICT protection in enterprises, selected countries, 2006

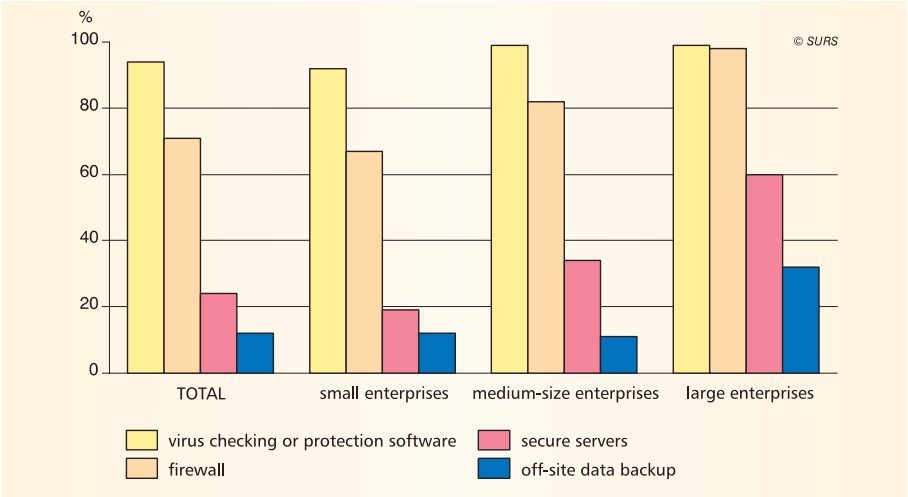


Source: Eurostat

In Slovenia in 2006 the most frequently used protection in enterprises was virus checking or protection software, which was used by 94% of enterprises; 71% of enterprises used firewalls. Secure servers and off-site data backup were the least frequently used for the protection (security copies of the data on a location outside of enterprise premises); the first was used by 24% of enterprises, the second by 12% of enterprises, as these two ways of protection are connected with higher investments in protection. In the usage of software protection in enterprises Slovenia ranked over the EU-27 average; however, in view of the share of the usage of machinery equipment (secure servers, off-site backup) it lagged behind and was under the EU-27 average.

SECURITY AND INTERNET

Figure 32: Used means of ICT protection in enterprises, Slovenia, 2006



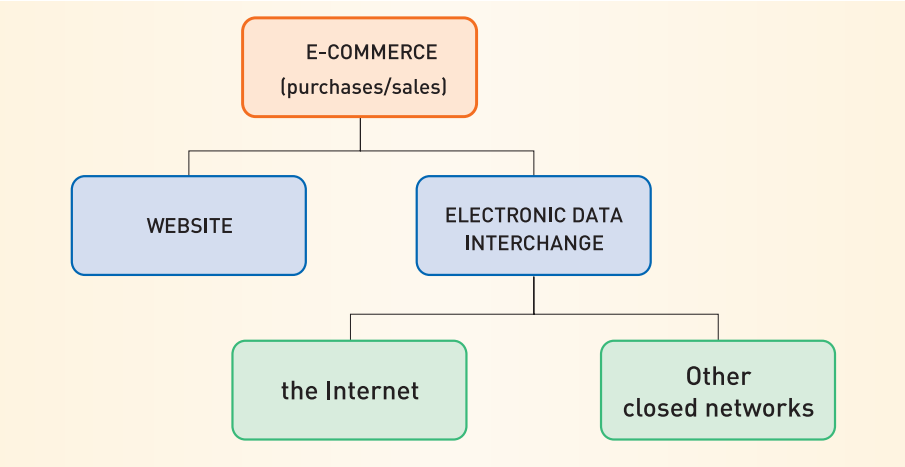
Source: Eurostat

- In 2006 the majority of enterprises (without regard to their size) used virus checking or protection software (over 90%). The second most used protection was a firewall; this form of protection was used to the smallest extent among small enterprises (67%). An off-site backup system and secure servers were used to the largest extent in large enterprises (secure serves were used by 60% of large enterprises, an off-site backup system by 32% of large enterprises).
- While communicating electronically with their business partners, 11% of Slovenian enterprises in 2006 used digital signatures. The majority of those enterprises were engaged in the activity post and telecommunications (47%), the fewest in the activity of sale, repair of motor vehicles, retail sale of motor fuel (4%). In the EU-27 the majority of those enterprises that used an electronic signature was, on average, in the activities of computer and related activities, 25% (in Slovenia the share was 18%).
- Other authentication mechanisms (e.g. PIN code with which the placement of an order is confirmed) were used in 2006 only by 4% of enterprises in Slovenia; this was the lowest share of enterprises among EU-27 countries. Most of those enterprises in Slovenia were in the activities post and telecommunications, 31%. In EU-27 other authentication mechanisms were used by most of the enterprises in the United Kingdom, 52% (in EU-27 on average 30%).
- Encryption at data transmission (the alteration of numbers and letters in a form that requires a key for their decryption) was in 2006 used by 8% of enterprises in Slovenia (the EU-27 average was 19%). Data encryption was the most used method of data protection among enterprises in Germany; it was used by 38% of enterprises (or by 16 percentage points more than in Finland).

E-COMMERCE

With the expression e-commerce we mark purchases/sales of products or services (e.g. reservations) via websites (e.g. via prepared e-forms, e-shops). Payment and delivery does not necessarily have to be done via the Internet or computer networks. E-commerce can also run via computer exchange of data or EDI – Electronic Data Interchange. EDI is used for the electronic interchange of data, documents and orders inside the enterprise (e.g. branches) and between the enterprises. Data interchange flows automatically between the computer systems and partners. Data are exchanged in standard and encrypted form (e.g. EDIFACT standard) either via the Internet or other closed networks. Purchases/orders via regular e-mail are not considered as e-commerce.

Figure 33: E-commerce

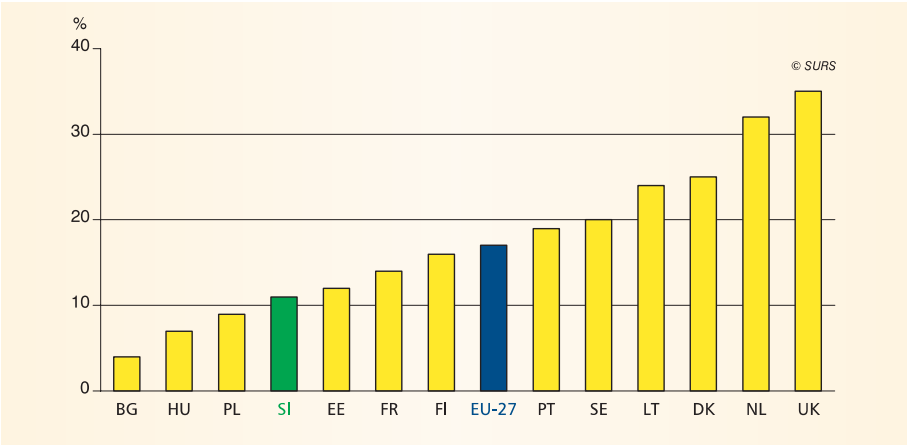


The Internet and access to the World Wide Web provided to the enterprises the opportunity to introduce themselves and for marketing (e.g. via website) and with that also access to new markets.

Slovenian enterprises that used the Internet in 2005 for sales/purchases estimated the perceived benefits of selling via the Internet: 82% of enterprises indicated that Internet sales had extremely important benefit for reaching new customers, 77% of enterprises that the Internet had extremely important benefit in keeping pace with competitors, for 70% of enterprises the benefit was expanding the markets geographically, for 72% of enterprises selling via the Internet had the very important benefit of launching and sales of new products/services. For 74% of Slovenian enterprises the extremely important benefit of Internet sales was in targeting customers individually and for 76% of enterprises the Internet sales had extremely important benefit for improving the enterprise's image.

E-COMMERCE

Figure 34: Receipt of orders via enterprises computer networks, European comparison, 2007



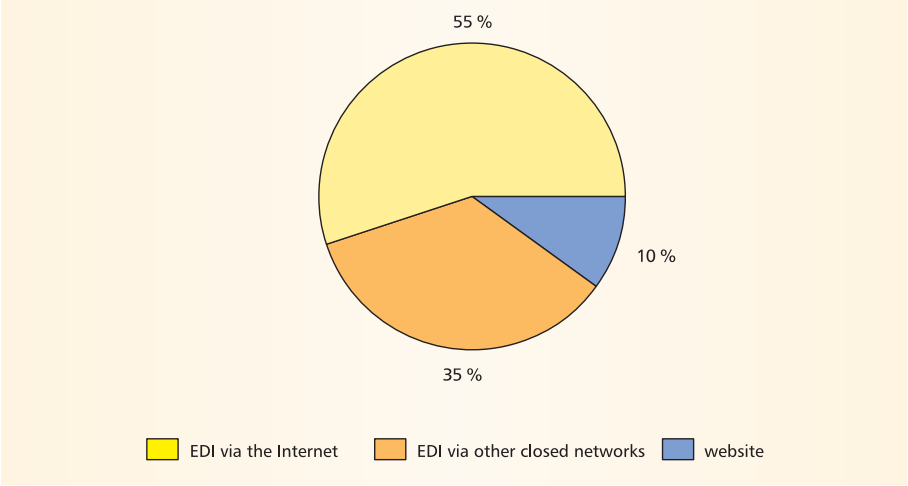
Source: Eurostat

- In 2007, 11% of enterprises in Slovenia received orders via computer networks, i.e. via websites or electronic data interchange (EDI, which is used for exchange of data in standardised and encoded form, e.g. EDIFACT). In the EU-27, 17% of enterprises received orders via computer networks. The percentage of enterprises that received orders via computer networks was with 35% the highest in the United Kingdom.

- The share of enterprises that received orders via computer networks was in Slovenia the highest in the activity hotels and restaurants, with 39% of enterprises (the EU-27 average 48%). In the EU-27 the share of those enterprises in the activity hotels and restaurants was the highest in Ireland (70%).

- In 2007 in Slovenia such enterprises were least frequent in construction (1%), which was less than the average in this activity in the EU-27 (9%). Most of such enterprises in the activity construction were in the United Kingdom, 28% of enterprises; among the Scandinavian countries there were 14% of such enterprises in Denmark, 10% in Sweden and 5% in Finland.

Figure 35: Methods of receiving orders via computer networks, Slovenia, 2007



Source: Statistical Office of the Republic of Slovenia

- Among the enterprises in Slovenia that received orders in 2007 via computer networks, 17% received or were receiving orders via EDI that runs over other closed networks, 37% via EDI that runs via the Internet, and 60% via websites.
- The value of orders received via computer networks was in Slovenia in 2007 8% of the turnover (excluding VAT) created via computer networks. 10% of turnover was created via orders received via websites, 55% of value via EDI that runs via the Internet and 35% of value via EDI that runs via other closed networks.
- In the EU-27, 12% of total turnover (excluding VAT) was created via computer networks in 2007. 48% of turnover was created via EDI that runs via other closed networks, 29% via EDI that runs via the Internet and 22% with orders received via websites.
- The share of enterprises in Slovenia that conducted e-commerce via EDI was in 2007 the highest among enterprises in the manufacturing activities (manufacture of petroleum, chemical products) with 14%, followed by 12% of enterprises in the manufacturing activities (manufacture of food, textile, wood products). In this activity the difference how e-commerce via EDI was conducted was best perceived: 9% of enterprises in manufacturing of food, textile, wood products conducted e-commerce via EDI that runs through the Internet and 3% of these enterprises via EDI that runs through other closed networks.

E-COMMERCE

Orders received via websites

In 2008, 71% of enterprises in Slovenia had a website. Among them there were all enterprises in computer and related activities and all enterprises in motion picture, video, radio and television activities. The fewest enterprises with a website were observed in the activity construction, 46%.

Table 14: Sophistication of enterprises websites with options and content by individual activities, NACE Rev. 1.1, Slovenia, 2008

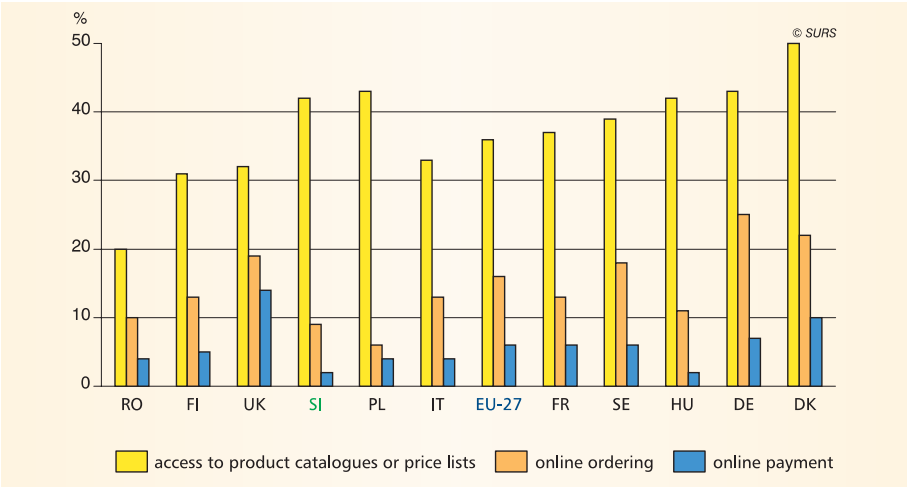
%

NACE Rev. 1.1	Website	Access to product catalogues or price lists	Online ordering	Online payment
F 45	46	12	2	0
I 60-63	50	24	14	2
DA-DE	65	41	8	1
DI-DJ	68	32	2	0
G 52	68	42	10	6
TOTAL	**71**	**42**	**9**	**2**
G 50	80	64	21	0
G 51	82	53	10	5
K 70, 71, 73, 74	83	50	14	2
DK-DN	83	61	7	0
I 64	86	67	42	19
H 55.1- 55.2	90	70	41	3
DF-DH	93	45	1	0
K 72	100	80	16	0
O 92.1 - 92.2	100	89	14	0

Source: Eurostat

In Slovenia 42% of enterprises in the post and telecommunications activities made on their website possible online ordering in 2008. 19% of enterprises in this activity made also possible online payment via website. Almost an equal share of enterprises (41%) made online ordering possible (reservations) also in hotels and restaurants; only 3% of those enterprises simultaneously made online payment on a website possible. Quite a lot of enterprises (21%) made possible online ordering via website in the activity sale, repair of motor vehicles, retail sale of motor fuel.

Figure 36: Sophistication of enterprises websites with options and content, European comparison, 2008



Source: Eurostat

■ Slovenian enterprises ranked differently in regard to website sophistication in comparison with other EU-27 Member States. The share of Slovenian enterprises with a website was with 71% by 7 percentage points over the EU-27 average. The Slovenian enterprises were also over the average in granting access to product catalogues or price lists that are published by enterprises on their website (42% in Slovenia, 36% in the EU-27). In view of the possibility of online ordering, Slovenia was with 9% by 7 percentage points under the EU-27 average. The share of enterprises that made online ordering possible was the highest in Germany and the Czech Republic (25%) and the lowest in Poland (6%). Online payment via website was made possible most often by enterprises in the United Kingdom (14%). As regards the share of enterprises that made online payment possible via the website, Slovenia was with 2% last among the EU Member States.

■ In view of receipt of orders via website there were in Slovenia in 2007 numerous enterprises in the activity hotels and restaurants, 39% of enterprises in this activity received orders (reservations) via website. They were followed by enterprises in the activity post and telecommunication with 33%, while the fewest enterprises received orders via website in the manufacturing activities (manufacture of petroleum, chemical products and manufacture of metal, non-metal products), less than 1%.

E-COMMERCE

Purchases via electronic computer networks

- In 2007, 28% of enterprises in Slovenia sent orders via computer networks (website or electronic data interchange), which is less than the EU-27 average (37%).

- 26% of enterprises in Slovenia in 2007 bought (sent orders) via the website, of these the most in the activity computer and related activities, 56% of enterprises, followed by the activity post and telecommunication, 44% of enterprises. The fewest enterprises that sent orders via website were observed in the activity hotels and restaurants, 11% of enterprises.

- Via electronic data interchange (EDI), where the data about a sent order are exchanged automatically between the computer systems of the enterprise and the business partners and are sent in an agreed format, in 2007 orders were sent by 3% of enterprises, among them the majority was in the activity sale, repair of motor vehicles, retail sale of motor fuel, 17% of enterprises, and in the activity retail trade, except of motor vehicles, repair of household goods, 18% of enterprises. In both activities most of EDI was conducted via the Internet.

- In EU-27 Scandinavian enterprises were those that in 2007 most frequently made purchases over computer networks: in Sweden 68% of enterprises made purchases in this way, in Denmark 62% of enterprises. The fewest enterprises did this in Romania and Bulgaria (5% of enterprises).

The usage of secure protocol

- The secure protocol protects and encrypts the data. In Slovenia 11% of enterprises conducted e-commerce via computer networks in 2007 and 6% of those enterprises used the secure protocol. With the value of this indicator Slovenian enterprises were over the EU-27 average (there on average 5% of enterprises used the secure protocol).

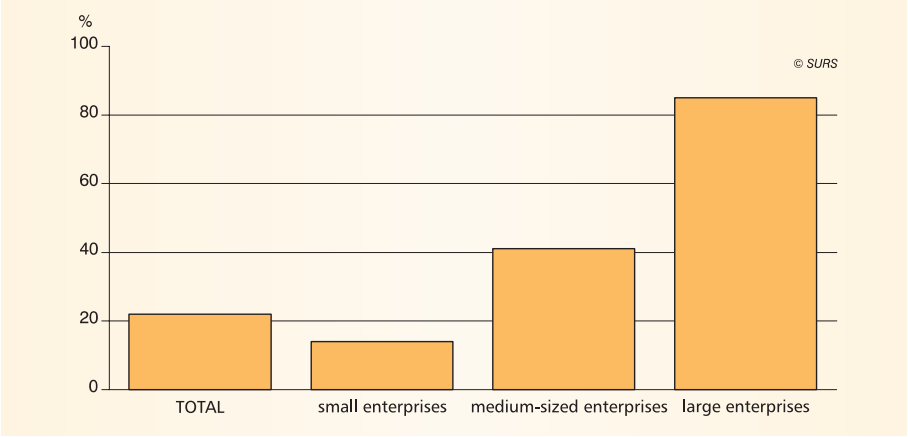
- In 2007, 18% of enterprises used the secure protocol in the activity hotels and restaurants (39% of enterprises received orders via computer networks). And among enterprises in the computer and related activities the secure protocol was used by 16% of enterprises (16% of enterprises received orders via computer networks).

- In 2007 the highest share of secure protocol usage was recorded among enterprises in Sweden and the Netherlands, 10%, and in Denmark, 9%. Ireland and the United Kingdom followed. The secure protocol was used to the smallest extent among enterprises in Romania, Bulgaria, Slovakia (in each 1% of enterprises) and in Latvia, Italy and Hungary (2% of enterprises).

IT SPECIALISTS

The introduction of ICT in enterprises requires maintenance of the equipment (hardware and software). This is one of the tasks that are done by IT specialists. **IT or ICT specialists have the capability to specify, design, develop, install, and maintain ICT and ICT systems (computers and computer programs) in enterprises.**

Figure 37: Employment of IT specialists in enterprises, Slovenia, 2007



Source: Eurostat

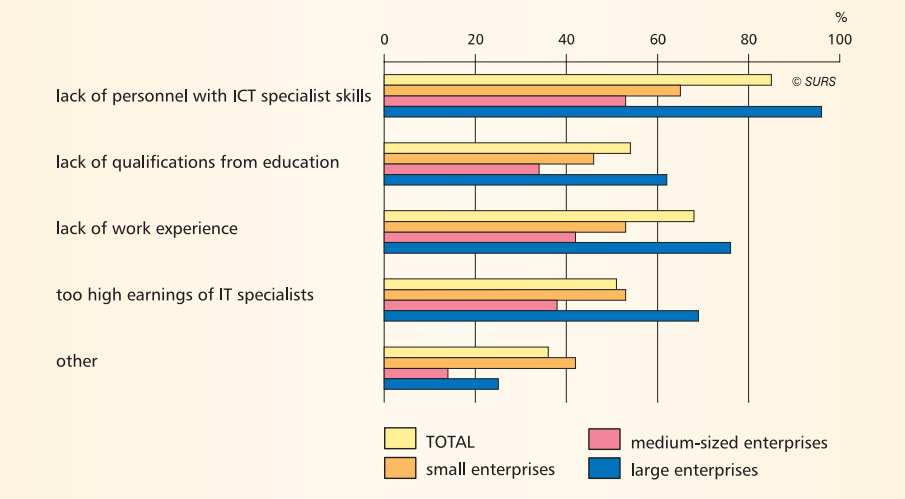
22% of enterprises employed IT specialists in Slovenia in 2007, whereas only among large enterprises there were 85% of such enterprises.

In 2006, 64% of enterprises in Slovenia encountered problems while employing IT specialists, while in EU-27 on average 47% of enterprises encountered such problems. 66% of enterprises in Lithuania and the Czech Republic were confronted with this problem while employing, while in the United Kingdom, Sweden and Finland 4% of enterprises encountered these problems.

The most frequent problem in Slovenia was lack of applicants with ICT specialist skills; with this problem were confronted 85% of enterprises (or all enterprises included in the survey, regardless of their size). The second most frequent problem was lack of work experience in the field of ICT (68% of enterprises), and the third lack of ICT related qualifications (54% of enterprises).

IT SPECIALISTS

Figure 38: Barriers in employment of IT specialists in enterprises, Slovenia, 2006

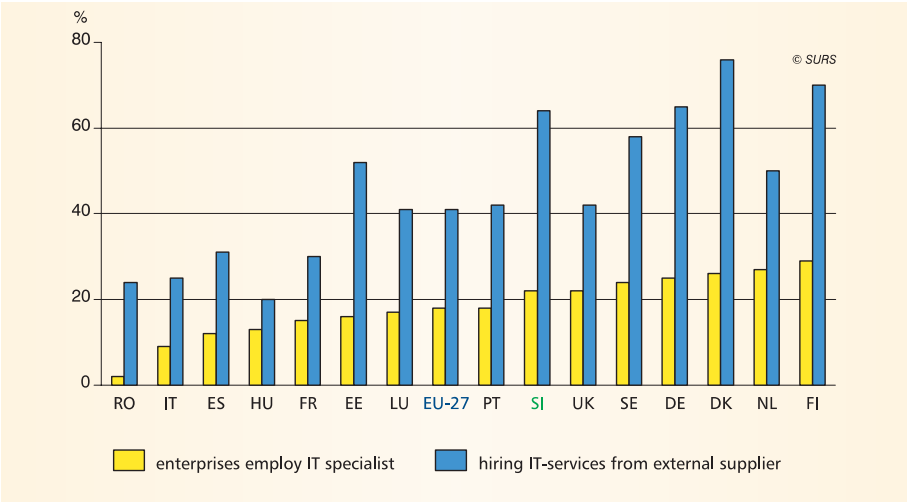


Source: Eurostat

In 2006, 10% of enterprises provided or organised education in Slovenia for their IT specialists with the purpose to develop or upgrade their ICT related skills. In the EU-27 such enterprises at that time prevailed in Germany, 24%, and in the United Kingdom, 23%. These were followed by Malta (19% enterprises), Denmark (15% of enterprises) and Finland (14% of enterprises), countries which are among the leading countries in the usage of ICT. The fewest enterprises that trained their IT specialists in 2006 were in Hungary (2% of enterprises) and in Romania (3% of enterprises). With 10% of enterprises Slovenia was under the EU-27 average (12% of enterprises).

IT SPECIALISTS

Figure 39: Employment of IT specialists in enterprises and hiring of IT services from other enterprises, Slovenia, 2006



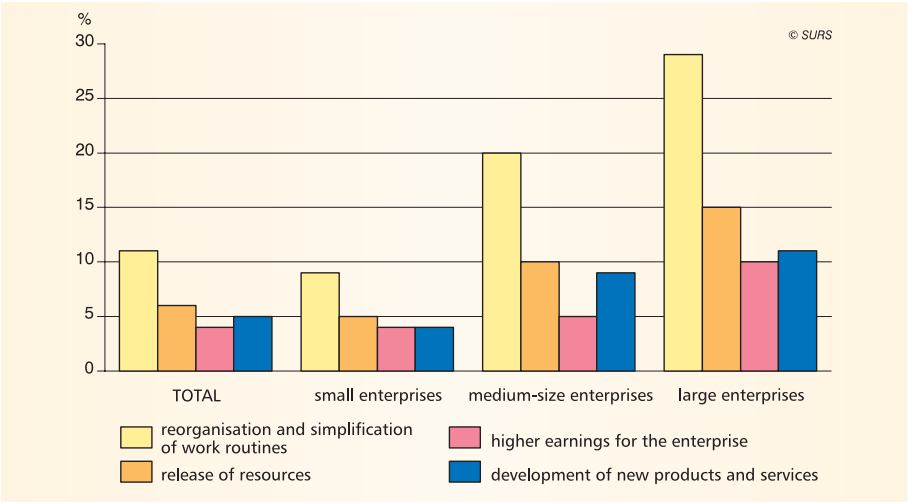
Source: Eurostat

- In 2006, 64% of all enterprises in Slovenia hired computer and software administrators or IT-services from other (external) enterprises (outsorcing) either in Slovenia or abroad. 8% of those enterprises hired or were hiring the mentioned services from enterprises abroad. 71% of those enterprises hired IT-services for ICT development or implementation (development of business programs, websites, databases), 62% of those enterprises hired IT-services for ICT operations (technical support, users suport) and 26% of those enterprises (that outsourced) hired IT-services for management of ICT in enterprises.

- Among large enterprises, in 2006 84% of enterprises hired or were hiring IT-services from other enterprises (29% of those enterprises hired IT-services abroad). Among medium-sized enterprises there were 82% of such enterprises (15% of those enterprises hired IT-services abroad) and among small enterprises there were 59% of such enterprises (5% of those enterprises hired IT-services abroad).

PERCEIVED BENEFITS OF ICT PROJECTS IMPLEMENTED IN ENTERPRISES

Figure 40: Perceived benefits of ICT implemented in the last two years, Slovenia, 2008



Source: Eurostat

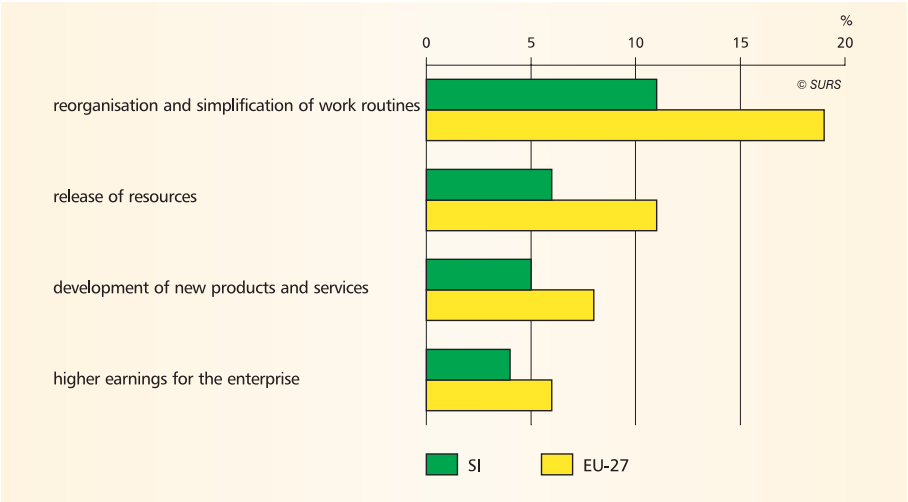
- In 2008, 11% of enterprises stated as their reply in the survey that the implementation of the ICT project in the last 2 years (e.g. new or updated website, starting to receive orders via computer networks) brought significant improvements in the area of reorganisation (redesign) and simplification of work routines in their operation. For 6% of enterprises this was significant improvement because the implementation of ICT projects in the last 2 years released the resources, while in 5% of enterprises the implementation of ICT projects encouraged the development of new products or services.

- For 4% of enterprises implementation of ICT in the last 2 years had significant influence on higher earnings of the enterprise.

- Set (routine) working operations were with the implementation of ICT simplified to a significant degree in many enterprises registered in the activity post and telecommunications (28%), the fewest of this kind of enterprises were in the activity hotels and restaurants. Resources were significantly released due to the implementation of the ICT projects in 18% of enterprises in motion picture, video, radio and television activities. Higher earnings were significantly provided by the implementation of ICT in computer and related activities (14% of enterprises). In these activities the implementation of ICT projects significantly encouraged the development of new products and services (31% of enterprises).

PERCEIVED BENEFITS OF ICT PROJECTS IMPLEMENTED IN ENTERPRISES

Figure 41: Percived benefits of implementing IT projects in the last two years in significant extent, Slovenia and EU-27, 2008



Source: Eurostat

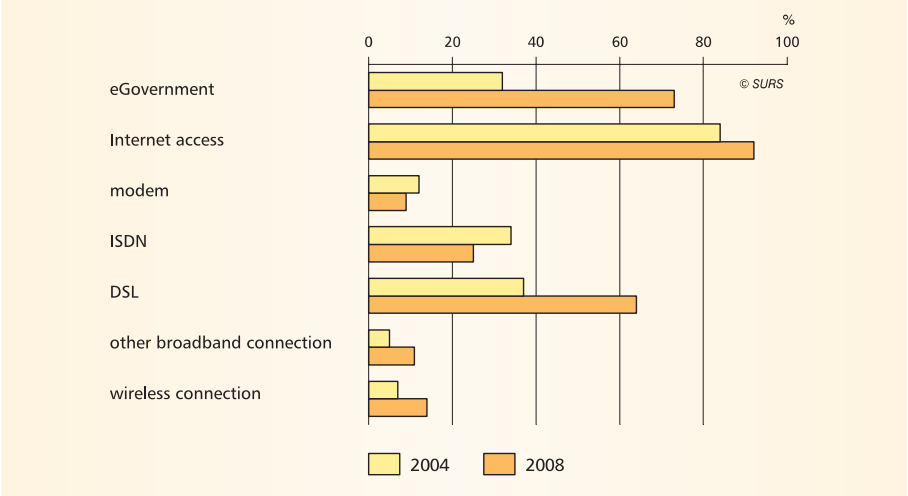
Among the benefits (improvements) that the implementation of ICT encouraged in enterprises in their work in EU-27 and that was perceived to a significant extent was the reorganisation and simplification of work routines; this advantage was perceived in 19% of enterprises in the EU-27; release of resources was perceived by 11% of enterprises; the implementation of ICT influenced the development of new products and services in 8% of enterprises and in 6% of enterprises in EU-27 the implementation of ICT brought the advantage of gaining higher earnings.

MICRO ENTERPRISES AND THE USAGE OF ICT

The investment in the latest information communication technologies is often related with larger investments and because of that fact it is important to know how micro enterprises (enterprises with 5 to 9 employees) are equipped and use ICT.

In 2004, 89% of micro enterprises in Slovenia used computers, 4 years later the share of enterprises increased to 93%. 56% of those enterprises used local computer networks (LAN) in 2008, which enables the exchange of information and the usage of common hardware in the enterprise.

Figure 42: Access and means of access to the Internet and the purposes for which the Internet is used in micro enterprises, Slovenia, 2008



Source: Statistical Office of the Republic of Slovenia

In 2004, 84% of micro enterprises in Slovenia had access to the Internet; 37% of them accessed the Internet via DSL, 34% via ISDN and 14% via modem (dialup access) - that was the highest share of enterprises with access to the Internet via modem among enterprises in regard of their size. In 2008, 91% of micro enterprises had access to the Internet and the share of those enterprises with modem Internet connection decreased to 8%, but was still the highest among enterprises in regard to their size. The Internet connection via DSL was used by 63% of enterprises. 72% of enterprises had access to the Internet via broadband connection, which was lower by 10 percentage points than in case of small enterprises.

In 2007, 73% of micro enterprises used eGovernment services, substantially more than in 2003 (then there were 32%). In 2003, 31% of those enterprises used eGovernment services for obtaining information, 25% of those enterprises used it for obtaining forms; 19% of those enterprises treated the administrative procedure completely electronically. In 2007 the share of enterprises that obtained information or forms almost doubled (information was obtained by 68% and forms by 65% of enterprises). The service of treating the administrative procedure completely electronically was used or was being used by 36% of enterprises (or by 19 percentage points less than the usage of services among small enterprises).

MIKROPODJETJA IN UPORABA IKT

- 47% of micro enterprises had a website in 2008 or 10 percentage points more than in 2004. 26% of those enterprises published on their website product catalogues or price lists of their products or services, 6% made online ordering, reservations possible and advertisement of open job positions or online job applications.
- 3% of micro enterprises received in 2007 orders via website. And 20% of micro enterprises placed orders via website.
- 4% of micro enterprises stated in the survey in 2008 that the ICT projects implemented in the last 2 years caused significant improvements in regard to reorganisation and simplification of work routine in their enterprises.
- 7% of micro enterprises employed IT specialists for maintaining and developing of software and hardware in 2007. A large part of micro enterprises (42%) hired IT-services from other enterprises (outsourcing).

Table15: The number of persons employed in micro enterprises that use computers at their work at least once a week, Slovenia, 2004 and 2008

	2004	2008	Index 2008/2004
Employees use computers	20,400	25,918	127.0
Employees use computers with Internet access	16,387	23,507	143.4

Source: Statistical Office of the Republic of Slovenia

METHODOLOGICAL EXPLANATIONS

Conversion of data
To ensure comparability, statistical data that refer to periods prior to 2007 have been recalculated and are published by Eurostat for all EU-27 Member States.

Graphical presetation of extreme values
Figures 1, 2, 4, 5, 7, 10, 11, 14, 17-21, 23, 25, 28, 29, 31, 34, 36 and 39 present data only for those EU-27 Member States with the highest and lowest values.

Abbreviation
SURS Statistical Office of the Republic of Slovenia

Breakdown of enterprises by the number of employees
- micro enterprises (5–9 employees)
- small enterprises (10–49 employees)
- medium-sized enterprises (50–249 employees)
- large enterprises (250 or more employees)

NACE Rev. 1.1 activities
The observation units are enterprises registered on the territory of the Republic of Slovenia for performing the following activities by the NACE Rev. 1.1 classification:
– DA: manufacture of food products, beverages and tobacco
– DB: manufacture of textiles and textile products
– DC: manufacture of leather and leather products
– DD: manufacture of wood and wood products
– DE: manufacture of pulp, paper and paper products, publishing and printing
– DF: manufacture of coke, refined petroleum products and nuclear fuel
– DG: manufacture of chemicals, chemical products and man-made fibres
– DH: manufacture of rubber and plastic products
– DI: manufacture of other non-metallic mineral products
– DJ: manufacture of basic metals and fabricated metal products
– DK: manufacture of machinery and equipment not elsewhere classified
– DL: manufacture of electrical and optical equipment
– DM: manufacture of transport equipment
– DN: manufacturing not elsewhere classified
– F45: construction
– G50: sale, maintenance & repair of motor vehicles, retail sale motor fuel
– G51: wholesale trade & commission trade, except of motor vehicles & cycles
– G52: retail trade, save motor vehicles, repair personal & household goods
– H55.1: hotels
– H55.2: camping sites and other provision of short-stay accommodation
– I60: land transport, transport via pipelines
– I61: water transport
– I62: air transport
– I63: supporting and auxiliary transport activities, travel agencies
– I64: post and telecommunications
– K70: real estate activities
– K71: renting machinery, equipment w/o operator, personal & household goods

- K72: computer and related activities
- K73: research and development
- K74: other business activities
- O92.1: motion picture and video activities
- O92.2: radio and television activities

DEFINITIONS

ICT (Information and Communication Technology) is software and hardware for data communications (e.g. computer, fax, Internet, fixed, mobile phone).

EMPLOYMENT OF PERSONS WITH ICT KNOWLEDGE AND TRAINING OF EMPLOYEES FOR ICT USAGE

ICT - User skills are capabilities enabling the effective use of common or advanced software tools (computers, computer programs, Internet).

TELEWORK - WORKING AT A DISTANCE

Teleworker is a person who is employed in a company but performs at least a few hours monthly elsewhere (e.g. at home), using ICT. (In the IKT-PODJ survey there is an additional condition for the telework; access to the enterprise's IT system from where the teleworker is working.)

COMPUTER NETWORKS

Intranet (enterprise's computer network, internal website of the enterprise) is a network that uses Internet technologies for informational needs of an enterprise. It enables efficient communication among employees.

Extranet is a closed network that uses Internet technology for the communication with the company partners and customers. It can be an extension of the Intranet that gives external users (business partners, customers) partial access to the Intranet. It can also be a private part of the website of the enterprises to which access is restricted by a password.

LAN stands for local area network. A local area network is a local community connecting at least two computers, which enables enterprises to share and jointly usage hardware and databases in enterprises, exchange data and documents and allows for communication between employees.

WLAN is wireless LAN, thus a network that establishes connection between computers on the basis of radio waves, without the usage of cables.

AUTOMATED ELECTRONIC DATA EXCHANGE

Automated data exchange between the enterprise and Information-communication systems outside the enterprise enables exchange – sending or receiving - of messages (e.g. orders, invoices, payment transactions) in an agreed format (EDI, EDIFACT, ODETTE, TRADACOMS, XML, xCBL, cXML, ebXML) which allows its automatic processing. Mes-

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sages are not entered manually and can be transferred via different computer networks (e.g. transmission of data for the annual report to the Agency of the Republic of Slovenia for Public Legal Records and Related Services).

E-invoices are invoices where all data are written in a digital format (e.g. XML) and they enable automated processing. The usage of this kind of conducting business saves time and lowers the material costs, simplifies the procedure of paying invoices and is at the same time ecologically friendly.

SHARING ELECTRONICALLY INFORMATION ON THE SUPPLY CHAIN MANAGEMENT

The supply chain (flow of raw materials, information, means, services from the suppliers of raw materials to factories, warehouses and end consumers) includes the organisation and processes that create and deliver information, products and services to end users. The advantages of electronic exchange of information between suppliers and customers in the supply chain are: reduction of transaction costs, the improvment of the flow of data, elimination of paper business operations and the costs connected with it and simpler transfer and processing of information for users.

In the supply chain information with suppliers and customers is exchanged with the purpose to coordinate the delivery or accessibility of products and services. The flow of information about the distribution, production and inventories is conducted either via the Internet or computer networks between enterprises.

AUTOMATED ELECTRONIC DATA EXCHANGE WITHIN THE ENTERPRISE

Automatic sharing of information within the enterprise relates to the usage of one single software application that supports and manages the different functions of the enterprise. Also a common database or data warehouse can be used which is accessed by different software applications (programs) that are used for carrying out the different functions of the enterprise.

ERP - Enterprise Resource Planning is a software application that integrates and stores data from different business functions. ERP integrates different enterprise departments, the majority of business processes, e.g. planning, procurement, sales, marketing, customer relationship, finance and human resources.

The computer program CRM (Customer Relationship Management) for management of customer relations enables access to key information about customers.

THE USAGE OF OPEN SOURCE OPERATING SYSTEMS

Open source operating systems are free of charge programs that allow access to the source code of the program and its modification.

INTERNET USAGE

Wireless connection is a connection with web without wire (infrared, satellite, microwave, laser connection, wimax). Wireless connection can be via a mobile telephone (GPRS, UMTS, EDGE), Wimax or a 3G modem (USB, wireless data card).

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The Internet is a worldwide WAN (broader network) that covers large geographical networks. It enables users access to data, communication, and makes exchange of information over the world faster and at lower costs. The data packages are transported and received via Internet protocol (IP). One has to distinguish between the Internet and the World Wide Web (WWW). The Internet is a mechanism for transport of data and the World Wide Web is a program that makes transport possible.

Internet is a worldwide network of computers communicating on the standard Internet protocol and providing users with exchange of textual and audio-visual information.

ISDN (Integrated Services Digital Network) is a digital network that enables transmission of voice, picture and data at the same time (128 Kb/s).

ADSL (Asymmetric Digital Subscriber Line) is one of the xDSL technologies, which enables asymmetrical transmission of data. That means the speed of downloading is much faster than the speed of uploading. The ADSL technology is using a copper line to send data.

xDSL (Digital Subscriber Line) is a technology that includes different variations of the principle, such as e.g. ADSL, VDSL. These technologies are designed to increase bandwidth available over standard copper telephone wires. Individual connections depend on destination of home or business from the company central office that offers DSL service. A DSL line can carry both data and voice signals and the data part of the line is continuously connected.

VDSL (very-high-bit-rate DSL) is one of the DSL technologies. It enables faster data transmission than ADSL, but depends more on the destination of home or business from the company central office offering DSL service.

VoIP connection is ensured by broadband access to the Internet assuring access to the public telephone network and publicly available fixed telephone services including emergency services. Each connection has a telephone number allocated and enables the service of managed IP telephony, with which the operator prioritizes IP speech packages and supervises the quality of services. Unmanaged IP speech services enabled by computer software or other terminal equipment, where the communication is realized through the public Internet network without the supervision over the quality of services, are excluded.

UMTS (Universal Mobile Telecommunication System) is also known as 3G technology that was designed as a successor to GSM. It enables users to transmit images, video, high volume of data through wireless connection and access to the Internet.

Broadband are technologies or connections which enable rapid transmission of data, e.g. films, games, video-conferences, over an Internet (for example: ADSL, cable connection, UMTS, optical connection, VDSL, leased lines).

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PRESENTATION OF ENTERPRISES ON THE WORLD WIDE WEB

Website is a document with hypertext, as it is shown by a web browser. Websites can have text, hypertext links, images, videos and sound.

Web 2.0 – or the World Wide Web of the second generation is normally connected with the development of the web and web design that accelerates interactive exchange of information. The examples of Web 2.0 include social networks, blogs, wikis, websites with the possibility of exchange of video takes. Web 2.0 makes possible to the users interaction with other users or change the content of the web. With this it distinguishes itself from websites without interaction, where the visitors can only see and read the information.

SECURITY AND INTERNET

Off-site system (security copy of data on the location outside of enterprise): the enterprise has besides the main location another location or several locations where data backups are saved and the backup information system is operating.

Secure server (supports security protocol, e.g. SSL -Secure Sockets Layer, which encodes or protects the transfer of data in electronic communication). It protects transactions at eBusiness. By entering such a protected website, where you write down the address of the website (for example **http://www.stat.si**) it adds to the address letter "**s**", thus **https://www.stat.si**, in the bottom right corner of the browser a lock appears.

Firewall is a combination of hardware and software that protects data and computers from harmful influences of the Internet.

Digital signature or **electronic signature** in the electronic commerce is equal to one's own hand signature on the paper documentation in the traditional business. The user signs the document with the digital signature electronically and with that the user confirms the agreement with the contents of the document. For example, in electronic banking we confirm the requested service with the digital signature.

E-COMMERCE

With the expression **e-commerce** we mark purchases/sales of products or services (e.g. reservations) via websites (e.g. via prepared e-forms, e-shops). Payment and delivery does not necessarily have to be done via the Internet or computer networks. E-commerce can also run via computer exchange of data or **EDI** – Electronic Data Interchange.

EDI is used for the electronic interchange of data, documents and orders inside the enterprise (e.g. branches) and between the enterprises. Data interchange flows automatically between the computer systems and partners. Data are exchanged in standard and encrypted form (e.g. EDIFACT standard) either via the Internet or other closed networks. Purchases/orders via regular e-mail are not considered as e-commerce.

IT SPECIALIST

IT or ICT specialists have the capability to specify, design, develop, install, and maintain ICT and ICT systems (computers and computer programs) in enterprises.

Outsourcing - Hiring IT services from other enterprises from inside of the country or from abroad.

LIST OF COUNTRIES: NAMES AND ABBREVIATIONS (ISO 3166)

Country name	Abbr.	Country name	Abbr.
EU-27, TOTAL	**EU-27**	Italy	IT
Austria	AT	Latvia	LV
Belgium	BE	Lithuania	LT
Bulgaria	BG	Luxemburg	LU
Cyprus	CY	Malta	MT
Czech Republic	CZ	Netherlands	NL
Denmark	DK	Poland	PL
Estonia	EE	Portugal	PT
Finland	FI	Romania	RO
France	FR	Slovakia	SK
Germany	DE	Slovenia	SI
Greece	GR	Spain	ES
Hungary	HU	Sweden	SE
Ireland	IE	United Kingdom	UK

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How to obtain statistical data and information?

- **on Statistical Office's website**
  www.stat.si

- **via mail, phone, fax and e-mail**
  address: Statistical Office of the Republic of Slovenia
  Vožarski pot 12, 1000 Ljubljana, Slovenia
  phone: +386 1 241 51 04
  fax: +386 1 241 53 44
  answering machine: +386 1 475 65 55
  e-mail: info.stat@gov.si

- **by ordering statistical publications**
  address: Statistical Office of the Republic of Slovenia
  Vožarski pot 12, 1000 Ljubljana, Slovenia
  phone: +386 1 241 52 84
  fax: +386 1 241 53 44
  e-mail: prodaja.surs@gov.si

- **by visiting the Information Centre**
  office hours: Monday to Thursday from 9.00 to 15.30
  Friday from 9.00 to 14.30