

## ICA Country Report 2004

### DENMARK

#### 1. Government structure

The political system of Denmark is a multi-party structure, where several parties are represented in the Parliament. Danish politics is typically characterised by inter-party compromise and broad agreements. The Danish counties and municipalities have a high degree of regional autonomy – this means, for example, that they have their own elections and regional administrations.

Denmark has a three-tiered governance structure, i.e. the Government and its respective ministries and associated agencies, etc., counties ('amter') governing various tasks such as health care, roads, etc. and local governments/municipalities ('kommuner').

For more information on public administration in Denmark: [Denmark.dk](http://Denmark.dk)

#### 2. The strategic approach adopted by the Danish Government

The government's policies and specific initiatives in the area of IT and telecommunications are described in the action plan '[Using IT Wisely](#)' from October 2003, which sets the framework and defines the guidelines for the efforts in the area. With 'Using IT Wisely', the Government is targeting its efforts at the areas where the use of IT and telecommunications generates the highest value. The Action Plan presents a number of coordinated and specific initiatives which, taken together, will contribute to maintaining Denmark's position among the world's leading IT nations, ensuring continued improvement and increased value of IT activities in Danish society. Denmark is reckoned to be among the world's best IT nations, characterized by advanced and creative use of information and communications technologies in all parts of society. This is the government's ambition and the aim of Danish IT and telecommunications policy.

In concrete terms, it is the government's aim that efforts in the IT and telecommunications area should contribute to:

- Developing the public sector
- Creating growth in Danish business and industry
- Qualifying the Danes for the future knowledge society.

[The public sector's 'eGovernment Strategy 2004-06 - realising the potential'](#), which was launched by the government and the municipalities in February 2004, contains some specific and measurable goals. The Danish vision for eGovernment is that digitalisation must contribute to the creation of an efficient and coherent public sector with a high quality of service, with citizens and businesses in the centre. In order to facilitate work on this vision and monitor the progress of its realisation, the following five signposts have been drawn up each with associated measurable indicators of success/benchmarks. The first two signposts express the aims of the vision, while the latter three are concerned with the measures that will be necessary in order to realise it. A number of specific aims have been listed beneath each of these signposts, in prioritised order. The five signposts are:

- The public sector must provide coherent services with the citizens and businesses in the centre

- eGovernment must result in improved service quality and the release of resources
- The public sector must work and communicate digitally
- eGovernment must be based on a coherent and flexible infrastructure
- Public sector managers must lead the way and ensure that their own organisations are capable of realising the vision

### 3. Organizational Issues

As an integral part of the Ministry of Science, Technology and Innovation, the National IT and Telecom Agency takes an active part in achieving and implementing the government's policies and initiatives within the area of IT and telecommunications. The National IT and Telecom Agency handles a wide range of activities of key importance to the development of IT and telecommunications in Denmark. This applies to areas such as ensuring a forward-looking, advanced and well-developed IT and telecommunications infrastructure in Denmark; promoting competition in the Danish telecommunications market; consumer protection; IT security; broadband development; improving IT efficiency in the public sector; public communication and providing digital services to the citizens.

#### Key activities:

##### **Enterprise architecture and XML**

This initiative aims to improve the basic conditions for efficient and coherent *public IT use*, including the preparation of general guidelines and principles for building IT systems in the public sector (common enterprise architecture) and dissemination of standards for data interchange (XML). This work is carried out in close cooperation with other public and private stakeholders, where sharing and communicating expert knowledge is a key element in fostering a common IT foundation for e-government.

In June 2003, the Ministry of Science, Technology and Innovation, on behalf of the Coordinating Information Committee, published a White Paper on enterprise architecture. The White Paper contains three main recommendations for a common framework for enterprise architecture in the public sector. The main recommendations are:

- The public sector – at agency level and at large – should take a more active responsibility for its own enterprise architecture.
- Government should create a joint enterprise architecture framework for the planning of government IT systems with particular focus on securing interoperability.
- A pronounced effort to raise awareness, spread knowledge and develop competencies with regard to enterprise architecture, especially around joint government initiatives.

Since, the Government has incorporated the recommendations of the White Paper into its public IT policy and the public E-Government Project has formally adopted them in February 2004 with the new E-Government Strategy 2004-2006, which designates enterprise architecture (EA) as a key signpost in the e-government process.

To follow up on the White Paper, the National IT and Telecom Agency, as part of the Ministry of Science, Technology and Innovation, has launched a number of initiatives:

- Appointment of the Enterprise Architecture Committee, which is a technical committee, composed of experts from central government, regional and local authorities. It reports, in line with the similar XML Committee, to the Coordinating Information Committee. The

- Enterprise Architecture Committee is chaired by the National IT and Telecom Agency which also provides secretarial assistance to the Committee.
- The [Danish reference profile \(eGovernment Interoperability Framework\)](#), with common recommendations for technical standards that may be used in connection with tenders and development projects. The reference profile was published in late January 2004.
  - A handbook on enterprise architecture, which was presented for debate in autumn 2003. The handbook focuses on the strategic architectural process, which is to ensure optimal technology support for business-related needs and objectives. The final version of the handbook was published in the early summer of 2004.
  - Forum for IT architects, intended to ensure knowledge sharing, exchange of experience and dialogue about the common work with enterprise architecture.
  - A broad dialogue with parties in the educational field, including universities, which are active within the area of enterprise architecture, both in education and research.
  - International collaboration on enterprise architecture within the framework of EU (European Interoperability Framework) and in the worldwide organization ICA (International Council for Information Technology in Government Administration), where the National IT and Telecom Agency is in charge of collaboration regarding the exchange of experience in the area.
  - The central e-gov stakeholders are currently developing tools and guidelines for enterprise architecture processes. The National IT and Telecom Agency is facilitating the development by expanding the national EA framework with practical implementation tools and shared services, such as repositories. A new EA repository is opening late 2004 or early 2005. This is expected to cover all layers of the enterprise architecture work from strategy to infrastructure, and to be used by both central and local government. The focus in the first phase is on assisting local actors and cross-government projects with a tool for sharing and reusing architecture documents and sharing knowledge and experiences. Later phases may put more focus on more wide ranging issues such as coordination, alignment, compliance and governance.

The work on XML standardization is an integral part of the enterprise architecture work. The work with XML is to ensure that a common language is developed for exchanging data with guidelines, rules and instructions. By means of XML, it is possible for public authorities - in a readily available and relatively inexpensive manner - to place their data and services at the disposal of other public users and users in the private sector.

The focus of the XML standardisation is semantic and syntactic interoperability. The activities are extensive, including:

- A national XML Committee which is responsible for ensuring coordination and progress in the standardization of XML based services and interfaces for exchanging data in the public sector. The National IT and Telecom Agency has the Chairmanship of the XML Committee and provides secretarial assistance.
- Key actors in various domains are encouraged to set up domain XML committees and working groups with formal agreement to work under the common framework
- Common guidelines for XML interfaces. The Danish guidelines are based on the Universal Business Language (UBL) Naming and Design Rules (NDR). Danish XML – called OIOXML - includes both the adoption of international XML languages as well as the development of new languages. OIOXML is in English in order to enhance international cooperation and re-use.

- The [Infostructurebase](#) is a combined repository and registry where users may obtain XML schemas and request assistance for drawing up their own schemas. The Infostructurebase contains all the elements relevant to descriptions of data and documents, access to data, etc.
- A number of XML pilot projects and large scale strategic projects use OIOXML to ensure that IT projects communicating via a common public XML standard will be carried out in practice.
- A number of activities for spreading information and sharing experiences, including a developers Forum for OIOXML, guidelines and cookbooks, reference implementations, hotline, e-newsletter and a best practice newsletter called In Practice in Danish and English showcasing actual experiences and results.

### **The Joint Electronic Document Management System (JEDMS)**

The framework agreement is called the Joint Electronic Document Management System. Via framework contracts, the JEDMS project must secure a supply of attractive Electronic Document Management System solutions to the entire public sector. The aim is to ease the daily workload, increase efficiency and create better co-operation, internally and with citizens, businesses and other public authorities. The JEDMS project will also develop a number of standards and recommendations that will ensure coherence between IT systems across the boundaries of the public sector.

### **Common solutions and infrastructure**

The increased requirements for e-government and electronic access for citizens have amplified the need for ensuring coherence in the public sector's use of IT and examining the potential for rationalization, scale economies and economic savings via common solutions. As part of the Ministry of Science, Technology and Innovation, the National IT and Telecom Agency has drafted a strategic proposal for the Government's IT network - a concept for a common communication structure across the public sector, improving security and flexibility.

Furthermore, the National IT and Telecom Agency has participated in a joint governmental pilot project to benchmark IT costs in four Ministries, and the Agency has also established a digital tool for knowledge sharing and exchange of experience in the form of an extranet on [www.it-netvaerk.oio.dk](http://www.it-netvaerk.oio.dk) for 250 IT managers with access to the Ministries' IT plans, policies, and programs, etc.

### **Software strategy**

The government has created a software strategy for the public sector. The chief purpose of the strategy is to contribute towards competition in the software market and ensure that public authorities can choose software on the principle of maximum value for money - regardless of whether or not the software is open-source-based or proprietary. To help assess which software is best and cheapest, the Ministry of Science, Technology and Innovation and the National IT and Telecom Agency - in cooperation with Local Government Denmark and Danish Regions - are in the process of developing a costing and evaluation model for desktop software. The model makes it easier to obtain greater knowledge of cost structures and knowledge of values, benefits and user satisfaction in relation to investments in various types of software. In addition a number of pilot projects have been started. The projects will gather data concerning use of both open source and proprietary desktop software.

The content of The Desktop Evaluation Model is:

- A Value Model describing a set of qualitative characteristics related to the desktop such as flexibility, usability, etc. These characteristics are accompanied by a set of indicators offering quantitative data to enlighten the value of the characteristic.
- A Cost Model describing a set of cost categories making it possible to calculate the total operating costs to operate the desktop.
- A Migration Model used for the gathering of information about the effort needed to switch from one desktop type to another. And
- A set of basic information about an institution using the model and about the migration project the institution has performed.

### **Right to data & exchange of data**

The use and reuse of data across public digital registers is a fundamental element in establishing a service-oriented e-government. The public sector has agreed on principles for access and right to data across the public sector, providing public sector entities with a right to data from other public sector entities at marginal cost - limited only by specific mandatory legislation.

To support the principle of right and access to data within the public sector - and to the extent data are available to the private sector - the National IT and Telecom Agency has established a website to be launched in the beginning of 2005, which will provide an overview of registers and databases held by various public sector entities. Furthermore, the Agency is in charge of case administration regarding complaints from public authorities about the right to data before the Coordinating Information Committee.

One thing is establishment of principles providing right and access to data. Another is the actual access to and usage of data. In the second half of 2004, a cross-governmental survey is being conducted by the National IT and Telecom Agency with a view to establishing the status over current barriers to data usage as well as assessing the potential for extensive data exchange.

### **eDays**

On 1 September 2003 the e-day initiative was launched in the public sector. The initiative, which is an element in the Government's modernization programme, provides the framework for encourages all public authorities to preferably exchange documents and information digitally.

eDay II will be launched 1 February 2005. After this date citizens and enterprises have the right to receive and send secure e-mails to the public sector and vice versa.

### **FOA**

The National IT and Telecom Agency is developing a common public address database (known as [FOA](#)). Here, all authorities, citizens and businesses are able to quickly find e-mail addresses of public institutions with a number of XML-based extraction facilities and special functionalities to be further developed in 2004/2005. The objective is for FOA to become the site where all addresses and personal data for the government are collected and updated, and in future FOA is also intended to contain address information, etc. of local and regional authorities.

### **Effective public communication**

To a large extent, IT use in the public sector is also a question of effective public communication to citizens and businesses and access for all to public information. In 2003, the National IT and Telecom Agency focused on developing and ensuring a high quality in public communication. This

was done under the heading Effective Public Communication (known as EOK). Efforts are aimed both at public communication on the network and public communication at large, and include:

- [Top of the Web](#), which has quality checked public websites since 2000, giving them scores known as net crowns. The interest in participating in this benchmarking is extremely great. In 2003, about 2,200 public websites were evaluated. Nearly all websites got a score of at least three out of five net crowns, which is an improved standard on previous years. Top of the Web will continue in 2004 with a revised evaluation basis including a rating of content and communication: How well do the websites present their message?
- EOK mini-seminars, which allow participants to gain and share experience on communication activities in the public sector, e.g. language policy, network publications, choice of media, user-friendliness and surveys. In 2004, a number of new EOK initiatives will be launched.
- The electronic oio-newsletter (public information online), which is issued every two weeks with news on IT and communication activities in the public sector. [www.oio.dk](http://www.oio.dk) is a tool for registration, collection and dissemination of knowledge about IT and communications.
- The establishment of a conversion tool, NetPub, which is able to convert publications according to the Government standard for e-publication in a fast and inexpensive way.

#### **Citizens in focus**

The website [danmark.dk](http://danmark.dk) is the citizens' shortcut to dedicated information from the public sector. During 2004, an entirely new technical platform was created for danmark.dk with the ability to develop new services. The strategy is for danmark.dk to become the collective platform for all public information to citizens in 2004. This implies that danmark.dk will be able to offer both target group entries and individual personalized entries to information on the website - a new feature giving flexibility in the structure and adjustment of content on danmark.dk with unique scope for applying and utilizing the content across the public sector.

Denmark has some of the most frequent Internet users within the EU. This affords a good basis for public authorities to communicate digitally with citizens and offer digital services. But not all citizens are quite familiar with the Internet yet. So the contact centre of the National IT and Telecom Agency helps citizens find their way in the public sector via the 'speaking danmark.dk' service on the telephone number 1881.

An important reference point for the Danish Government's IT and telecommunications policy is the individual citizen. IT can provide greater flexibility, increased transparency and more choice in everyday life. A key element in the work with digital administration is dialogue - between authorities, but also between authorities and citizens, i.e. end-users. [DanmarksDebatten](#) is a dialogue-oriented Internet-based tool to support these efforts via input from citizens and elected representatives.

#### **Access for all**

The Internet offers quite unique possibilities for making public information and communication accessible to all, including people with disabilities. As an element in the action plan 'Disability no Hindrance', the National IT and Telecom Agency in May 2003 established the 'Competence Centre IT for All'. The purpose of the Centre is to show that accessibility is to be regarded as a natural element in the network society - not least in digital services offered by public authorities.

Technological progress should be of benefit to the majority and not only to the few. Also Top of the Web focused on accessibility in 2003, increasing requirements for accessibility on the occasion of the European Year of Disabled People. On 16 April 2004 the centre of competence launched a public procurement toolkit, which offers public authorities a new and easy way of including accessibility in their public procurement.

### **IT security**

Within the Danish society a great and ever increasing need for strengthening IT security is felt. Vital public interests within most sectors are profoundly dependent on information and communications technologies working in a stable, efficient and secure manner. The vulnerability to IT breakdown, fraud, sabotage and terrorism is latent today with respect to citizens, businesses and the public sector. IT security is a precondition for the continued growth and competitive power of businesses - and for the functions of society as a whole.

Increased focus on promoting IT security in Denmark as a condition for reducing vulnerability and ensuring stable, efficient and secure IT. Among specific activities are the work for the Council for IT Security; information and campaigns on IT security; drawing up specifications and standards for IT security and providing guidance to the public sector on IT security questions. The National IT and Telecom Agency also supervises the certification authorities that issue certificates, and the Agency also assists the Ministry of Science, Technology and Innovation in its work on digital signatures, e.g. by standardizing certificates to be used for communication with public authorities, as well as guidance and advice to public authorities, businesses and citizens on implementing and using digital signatures, see also [www.digitalsignatur.dk](http://www.digitalsignatur.dk).

The National IT and Telecom Agency's activities in the IT security area includes:

- Handling secretarial functions for the Council for IT Security
- Launching information campaigns regarding IT security
- Dissemination and use of digital signatures according to the OCES standard
- Specification of rules and standards for IT security in the government sector
- Establishment of integrated IT and telecommunications emergency planning
- Strengthening of research and training within IT security
- Ongoing measurements of the IT security level in Denmark.

### **4. Operational issues**

Increasing attention is being paid to ensuring impact and assessing the direct and indirect value of the many initiatives, as illustrated below.

The Danish IT Council decided in September 2003 to develop a common methodology for IT benchmarking in central government. The general aim is to offer IT benchmarking to interested institutions as a tool to strengthen IT governance and optimise IT usage.

A first step is to develop a common framework for accounting IT costs and second step will be to define common indicators to be used in the IT benchmark. The common accounting framework should be applicable in the accounting year 2005 and IT benchmarking should undertaken on a voluntary basis from mid 2005.

The Ministry of Science, Technology and Innovation has recently undertaken a literature review to determine the benefits of e-government projects to government and to end-users, i.e. citizens and

businesses. One of the main objectives of the literature study was to grasp the qualitative benefits in order to improve already existing economic value frameworks. In the literature review, attention has been given to the factors of a preliminary value framework. The literature review has thus led to knowledge about both input and output variables for three main categories, namely IT, Organisation and End-Users. The findings have been synthesized into main output variables (Benefit indicators).

[OIO.dk](http://OIO.dk) (public information online) is a central website for everybody who deals with e-government and the implementation of IT in the public sector in Denmark. On OIO.dk, a series of tools are contributing to securing the basis and coherence of the public sector's use of IT.

OIO also serves to showcase actual experiences and results as well as best practices. For example, 'In Practice' is a printed case study series published in Danish and English by the Ministry of Science, Technology and Innovation as a part of the work with enterprise architecture and XML in the public sector.