

# **From Vision to Action Info-Society 2000**

Statement to Parliament  
on “Info-Society 2000”

and

IT Political Action Plan 1995

Ministry of Research and Information Technology  
Denmark  
March 1995

**From Vision to Action  
Info-Society 2000**

Statement to Parliament on "Info-Society 2000"

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## Foreword

In October 1994 the Government Committee on the Information Society by the Year 2000 submitted a report, "Info-Society 2000". Shortly before, in connection with a Government reshuffle, the jurisdiction of the Ministry of Research and Information Technology had been extended to comprise information technology and telecommunications. The decision to do so was made to radically upgrade the political priority given to these areas, thereby strengthening Denmark's realisation of the information society.

In the meantime, the Report on "Info-Society 2000" has been circulated for comments to organisations, ministries, government agencies, etc. These comments and the ensuing general debate on the Report and its themes form the basis of the Government's preliminary conclusions. They have been summarised in this Statement to Folketinget and the attached Action Plan 1995.

The idea is that the Government from now on will submit an annual Statement to Folketinget and an Action Plan of the year's initiatives. In other words, this is a current process which involves that each year we will take stock of the situation and correct the course.

It is the Government's intention that the major themes of the Info-Society should be in the foreground of public attention and political debate - may this Statement contribute towards that end.

Frank Jensen  
Minister of Research and Informations Technology



# Statement to Parliament on “Info-society 2000”

## 1. The Info-Society is a challenge

“A revolution is in progress; a world-wide short-circuit of time, space, people and processes” - this is the beginning of the Dybkjær-Christensen report on the “Info-Society 2000”.

It is a very precise description of the enormous impact on social life that we are witnessing at the moment: ever more sophisticated telecommunications make the world shrink. At the same time, computers become available at still cheaper prices and with their rapidly increasing capacity create entirely new potentials of information and working processes. With the fusion of the telecommunications and computer technologies this impact becomes increasingly powerful.

What this really means is that geographic distance tends to lose its importance altogether. Many production processes are made dramatically more efficient. Entirely new requirements to the qualifications of employees are often the consequence of these trends. The basic conditions of cultural development and education are radically changed.

In the global perspective, the Info-Society is certainly becoming a reality that we cannot dismiss. The only question is how we will respond to it.

### **A source of better quality of life and growth**

We still only see the dim contours of the Info-Society. Much will be different from what we expect. Envisaged problems may eventually evaporate into thin air while on the other hand new, unforeseen problems may emerge. We will experience changes of enormous impact and this development may justly be called revolutionising.

It is fair to compare this revolution with the industrial revolution and the agricultural reforms at the end of the last century, the difference being that things are moving much faster now. Another difference is that the introduction of the Info-Society, especially in the environmental area, has far less negative consequences than the transition to the industrial society.

Correctly used, the information technology may at the same time be a source of economic development, growing employment, improved quality of life and a cleaner environment due to the use of less polluting technologies.

In parallel with this, the Info-Society may develop into a much more open and decentralised society. Essentially, the Info-Society offers the prospects of an openness yet unseen and of uncontrolled access to information, communication and debate. The numerous global networks with their debates, databases and dissemination of information do not lend themselves to control. They invite to both anarchy and refreshing debate. Anyone with a PC and a modem connected to the telephone network can participate.

These are tools that provide us with as yet unrecognised potentials of public information. With their help, information and communication may reach remote areas which would otherwise be very difficult to reach. If N.F.S.Grundtvig<sup>1</sup> had lived today, he would probably be connected to the world-wide Internet!

#### **Front-Runner Countries get the New Jobs**

The development towards the Info-Society presents some problems, however, and it is necessary to respond to them. There are, in principle, three inherent *risks*:

- The public sector and Danish companies are unable to adequately redefine working routines and develop new, IT-based products.
- We see an increased social polarisation into a two-tier society with IT winners and losers.
- The Info-Society takes on the features of a centralist, surveillance society.

The transition towards the Info-Society will lead both to the creation of new *jobs* and to the loss of jobs. If we are to ensure a sufficient number of new jobs, this means that Danish companies must not only effectively introduce new technology for rationalisation purposes, it certainly also means that they must be able to transform new technology into new products to respond to special customer requirements. But speed is essential and it is of vital importance that action is taken ahead of other countries. Only then will it be possible to successfully enter the world market and, as experience shows, those countries that penetrate the world market, being the first to introduce new competitive products, are also the countries that get the jobs.

It is not only a question of jobs. It is also a question of the basis on which our entire welfare society is based. If we cannot compete successfully at the international level we have to face the fact that our welfare society must be tightened up, and that we will be unable to maintain a favourable trend in both the employment rate and in real wages and salaries.

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<sup>1</sup> N.F. S. Grundtvig (1783-1872) was a famous Danish poet, statesman, and divine. He was the driving force behind the establishment of the first popular schools in Denmark where national poetry and history should form an essential part of the instruction.



### **The Primary and Lower Secondary School System calls for Ambitious Action**

The development towards the Info-Society carries an inherent risk of *creating a two-tier society of winners and losers as far as IT is concerned*. The winners are those with a higher education who are able to master the new technology, who know the possibilities of the Info-Society and are able to learn and to develop the qualifications necessary to cope with the jobs of the future.

In particular, there is a risk that unskilled individuals and persons with no special labour market qualifications will find it even harder to get jobs than today. However, technology may also simplify some job qualifications, enhancing the employment prospects of those with a limited education. It is not a condition of using the technology that you are able to develop it. This is why it is all-important that our labour market and education policies are geared to meet the new demands.

The risk of having IT winners and losers is to a certain extent connected with the generation gap. The generation now growing up and those to follow are much more in control of new technology than their parents and it is a natural, everyday thing for them. Many children are much better at mastering new technology than even their school teachers.

But we should not resign ourselves to this state of things. First, we must not loose all the surprisingly many children who have no access to a PC at home and therefore are not given the necessary support nor the chance to master the new technology. A drastic and ambitious effort, therefore, is necessary to boost IT use in the primary and lower secondary school system.

Secondly, we must not loose the great number of Danes who are the parents and grandparents of these children. Our labour market policy and our policy on supplementary training and education will necessarily have to be adjusted to the new situation. It is of special importance in this connection that the public libraries become geared to play a major, intermediary role in the Info-Society.

### **Security Problems must be Tackled**

Finally there is a risk that the information technology will lead to a *“Big Brother” society* putting the individual citizen under central surveillance and showing clear features of dehumanisation. A number of years ago, this was a great concern of many people. But after more than 25 years of experience with increasing computerisation of the Danish society, DANKORT payment cards, CPR (Central National Register) numbers etc. it must be concluded that the horror visions seen by some did not come true. We have developed a degree of experience and maturity enabling us to prevent or tackle problems, provided that we are constantly aware of possible risks and that we make a conscious effort to deal with them.

Several factors have acted to demystify IT and to make it a natural element of everyday life: information initiatives in organisations and educational associations, the creation of a Parliamentary Technology Board etc., together with the fact that about one-third of all Danish households today have a PC, and finally that a steadily increasing number of Danes are using IT equipment in their jobs.

According to one's temper and beliefs it is possible to focus on either the potentials or the problems and risks inherent in the Info-Society. Both aspects are part of the reality of IT and it is not surprising, therefore, that the *debate* is often taking entirely different courses. The prospects of problems and risks, however, should not be allowed to lead to a state of paralysis.

If we are to realise the positive potentials of the Info-Society and to tackle problems and risks, this will call for a proactive effort. We simply have to face the *challenge of the Info-Society* instead of allowing uncertainty, fear or lack of resolution to take over, thereby missing the chance of properly timing our effort.

#### **A Danish model for IT Development**

It is the Government's aim that Denmark should make a *conscious choice*: We either leave important decisions entirely to the market forces and to the policies so far pursued in the various areas; or we formulate a *coherent strategy* which will make the Danes well prepared to meet the challenge of reorganisation in the wake of the Info-Society. Only in this way will we have a chance to cope with the dilemma of being faced with a pressing need for reorganisation and renewal, at the same time as this process is far too swift and drastic.

The strategy should be based on a *Danish model* involving that market forces are not allowed to be left alone. We must make sure that a number of special values prevail, primarily through a public sector effort:

- IT should support free access to information and exchange of information.
- IT should support democracy and give the individual the opportunity to exercise his influence.
- IT should support personal development, one of the means being to support the individual in his working situation and in his leisure time.
- IT should support openness in the public sector, making it more transparent, contributing to the promotion of efficiency and rationalisation in public institutions and enabling them to provide better services.
- IT should be used to sustain the disadvantaged of society.

#### **Denmark should act now**

Denmark is not the only country with a conscious and proactive attitude to the challenges of the Info-Society. On the contrary, a remarkable interest and a high level of awareness are rapidly gathering momentum in other countries as well.

The USA was first with the Clinton-Gore plan of "The Information Super-Highway" and is leading today both technologically and in the development of the world-wide Internet.

In Asia, Japan will be launching a large-scale project and Singapore has advanced plans for the introduction of a major project which contains some of the surveillance features, however, that we do not want in our society.

In Europe, the Info-Society was really put on the agenda with the publication of the Bangemann Report last year and with the discussions of it at the meeting of Heads of State and Heads of Government in Corfu last June. Among European countries, Sweden is far advanced with preparations of large-scale initiatives. But Denmark is certainly not disqualified from this international company, at least not if we act *now*.

## 2. From Vision to Action

These are the topics dealt with in the Dybkjær-Christensen Report. Judging by its reception by the public, the Report has hit major tendencies of our times and it has become a best-seller. The first two impressions totalling 12,000 copies have already been sold out and a third impression is on the way. What is more, the themes of the Report have given rise to a general debate which has now been going on in the media for more than six months and which is on the agenda of many conferences and meetings.

The Report's view that a proactive strategy for the Info-Society calls for increased public awareness and debate on potentials and problems and that the Info-Society should have a top position on the political agenda must be considered to have been realised so far.

The Report has been circulated for comments to all ministries and a number of government agencies, organisations and companies. On this background and on the basis of the debate, the Government now submits this Statement to Folketinget with the attached Action Plan for 1995.

The intention is that the Government from now on will submit a statement to Folketinget with an attached action plan once a year. This means that a continuous process has begun with an annual possibility of adjusting the policy and the initiatives based on the experience gained.

The central concept of the Government's strategy is for the public sector to play actively together with the private sector about a proactive strategy for Denmark's transition towards the Info-Society, the public sector carrying out its share of the work by realising the application of IT.

This concept which might be called “Single Market” or the Jacques Delors method may be summarised in three points:

- A number of ambitious but realistic goals with deadlines are set.
- Priority is given to solving a number of key problems, such as the development of infrastructure, updating of legislation or the establishment of standards.
- The strategy of advancing along a broad front will result in a synergic effect and in reaching the “critical mass”.

As will be seen, this is not a kind of Soviet five-year action plan with every detail being fixed for the coming years. Nor is it a traditional “lump sum plan” with millions of kroner earmarked for each initiative. There is no need for this.

It will be a continuous process over the coming years allowing us increasingly to set specific goals and to currently implement new initiatives in an interplay between the Government and Folketinget, the ministries, business enterprises, municipalities, organisations, etc. This will gradually lead to the emergence of a still clearer vision of the Info-Society that we are heading towards.

With the Action Plan, the Government calls for central and local authorities to do their share of the work. At the same time, the Government will invite Danish companies to do their share conscientiously and efficiently, stressing that we should all join together to ensure the necessary development of the qualifications of all employees.

The Government intends to invite the labour market parties to a three-party “summit meeting” later this year. The agenda of the meeting will include the demands made by the Info-Society on companies, on trade policy, labour market and education policies and it will generally deal with the public sector’s efforts to realise the Info-Society.

### **3. IT Political Action Plan 1995**

Action Plan 1995 contains the following specific objectives and lines of action.

#### ***The Electronic Service Network of the Public Sector***

The public administration within central and local government is to be interconnected in a comprehensive electronic service network. This will enable the public administration to become more efficient and lead to better servicing of the citizens and of companies, at the same time supporting their own use of IT; further, it will result in rationalisation gains and more open decision processes.

Central elements of these measures will be electronic communication and access to public information, a principle involving that citizens and companies do not have to go through the trouble of supplying data already kept in public registers and which may just as well be transmitted electronically; the establishment of a national business register (*Centralt Virksomhedsregister*, CVR) with attached CVR number which may prove to be an even more important key than the central national register or CPR number is for individuals. In step with the replacement of IT systems, public institutions will over the coming years introduce electronic processing and filing instead of paper-based files.

Another issue is whether we should take steps to advance the security of communication between the individual citizen and public authorities and access to personal data by introducing an electronic Citizen's Card with a PIN code and picture. Such a card could replace a number of cards, certificates and proofs of identity. The Ministry of the Interior has prepared a report on these ideas which is now being widely circulated for comments. As soon as all comments have been received, the Government will make a final decision in the matter.

These measures will primarily mean that the citizen and business encountering a public authority in the "normal" way by phoning, writing or showing up in a public office will perceive the public administration as a better, swifter, more efficient service. However, this also means that to an increasing degree, the individual or business will be given the choice of a purely electronic communication with public authorities. This may be done by using a PC at home when it is convenient to the user and when no opening hours apply for public offices, or it may be done from companies and other places of work.

#### ***Handling of Data and Protection of Personal Data***

Data kept in public registers should increasingly be handled by "reusing" data in the public as well as in the private sector. At the same time, steps should be taken to introduce data protection and especially the protection of sensitive information on individuals. The legislation on registers must be brought up to date, thereby ensuring that data for all legal purposes may be handled without the involvement of bureaucratic procedures.

#### ***A better Health Service Providing faster Treatments***

The unique possibilities in the health area of achieving better service and more efficient and faster medical care by using IT for communication and registration of medical cases and clinical data should be exploited. Such a development will support the many current readjustments of working routines and the organisation of the health sector and will open the possibility of further rationalisation gains in the sector.

#### ***The "Global Village" of Research***

Danish research must achieve maximum benefit from world-wide and national electronic networks for the exchange of research information, and Danish strong holds within IT research must be exploited by giving it higher priority.

#### ***New Ways in the Educational System***

All children must be prepared to master modern information technology. Education in the primary and lower secondary school system, therefore, should be so organised that IT becomes a natural element of the teaching of individual subjects. The unique potentials of the information technology should be exploited to ensure that teaching is adapted to the individual pupil - as intended in the new legislation on the Primary and Lower Secondary Schools.

In cooperation with the municipalities, a general initiative should be taken to further the use of IT in the primary and lower secondary schools. As an element of this, a large-scale reorganisation to include IT equipment must be undertaken which will allow the present level of around 40 pupils per updated PC to be increased to 5-10 pupils per PC.

Further, the concept of technology-supported education, including distance learning, will have to be fully exploited, adult education and supplementary training being given special attention.

#### ***Cultural Network Denmark***

The libraries of the future must have a central position in a society where electronic publications increasingly take over the role of magazines and books. The libraries should maintain a major, intermediary function as far as public information is concerned and be active in helping all citizens to navigate through the rising flood of information. Electronic communication of culture should supplement and increase the dissemination of cultural experience and knowledge. All cultural institutions should gradually enter a common network with access for the citizen to obtain information on culture by electronic means.

#### ***The Mass Media through New Channels***

In a world where the electronic media picture is increasingly dominated by international channels and producers it is vital to carry on a Danish public service function in the area of radio and TV. It must be ensured that Danish high-quality programmes of all kinds are still produced and transmitted. The Minister of Culture will shortly make a media policy statement on this subject.

#### ***Disabled Persons in the Information Society***

New IT applications which may offer the possibility of increased integration of disabled persons in society must be fully exploited.

#### ***IT - Means to Improve Traffic Management***

The possibilities of using traffic informatics to improve road traffic management, minimise environmental damage caused by traffic and increase the level of service for road-users must be exploited as they gradually prove to be practically and financially viable.

#### ***The Network of Companies***

IT is an important tool for the individual in his job. But IT is not only a tool to carry out the usual work more efficiently. It is often necessary to revolutionise normal working routines in order to gain full advantage of IT. There are indications, for instance, that organisations will tend to become more level as individual employees are able to communicate more easily and obtain the information they need for the performance of their work. In this way IT may contribute to the personal development in the working environment and at the same time the work is carried out more efficiently. Public policies, therefore, should support the development of such new working routines and organisation forms as IT is gradually introduced in the working environment.

As an element of this strategy, Danish companies should be connected in an electronic network for the interchange of business documents (Electronic Document Interchange, EDI). This will result in considerable rationalisation gains and a closer interplay between organisations.

***The World's Best and Cheapest Telecommunications Services***

By pursuing a proactive telecommunications policy, Denmark will during the period leading up to the year 2000 be providing some of the world's best and cheapest telecommunications services. A first step is taken with the implementation of a telecommunications policy "package" in 1995.

***Open Network of Society***

The computer and telecommunications networks must be developed further in order to make up a coherent "public network" which to ordinary citizens and companies is as simple to use and as easily accessible as the telephone system.

***EU***

Also in the case of information technology, EU decisions have increasing impact on aspects of Danish social life. It is therefore our declared aim, based on considerations of Danish values and priorities, to seek to influence EU policies in the IT area - and of course take maximum advantage of relevant EU programmes.

## **4. Implementation and Continued Debate**

With these proposals the Government is closely following up on the recommendations of the Committee on the Information Society by the Year 2000. In some areas, the Action Plan may even be said to be more ambitious as it contains a broader collection of proposals or suggests a faster course of action than recommended in the Report. This especially applies to the areas of culture, research, business, telecommunications policy and security.

There is also the financial aspect. Already today the public sector on an annual basis spends more than DKK 5 billion on IT equipment, software and services, and prices of the equipment are constantly falling. In some areas, investments may have to be made at an earlier stage than foreseen. In many cases, however, these investments will soon be recovered in step with the achievement of IT-based rationalisation gains from improved working routines. So, in a number of cases a change of priorities is called for to the benefit of IT initiatives. In addition, many institutions will be able to draw on their savings. Likewise, we will of course seek maximum funding from a number of EU development and research programmes. Specific financial decisions will of course have to be made in the normal budgeting processes when the Budget is drawn up, in the individual ministries, institutions and municipalities.

Generally, the measures proposed in the Action Plan may be kept within the known budgetary levels of central and local government. In the central government area, additional costs connected with the various proposals will be kept within the framework appropriations of individual ministries. The 1995 Budget provides for a pool-scheme under the Ministry of Research and Information Technology of DKK 35 million to follow up on the "Info-Society 2000" Report. The detailed implementation of these measures will be discussed with the political parties behind the Budget. As for the municipalities, expensive proposals will have to be realised in step with local establishment of an economic basis for them. A number of proposals, apart from offering better service to citizens and companies, may also lead to greater efficiency and economising on public spending in the longer term.

The train towards "Info-Society" is running fast. Denmark has certain, unique opportunities which we may turn to our advantage, especially if we do so in time. Faster action will also offer the best possibilities for us to be able to set the agenda on the basis of Danish values and priorities.

It is the Government's hope, therefore, that broad support can be rallied in Denmark to pursue a proactive strategy for the information society; that the private sector will lend its backing and cooperation; that Danish municipalities will join; that political agreement can be reached in Folketinget and that, most importantly, the individual citizen will play an active and critical role in the process.



# IT Political Action Plan 1995

*The principal political aim is for the public sector to play actively together with the private sector on a proactive strategy for Denmark's development towards the information society; the public sector should be leading in efficient use of information technology.*

The following is the Government's political guidelines for efforts in individual areas and the most important initiatives in 1995 are described. Where nothing else has been stated, the described projects are to be realised in the course of 1995.

## 5. The Electronic Service Network of the Public Sector

### **Policy 1**

*Public administration (central, county and municipal levels) is to be connected in a comprehensive electronic service network, providing: better service to citizens, better service to trade and industry and support of their own use of IT, rationalisation gains, and more open decision-making processes.*

### **Policy 2**

*Information already supplied by citizens and companies to one public institution and which can be transmitted electronically is not to be requested by another public institution.*

#### **Initiative 2.1: Data to be requested only once**

Citizens and companies are not to be asked to supply data to public institutions if such data have already been received by another public institution. In order to create a higher service level for citizens and companies, all ministries will examine the legislation within their jurisdiction to assess the requirements for data by citizens and companies. Each ministry will prepare a statement to establish how data already recorded with another public institution may be electronically transmitted. If the data are personal, the statement must indicate the conditions (such as obtaining consent from the individual) on which the data may be transmitted in the light of existing legislation on the protection of individuals with regard to the electronic processing of personal data.

#### **Initiative 2.2: Electronic Citizen's Card with PIN code**

Based on the current hearing of a report prepared by the Ministry of the Interior, a political decision will be made about the possible voluntary introduction of an electronic Citizen's Card with a PIN code and picture. The Citizen's Card may be used for positive identification of an individual when in contact with public authorities. It may further be used as an electronic "key" which will connect the user to the electronic self-service systems of the future. This means that a number of other cards, certificates and proofs of identity will become superfluous because the information may be obtained from public electronic registers.

### **Policy 3**

*Citizens and companies wishing to communicate electronically with public authorities are to be given this possibility.*

#### **Initiative 3.1: E-mail Boxes in all Public Institutions**

All government institutions are to establish official e-mail boxes. Likewise, municipalities are invited to establish official e-mail boxes for all institutions, enabling citizens and companies to communicate by electronic means with public institutions if they want to.

#### **Initiative 3.2: Development of Electronic Communication with Citizens and Companies**

All ministries will examine their legislation and administration and estimate the interchange of structured information with the private sector to prepare a plan enabling those citizens and companies, who want to do so, to communicate by electronic means based on the international Edifact standard. In this connection possible legislative requirements with regard to the use of specific paper forms, requirements for written documentation or handwritten signatures etc. will be assessed with the aim to remove obstacles to paper-free communication.

#### **Initiative 3.3: Development of Electronic Self-Service Systems and Bulletin Boards**

With regard to their own area, all ministries will make a general plan for the development of electronic self-service systems and bulletin boards which citizens and companies - as is the case of push-button-based telephone systems - may operate from their personal computer at home or at the office or via info-stands established in places within easy reach of the public.

#### **Initiative 3.4: Electronic Key to Public Schemes and Institutions**

*Statens Information* (the Danish State Information Service) will establish an electronic key based on the data contained in the publication "*Samfundsnøglen*" ("The Key to Society") and on other information about public authorities etc., such as *Hof- og Statskalenderen* (the Danish Official Yearbook).

**Initiative 3.5: Electronic Bulletin Board with Central Government Publications, Press Releases etc.**

The Ministry of Research and Information Technology, in cooperation with the various other ministries will start the development of a coherent system of electronic bulletin boards with copies of all press releases, newsletters, newspapers, special memoranda etc., and a survey of publications issued by government institutions. The system will be geared to realise in 1996 the objective that all government publications are made electronically accessible either free of charge or for payment. In this connection it will be attempted to establish a preliminary standard for electronic publications issued by public institutions.

**Policy 4**

*Publication of Lovtidende (the Legal Gazette), Ministerialtidende<sup>2</sup> and Statstidende (the Official Gazette) will be made in electronic form as soon as technically possible and in conformity with user requirements. The transitional period will end by the year 2000. Over a period following the transition to electronic form, there may still be a need for publishing the gazettes in printed form as well.*

**Initiative 4.1.: The Official Gazette**

From 1996, the Official Gazette, including *Tingbladet* (which contains information on the registration of deeds and mortgages) and *Registreringstidende* (the Registration Gazette) will step by step be published in electronic form. Before this can be done, it will be clarified which electronic publication form is appropriate in respect of the individual, very diversified types of information today provided in the Official Gazette.

As an element of the transitional process of the Official Gazette and the other gazettes into electronic form, a committee will be set up under the Ministry of Research and Information Technology to clarify the ways and means to secure for the public, on a continuous basis, easy access to the information provided in the gazettes. This may be done through the libraries and otherwise, including electronic means.

**Initiative 4.2: Ministerialtidende**

Following the modernisation which the Ministry of Justice is undergoing at the moment, it is the intention to reorganise *Retsinformation* (the Register of Legal Information) to comprise from 1996 also an electronic edition of the *Ministerialtidende*.

**Initiative 4.3: The Legal Gazette**

Based on the experience gained from e.g. the *Ministerialtidende* in electronic form, that Ministry will begin preparations for introducing formal promulgation of laws etc. in electronic form. This will be done through the modernised Register of Legal Information system by 1999, at the latest.

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<sup>2</sup> *Ministerialtidende* is released by the Ministry of Justice once a month bringing circulars and other notifications.

### **Policy 5**

*Public registers with information on persons, companies or geographical data are to be interrelated to a higher degree and duplication of registration entries are to be avoided.*

#### **Initiative 5.1: CVR number to be introduced in 1996**

Based on the report submitted by the Committee set up to make proposals for a National Business Register (CVR), plans to establish such a register with appurtenant CVR number system corresponding to the CPR number system for individuals, will be carried into effect. The Register is to be implemented in by stages from early 1996.

#### **Initiative 5.2: Responsibility for cross-coordination of the improved use of basic data**

The Ministry of the Interior, the Ministry of Inland Revenue and the Ministry of Housing, in their capacities as ministries responsible for individuals, companies and geographical data, respectively, will be responsible for cross-coordination to ensure that the use by other public registers of data from these registers is optimised.

#### **Initiative 5.3: Innovation and development of IT systems in the labour market field**

The Ministry of Labour will launch a general, in-depth innovation of systems in the labour market field resulting in better service provided to both employees and employers and improved interplay with the union insurance system. This process will also involve the establishment of electronic self-service systems, bulletin boards and electronic access to data in employment service registers, and improved possibilities of exchange of labour between EU Member States.

#### **Initiative 5.4: Further development of electronic system for registration of deeds and mortgages**

The Ministry of Justice will start experiments with electronic transmission of data on deeds and mortgages supplied by mortgage credit associations, lawyers a.o. to ensure that these are involved as much as possible in the working process.

### **Policy 6**

*Concurrently with the replacement of IT systems, public institutions are to change gradually from paper-based archives to electronic processing and filing over the coming years.*

#### **Initiative 6.1: Electronic Processing and Filing in Public Institutions**

A number of pilot projects will be launched to introduce in public institutions purely electronic processing and filing.

The National Archives will be responsible for drawing up new regulations on electronic filing thus enabling those institutions that want to give up traditional paper files to do

so, and to introduce purely electronic filing. This will happen not later than January 1, 1996.

At the same time, the Ministry of Research and Information Technology will start to clarify the general requirements to the electronic archives/filing system of the future. In this connection the practical possibilities will be examined of providing access to files and archives under the Act on Public Access to Documents in Administrative Files.

#### **Policy 7**

*The establishment of the electronic network of the public sector should be seen as a first step towards renewal in the functioning and interplay between citizens and companies, and institutions at central, county, and local levels. The performance of tasks and the division of labour will be reviewed with the aim to create a simpler and more efficient interplay with the public sector seen from the point of view of citizens and companies, involving maximum use of the rationalisation potentials offered by the information technology ("Business Process Reengineering").*

#### **Initiative 7.1: Pilot Projects in Government Institutions and Municipalities**

By introducing a number of pilot projects in government institutions and municipalities, new, more efficient forms of organisation and working processes may be put to the test.

#### **Initiative 7.2: "Spearhead" Municipalities**

All municipalities are invited to participate in a "spearhead project". This involves that 10 municipalities are selected according to the priority they attach to IT as a means to improve and rationalise the public service, establish interplay with private businesses or otherwise, e.g. through the development and use of local community antenna systems for distance learning. The Ministry of Research and Information Technology will coordinate the project in cooperation with the Ministry of the Interior, the National Association of Local Authorities, and the National Association of County Councils.

#### **Initiative 7.3: Priorities of the individual municipal councils**

The Government will prepare a memorandum and on the basis of this, the individual municipal councils will study how the action plan for the information society may best be realised in their municipality. It will also have to be clarified how the municipality may develop the electronic network of the public sector in the most appropriate way to serve the needs of the citizens and local companies of the municipality. The statement will be prepared by the Ministry of Research and Information Technology in cooperation with the Ministry of the Interior, the Ministry of Finance, the National Association of Local Authorities and the Association of County Councils.

## 6. Utilisation of Data and Protection of Personal Data

### Policy 8

*The protection of persons and data should be secured through modern legislation that makes it possible to register, transmit and reuse data for all legal, administrative purposes without the involvement of bureaucratic procedures.*

#### Initiative 8.1: Revision of the Danish Legislation on Registers

The Ministry of Justice will set up a committee to submit propositions for the renewal and simplification of the Private Registers Act and the Public Registers Act. The committee's work will be based on the coming EU Directive on registers and the recommendations of the Danish Government report "Info-Society 2000". Existing legislation on registers will be replaced by general legislation on the protection of personal data which will not be based on the concept of registration. The revision of the Public Registers Act will take into account any cases of coincidence between existing legislation on public administration and access to public records. The merits of full introduction of electronic processing and filing will be examined when reviewing each individual area, in principle giving paper-based and electronic processes equal treatment. It will be attempted to conclude this work before the end of 1996, when the committee will submit recommendations for new general legislation on the protection of personal data.

### Policy 9

*Data in public registers should be utilised to the maximum by making them available to both the public and private sectors. Where warranted by considerations of personal protection, the passing on of data should be made subject to permission being given by the citizen concerned, e.g. by use of the electronic Citizen's Card.*

#### Initiative 9.1: Study to achieve better utilisation of data in public registers

The Ministry of Research and Information Technology will be responsible for setting up committees to study better utilisation of data in public registers. Public registers for personal data (CPR), companies (CVR) and data on real property (CIS, a system for the coordination of information on real property, buildings and housing) will form the basis of this work. The possibilities of ensuring fair and equal access and of developing an electronic key to public registers with cross-references and through-connection will be clarified. Trade organisations, the Consumers' Council and others will participate in this work. In the area of real property data there is a need to estimate the extent to which

public utility companies and other organisations will be able to assist in the up-dating of public registers.

**Initiative 9.2: Payment for data**

In conjunction with initiative 9.1, the Ministry of Finance, cooperating with the Ministry of Research and Information Technology and the most involved ministries, will conduct an analysis of various schemes for delivery and sale of public data to be used by other public authorities, private organisations or individuals. The analysis is to form the basis of considerations on tariff principles aimed at furthering the advantages to society of the use and reuse of data.

## 7. Security

**Policy 10**

*IT and telecommunications security are to be an integral part of the use by public institutions and private companies of IT systems and telecommunications networks. Users of IT systems and telecommunications should be confident that data handled in IT systems and communicated through the telecommunications networks are at any time protected to the maximum against breach of confidence, and that the systems involve data integrity and accessibility.*

**Initiative 10.1: Formulation of a security policy**

The Ministry of Research and Information Technology will formulate a general security policy for the use of IT and telecommunications. Among other elements, the policy will comprise strategies for optimal protection against breach of confidence, for data integrity and accessibility and the use of electronic signatures and encryption.

**Initiative 10.2: The setting up of an IT and Telecommunications Security Board**

The Minister of Research and Informations Technology will set up an IT and Telecommunications Security Board to provide counselling on the formulation of an IT and telecommunications security policy (cf. initiative 10.1) and other initiatives in the area of IT and telecommunications security.

## 8. A Better Health Service Providing Faster Treatments

### **Policy 11**

*The aim must be to exploit the outstanding potentials of the Health Service to obtain better service and more efficient and faster patient care by using IT for communication and registration of medical case records and clinical data. Such a development will support the ongoing large-scale reorganisation of working routines and structures within the health sector.*

#### **Initiative 11.1: A nation-wide health network for the interchange of information**

The Ministry of Health, in cooperation with the county councils, municipalities and other players of the health sector will prepare an action plan for the establishment of a health network based on the MedCom project. This will mean that the systematic exchange of data between general practitioners, hospitals, pharmacies, municipalities and health authorities (e.g. references to specialists, excerpts of case records, prescriptions, settlements etc.) may be made electronic before the year 2000. The project also covers communication of measuring results, X-ray pictures etc. and systems for distance diagnosing. The principal guidelines for the realisation of the plan are fixed as a follow-up on the four-year agreement of 1995 between the Government and those municipalities that have hospitals about the development of the national hospital service. The framework of this will be an element of coming discussions on the economy of the counties and it is expected that in the longer term, considerable rationalisation gains may be achieved in the sector.

#### **Initiative 11.2: Development of electronic medical case records**

Together with the county councils and other affected players, the Ministry of Health will launch a medical project to develop a national standard for electronic medical case records to be used at hospitals and by general practitioners etc.

## 9. The “Global Village” of Research

### **Policy 12**



*Danish research must achieve maximum benefit from the global and national electronic networks for interchange of research information*

**Initiative 12.1: Connection to E-mail and Internet**

In cooperation with relevant parties, the Ministry of Research and Information Technology will launch a campaign to achieve that all Danish researchers are given access to electronic communication by way of e.g. the Internet and that they use this access actively.

**Initiative 12.2: Establishment of a Research Network**

Together, the Ministry of Research and Information Technology and the Ministry of Education will establish a new Danish research network when the existing Danish research network DENet is replaced with/developed into a comprehensive high-speed network. The research network is to become part of the worldwide Internet and will connect Danish universities and sector research institutions. The network will be accessible on regular commercial conditions to private companies carrying out research and development.

**Initiative 12.3: Electronic Research Publications**

Through a working group set up in the Ministry of Research and Information Technology, it will be examined what the possibilities are for making electronic research publications. A development project will be launched on new electronic forms of publication and increased access to electronic publications. This work will involve participants from research libraries, DANDOK<sup>3</sup>, research institutions, and the publishing trade.

**Policy 13**

*In the allocation of Danish research funds, greater importance must be attached to the strongpoints within IT-relevant areas relating to both technology and application.*

**Initiative 13.1: Special IT Research Initiative**

The Ministry of Research and Information Technology will take steps to strengthen the research effort within IT. These efforts will include the creation of a "Virtual Centre" which will connect departments of various universities by way of IT networks. The Centre is to form a spearhead of the IT research effort and it will to a considerable degree be aimed at trade and industry.

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<sup>3</sup> DANDOK (the Danish Committee for Scientific and Technical Information and Documentation) is a consultative and coordinating body under the Ministry of Research and Information Technology. DANDOK primary objectives are to register and communicate publicly financed Danish research.

## 10. New Ways In The Educational System

### **Policy 14**

*All children should be able to master modern information technology. Therefore the structure of primary and lower secondary education must be geared to make IT a natural element of teaching in the individual subjects. This unique opportunity of early introduction of IT must be seized, thus ensuring that teaching is adjusted according to the abilities of the individual pupil. This is the explicit intention behind the new legislation on primary and lower secondary schools. Comprehensive use of IT in the primary and lower secondary education system is essential to prevent the population from being split up into winners and losers.*

### **Initiative 14.1: General IT Initiative for the Primary and Lower Secondary Schools**

In cooperation with the municipalities, the Ministry of Education will take a general initiative to promote the application of IT in the primary and lower secondary schools. A crucial element of this strategy is to turn all teachers into users of IT. The Ministry of Education has taken initiatives in this respect, one of them being the educational programme “Lær-IT” (“Learn IT”) which is offered to all schools and teachers to support the efficient implementation of the new legislation on primary and lower secondary schools.

It is envisaged in the new legislation that IT is generally introduced in the first classes of the primary and lower secondary schools. Also in this case has the Ministry of Education taken specific initiatives and the idea is that IT is to be integrated in the description of subjects and curricula. Further, a research project has been launched, integrating IT in the teaching at selected schools that will be equipped with the best suited hardware and software. A third initiative concerns 50 development projects to be followed and supported by researchers and consultants, and improved supplementary training of teachers, one purpose of this being to enable them to use computer technology when teaching.

An important prerequisite of the desired development is for schools to have the necessary IT equipment. This is the responsibility of the municipalities and the Government intends to take up the issue during the coming negotiations on the economy of municipalities. The Government will i.a. propose a change of priorities aiming at comprehensive investments. The plan involves that over a number of years, the present level of just under 40 pupils per modern PC will be adjusted to 5-10 pupils per PC.

### **Initiative 14.2: Network to cover Primary and Lower Secondary Schools**

The Ministry of Education will begin the setting up of a nationwide network covering primary and lower secondary schools. The network is to interconnect all the country's schools and the world around them, giving Danish children the opportunity of entering "the global village". The network capacity will be gradually increased in step with the possibilities of individual schools to use it through internal networks and multi-media programmes. It will be attempted to support the development at individual schools through the services provided by the network.

**Initiative 14.3: Committee on Children, Media and Information Technology**

One effect of the IT development is that the flood of information and the number of electronically-based information channels will increase. This development makes requirements on the schools for all pupils to become acquainted with the tools, enabling them to form an overview of the flow of information and to use it in an appropriate and rational manner.

The Ministry of Education will set up a committee to examine possible initiatives to prepare children for using the information technology and for seeking and selecting information with a critical mind.

**Initiative 14.4: General Education in the Info-Society**

The Ministry of Education supports the first phase of a project to connect the institutions and organisations of general education with the IT network for education (the Ministry of Education's common network for administrative purposes in the educational sector).

**Initiative 14.5: Further Development of Educational Sector Network**

The Ministry of Education supports the use of IT in the entire educational sector. One means to do so is to further develop the IT network network for administrative purposes in the educational making it fit for use not only for administrative purposes but also for educational purposes.

**Policy 15**

*Possibilities of technology-supported education should be exploited fully with specific focus on adult education and supplementary vocational training.*

**Initiative 15.1: Establishment of a Centre for Technology-Supported Education**

With the establishment of a development centre for technology-supported education and an experimental fund, the Ministry of Education will implement a project on technology-supported education (distance learning).

## 11. Cultural Network Denmark

### **Policy 16**

*The presentation of culture by electronic means is aimed at supplementing and increasing the communication of cultural experience and cultural knowledge. All cultural institutions should gradually become participants in an interconnected cultural electronic network offering the citizen electronic access to electronic cultural services.*

#### **Initiative 16.1: Presentation of Culture by Electronic Means**

The Ministry of Culture is examining the possibilities of public libraries, archives and museums, and other cultural institutions becoming part of a “Cultural Network Denmark”. The network is to give the citizen electronic access to registers, texts, sound and pictures in the collections of these institutions.

Pilot projects will be carried out to gain experience on the potentials of public access to live pictures (films kept in the Danish Government Film Office and the Film Museum), digitalised pictures from art museums and on-line access to historical sound recordings (music, documentaries, speeches, etc.) from the State and University Library and collections abroad.

### **Policy 17**

*Even in the future - when electronic publications will be taking over the role of magazines and books - libraries must maintain a major, intermediary function as providers of public information to all citizens and they must help the public to navigate through the increasing flood of information.*

#### **Initiative 17.1: Committee to review the future of libraries**

The Ministry of Culture will set up a committee to review the tasks and conditions of public libraries in the light of developments within electronic publications and new requirements for communication to the citizens of informative and cultural works. Under this heading, urgent issues on copyright and the copyright deposit of electronic publications will also be examined.

## 12. The Mass Media Through New Channels

**Policy 18**

*In a world where the electronic media are increasingly dominated by international channels and producers, it is essential that a Danish radio and TV public service function is maintained. The continued production and transmission of Danish high-quality programmes of all kinds must be secured.*

**Initiative 18.1 Statement on media policy**

The Minister of Culture will prepare a statement on media policy focusing on central issues connected with the development of the electronic media in the years to come.

## 13. Disabled Persons in the Information Society

### **Policy 19**

*New IT applications, which may pave the way for greater integration of disabled persons in society, must be fully exploited. It should be ensured that the disabled persons' situation is given due consideration in EU policy on informatics.*

#### **Initiative 19.1: Action plan for disabled persons' use of IT**

In cooperation with the ministries concerned, the Ministry of Research and Information Technology will prepare an action plan for the better support and integration of disabled persons in society through their use of IT and electronic communication.

## 14. IT - a Means to Improve Traffic Management

### **Policy 20**

*The possibilities of using traffic informatics to improve traffic management, reduce the environmental impact caused by traffic and improve the service for road-users should be exploited as they gradually prove practicable.*

#### **Initiative 20.1 Experimental and Development Projects involving Traffic Informatics**

The Ministry of Transport will establish experimental and development projects on traffic informatics with the intention that such systems are introduced in Denmark as soon as they become ready for broad and efficient application and may be financially feasible.

## 15. Network of Companies

### **Policy 21**

*Danish companies should become more skilled at using IT combined with new working routines to improve development, production, marketing and customer service. Concurrently, adult education and supplementary training should be strengthened to prevent non-skilled individuals and people with a limited education from becoming the losers of the Info-Society.*

#### **Initiative 21.1: Three-party Summit on Trade Policy and Qualification Development of the “Info-Society”**

The Government will later in the year hold a three-party summit meeting with the labour market parties about the requirements of the Info-Society to companies and to the trade policy, the labour market and education policies; further, it will be discussed how the public sector may support the reorganisation of companies and the development of employee qualifications.

#### **Initiative 21.2: Dialogue with and analysis of the IT/electronics trade**

The Ministry of Business and Industry, in cooperation with the Ministry of Research and Information Technology and other relevant ministries, will open a dialogue with the Danish IT/electronics trade. As an element of this dialogue, the Ministry of Business and Industry will make an analysis of the challenges of the commercial sector and of its critical framework conditions.

These initiatives are expected to lead to proposals which will turn Denmark into an international centre of development/application of information technology and telecommunications. Some of the proposals will require public participation while others will be the responsibility of the companies themselves.

Public-private interplay will be an important element of the dialogue. One of the challenges is how it may be possible to collect and communicate Danish “spearhead” IT experience gained from public institutions and private companies. This applies to e.g. the development of electronic archives and filing systems in the public administration (cf. initiative 6.1) and electronic medical case records (cf. initiative 10.2).

### **Policy 22**

*Danish companies must be joined together by an electronic network for the interchange of business documents. Substantial rationalisation gains may be achieved in this way and a closer interplay may be supported.*

#### **Initiative 22.1: Campaign for the Use of E-mail and Electronic Interchange of Documents (EDI) in Companies**

The Ministry of Research and Information Technology, the Ministry of Business and Industry, the Danish EDI Council and relevant trade organisations will together launch a campaign to further the use of electronic mail (e-mail) and electronic transmission of standard documents (EDI).

**Initiative 22.2: Use of EDI in Public Sector Procurement**

The Ministry of Finance (the Accounting Directorate) and *Statens og Kommunernes Indkøbservice A/S* (the Governmental and Municipal Procurement Company) will prepare an action plan to establish how government procurement may gradually be undertaken via EDI. This applies to purchasing systems, economy systems for the handling of orders, invoicing, settlement etc. The Association of Local Authorities and the Association of County Councils will launch similar initiatives in respect of the local government sector.

**Initiative 22.3: Development of a Business Policy for the “IT organisation”**

The Ministry of Business and Industry will set up a working group with the participation of relevant experts who are to establish the public policies that may create the framework conditions of new IT working routines in trade and industry.

**Policy 24**

*Together, the private and public sectors are to take initiatives to enhance the potentials of Danish companies in relation to the “spearhead” applications of IT. In this connection Danish companies and public institutions should more actively engage themselves in the international standardisation work within the IT area in order to further Danish influence on standards in areas where they have not yet been carried into effect.*

**Initiative 24.1: Evaluation and dissemination of “spearhead” experience**

The Ministry of Research and Information Technology and the Ministry of Business and Industry will set up fora where “spearhead” experience gained by Danish companies and/or public institutions who are in the forefront with IT introduction may evaluate experience and systems requirements. This experience may then be communicated to a wider circle of companies and institutions to support their involvement in continued product development. This may concern e.g. the development of electronic archives and filing systems in the public administration (cf. initiative 6.1) and electronic medical case records (cf. initiative 10.2).

## **16. The World’s Best And Cheapest Telecom Services**



**Policy 25**

*During the period leading up to the year 2000, Denmark, through a proactive telecommunications policy, will realise the world's best and cheapest telecommunications services. A decisive step in this direction will be the full liberalisation to be introduced by January 1, 1998 according to a decision at EU level. A gradual liberalisation and a new regulatory basis will be introduced to ensure efficient competition and consumer protection.*

A "stage 1" packet which is an element of these efforts will appear below under initiatives to be taken in 1995.

**Initiative 25.1: Substantially Lower Prices of Broadband Connections**

The Minister of Research and Informations Technology, in conformity with his authority to do so, will establish new tariff principles and substantially lower prices of broadband connections.

**Initiative 25.2: Normalisation of the "Hybrid Network"**

The exclusive right held by Tele Danmark A/S to transmit radio and television programmes in the nationwide telecommunications network will be revoked and free access will be given to all to transmit radio and television programmes in the telecommunications network via permanent lines leased from Tele Danmark A/S. At the same time the limitations existing so far on access to own community antenna systems will be lifted with the effect that in future they may also be owned by e.g. companies.

**Initiative 25.3: Liberalisation of Broadband Networks in Local Areas**

The exclusive right held by Tele Danmark A/S to establish broadband networks in local areas, i.e. within the boundaries of a municipality, will be revoked. All telecommunications services including telephony may be provided through the broadband network.

**Initiative 25.4: Increased Access to Establish Own Networks**

Access to establish infrastructure internally in companies or between closely related companies will be improved. In addition, a number of restrictions on the physical distance between properties forming part of the same organisation (the "100 m-rule") and requirements to special transmission installations will be abolished.

**Initiative 25.5: Improved Situation for Mobile Operators**

Special rights in the mobile area will be adapted to the general liberalisation of infrastructures and will be extended to comprise also direct interconnection between mobile networks in Denmark and abroad. Tele Danmark A/S and the mobile operators are invited to renegotiate the Interconnect Agreement to achieve improved conditions and lower prices for mobile operators. These changes are expected to lead to better services and lower tariffs for mobile communication customers.

**Initiative 25.6: Political Constraints on the Organisation of Tele Danmark A/S Will No Longer Apply**

The political constraints on the organisation of Tele Danmark A/S with the effect that the original regional companies, KTAS, Jydsk Telefon, Fyns Telefon, Tele Sønderjylland and Telecom are to exist until March 1997, will no longer apply.

## 17. Open Network of Society

**Policy 26**

*The computer and telecommunications networks together are to form a coherent "public network" which will appear to the average citizen and companies as easy to grasp and as readily accessible as the telephone system.*

**Initiative 26.1: Network Cooperation**

In order to produce sufficiently clear maps and guides for the "road system" made up by the electronic network, the Ministry of Research and Information Technology will take steps to establish a network cooperation between telecommunications companies, suppliers of network services and other relevant organisations, as well as government institutions and municipalities, possibly with the support of a special network secretariat. This cooperation is to ensure better technical coherence of networks, turning them into "networks of networks". Shared access to relevant Danish bulletin boards and databases etc. is one of the features of this cooperation (cf. also initiatives 3.1 - 3.5 on bulletin boards and keys etc.).

**Initiative 26.2: More User-Friendly E-mail**

In cooperation with suppliers of network services and other relevant companies, central and local government authorities, the Ministry of Research and Information Technology will take steps to develop a more user-friendly e-mail system. As a means towards this end, a general electronic e-mail directory (with the same function as the telephone directory) will be developed as well as systems for the communication of e-mail addresses.