

IT and Telecommunications Policy Report 2009

The Danish Government
March 2009

IT and Telecommunications Policy Report 2009

The Danish Government
March 2009

Contents

Minister's preface	5
Continued digital development	6
Green IT	7
World class digital infrastructure	8
Future digital skills	13
Valuable digital content and new opportunities	14
Safe and secure use of ICT	17

Minister's preface

Information and communication technology (ICT) plays an important part in the development of the Danish welfare society. ICT is crucial to the efficiency, quality and flexibility of public services and as a basis for business innovation and growth.

We face a number of major challenges in the years to come, and to meet them it is essential that we convert digital opportunities to growth and prosperity. I would like to focus on three challenges in particular where ICT is an important part of the solution:

- > The general economic downturn is affecting more and more sectors of society.
- > The impact of global climate change will steadily increase if we fail to focus on new ways of reducing of CO₂ emissions.
- > In the area of welfare, the demand for services is growing whilst, at the same time, there is a shortage of qualified personnel.

Just under a third of the increase in Danish labour productivity in recent years can be ascribed to ICT. In an increasingly recessionary climate, a commitment to the maximum exploitation of technology will be crucial to the business community.

ICT is also an essential element of a greener climate agenda. The use of ICT is responsible for a significant and increasing share of CO₂ emissions, which it is important to reduce. But ICT is not just a part of the problem, it is also a crucial part of the solution. The Government has set an ambitious target of brokering a binding global climate agreement at the UN Climate Conference in Copenhagen in 2009. With the Action Plan for Green IT in Denmark I have set both a domestic and international green agenda in the ICT area in the run-up to the conference.

ICT solutions in the welfare sector span a whole range of options from digital self-service systems that will save individual users time and money, to labour saving technologies in the social and healthcare sectors.

If we are to achieve world class digital solutions we must increase the intake of students studying ICT, expand and develop the talent base, integrate IT as part of our lifelong learning, strengthen cooperation with the business sector and power up research in ICT's. In addition, these efforts will open up an export market of considerable proportions.

The IT and Telecommunications Policy Report takes stock of some of the most important initiatives and results in the ICT area the recent year and looks forward to future targets and objectives.



Helge Sander

Minister for Science, Technology and Innovation

Continued digital development

For many years, Denmark has occupied a leading position when it comes to utilising the potential of information and telecommunications technologies (ICT). In recent years, more countries have also experienced rapid progress on the digitisation front. Many countries, in particular in the Baltic region and Asia, have made quantum leaps towards entering the digital elite. Denmark can still draw great competitive advantage from maintaining its leading digital position. However, this requires a continuous setting of new ambitious targets for the digitisation of Denmark.

Firstly, continued digital development requires Denmark to maintain a world class electronic communications infrastructure in the future. The Government's target is for all Danes to have broadband access by the end of 2010 at the latest. This is a good and ambitious target which has already ensured that more than 99 per cent of Danes are able to get broadband access if they wish so. Now that this target has almost been reached, it is time to set new targets for the infrastructure of the future. We must have higher speeds, promote the development of mobile broadband, and it must be possible to handle new types of content. Danes must be able to communicate electronically whenever and wherever they wish - easily, quickly and inexpensively.

Against this background, the Minister of Science, Technology and Innovation has decided to set up an independent committee which will have a free hand until the end of 2009 to come up with proposals on how to reach the target and how to develop the framework. The committee should be able to propose public initiatives capable of supporting the supply of broadband, as well as the development of new digital services and solutions aimed at promoting the demand for broadband.

A strong and extensive electronic infrastructure is not enough. To be able to navigate the digital world it is important that Danes also have good ICT skills. We must ensure the creation of open and accessible ICT solutions which will enable every citizen, regardless of disability, to fully benefit from digital opportunities. Good ICT skills and accessible solutions are important prerequisites for an extensive use of ICT which creates growth and value in all parts of society.

High levels of security and safety are also needed to realise the full potential of digital solutions. More and more Danes are taking the digital possibilities to heart while companies and authorities digitise an increasing part of their communication. The Government continues to work on the development of a secure electronic infrastructure and secure exchange of digital content so everyone can feel safe while travelling in the digital world.

Digital solutions must be of value to citizens and companies. The Government is promoting the creation of relevant digital content and services with high utility which appeal to all groups of society and meet their needs. Both public and private players must have a good framework, including the necessary IT infrastructure, in which to develop and mediate content and services themselves. This will lead to more growth and create value to the benefit of society as a whole.

As ICT penetrates all parts of society it is also important to set a green digital agenda and create a sustainable digital future. ICT is already responsible for a considerable part of the total CO₂ emissions. But ICT can also be part of the solution to environmental and climate challenges. We must ensure that we make the use of ICT “greener” as well as utilise ICT to reduce our energy consumption in other sectors.

These assumptions and considerations form the basis on which the Government’s ICT policy has been built since the last report. In the following chapters, the initiatives taken by the Government during the last year are explored in greater depth.

Green IT

Green IT is an important part of a sustainable high-tech society. Developing ICT solutions which enable the reduction of energy consumption in the future is an important focus area for the Government. Denmark already occupies a leading international position in the fields of sustainable energy and efficient environmental technology. In continuation of this, the Government is working towards ensuring that green IT contributes to boosting overall efforts against global climate change and emissions of greenhouse gases.

In 2008, the Ministry of Science, Technology and Innovation took the initiative to promote energy-sound IT use by citizens, companies and authorities. In April, the Ministry published its “Action Plan for Green IT in Denmark”. The action plan contains eight initiatives divided into two main focus areas - greener IT use and IT solutions for a sustainable future. Thus, the two main focus areas are directed against both the proportion of CO₂ emissions stemming directly from the use of computers and other IT equipment (estimated at approximately two per cent) and CO₂ emissions in general (the remaining 98 per cent). The initiatives will be implemented in the run-up to the UN Climate Summit in Copenhagen at the end of 2009.

Within the first focus area, greener use of IT, the Ministry of Science, Technology and Innovation has focused on IT use in companies, public institutions and by citizens. In December 2008, the Ministry published guidelines and an interactive guide on green IT for public authorities containing 27 specific recommendations aimed at helping public authorities and institutions purchase and use IT equipment in a more environmentally correct manner.

Moreover, in the autumn of 2008, the Ministry launched an information campaign about green IT aimed at children and young people, which among other things consisted of “The Climate Mystery”, an Alternate Reality Game, which combines facts, computer games and an online forum in a dramatic fiction series.

Within the second main focus area, IT solutions for a sustainable future, the Danish Council for Strategic Research allocated funds for two research projects. The projects focus on the development of energy-saving technologies through research into better shipping route planning and the reduction of energy consumption in microelectronics.

In addition to this, an export drive for Danish green IT knowhow and technology was initiated in China. The purpose of the drive was to improve awareness of Danish know-how and technology in the field and promote collaboration between Denmark and China within the fields of research and development, commerce and investment.

The Ministry of Science, Technology and Innovation also wishes to strengthen international collaboration on research, innovation and technological development within the field of green IT, and in 2008 embarked upon collaboration with the OECD. In May 2008, the Ministry hosted a two-day OECD workshop on ICT and the environment. At the workshop, more than 100 experts and officials from a wide range of OECD countries discussed how ICT can be used for energy management and intelligent solutions in the field of energy, and what can be done to promote more environmentally friendly ICT products.

On 27 and 28 May 2009, the Ministry of Science, Technology and Innovation will host a major OECD conference on green IT in Elsinore. The purpose of the conference is to gather together political decision-makers, representatives from the business world and expert academics to discuss and promote the political agenda relating to the role of ICT in the fight against climate change and the improvement of environmental initiatives. One of the aims is for the conference to make a contribution to the climate summit in Copenhagen later in the year.

Besides the two main focus areas, another aim of the action plan is for the Ministry of Science, Technology and Innovation to become a pioneering authority in the field of green IT. Therefore the Ministry has taken initiatives to reduce its annual energy consumption by at least 10 per cent by 1 December 2009 compared with the 2008 consumption.

World class digital infrastructure

As at 30 June 2008, Denmark topped the OECD's table of broadband proliferation with 36.7 broadband subscriptions per 100 inhabitants.

The Danish broadband survey performed in 2008 showed that there are now only approximately 21,000 households and companies which are still unable to receive broadband. 2 Mbps connections are available to 96 per cent of all households and companies. In October 2008, the cheapest broadband connection offered nationwide with a marketed download speed of at least 2 Mbps (and upload speed of at least 512 Kbps) cost DKK 169 per month. The price for the same connection at the beginning of the year was DKK 249, i.e. a decline in price in excess of 30 percent in less than a year. However, in international comparison there is still room for improvement in when it comes to speeds and prices.

The number of broadband connections continues to increase. For example, there is rapid growth in the number of fast fibre optic connections with speeds of up to 100 Mbps, which in the first half of 2009 rose by 43 per cent to some 90,000 subscribers.

Moreover, the most recent figures showed that 560,000 Danes were using mobile broadband at the end of June 2008 compared with 333,000 six months before, i.e. a 69 per cent rise in six months.

In September 2008, the EU Commission published a broadband index which shows the progress being made in broadband development in the various member countries (i2010 Broadband Performance Index). Sweden tops the index, while Denmark is in third place. In the index, Denmark scores particularly well on the indicators ‘coverage in outlying areas’, ‘use of advanced services’ and ‘socio-economic conditions’, whilst Denmark does less well on such aspects as broadband prices and speeds.

Source: The EU Commission: Future networks and the internet

One important question is whether the internet should remain “neutral” or whether it should be possible for internet providers to prioritise traffic on the internet. Prioritisation can be used to assure quality and accessibility on the internet, but it can also distort competition and market access, and inhibit innovation. On 30 September, the Ministry of Science, Technology and Innovation arranged a conference to address the problems relating to internet neutrality in an international perspective. The discussions dealt with the essential principles for the development of the internet and what the implications for innovation and business on the internet might be. The conference attracted speakers from throughout Europe and the US, and put internet neutrality on the European agenda. Denmark will continue its endeavours to guarantee an open internet for all.

Through the universal service obligation, every citizen of Denmark is entitled to certain basic telecommunications services such as landline telephony and special disability services. This is essential in a society which is increasingly based on the digitisation of both information and communications. In 2008, TDC was appointed universal service provider from 1 January 2009 based on an appointment process in which all companies could participate. The universal service provision obligation remains in force for six years with options for extensions of up to two years. The Danish rules are based on an EU directive (the Universal Services Directive).

Internet domain names are an essential prerequisite for an efficient internet. In 2008, tenders were invited for the administration of the .dk domain. The Danish National IT and Telecom Agency received two tenders. The company dotDK was granted the tender, but could not subsequently muster all the necessary declarations of support for the issue of the administrator licence. Consequently, the National IT and Telecoms Agency moved down the order to the next company, Dansk Internet Forum, which, having documented broad support from the Danish internet society, was issued an administrator licence for the .dk domain for a period of six years.

The expansion of the wireless broadband network will result in a large number of masts and antennas being erected throughout the country. In 2008, the Ministry of Science, Technology and Innovation expanded its advisory services for municipalities which issue planning permission for the erection of masts and antennas.

In 2007, a political agreement was signed on new general frequency administration principles. Based on this, in 2008 a proposal for a new frequency bill was drawn up, which is expected to be adopted by the Danish Parliament in the spring of 2009. The law is expected to enter into force on 1 January 2010, and will among other things make it easier for market forces alone to determine what the frequencies should be used for. It will also boost opportunities for frequency trading and enhance the efficiency of frequency allocation, while continuing to ensure a political anchoring of frequency administration. The new act will support growth and innovation, and it is estimated that the new rules will enable society to save upwards of DKK 1 billion a year. As a consequence of the new principles, a new model for the imposition of frequency charges has been drawn up, which will enter into force at the same time as the new law.

In 2008, the Ministry of Science, Technology and Innovation decided to auction the 2500-2690 MHz and 2010-2025 MHz frequency bands on a service and technology neutral basis. The auctions are expected to be held at the end of 2009. The decision was made following a hearing which showed that the sector's interests embrace using the frequencies in question for fixed and mobile broadband services.

It is important to ensure investment in the telecoms network of the future. However, it is also important that there are reasonable competitive conditions in the existing infrastructure. Consequently, in October 2008, the Minister for Science, Technology and Innovation presented a bill on the distribution of charges for the use of electronic communications networks. The law enacts the principle that companies which share the use of the telecommunications network should also defray equal shares of the costs. This will result both in incentives to invest in new technology and also in competition between the services on the existing telecommunications networks. This will benefit both consumers and society. The bill was passed in December 2008.

In 2008, the National IT and Telecom Agency examined the competitive situation affecting the infrastructure which is used, among other things, to provide broadband services. The Agency's investigations showed that it is still necessary to ensure that TDC's competitors have access to TDC's network to ensure equal competition in the market. In the spring of 2009, the Agency will make rulings to establish the regulation of the area.

In the spring of 2008, the National IT and Telecom Agency began revising the model which determines the prices charged to TDC's competitors for the use of TDC's copper network. The pricing is intended to ensure that the competing telecom companies can, for instance, offer users broadband services at competitive prices. Moreover, it must remain attractive to invest in and use new and modern infrastructure such as fibre optic networks and mobile broadband.

In the area of mobile communications, the increased competition has resulted in falling prices for consumers. However, besides international roaming, regulation is still needed in one area in particular; when receiving calls to mobile phones prices are still too high. In the summer of 2008, the National IT and Telecoms Agency ruled on charges made by a number of mobile companies. As a result of these rulings, from 1 April 2009 there will be a 13 to 20

percent reduction in wholesale prices for calls to Sonofon, TDC, Telia and the company 3 which will provide consumers with the opportunity of reduced charges for calls made to mobile phones.

In 2007, the EU with the strong support of the Danish Government resolved to regulate international roaming prices, which apply when customers use their mobile phones abroad. However, price regulation only affects voice telephony. An analysis of prices and costs for using mobile data services abroad carried out by the National IT and Telecoms Agency in 2008 shows that consumers are paying unreasonably high prices for sending text and multimedia messages and using data services when abroad. Therefore, in 2008 the Government worked actively on extending the current EU voice telephony regulation to cover text and multimedia messages and data services as well. In the EU Council of Ministers there is currently political agreement on lowering text message prices for consumers when abroad, which will result in prices being cut by more than 50 per cent. The revised set of rules is expected to be finally adopted mid-2009.

As part of the Government's work of enhancing the efficiency of state administration, it has been decided to gather a number of administrative IT functions under the newly established agency Statens IT (the Danish IT Agency). The agency will be responsible for operations, IT support and the development of general systems for 15 ministries and their associated agencies and directorates.

When gathering administrative IT functions under a single agency it is important for individual ministries not to lose their focus on IT strategy and business development. In October 2008, the Minister of Science, Technology and Innovation sent out IT strategy guidelines to all ministries. The guidelines were drawn up by a working group under the auspices of the Danish National IT Council with the participation of nine ministries. The guidelines recommend that the management of each ministry draw up an IT strategy for their specific ministerial area. The IT strategy is intended to set objectives for IT use and the desired effects of digitisation, and describe how organisational development is ensured in time with digitisation. The Danish National IT Council recommends that ministries update their existing IT strategies no later than by the end of 2009 or upon the expiry of their current IT strategies.

In consultation with the parties to the national healthcare system, the organisation Connected Digital Health in Denmark (SDSD) has made a new national strategy for the digitisation of the national healthcare system between 2008 and 2012. The hub of the strategy is to build up a national infrastructure across all the public authorities involved in the national healthcare system. The infrastructure is intended to support increased digital communication within the national healthcare system and the commissioning of new tools for clinics and patients, such as telemedicine.

In January 2008, a number of requirements for the use of open standards by the public sector came into force. Open standards help ensure that IT systems can communicate with each other while also creating increased competition between the suppliers of these systems. In October 2008, the Ministry of Science, Technology and Innovation concluded a survey

which showed that comprehension of the use of mandatory open standards is very widespread among public authorities, that requirements for their use are typically included in the specifications of requirements in public procurement procedures and that these requirements are also maintained after contracts have been signed.

In June 2008, after consulting with the parliamentary parties, the Minister of Science, Technology and Innovation appointed an independent committee of experts to evaluate the implementation of the mandatory open document formats ODF and OOXML. The committee issued its report in December 2008 which concluded that for a variety of reasons it was difficult to assess the document formats at present time. However, the committee mentioned the possibility of using PDF as a document format, as this may now be regarded as an open format.

In October 2008, the Ministry of Science, Technology and Innovation launched digitaliser.dk, which provides single shared access to public IT architecture and open standards for all authorities, suppliers and others wishing to participate in the development of the digital Denmark. At the same time, the National IT and Telecom Agency published a series of recommendations and principles for good IT architecture in the public sector. The recommendations and principles are an initiative under the joint public digitisation strategy 2007-2010. In fact, digitaliser.dk was developed on the basis of the recommendations for IT architecture, including the use of open source and open standards.

As part of the Government's objective of ensuring the greatest possible innovation, openness and competition in the IT area, in December 2008 the Ministry of Science, Technology and Innovation published its vision "Open source software and the public sector", which is founded on the Government's overall software strategy. A central message of the publication is that open source is not a miracle cure, but rather a pragmatic tool which, used correctly, can strengthen innovation and competition and provide value for public authorities as well as private companies and citizens. The use of open source software is part of the Ministry of Science, Technology and Innovation's IT architecture recommendations.

In the autumn of 2008, the Ministry of Science, Technology and Innovation also published a handbook on open source for public authorities. The handbook focuses on the legal aspects of the use of open source software, in particular on the use of software licences. "Open source software and the public sector" and the handbook on the legal aspects were produced by the National Knowledge Centre for Software under the Ministry of Science, Technology and Innovation. The centre was established for a three-year period up until April 2009 and supports the Government's software strategy. In 2007, the National Knowledge Centre for Software set up an online software exchange, softwareborsen.dk, which supports the acquisition and development of open source software in the public sector. By the end of 2008, the Software Exchange contained 45 projects which may be used freely by other authorities. Moreover, all suppliers can sell add-ons to the software on competitive terms.

In October 2008, the Ministry of Science, Technology and Innovation and Local Government Denmark published a reference architecture for records and case management. The reference architecture is an open IT architecture which supports innovation and competition in the provision of sub-systems and links to other IT systems and infrastructure.

The reference architecture underpins the work of a future joint public specification of requirements in the area (FESD II) and future standardisation within the area of records and case management.

Future digital skills

Several international surveys show that the Danes are among the most highly skilled IT users in the world. Good IT skills is a crucial prerequisite if all Danes are to participate in the information society.

In 2008, the Government continued its efforts to maintain and improve this position. In 2008, the Ministry of Science, Technology and Innovation worked on implementing the initiatives aimed at improving the citizens IT skills which were published in December 2007 in the strategy entitled “The Danes’ IT skills - a focused initiative”.

Annual barometer measurements are made to monitor the initiatives. The IT barometer for 2008 showed that three fifths of the population assessed their IT skills as medium to good. However, a part of the population has still not taken IT to heart. One fifth of the population has never used a computer, and one fifth only makes limited use of the computers.

One important initiative taken by the Ministry of Science, Technology and Innovation to meet this challenge was the establishment of a network partnership with a view to improving public IT skills. A large number of authorities, organisations and associations are participating in this network partnership, which goes by the general name of “Learn more”.

The Learn more partnership is backed by training in and the use of an IT teaching concept intended to help everyone in the network to teach at a qualified level. The training course aims at enabling participants and their organisations to produce relevant, citizen-related teaching materials to high educational standards. The training course is also intended to enable participants to train their colleagues in the concept, so skills development ripples out into the organisation in ever-widening circles. Organisations will subsequently be able to run customised training and educational courses for citizens within their specific target groups, thus providing citizens with access to customised training courses, tailored their needs and interests.

Besides the teaching materials, a website for the network has been set up which will act as a virtual meeting point, discussion forum, archive and workshop. Here network partners can meet online and discuss and develop teaching materials with each other throughout the country and across participating organisations.

In 2008, the Ministry of Science, Technology and Innovation embarked upon a number of initiatives as part of implementing the Government’s national e-learning strategy. In February, a pool to promote strategically anchored e-learning at the universities was published. Nine projects have received backing, partly to strengthen the range of further education courses at domestic and global level and partly to improve the quality of teaching. In October, the Ministry of Science, Technology and Innovation signed a framework contract

with five suppliers who will develop innovative e-learning solutions targeted the various groups in the national strategy. The solutions are intended to help demonstrate the possibilities of e-learning and boost the proliferation and use of e-learning tools geared towards the target groups in the national strategy.

In 2008, the Ministry of Science, Technology and Innovation embarked upon a number of initiatives aimed at improving the accessibility of public websites. One of these initiatives involved the charting of accessibility levels for a number of selected websites. A total of 234 websites were tested in accordance with the Web Content Accessibility Guidelines standard, which is one of the open standards for public authorities that became mandatory from 1 January 2008. On the basis of the survey, a focused information campaign was planned with a view to improving the accessibility of public websites. The information campaign was launched immediately after the turn of the year 2008/2009.

In 2008, the Ministry of Science, Technology and Innovation embarked upon collaboration with IT-Branchen, the Danish IT Industry Association, and DI-ITEK, the Danish IT and Electronics Federation, on an IT recruitment campaign aimed at increasing young people's knowledge of IT educational courses and IT careers thus improving the intake to the IT educations. The campaign focuses on lower secondary and upper secondary school pupils. The campaign consists of radio spots, pieces on popular young people's channels, visits by role models to the country's upper secondary schools, information days for careers advisors and competitions. Activities started in May 2008 and will continue until September 2009.

Valuable digital content and new opportunities

High quality digital content helps create value and new opportunities for citizens and businesses. Accessible, coherent and targeted digital services based on citizens' and companies' needs are one of the three strategic focus areas in "The Danish E-government Strategy 2007-2010", which the Government adopted together with Local Government Denmark and Danish Regions in 2007.

One of the main joint public initiatives in the digitisation strategy is the citizens' portal borger.dk, which is run by the Ministry of Science, Technology and Innovation. With the launch of a new version of borger.dk in October 2008, Denmark remains in the vanguard of public digital service development. Using their digital signatures, citizens can now access "My page" with personalised services and data about themselves. Part of the solutions are linked to NemLogin ("EasyLogin"), so citizens only need log in once after which they can navigate freely between various self-service options offered by the public sector. In the new version of borger.dk, four new "citizen themes" have been added comprising homes, children, finances and pensions. The themes have been developed from the perspective of citizens' everyday lives and needs across public authority divides.

e-Democracy is another area that is undergoing rapid development. The Ministry of Science, Technology and Innovation is backing this development by enabling citizens to participate in digital ballots and discussions via borger.dk's voting and discussion module.

Denmark's first real binding and secure e-election was successfully held in connection with the parochial church council elections in the autumn of 2008. The solution is an add-on to borger.dk's voting and discussion module and has been developed in collaboration between the Ministry of Ecclesiastical Affairs and the Ministry of Science, Technology and Innovation. The experience gained will be used in the future considerations over digital elections and referendums in Denmark. e-elections are also widely used within the university sector, as a large number of Danish universities successfully use a common electronic voting system developed with the backing of the Ministry of Science, Technology and Innovation.

In March 2008, Virk.dk, which is the Ministry of Economic and Business Affairs' business portal, was relaunched in a new design and with new improved features. Companies now find it far easier to find precisely the reports they need among the more than 1,300 public e-solutions and forms available on the portal. The new solutions available on Virk.dk include the preparation of electronic invoices and options for sending them directly to public authorities, thus reducing errors and saving time.

In 2008, the Danish Agency for Governmental Management also initiated the Digital dokumentboks ("Digital document box") and NemSMS ("EasySMS") projects, which are also initiatives in the national digitisation strategy. The digital document box will enable citizens and businesses to send and receive documents digitally and securely to and from public authorities. Among other, the solution will be accessible via borger.dk and virk.dk. The NemSMS project is intended to extend the use of text message reminders among public authorities, thereby increasing the level of service for citizens. Another objective of the solution is to reduce the number of cancelled meetings with public authorities as a result of no-shows by citizens.

In collaboration with the Ministry of Culture and a number of private and public stakeholders, the Ministry of Science, Technology and Innovation have embarked upon an initiative to provide digital support for the sports and leisure sector. At the moment, work is being done on the digitisation of grant and subsidy applications, the introduction of uniform membership registration and the integration of the sports and leisure area on borger.dk. The purpose of the initiatives is to ease the administrative work of voluntary leaders of sports and leisure organisations and provide citizens with valuable and coherent services across clubs, associations, organisations and authorities.

The Ministry of Science, Technology and Innovation is responsible for NemHandel ("EasyTrade") which enables both private companies and public authorities to send electronic business documents, including e-Invoices, easily and securely over the internet. Commercial suppliers of finance systems and invoicing solutions can freely incorporate the technology into their products. In addition, NemHandel is integrated in the new version of the joint government finance system, Navision Stat 5.0. It is estimated that the private sector could save more than DKK 4.4 billion through the further digitisation of business processes associated with eCommerce.

Through the PEPPOL pilot project, the EU is working on a system similar to NemHandel whereby private companies will be able to exchange electronic business documents with any

EU institution they like, thus ensuring that technological development in the public sector is on a par with that in the private sector. Denmark is one of the key participants in this work, which is based on the international standards behind NemHandel.

The use of the NemHandel is growing rapidly. In 2008, more than 445,000 invoices were sent out using NemHandel. In December alone, almost 70,000 invoices were sent out, and by the end of 2008 more than 15,000 companies had used NemHandel.

Source: The Danish National IT and Telecom Agency

Since 2001, the Bedst på Nettet (“Best on the Net”) benchmarking project has been a significant driving force behind the development and improvement of public websites. In November 2008, Bedst på Nettet was conducted for the eighth time. Once again focus was on increasing awareness of the quality of public websites so they match citizens’ needs. Altogether, 654 websites were assessed in categories such as digital self-service, technical availability, openness and utility value. A new feature of Bedst på Nettet was the awarding of an innovation prize and a communications prize to draw attention to new ways of communicating content via digital media.

The National IT and Telecom Agency is carrying out a comprehensive frequency planning project for digital TV so they are ready for use when analogue TV signals are switched off by the end of 2009. Negotiations are now in progress for the use of frequencies by 16 different countries aimed at facilitating the issuing of the necessary broadcast frequency licences. Moreover, the National IT and Telecom Agency has issued licences for trials with mobile TV on digital frequencies located in the so-called MUX 6 and 7.

ICT research is one of the Government’s main focus areas. In February 2008, the Ministry of Science, Technology and Innovation initiated an internal action plan to promote public ICT research. A number of projects has been implemented under the action plan, including a comprehensive analysis of public ICT research in Denmark and the holding of a conference on how to strengthen public ICT research.

Safe and secure use of ICT

People’s confidence in ICT is crucial when new products and services are provided by private companies and by the public sector. At the same time, citizens, companies and public authorities have become mutually dependent on a secure use of ICT. Therefore, the initiatives taken by the Ministry of Science, Technology and Innovation in the field of security have a broad societal aim and are based on partnership models with relevant players. Digital features and solutions must be designed with the protection of privacy in mind so citizens feel secure when using the technology.

In August 2008, on behalf of the central government, the regions and the municipalities, the Ministry of Science, Technology and Innovation signed an agreement with the PBS (Danish Payments Systems Ltd) owned company, DanID, on the development, implementation and operation of a new digital signature. The new digital signature will provide citizens and

companies with more user-friendly, secure and flexible access to digital services across authority and sector boundaries in both the public and private sectors. Most notably, the agreement provides a joint solution with the finance sector so that signatures can be used for both internet banking and for public and private digital services. Moreover, it will also be possible to use the new digital signature from any computer with internet access irrespective of where in the world the user is signing in from. The new digital signature will come into use at the end of 2009.

In April 2008, the IT security committee was appointed by the Minister for Science, Technology and Innovation for a two-year period with Professor Linda Nielsen (LLD) in the chair. The committee will guarantee increased high level commitment to IT security and will help with coordinating IT security initiatives in partnership with major stakeholders and the Ministry of Science, Technology and Innovation. This has given a boost to the concrete action-oriented work with IT security. In 2008, the committee focused on the protection of privacy, in particular in relation to social networking services.

Safety and security is created through targeted information. For an entire week in October of 2008, the Netsikker nu! (Netsafe Now!) campaign focused on safe behaviour on the internet. In particular, it focused on the protection of privacy on the net, mistrust of the internet and updating PCs. The campaign was organised in partnership with public and private sector players. Some 182,000 people participated in the 126 campaign activities.

The Ministry of Science, Technology and Innovation has drawn up a template for the creation of a privacy policy. The template is intended to support the work of public authorities in describing to citizens how personally attributable information about them is gathered and processed on the authorities' own websites. The Ministry of Science, Technology and Innovation is heading a joint public sector working group appointed to continue raising awareness of privacy protection issues in public sector information processing. The working group was one of the initiatives in the joint public digitisation strategy and will terminate its work in March 2009.

Looking ahead, the establishment of the Danish IT Agency will create the largest ICT operating centre in Denmark. Consolidating major parts of government ICT operations, data storage and support will provide good opportunities for collecting and enhancing security efforts in the ICT area. In the initial stage, the Ministry of Science, Technology and Innovation have contributed to the formulation of requirements for secure operations and secure information processing for both the joint ICT service centre and the common network that will connect the centre to the many government institutions.

In 2008, the Ministry of Science, Technology and Innovation, in collaboration with the Minister of Justice and the Minister of Welfare, appointed a contact committee to reinforce efforts aimed at combating IT-related child pornography and sexual abuse. The contact committee will act as a single point of contact in the central administration for all interested parties wishing to participate in the dialogue on combating IT-related child pornography and sexual abuse in Denmark. The contact committee was set up on 1 January 2009 with the participation of the relevant ministries. Relevant sector players and interest organisations will be drafted in to assist with the work of the committee for specific assignments.

PRINT EDITION:
ISBN 978-87-92311-83-2

INTERNET EDITION:
ISBN 978-87-92311-84-9