I. Methodology

I.1 Information and communication technology

The abbreviation ICT stands for information and communication technology. The alternative term IT (information technology) is used less and less. Although today information technology and communication technology are apparently inseparable, this has not always been the case.

Information technology

Information technology is technology aimed at providing people or machines adequately with the information they need to perform well. To produce information, data are usually processed by computers. The way in which the have to be processed – the automation – is laid down in computer programs, called software. A computer has four components: storage technology (memory), a calculation unit (processor), input (data and programs) and output (data or information). Although it is not possible to point to one single inventor of the computer, the Briton Charles Babbage is widely accepted to be the person who described the components of the modern computer for the first time in this way. He did so in 1834.

Technology is more than just the mechanics; it also incorporates the skills applying these mechanics. Information technology combines the mechanics of collecting, recording, processing, storing, representing and transporting data.
Until the late 1970s, only a few people – working in computing centres – physically worked with computers. Even computer programmers had to hand in their computer codes on punch cards and sometimes had to wait a long time for their printed results that showed what progress they were making. Most companies had only one single or just a few computers, which did not resemble the current personal computer (PC) in any way. The increased capacity of microprocessors and the consequent smaller and smaller sized computers changed all that. The influence of communication technology must also be mentioned in this respect.

Communication technology

The purpose of communication technology is to disseminate data or information. The following elements play a role in communication technology: source, transmitter, channel, receiver and destination. The technology used for communication has greatly improved in recent decades, and new technologies continue to emerge. Old forms of exchanging information across large distances, such as radio, television and fixed telephone lines have been complemented by a growing number of new forms, of which the internet is the best known.

The rapid developments in communication technology also made the old type of computer, entirely based on information technology, obsolete. The combination of information and communication technology has simplified the use of computers. For quite some time now users can give computers instructions via the keyboard, while on-screen access to information has also become common. Communication technology is at the basis of these options.

As a result of the continuous miniaturisation of technologies and cheaper production methods, computers started to appear not only on the desks of company and government employees by the early 1980s, but also more and more in the home. Initially, these were mainly game computers that had to be connected to a television set and which sometimes used a cassette recorder as the storage element. The development of faster microprocessors enabled the introduction of the personal computer (PC). Since then, the development of the PC has led to an almost universal availability of information and communication technology without too many financial or physical obstacles. Apart from PCs, there are now many new ICT forms, such as mobile telephones, network equipment and satellite systems. As a result of 'embedded' applications of computer technology in things like washing machines and microwave ovens – where the number of computer components is minimised to the bare necessities – ICT is becoming more widespread. This is even more the case for 'embedded' software in all kinds of machinery and equipment used in (industrial) production processes.

I.2 ICT goods and services

Products that serve primarily to process data electronically and/or provide communication are considered to be ICT products. Without ICT, these products – which include tangible goods as well as services – would not exist. In this publication, there is a strict distinction between goods and services: goods refer to equipment (hardware) or its components; services aimed exclusively at electronic data processing (including production of software) and/or communication, are referred to as ICT services.

Statistics Netherlands uses several goods and services classifications. They play a key role in the compilation of the National Accounts, which incorporates all data gathered by Statistics Netherlands on companies, and estimates for parts of the economy that are not observed. In this way, Statistics Netherlands arrives at a complete, consistent description of the Dutch economy.

Internationally, the OECD has defined a list of ICT goods based on the classification of goods used in the international trade statistics. There is no internationally accepted definition of ICT services yet.

The National Accounts currently distinguishes the following ICT goods:

office machines, computers and peripherals, insulated wire and cable, integrated circuits, other electronic components, transmitters, TV cameras, telephones, components of telephones, radios, televisions, other audio and video equipment, components of radios and televisions etc., equipment for measuring, checking, testing, navigating and other purposes, components of that equipment, industrial process control equipment, watches and clocks.

The National Accounts currently distinguishes the following ICT services:

postal services, post office counter services, courier services, telecommunications services, computer and related services, software consultancy and supply services, production of own software.

Listing the ICT goods and services is only a starting point for the study of the phenomenon ICT. The ultimate aim of the ICT study is to map out the use society makes of ICT and the social and economic consequences of this: in short: the impact of ICT.

I.3 Defining the ICT sector

Once ICT goods and services have been defined, the next step is to determine what an ICT companies is exactly. In statistical surveys, companies are classified by their main activity. Roughly speaking, companies whose main activity is producing ICT goods and/or services belong to the ICT sector. These companies may also produce other products besides ICT goods and services. On the other hand, not all ICT goods and services are necessarily produced by companies in the ICT sector. Companies in the manufacturing industry, for example, may produce software for their own use as a sideline.

Standard Industrial Classification

Statistics Netherlands uses its own Standard Industrial Classification (SBI) for a uniform classification of the economy. This classification, last revised in 1993 (SBI93), covers all economic activities, i.e. activities leading to the production of goods and services. The SBI design takes EU regulations into account, such as those laid down in the NACE (*Nomenclature générale des Activités économiques dans les Communautés Européennes*).

The SBI is used in all surveys conducted by Statistics Netherlands in which results are broken down by economic activity. In principle, the most detailed level of the classification was designed for statistics describing the production process. Because of the costs and the reduction of the administrative burden, Statistics Netherlands

does not collect and publish data at the lowest level for all its statistics. Confidentiality constraints may also prevent more detailed publications.
Table I.3.1 shows the SBI classes that are included in the ICT sector in this publication. These are based on the OECD guidelines. However, there is a slight difference between this publication and the OECD guidelines in the case of ICT services. This is discussed further in the glossary.

As activity classifications based on main activities do not provide a perfect view of the total volume of a particular activity, not all ICT-related economic activities are included in this publication. For example, an ICT department within a bank is not included in the ICT sector, whereas staff of a child-care centre within a large ICT consultancy are included in this sector.

Table I.3.1
Definition of the ICT sector

SBI93	Description of activities
ICT industry	
3000	Manufacture of office machines and computers
3130	Manufacture of insulated wire and cable
3210	Manufacture of electronic components
3220	manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy
3230	Manufacture of audio and video equipment
3320	Manufacture of instruments and appliances for measuring, checking and testing
3330	Manufacture of industrial process control equipment
ICT services	
6400	Post and telecommunication
7200	Computer service bureaus, etc.

Source: OECD/Statistics Netherlands.

In addition, the volume of the ICT market does not correspond with turnover in the ICT sector. Here, the ICT market is seen as the virtual place where supply and demand of ICT goods and services meet. The volume of this market can be quantified by the turnover realised on ICT goods and services. Naturally, the domestic ICT sector is a key market player as a provider of ICT goods and services. However, as mentioned above, ICT goods and services may also be provided by non-ICT companies. Moreover, ICT goods in particular are imported on a large scale and partly marketed through domestic wholesalers.

Content sector

Opinions differ as to whether the content sector should be considered part of the ICT sector. Certain companies distribute content with the specific aim to provide

services via digital networks while they are still classified in the sector of companies who provide comparable services through traditional channels. One example is news provided on the internet. For the time being, these activities will not be considered as ICT services because the product – news – and not the distribution channel is seen as the primary criterion.

I.4 Telecom infrastructure

As a result of new communication technologies, computers have become easier to use in the work place and also affordable as consumer goods. Initially, changes to the actual machines resulted in innovations in computer use, but since the 1980s the introduction of internal and external networks have been the main revolutions. These far-reaching developments have in turn led to new kinds of business management and consumer behaviour.

This section looks at the concepts and developments used in telecom infrastructure and the services it provides. Quantitative research data are presented in chapter 3 of the book, which is entirely devoted to telecom infrastructure.

Delineating telecom infrastructure

The word 'infrastructure' produces associations with physical facilities that connect places in space. In this sense, telecom infrastructure in this publication includes all facilities linking points in space with the aid of information and communication technology. In addition, this interpretation assumes that the facilities are characterised by a certain immobility. The definition is a strict one: just as a car is not part of a road network, so a PC is not part of the telecom infrastructure. The telecom infrastructure is an application of ICT, just as the PC, but the two serve different purposes. The telecom infrastructure is now mainly aimed at transmitting data, while a PC is mostly used to process or gather the data before sending them. A computer is part of the telecom infrastructure if it is an integral part of the technology used to operate the infrastructure (servers for example).

The telecom infrastructure as seen in this publication is in fact the total collection of electronic communication networks, making them a modern version of the traditional rail and road networks. Via the telecom infrastructure, the data are sent electronically, but the impact is more far-reaching than the physical process alone. In fact, the telecom infrastructure creates a growing virtual world in which time and distance lose some of their meaning. This can have major social consequences, just as the arrival of the railway networks did.

In the future, ad hoc or spontaneous networks will play an increasingly important role. Computers will discover their physical proximity to each other and will link up to form temporary unique networks without the intervention of an operator, while

there is still the possibility that one of the machines is in contact with wider electronic networks.

Electronic communication networks may have physically different layouts. Some cables transmit electrical signals, for example, others transmit light signals. The new wireless WiFi, WLL and WiMax technologies share the fact that they are wireless with older technologies such as radio and television, but in terms of application they are an extension of existing cable networks. The new wireless technologies have vastly expanded the telecom infrastructure.

Appliances to access the networks

Alongside the telecom infrastructure are the ICT goods that use the infrastructure. Denoted by the collective term peripherals, these include for example telephones, mobile telephones, faxes, personal computers, printers, television and radio. In fact, these goods are also seen as interchangeable intelligent access points to the infrastructure. Not all ICT goods belong in this category, as they also include items that cannot be connected directly to the telecom infrastructure, for instance because they are not appliances that can be used in their own right (e.g. diodes, transistors, processors and ICs).

The chapter on telecom infrastructure addresses the penetration of peripherals in society, showing the scale on which the telecom infrastructure is used, and by which peripherals. The more specific use of the telecom infrastructure and its peripherals by companies, the public sector and households is discussed in chapters 4, 5 and 6 respectively.

Internet as leading technology

The internet is an abstract term for a worldwide network. Computers linked to the internet make use of the internet protocol. This standard protocol, developed in 1977 under the name TCP/IP (Transmission Control Protocol/Internet Protocol), enables networks to be linked to each other.

The first network ARPANET (Advanced Research Projects Agency Network) was set up in the 1960s by the US Department of Defence as a network that would continue to operate even if parts of it were damaged. To realise this, it was designed as a web structure rather than a linear structure which would allow only one single route between two computers. The network expanded over the years as other networks were linked up. These networks are owned by the network providers or internet-backbone providers. The providers are not interested in individual internet users, but in companies to whom they delegate the operational management. These companies are called access providers: they provide access to the services made possible by the internet. They have a vast number of fixed IP addresses, which are assigned to clients at random per session, or permanently. Access providers providing more services than just access to the World Wide Web are called service

providers. The most commonly known services are e-mail, news groups and hosting (through which users can operate their own website).

The internet protocol, which - in spite of the different views of Europe and the USA about control of the internet - is still monitored by national and international bodies, has increasingly become the standard for data transmission across the world. Its success is mainly based on its being an open standard that everyone can use and for which therefore everyone can develop applications. In addition, more information is standardly becoming available in digital form, which means it can be disseminated via the internet. For example: digital cameras. Before digital cameras came onto the market, photographs had to be developed and digitized by scanners before they could be transmitted on the internet.
Access to the internet is very low threshold for potential users, who only have to buy the peripherals and sign an agreement with the access provider to 'go on-line'. The transport method itself is relatively simple and new elements can be introduced by changes at the access point to the network – mainly through software.
The intensity of use has increased, as a result of faster connections. Files that could not conceivably have been transmitted via a network can now be sent through the internet (e.g. music and video files). In recent years, a lot of money and effort have been invested in backbone infrastructure, which links various local networks with the internet over long distances. The current capacity of these backbones is expected to suffice for quite some time to process the ever increasing data flows.

Services via the telecom infrastructure

In part, the usability of an electronic communication network in terms of scope, capacity, speed of transmission and (technical) reliability is determined by its quality. Without a network, telecom services would not be possible. Almost all telecom services are covered by two categories:
– making an electronic communication network available;
– providing an electronic communication service.

A reliable network is one that transmits information without failures, errors etc. Users must be able to rely on the fact that the information is received by the person it is addressed to, and does not fall into the wrong hands. Adequate handling of information flows increases public trust in electronic networks and indirectly also the use of applications. The Dutch government privatised the post and telecommunications services (PTT), thus opting no longer to play a role in the hands-on quality management of electronic networks. However, a new government body (the Telecom Agency or AT) does monitor the continuity and availability of networks.
Companies which own a functioning electronic communication network can earn money by making it available to others as well. This is a relatively new service. Originally, the owner of a network was also the sole provider of services through

that network. Government measures – particularly the liberalisation of the telecom market – have brought about substantial changes in the past ten years.

Once a company has access to an electronic communication network, either as its owner it or through a contract with the owner, it can provide a wide range of electronic communication services. Examples are (analogue or digital) transmission of television broadcasts, provision of (mobile) telephone services and internet access. Making available one or more e-mail addresses is a standard service provided by most access providers in their paid packages. Hosting paid access internet sites is another service. However, only generating the information ('content') itself is not considered to be a telecom activity. A television production company, therefore, is not a telecom company. A newspaper that can be read on the internet conducts or insources telecom activities, but the actual compilation of the news reports is not a telecom activity.

I.5 The influence of ICT on society

Below various developments and concepts are discussed that are important for the understanding of the impact of ICT on the economy and on society. Many of the concepts are addressed in various chapters of *The Digital Economy*, but in a more quantitative context.

Innovation and ICT

Looking back at the last decades, scientists sometimes refer to an ICT created 'Fordism' crisis; Fordism here being a metaphor for the large-scale production of standardised goods for mass consumption by using routinised production methods. Flexibility is seen as a key characteristic of more recent production methods; flexibility in both the production process itself, and the organisation of the production within and outside the company. The introduction of automation to make production processes more efficient has made it possible to produce cheaper and better quality products on a smaller scale (Oerlemans, 1996).

Much has been written about the specific relationship between innovation and ICT. The original theories in this area referred to the manufacturing industry, and used the life cycle of a product as a basis to describe product innovation. According to these theories, a product passes through several stages before it reaches a certain standardisation, and just how these stages develop is determined by competition with respect to quality differences, investment and chance.

However, this theory is more difficult to apply to the services industry, which has become increasingly important in recent decades, also in terms of ICT application. Therefore a similar theory has been developed for the services sector. With the introduction of the 'reversed product cycle' concept, Barras was the main exponent of those arguing for an explicit services approach. He described the 'reversed

product cycle' based on his studies of the developments in financial and business services (Barras, 1986 and 1990). In short, he argues that innovations in services – including ICT services – first take place in the processes and only subsequently in the products themselves. Barras saw technology as the determining factor in innovation. This led to criticism from others, who felt that non-technological aspects did not receive enough attention and that innovation did not always necessarily result in a product (Gallouj, 1998 and Uchupalanan, 2000).
Barras – like Oerlemans before him – noted that in the first stages of the application of new technology such as ICT, it is the major companies who play the main roles. However, they get into difficulties in later stages because of their lack of flexibility. Barras' studies are mainly based on innovation initiated by suppliers. Other authors stress other sources of innovation, such as customers and company employees.

Dutch authors, like Goedvolk, have also described the role of ICT in innovation (Goedvolk, 1995). Goedvolk states that ICT is going through a similar evolution to all other new technologies. The first two stages are denial ('No, it is not important') and exploration ('Maybe we should take a look at it'). In the third stage, that of replacement, a company looks at which operations could be done with the aid of the new technology in the future. The purpose then is to increase efficiency without essentially changing the process.
In the fourth stage – integration – the various new technological applications are studied in connection with each other and combined to form a new joint infrastructure. The new technological applications must meet demands in terms of connectibility and integration. Processes may be changed alongside these developments, but the processes are not directly related to the new technological infrastructure.
In the fifth stage, that of transformation, business processes are adjusted because the new technology makes some processes redundant or allows them to be carried out elsewhere. Goedvolk indicates that companies often look beyond their own four walls during this transformation. They take decisions based on opportunities and risks, and are concerned with their own competitiveness and environment. In this stage, the technology will result in new products or services, and may trigger a restructuring of customer and supplier networks.
The sixth and last stage, transparency, is reached when the interaction between technology and processes has developed to a point where people understand how they can make even better use of the technology. They perceive it as normal and do not need to know exactly how it works to be able to use it. Examples of this are the telephone and the car.

E-business and e-commerce

The physical presence of computers does not say much about the degree of computerisation in a company. What counts is what the organisation actually does with these computers. The question is, therefore, how can ICT can best be used as an

instrument. The idea that there is 'one best way of management' was abandoned some thirty years ago where technology is concerned. The importance of appropriate non-technical innovations to complement technical innovations is now generally acknowledged. Under the notion of business process re-engineering (BPR) organisations are required to radically reorganise their structures with the aid of new technology in order to survive. Enterprise resource planning (ERP) systems are software tools ('enablers') that are only profitable if companies are prepared to invest in BPR. In combination with workflow software, these ERP systems facilitate the numerous electronic business activities that are thus generated. E-business is discussed in detail in chapter 4 of the publication. E-business seeks to create synergy between traditional and new business methods, and the opportunities offered by ICT in enterprises.

For a long time, there was no consensus about the definitions of e-business and e-commerce. E-business was generally defined as doing business with the help of ICT and ICT applications. E-commerce, is an element of e-business and consists of concluding or initiating a transaction through electronic networks: actual purchases and sales of goods and services. A distinction can be made between e-business between companies (business-to-business or B2B) and between companies and consumers (business-to-consumer or B2C). Opinions on the definitions differed mainly on the point of exactly which ICT was referred to. Increasing political and media interest in e-commerce made it necessary to end the confusion. Therefore, in 1999 the OECD decided to set up an international working group to compile a definition of e-commerce that could be used in policymaking and that was statistically reliable and feasible (see Pattinson, 2000). The working group compiled two definitions of e-commerce with the following dimensions: the network used for e-commerce and the business processes related to e-commerce. The 'broad' definition concerns the purchase and sale of goods or services via computer networks in which the activity relating to purchase and sale refers to the ordering, and not to payment or delivery. The 'narrow' definition only deviates in one aspect: the network used to order the goods and services is the internet.

Stages of e-business

In the literature, the intensity of e-business is often described as developing in stages. The stages described below are taken from the Agency for International Business and Cooperation (EVD), part of the Dutch Ministry of Economic Affairs. The approach of classifying companies by their stage of development is based on the sales perspective. There is a certain logic to this. Companies in stage 1 only make passive use of external data communication. These companies use facilities provided by others, but do not have any facilities themselves on the internet. They can purchase via the internet, however. In stage 2, companies who have only a website only provide information via the internet. Companies reach stage 3, transaction, when they are in a position to sell products on-line. In stage 4 companies

offer after-sales support and communicate with third parties via the internet. And lastly, in stage 5, companies have linked their computer system to that of customers, and computerised certain processes between the own company and third parties. Each stage is more or less a subsequent step in the support of business processes by external data communication. In spite of the supposed logic or sequence in the automation process of companies, it is not the case that a company can reach stage 4 only if it has successfully completed stages 1, 2 and 3. Some companies sell products on-line without having a website. The approach 'permits' this.

Motivations, consequences and risks of e-business

E-business seems to be here to stay. The motives for doing business on-line are not the same for all parties in the process chain, however. For companies cost reduction and better customer service are the main reasons for doing business electronically. Retailers have a traditional interest in personal contacts (customers in their shops). However, if their customers are no longer bound to their local shops, retailers will have to compensate by attracting customers from elsewhere, for instance through the internet (see also Adelaar, Bouwman and Steinfield, 2004). The motives for consumers to shop on-line are mainly convenience and a better overview of what's for sale.

Market forces are gradually shifting as a consequence of e-business. The position of consumers – the demand side – seems to be becoming stronger, as it is easier to compare products and prices. The traditional distributive trades are having to rethink their position because manufacturers can now also sell directly to consumers or use other intermediaries (such as e-markets). It is too early to draw definite conclusions about the consequences of e-business, though. There are still a number of ongoing studies in this respect.

Naturally, new ways of doing business involve risks. A well-known pitfall is the confusion of technology with market demand (i.e. something that is technically possible, but which no one wants). Management is also sometimes insufficiently involved in innovation, with the result that projects proceed too slowly to be successful.

Offshore outsourcing

One literally far-reaching consequence of computerising business processes is that they can be easily transferred and managed at a distance. The use of ICT can lead to changes in the distribution of labour in a production and distribution chain. This may involve offshore outsourcing. Outsourcing means that a company transfers services it can provide itself, to another company. The term offshore originally comes from oil and gas exploration as an indication of activities at sea. In practice, offshore outsourcing of ICT – called offshoring in the publication – entails ICT services being transferred to another country. It has now become a serious subject, and is even on the political agenda.

Section 2.10 on 'globalisation' examines these issues in more detail.

Consequences for the public sector

Outside the business sector, too, there is a wide interest in the role ICT can play in improving business processes and customer contacts. The arrival of the internet makes it possible for the public to access a wealth of information on, for instance, legal or health issues, and thus become a well-informed party. The government is expected to account for its actions through easily accessible information on internet sites. With the aid of ICT, a modern and efficient government is expected to communicate with its citizens and with companies not only through traditional physical contacts and paper forms, but also via the internet. Several of these aspects and government progress in these areas are discussed in section 5.1.

The digital economy

At the end of this section on the effects of ICT on society, it can be concluded that there are noticeable changes in society that can be termed a transition toward a 'digital economy'. Changes occur in ways of conducting business, but also in the social relations between individuals and between organisations and individuals.

Statistical appendix to The Digital Economy 2006

Table 2.1.1
GDP and employment, 1970–2005

	GDP	Employment
	% volume change	
1970	5.7	1.2
1971	4.4	0.5
1972	2.7	–0.9
1973	4.9	0.1
1974	4.1	0.2
1975	0.2	–0.7
1976	4.5	0.1
1977	2.5	0.2
1978	2.5	0.8
1979	1.8	1.5
1980	1.7	0.7
1981	–0.5	–1.4
1982	–1.3	–2.6
1983	1.8	–1.8
1984	3.1	0.1
1985	2.7	1.9
1986	3.1	2.1
1987	1.9	1.8
1988	3.0	1.5
1989	4.8	2.2
1990	4.1	2.6
1991	2.4	1.2
1992	1.5	1.1
1993	0.7	–0.2
1994	2.9	–0.2
1995	3.0	2.0
1996	3.4	2.3
1997	4.3	3.1
1998	3.9	2.9
1999	4.7	2.4
2000	3.9	1.9
2001	1.9	1.6
2002	0.1	–0.3
2003	0.3	–1.1
2004	2.0	–1.4
2005	1.5	–0.3

Source: Statistics Netherlands, National accounts.

Table 2.3.1
The ICT sector compared with the Dutch economy, 2001–2005

	2001	2002	2003	2004*	2005*
	million euro				
Production value					
ICT industry[1)]	14,860	13,480	13,336	13,152	12,685
ICT services	36,255	36,934	37,673	37,953	38,833
of which					
post and telecommunication	21,510	23,026	24,080	23,936	23,828
computer service bureaus	14,745	13,908	13,593	14,017	15,005
Total ICT sector	51,115	50,414	51,009	51,105	51,518
Netherlands	853,164	870,427	883,492	909,039	950,536
Share of ICT sector in the economy (%)	5.99	5.79	5.77	5.62	5.42
Gross value added					
ICT industry[1)]	2,759	2,045	2,089	2,162	1,964
ICT services	17,454	18,680	19,879	20,215	20,509
of which					
post and telecommunication	9,241	10,906	12,101	12,151	11,901
computer service bureaus	8,213	7,774	7,778	8,064	8,608
Total ICT sector	20,213	20,725	21,968	22,377	22,473
Netherlands	397,556	414,374	425,256	435,837	449,041
Share of ICT sector in the economy (%)	5.08	5.00	5.17	5.13	5.00
Investment					
ICT industry[2)]	1,213	1,016	904	845	.
ICT services	5,159	3,011	2,510	2,756	.
of which					
post and telecommunication	4,510	2,531	2,017	2,217	.
computer service bureaus	649	480	493	539	.
Total ICT sector	6,372	4,027	3,414	3,601	.
Netherlands	94,673	92,862	92,848	93,454	97,711
Share of ICT sector in the economy (%)	6.73	4.34	3.68	3.85	.
	full-time equivalents (x 1,000)				
Labour volume of employees					
ICT industry[1)]	95	92	85	80	77
ICT services	241	226	213	205	203
of which					
post and telecommunication	116	106	97	91	87
computer service bureaus	126	120	116	114	115
Total ICT sector	336	318	298	285	280
Netherlands	6,636	6,620	6,547	6,453	6,433
Share of ICT sector in the economy (%)	5.07	4.80	4.55	4.41	4.35

1) 2004 and 2005 are estimates.
2) For investment, ICT industry is defined as SBI groups 30–33. The figures on investment are not detailed enough to be able to be compiled according to the internationally agreed definition of the ICT manufacturing sector.

Source: Statistics Netherlands, National accounts.

Table 2.3.2
Share accounted for by ICT sector in total value added of all sectors of industry, international, 1995 and 2003

	1995	2003
	%	
EU-15 [1]	7.2	8.3
Belgium [2]	7.1	8.2
Denmark	8.2	8.5
Germany [2][3]	5.7	6.9
Greece [2][3][4]	4.8	5.4
Spain	6.2	6.8
France	8.0	8.5
Ireland [2]	11.4	11.8
Italy	6.0	6.9
Netherlands	8.8	9.8
Austria	8.3	8.8
Portugal [2][5]	7.7	8.4
Finland	8.3	14.9
Sweden	8.1	9.1
United Kingdom	9.7	10.8
Canada	7.0	7.6
Japan [3]	7.2	7.6
United States	9.6	10.5
South Korea [2]	10.7	13.2

[1] Excluding Luxembourg.
[2] Figures on lease of ICT goods (ISIC 7123) not available.
[3] Figures on wholesale of ICT goods not available.
[4] Postal services included in telecommunication services.
[5] 1996 instead of 1995.

Source: OECD, Information Technology Outlook 2006.

Table 2.4.1
Investment in ICT capital, by sector of industry, 2001–2004

	2001	2002	2003	2004*
	million euro			
Agriculture, forestry and fishery	79	79	82	84
Financial and business services [1)]	4,156	3,946	3,842	4,114
Mineral extraction	94	116	97	111
Trade, hotels and restaurants, repairs	1,241	1,145	1,062	1,112
Energy and water companies	145	129	143	133
Care and other services	1,044	1,046	1,197	1,271
Construction	248	205	182	177
Manufacturing	1,702	1,512	1,447	1,460
Transport, storage and communication [2)]	4,328	2,692	2,247	2,538
Government	1,032	1,166	1,185	1,223
Total	14,069	12,036	11,484	12,223
Audio, video and communication equipment not allocated	742	680	696	709
Total ICT investment	14,811	12,716	12,180	12,932

[1)] Including computer service bureaus.
[2)] Including post and telecommunication.

Source: Statistics Netherlands, National accounts.

Table 2.4.2
Investment in ICT capital as a percentage of total investment, 1995–2004

	1995–2000	2001–2004
	%	
Agriculture, forestry and fishery	2.0	2.3
Financial and business services [1)]	8.5	9.0
Mineral extraction	5.1	7.2
Trade, hotels and restaurants, repairs	14.0	18.1
Energy and water companies	5.9	9.0
Care and other services	12.7	15.9
Construction	11.5	14.0
Manufacturing	15.1	18.7
Transport, storage and communication [2)]	33.1	33.5
Government	10.5	9.5
All sectors of industry	12.4	13.1
Total Netherlands	12.6	13.3

[1)] Including computer service bureaus.
[2)] Including post and telecommunication.

Source: Statistics Netherlands, National accounts.

Table 2.4.3
ICT expenditure, international, 2003–2005

	Expenditure on information technology			Expenditure on telecommunication			Total ICT expenditure		
	2003	2004	2005	2003	2004	2005	2003	2004	2005
	% of GDP								
EU-25	3.0	3.0	3.0	3.4	3.4	3.4	6.4	6.4	6.4
EU-15	3.1	3.0	3.1	3.3	3.4	3.3	6.4	6.4	6.4
Belgium	3.0	2.9	2.9	3.5	3.4	3.4	6.5	6.3	6.3
Denmark	3.5	3.5	3.4	3.2	3.1	3.1	6.7	6.6	6.5
Germany	3.1	3.1	3.1	3.0	3.1	3.1	6.1	6.2	6.2
Greece	1.3	1.2	1.2	4.0	3.8	3.7	5.3	5.0	4.9
Spain	1.8	1.7	1.7	3.7	3.8	3.8	5.5	5.5	5.5
France	3.3	3.3	3.4	2.7	2.6	2.6	6.0	5.9	6.0
Ireland	2.1	2.1	2.0	3.5	3.4	3.2	5.6	5.5	5.2
Italy	2.0	1.9	1.9	3.3	3.4	3.4	5.3	5.3	5.3
Netherlands	3.9	3.8	3.9	3.7	3.7	3.7	7.6	7.5	7.6
Austria	3.0	3.0	3.0	3.4	3.4	3.3	6.4	6.4	6.3
Portugal	2.2	2.1	2.2	5.1	5.2	5.2	7.3	7.3	7.4
Finland	3.6	3.6	3.7	3.4	3.4	3.3	7.0	7.0	7.0
Sweden	4.5	4.4	4.4	4.3	4.3	4.2	8.8	8.7	8.6
United Kingdom	4.3	4.2	4.2	3.8	3.8	3.8	8.1	8.0	8.0
Japan	3.4	3.4	3.4	4.2	4.2	4.2	6.6	6.6	6.6
United States	4.1	4.0	4.0	3.0	2.8	2.7	7.1	6.8	6.7

Source: Eurostat.

Table 2.7.1
Share of high-tech products in total exports, international, 1995, 2000 and 2004[1)]

	1995	2000	2004
	%		
EU-25	.	21.4	18.4
EU-15	15.6	20.6	17.7
Denmark	10.0	14.4	13.3
Germany	11.6	16.1	15.4
Finland	12.6	23.5	17.8
France	19.3	25.5	20.1
Netherlands	15.0	22.8	19.1
United Kingdom	21.8	28.9	22.8
Japan	25.3	27.0	22.4
United States	24.1	28.2	26.8

[1)] High-tech products: products for the aircraft and aerospace industry, computers, office machines, electronics, instruments, pharmaceuticals, electrical machines and weapons. EU exports do not include intra-EU exports.

Source: Eurostat.

Table 2.8.1
ICT employees, by background characteristics, 1997–2005[1)]

	ICT employees									Total employed labour force
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2005
	number (x 1,000)									
Total ICT employees/labour force	176	212	234	261	269	288	271	273	266	6,918
	% of total ICT employees									*% of total employed labour force*
Occupational group										
Programmers	34	32	32	34	33	31	32	29	33	1
Technical system analysts	6	5	5	4	3	4	5	5	4	0
System analysts	53	52	49	47	50	51	51	57	54	2
Computer scientists	8	11	14	15	14	14	12	9	10	0
Type of appointment										
Employees with permanent contract	91	92	94	90	91	90	89	88	89	81
Employees with a flexible contract	2	2	2	2	2	2	3	3	3	7
Self-employed	6	5	4	8	7	8	8	9	9	12
Weekly working hours										
12–19 hours per week	1	2	1	2	2	1	1	1	2	10
20–34 hours per week	8	8	10	9	10	11	12	13	14	27
35 or more hours per week	91	91	89	90	88	88	87	86	85	63
Age										
15–24	6	8	7	8	9	7	7	6	6	11
25–34	42	44	43	43	40	37	38	35	32	25
35–44	34	29	32	32	33	35	34	36	36	29
45–54	16	17	16	13	14	17	17	18	20	24
55–64	2	2	2	3	3	3	5	5	5	11
Education level										
Primary education	1	1	1	2	1	1	1	0	0	5
First stage secondary education (MAVO)	5	5	5	5	4	3	3	4	4	7
Basic vocational training (VBO)	2	2	1	2	3	2	2	2	2	12
Second stage secondary education (HAVO/VWO)	10	11	11	13	13	11	16	15	14	9
Senior vocational training (MBO)	29	26	27	27	27	27	24	24	24	35
Vocational college (HBO)	35	38	36	32	33	35	36	34	36	20
University	18	17	20	19	19	20	18	22	20	12
Sex										
Men	89	89	88	88	89	87	88	89	89	58
Women	11	11	12	12	11	13	12	11	11	42
Origin										
Native Dutch	87	85	86	83	80	80	80	84	81	83
Western foreign background	9	12	10	11	13	13	13	11	11	9
Non-western foreign background	3	4	4	6	8	7	6	5	7	8

[1)] ICT employees are those in classes 514, 666, 714 and 914 of the SBC (standard occupations classification).

Source: Statistics Netherlands, Labour force survey.

Table 2.8.2
ICT employees, by sector of industry, 1997–2005[1)]

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2005
										ICT employees as a percentage of the total employed labour force
	number (x 1,000)									*%*
Total ICT employees	176	212	234	261	269	288	271	273	266	3.8
Agriculture, forestry and fishery	0	0	0	0	1	0	0	1	0	0.2
Mineral extraction	0	0	1	0	0	0	0	0	0	5.8
Manufacturing	22	21	29	22	24	25	28	30	28	3.0
Energy and water companies	1	2	2	2	2	2	1	2	2	5.1
Construction	3	2	3	4	4	5	3	3	5	1.1
Trade, hotels and restaurants	19	23	21	26	24	25	26	14	16	1.5
Transport, storage and communication	7	10	11	18	15	14	16	18	17	4.0
Business services	88	114	126	146	143	159	137	148	144	13.3
among which										
financial institutions	18	16	21	21	20	30	21	27	24	9.3
computer service bureaus	54	80	79	99	99	100	79	100	99	63.5
Other services	14	19	20	17	23	25	23	24	23	3.2
Government	16	14	14	14	21	19	21	21	20	4.0

[1)] ICT employees are those in classes 514, 666, 714 and 914 of the SBC (standard occupations classification).

Source: Statistics Netherlands, Labour force survey.

Table 2.8.3
Vacancies in the ICT sector and in the other sectors of the economy, 1995–2005[1)]

	ICT sector			Other sectors			Total		
	Vacancies	Jobs	Vacancy rate [2)]	Vacancies	Jobs	Vacancy rate [2)]	Vacancies	Jobs	Vacancy rate [2)]
	x 1,000		*number*	*x 1,000*		*number*	*x 1,000*		*number*
1995	3.7	149	25	58.6	5,529	11	62.3	5,677	11
1996	5.2	160	33	63.8	5,709	11	69.0	5,869	12
1997	8.1	171	48	83.4	5,897	14	91.6	6,067	15
1998	12.9	187	69	116.0	6,075	19	128.9	6,262	21
1999	15.5	224	69	155.2	6,470	24	170.7	6,694	26
2000	12.7	238	53	170.7	6,633	26	183.4	6,871	27
2001	9.0	240	37	161.7	6,759	24	170.7	6,999	24
2002	2.2	217	10	112.9	6,839	17	115.1	7,056	16
2003	2.4	209	12	78.9	6,786	12	81.3	6,995	12
2004*	6.0	202	30	103.3	6,727	15	109.3	6,929	16
2005*	8.9	210	42	143.9	6,766	21	152.8	6,975	22

1) The ICT sector includes groups: 30, 3130, 3210, 3220, 3230, 3320, 3330 (ICT manufacturing) and 6420, 72 (ICT services) of the SBI (standard industrial classification).
2) The vacancy rate is the number of vacancies per 1,000 jobs.

Source: Statistics Netherlands, Vacancies survey (third quarter), Employment and earnings survey.

Table 2.10.1
Foreign direct investment (flows), average 2000–2003

	FDI outflow	FDI inflow
	% of GDP	
Australia	1.6	2.3
Austria	2.5	2.6
Belgium	8.8	8.6
Canada	4.3	4.1
Czech Republic	0.2	8.0
Denmark	6.6	7.9
Finland	8.4	4.6
France	6.6	3.4
Germany	1.4	3.5
Greece	0.3	0.6
Hungary	1.1	4.6
Iceland	4.0	2.3
Ireland	4.0	16.4
Italy	1.3	1.2
Japan	0.9	0.5
Korea	0.6	1.2
Mexico	0.2	2.8
Netherlands	11.2	9.3
New Zealand	1.2	4.2
Norway	2.2	1.7
Poland	0.1	3.1
Portugal	4.1	3.4
Slovakia	0.1	8.7
Spain	5.6	4.7
Sweden	7.3	5.1
Switzerland	8.2	4.7
Turkey	0.3	0.9
United Kingdom	6.2	3.5
United States	1.3	1.4

Source: OECD, Economic Globalisation Indicators 2005.

Table 3.3.1
Internet users per 100 inhabitants, international, 1995–2006

	1995	2000	2001	2002	2003	2004	2005	2006 [1)]
	number per 100 inhabitants							
Internet users								
EU-25	2	22	27	32	39	48	50	.
Canada	4	42	45	48	52	62	68	.
Denmark	4	39	43	51	54	60	69	.
Finland	14	37	43	49	51	63	63	.
France	2	14	26	31	37	41	43	.
Germany	2	30	32	34	40	43	59	.
Japan	2	30	38	46	48	50	67	.
Netherlands	6	44	49	51	52	61	66	.
South Korea	1	41	48	55	61	65	67	.
United Kingdom	2	26	33	42	57	62	63	.
United States	9	44	50	55	56	63	69	.
Broadband connections (excl. mobile)								
EU-25	.	.	.	.	.	9	13	.
Canada	.	.	9	11	15	18	21	22
Denmark	.	.	4	9	12	19	25	29
Finland	.	.	1	5	10	13	23	25
France	.	.	1	2	6	11	15	18
Germany	.	.	2	4	6	8	13	15
Japan	.	.	2	7	12	14	18	19
Netherlands	.	.	4	7	12	19	25	29
South Korea	.	.	17	21	23	25	25	26
United Kingdom	.	.	1	2	6	11	16	19
United States	.	.	5	7	8	12	15	19

[1)] June 2006.

Source: TNO, OECD.

Table 3.3.2
Access technology used for broadband internet connections, international, January 2006 [1)]

	ADSL	Cable	Satellite	Glass fibre	Wireless Local Loop	Other
	%					
EU-25	81	16	–	1	1	1
Canada	49	51	–	–	–	–
Denmark	62	29	–	1	1	7
Finland	77	12	–	–	–	10
France	94	6	–	–	–	–
Germany	97	2	1	–	–	1
Japan	65	14	–	21	–	–
Netherlands	61	37	–	1	–	–
South Korea	53	33	–	14	–	–
United Kingdom	73	26	–	–	–	–
United States	41	54	1	1	1	2

[1)] Excluding UMTS.

Source: TNO.

Table 3.4.1
Telephone connections per 100 inhabitants, international, 1990–2005

	1990	1995	2000	2001	2002	2003	2004	2005
	number per 100 inhabitants							
Fixed landlines (including ISDN)								
EU-25	37	44	51	52	52	52	51	50
Canada	56	62	66	65	64	63	63	64
Denmark	57	61	71	72	69	67	72	64
Finland	53	54	55	54	52	53	52	67
France	50	56	58	57	57	57	56	44
Germany	44	51	61	63	65	66	66	53
Japan	44	50	59	58	56	55	51	45
Netherlands	46	52	62	62	62	61	59	.
South Korea	31	42	48	49	49	47	48	56
United Kingdom	44	50	59	59	59	62	61	59
United States	55	60	66	67	65	67	65	55
Mobile telephone connections								
EU-25	1	5	57	68	74	82	89	99
Canada	2	9	28	35	38	39	49	.
Denmark	3	16	63	74	83	88	96	97
Finland	5	20	72	80	87	90	92	95
France	0	2	49	61	65	66	72	102
Germany	0	5	59	68	73	77	81	73
Japan	1	9	53	59	64	63	69	74
Netherlands	1	3	67	77	74	82	98	100
South Korea	0	4	58	62	68	70	77	109
United Kingdom	2	10	73	77	84	91	103	69
United States	2	13	39	45	49	54	62	.

Source: TNO.

Table 4.1.1
Developments in ICT use by companies, 1995–2005[1)]

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
	% of total number of companies										
Internet	9	15	29	49	63	77	84	86	87	90	97
Website	.	.	11	9	32	43	49	60	65	72	82
Broadband internet [2)]	.	.	.	.	.	.	23	40	55	70	81

1) Companies with 10 or more employees (1995–2001)/employed persons (2002–2005).
2) Broadband internet is defined here as ADSL, cable and other fixed internet connections with a large bandwidth.

Source: Statistics Netherlands, ICT use by enterprises/ IT survey.

Table 4.2.1
Companies with ICT systems linked to order processing systems by company size, 2005

	Internal systems for:				External systems for:	
	Invoicing and payment	Stock manage-ment	Production and logistics	Marketing	Suppliers	Customers
	% of companies with an order processing system					
Total [1)]	86	52	40	26	21	15
Company size						
10– 19 employed persons	82	48	30	25	20	13
20– 49 employed persons	87	51	41	26	19	13
50– 99 employed persons	90	60	59	27	22	19
100–249 employed persons	93	69	69	33	25	26
250–499 employed persons	93	67	61	36	27	26
500 or more employed persons	92	73	60	35	39	24

1) Companies with 10 or more employed persons.

Source: Statistics Netherlands, ICT use by enterprises 2005.

Table 4.3.1
Companies with a broadband internet connection, international, 2002–2004[1)]

	2002	2003	2004
	% of the companies with an internet connection		
EU-25	.	58	69
EU-15	46	61	71
Belgium	54	73	82
Austria	54	58	64
Bulgaria	.	46	.
Cyprus	.	43	47
Czech Republic	23	42	56
Denmark	71	82	85
Estonia	.	75	74
Finland	67	73	83
France	59	.	.
Germany	44	57	66
Greece	15	24	48
Hungary	.	.	61
Iceland	20	.	.
Ireland	22	34	52
Italy	38	.	62
Latvia	.	60	64
Lithuania	.	62	67
Luxembourg	46	54	70
Malta	69	.	87
Netherlands	43	61	79
Norway	53	71	84
Poland	.	33	49
Portugal	45	63	77
Romania	.	13	.
Slovakia	.	35	52
Slovenia	.	66	77
Spain	62	82	85
Sweden	65	.	86
United Kingdom	36	51	73

1) Companies with 10 or more employed persons.

Source: Eurostat.

Table 4.4.1
Share of on-line sales in total turnover of companies, international, 2002–2004[1)]

	2002	2003	2004
	% of total turnover		
EU-25	.	9	9
EU-15	.	9	10
Belgium	7	6	9
Austria	6	7	7
Bulgaria	.	4	.
Cyprus	.	.	0
Czech republic	6	6	8
Denmark	8	12	.
Estonia	.	3	2
Finland	11	13	14
Germany	.	11	13
Greece	1	2	2
Hungary	.	.	3
Iceland	6	.	.
Ireland	17	18	20
Italy	2	3	2
Latvia	.	0	1
Lithuania	.	2	2
Netherlands	7	8	9
Norway	6	8	15
Poland	.	3	4
Portugal	2	5	.
Slovakia	.	.	0
Spain	2	3	3
Sweden	12	.	.
United Kingdom	12	14	16

[1)] Companies with 10 or more employed persons.

Source: Eurostat.

Table 4.5.1
Companies taking ICT security measures and with security problems, by sector of industry and company size, 2005[1)]

	Anti-virus soft-ware	Fire-wall	Secure web server	Off-site data back-up	Digital signa-ture	Other means of authen-tication	Encryp-tion	Security problems
	% of the companies with external data communication							
Total	94	84	43	40	15	36	16	7
Sector of industry								
Manufacturing	96	87	42	42	13	35	15	8
Public utilities	100	100	75	82	46	67	48	22
Construction	95	74	32	31	13	30	8	6
Trade, repair of consumer goods	93	85	44	39	15	38	16	5
Hotels and restaurants	90	71	29	24	10	23	6	2
Transport, storage and communication	94	80	35	36	14	32	15	6
Leasing and business services	97	91	53	49	20	42	23	7
Health care and welfare	97	86	51	40	15	41	19	13
Culture, recreation and other services	92	83	43	42	10	34	12	10
Company size								
10– 19 employed persons	94	79	35	34	12	31	11	7
20– 49 employed persons	94	85	46	41	16	36	15	6
50– 99 employed persons	97	93	55	48	20	46	22	6
100–249 employed persons	98	97	61	54	19	53	35	6
250–499 employed persons	99	98	66	59	21	56	40	9
500 or more employed persons	99	98	73	66	28	66	54	12

[1)] Companies with 10 or more employed persons.

Source: Statistics Netherlands, ICT use by enterprises.

Table 4.5.2
Companies experiencing ICT security problems, international, 2002–2004[1)]

	2002	2003	2004
	% of the companies with internet access		
EU-25	.	30	29
EU-15	.	30	29
Austria	34	35	36
Belgium	40	32	24
Denmark	47	34	27
Finland	43	53	56
Germany	.	25	21
Ireland	.	47	41
Luxembourg	31	36	23
Netherlands	35	46	22
Norway	42	31	24
Sweden	33	32	25

[1)] Companies with 10 or more employed persons that experienced one of the following problems in the 12 months preceding the survey: virus attack, unauthorised access to ICT systems or extortion.

Source: Eurostat.

Table 4.6.1
ICT use in the financial sector, by company size, 2005[1)]

	Anti-virus soft-ware	Fire-wall	LAN	Broad-band	Inter-nal links	Secure com-muni-cation	Web-site	Intra-net	Extra-net	Secu-rity pro-blems
	% of all companies in the sector									
Total	99	97	97	95	76	73	68	64	36	10
Company size										
10– 19 employed persons	100	97	94	93	75	67	56	57	33	10
20– 49 employed persons	97	94	100	97	64	76	88	58	27	13
50– 99 employed persons	100	100	100	100	82	84	68	78	42	6
100–249 employed persons	97	97	100	92	85	90	75	97	50	16
250–499 employed persons	100	100	100	100	90	86	91	100	78	4
500 or more employed persons	100	100	100	100	96	95	87	100	92	8

[1)] Companies with 10 or more employed persons. Financial sector: SBI groups 65.12, 65.22, 66.01, 66.03, 67.12, 67.13 and 67.2.

Source: Statistics Netherlands, ICT use in the financial sector 2005.

Table 5.2.1
Use of ICT applications in primary and secondary education, 2005

	Every day	About once a week	About once a month	A few times a year	Less often or never	Don't know
	%					
Primary education						
Word processing	7	37	11	12	31	2
Exercise programs	47	34	5	4	9	1
Looking up information on the internet	13	30	5	15	35	3
Non-supervised work	10	16	11	7	53	3
Internet for communication	4	15	7	15	57	2
Secondary education						
Word processing	18	22	39	16	5	–
Exercise programs	19	22	23	28	7	–
Looking up information on the internet	11	38	32	14	5	–
Non-supervised work	15	14	21	20	30	–
Internet for communication	7	19	20	28	25	–

Source: ICT op School.

Table 6.3.1
Substitution of physical mail by internet and e-mail, 2006 [1)]

	No substitution	Little substitution	Wide-scale substitution	(Nearly) complete substitution	Not applicable	Don't know
	% of persons					
Total	28	41	21	7	2	0
Sex						
Men	28	39	23	9	2	0
Women	29	44	20	5	2	0
Age						
12–14	47	25	7	4	16	2
15–24	27	34	26	11	2	0
25–34	24	45	23	7	0	0
35–44	25	46	21	6	1	0
45–54	25	45	22	7	1	0
55–64	34	40	19	5	2	0
65–74	39	39	16	4	1	1
Education level						
Primary	39	35	15	6	5	0
Secondary	26	46	19	8	1	0
Higher	18	43	31	7	0	0
Employment status						
Employed	25	44	22	8	1	0
Unemployed	33	37	22	6	2	0
Standardised disposable household income						
1st (lowest) 20% income group	33	40	18	7	2	0
2nd 20% income group	32	42	18	7	2	0
3rd 20% income group	29	41	20	7	3	0
4th 20% income group	26	45	21	6	1	0
5th (highest) 20% income group	23	40	28	8	1	0

[1)] Persons who used the internet in the 3 months preceding the survey.

Source: Statistics Netherlands, ICT use by households and individuals 2006.

Table 6.3.2
Substitution of physical mail by mobile phone messages, 2006 [1)]

	No substitution	Little substitution	Wide-scale substitution	(Nearly) complete substitution	Not applicable	Don't know
	% of persons					
Total	66	20	6	2	6	0
Sex						
Men	64	21	6	3	6	0
Women	67	20	6	2	5	0
Age						
12–14	55	21	5	2	16	0
15–24	47	29	13	7	4	1
25–34	63	22	7	4	4	0
35–44	70	20	5	1	5	0
45–54	71	20	4	1	4	0
55–64	75	14	3	1	8	0
65–74	80	8	1	0	10	0
Education level						
Primary	66	18	6	3	7	0
Secondary	66	20	5	3	5	0
Higher	64	24	7	1	4	0
Employment status						
Employed	64	22	6	3	5	0
Unemployed	71	16	5	1	7	0
Standardised disposable household income						
1st (lowest) 20% income group	66	21	6	1	6	1
2nd 20% income group	68	17	6	3	6	0
3rd 20% income group	64	20	7	3	7	0
4th 20% income group	65	22	4	2	6	0
5th (highest) 20% income group	65	21	7	3	4	0

[1)] Persons using a mobile telephone.

Source: Statistics Netherlands, ICT use by households and individuals 2006.

Table 6.4.1
On-line shopping, 2006 [1)]

	Ever purchased or ordered goods on-line			Never purchased or ordered on-line incl. don't know
	Yes	Yes, in the last 3 months	Yes, more than 3 months ago	
	% of persons			
Total	61	41	20	39
Sex				
Men	65	45	20	35
Women	56	37	19	44
Age				
12–14	26	15	10	74
15–24	62	37	26	38
25–34	78	56	22	22
35–44	70	49	21	30
45–54	61	44	17	39
55–64	43	27	16	57
65–74	32	20	12	68
Education level				
Primary	44	27	18	56
Secondary	64	42	22	36
Higher	76	57	19	24
Employment status				
Employed	68	47	21	32
Unemployed	46	27	19	54
Standardised disposable household income				
1st (lowest) 20% income group	54	35	19	46
2nd 20% income group	62	40	22	38
3rd 20% income group	61	41	19	39
4th 20% income group	61	39	22	39
5th (highest) 20% income group	67	50	17	33

[1)] Persons using the internet.

Source: Statistics Netherlands, ICT use by households and individuals 2006.

Table 6.5.1
Dealing with public services on-line, 2006 [1)]

	Already done this on-line	Not yet done this on-line, but plans to do so	Not yet done this on-line, does not plan to do so	Doesn't know
	% of persons			
Total	49	15	34	2
Sex				
Men	56	15	28	2
Women	42	16	40	2
Age				
12–14	0	3	89	8
15–24	38	18	41	3
25–34	62	17	20	1
35–44	57	15	27	1
45–54	57	17	25	1
55–64	45	16	38	1
65–74	43	10	45	2
Education level				
Primary	24	15	57	4
Secondary	54	16	29	1
Higher	70	15	15	0
Employment status				
Employed	55	17	27	1
Unemployed	42	13	42	3
Standardised disposable household income				
1st (lowest) 20% income group	44	14	40	2
2nd 20% income group	45	13	40	2
3rd 20% income group	48	12	37	3
4th 20% income group	52	17	30	1
5th (highest) 20% income group	56	20	23	1

[1)] Persons who used the internet in the 3 months preceding the survey.

Source: Statistics Netherlands, ICT use by households and individuals 2006.

Table 6.6.1
Unwanted spam received, by frequency of internet use, 2006 [1)]

	Total internet users	Frequent internet users [2)]	Less frequent internet users [3)]
	% of persons using the internet		
Total	65	71	48
Sex			
Men	69	74	47
Women	61	66	48
Age			
12–14	36	40	27
15–24	69	72	54
25–34	73	76	59
35–44	66	71	52
45–54	69	75	47
55–64	59	69	41
65–74	51	59	41
Education level			
Primary	54	61	40
Secondary	65	70	52
Higher	77	80	58
Employment status			
Employed	69	74	54
Unemployed	58	67	40
Standardised disposable household income			
1st (lowest) 20% income group	62	69	44
2nd 20% income group	61	66	46
3rd 20% income group	65	70	53
4th 20% income group	65	69	49
5th (highest) 20% income group	71	77	47

1) Persons who used the internet in the 3 months preceding the survey.
2) More than once a week.
3) Once a week or less.

Source: Statistics Netherlands, ICT use by households and individuals 2006.