NORWAY

Policy environment

Action Plan on Broadband Communication

In October 2000 the Norwegian Government launched an Action Plan on Broadband Communication. Highlights of the plan and a status description are given below.

Definition of broadband

Backbone as well as access networks must have sufficient capacity to handle the services required. The access networks, in particular, may cause bottlenecks for the transmission of broadband services. The conception of what broadband is must therefore be viewed in the light of user demand and the capacity needed to deliver the services. The fact that users will demand an ever broader range of services, that the need for return capacity will grow and that more users will be connected to the network at the same time, must all be taken into consideration. Sufficient broadband capacity means backbone and access networks with transmission capacities that do not hamper individuals in their use of modern, future-oriented ICT services.

Goals and strategies

The Government believes that it is neither proper nor necessary for the public sector to develop or own the infrastructure itself (exceptions may apply out of consideration to defence and national security). The broadband policy is based on a two-pillar approach:

− fostering competition in the market

− strengthening public demand for broadband networks and services

In addition the Government will in due time consider special initiatives for areas or groups where no commercial basis for development exists. 35 measures have been initiated to foster competition, stimulate public demand and pave the way for a desired geographical distribution of broadband networks.

The goal of the Government is to help provide, through increased competition and demand:

− favourable market offers that enable broadband connections to all primary and secondary schools, public libraries, hospitals and local authority administrations by the end of 2002

− favourable market offers that provide broadband connections to all Norwegian households by the end of 2004.
Status - July 2001

2 MB leased lines have been made available in all municipalities by Telenor, the biggest operator in Norway. Telenor's licensing requirements regarding leased lines have thereby been fulfilled. However, prices are relatively high and there are price differences due to geographical location. In some areas prices are prohibitively high. A consultancy report of July 2001 indicates that between 36% and 50% of Norwegian municipalities will have favourable broadband market offers by the end of 2002, when leased lines are not taken into consideration. In the more densely populated areas the situation is different. This is reflected in estimates showing that by the end of 2002 about 65% of the Norwegian population will have ADSL coverage.

The main reason for slow developments is considered to be associated with the present unfavourable economic climate in the telecom market, leading to lower investments than expected.

Corrective measures

The Government will intensify the stimulation of public demand and competition. Strategies and goals are upheld.

eNorway

In June 2000 the Norwegian Government launched an ICT Action Plan, called eNorway. The overall goal of the plan is an Information Society for all. Three basic prerequisites; access, competence and confidence, are considered crucial in achieving an information society for all. eNorway is an operative plan which describes where we are, what needs to be done, who is responsible and when actions are to be implemented. The plan has up to now been updated three times since June 2000 and a total of 16 Ministries have contributed to the plan. A total of 16 organisations, municipalities and government bodies are included in a special appendix to the eNorway plan, as eNorway partners.

Specific policies and programmes

Technology development

R&D programmes

Norwegian ICT research is well below the OECD average for R&D as a share of GDP. The Parliament and Government have agreed on the objective to bring the level of R&D activities in Norway to the OECD average by 2005. ICT has been identified as a major potential contributor to the realisation of this objective. The Norwegian Research Council is in the process of formulating a strategy for stepping up Norwegian ICT research. The strategy, which is still being debated among affected research institutions, is expected to be adopted in the coming months.

Government procurement

Government procurement - the program for e-commerce in the Norwegian public sector
Public procurement has to be in front in order to "push" the development and competence of ICT and e-commerce in Norway. The Program for e-commerce was established with the goal of introducing e-commerce in public procurement over the period 1999-2003. The program will include procurement at all management levels in governments, county councils and local authorities. The program's main activity for the time being is to establish an electronic marketplace for the public sector [http://www.ehandel.no].

**Technology diffusion**

**Technology diffusion to businesses / Small and medium-sized enterprises**

eCommerce for SMEs: the programs VeRDI and BIT A new national program for strengthen SMEs competitiveness and profitability by increasing awareness and stimulating "e" was established in 2001. The main content of VeRDI is increasing awareness and motivation, facilitate the upstart of strategy processes, providing knowledge professional development (best practice), and promote joint measure and infrastructure. The Norwegian Industrial and Regional Development Fund (SND) is the responsible authority. The Government funded the program in 2001 with NOK 40 million [www.handel.no/www.snd.no].

The main objective for the BIT-program is to increase the competitiveness and profitability of SMEs through developing, implementing and distributing general IT-solutions for specific trades. The program includes 22 sectors and has about 200 pilot companies.

**National Forum for e-commerce**

The Norwegian Ministry of Trade and Industry has established a meeting place for representatives for the public and private sector. The forum discusses e-commerce related questions and is supposed to be a "pusher" for development of e-commerce in Norway. The forum owns a web-site for e-commerce, named www.handel.no. The web-site is an information- and knowledge channel to help pushing forward e-commerce in Norway. The web-site is a user-oriented site where SMEs may find the most relevant information about e-commerce.

**Government on-line, government as model user**

The government launched in October last year a programme for innovation and modernisation of the public sector in Norway. One of nine reforms presented in the programme is simplification of regulations as a general aim.

The work for better regulations concentrates on three main areas:

- make regulations easily accessible and comprehensible, and available to everyone on the Internet [www.lovdata.no]

- improve the quality of new/altered regulations by improving the decision basis (i.e. more use of impact analyses; better procedures for law making)

- reduce the administrative burdens concerning red tape (i.e. use of electronic filing solutions; co-ordination of the compilation of information by public agencies; creating a data definition repository)
− simplifying existing regulations, in close co-operation with the business community

Another reform, the "24/7"-reform means that public services will be available on the Internet, regardless of time and location. 24-hour availability of public services means electronic online communication, which will, for example simplify reporting, which some sections of business and industry experience as a great burden. Measures have also been implemented to further develop public service offices. The "one-stop-shop" is to be a service-oriented, first point of contact service. The "one-stop-shop" is desired to have both municipal and state participation in all municipalities by the end of 2003.

The public sector should be a demanding customer and help to strengthen the competitive abilities of Norwegian trade and industry. At the same time the public sector should be a prime mover by being way ahead itself. Great emphasis is placed on the municipalities' needs for IT-policy.

**Business environment**

*Electronic settlement/payments*

Concerning electronic settlement and payment and framework for electronic transactions in general, the government of Norway has been working for several years now to introduce measures to facilitate such transactions. The Law on financial agreements entered into force since 1998. This law enables parties to conclude financial agreements electronically, with some exceptions. On 1st of July 2001, the Law on electronic signatures entered into force, along with some secondary legislation. The law implements Directive 1999/93/EU on the framework for electronic signatures. Work is currently in progress to draft the Law on electronic commerce. Final draft was being prepared and was to be put forward to the Parliament in December 2001. It was expected that the law would pass in spring 2002. The government of Norway has been utilising electronic funds transfer for governmental transactions with the Bank of Norway for several years now. The transactions are digitally signed and encrypted.

In 2001, some major data processing companies introduced electronic bill presentment and payment schemes for enterprises and private persons. The schemes are now being tested on a larger scale and it is expected that they will gain significant market coverage in the coming years. The Norwegian population boasts a very high percentage of users of online banking. Over 1 mill. in a population of 4.5 mill do their banking on the Internet. These users will probably adopt electronic bill presentment and payment already during 2002. It is expected that this will bring large savings for Norwegian enterprises issuing large volumes of bills per year.

Norway published its cryptography policy in August 2001. The policy calls for free access to and distribution of crypto products and services. The government will even facilitate such access, both for the public administration, the industry and citizens as well. The policy prohibits the authorities to require key escrow or any other form for storage of the citizens' encryption keys. The police, however, may gain access, if technically possible, to confidential information held by telecomms operators when investigating a crime and with proper court orders. The policy recommends, on the other hand, that the employers do store backup of their employees' encryption keys. The policy also calls for that the Foreign Ministry exercises the crypto export rules as liberally as possible. The development of the Norwegian crypto industry shall be promoted by renewed cooperation with the government acting as a competent user.
Globalisation

Trade and foreign direct investment

The first Strategy for Exporting and Internationalising the Norwegian ICT Industry was launched in February 2001 by the Government as a part of the eNorway Action Plan [www.enorge.dep.no]. It was valid for 2001 and is to be succeeded by a new strategy document every year. The strategy for 2002-2003 was presented in December 2001.

The strategy for 2001, being the first of its kind in Norway, gave considerable attention to domestic challenges faced by the Norwegian ICT industry when it wishes to internationalise and develop its exports. A range of issues were addressed, stretching from work permits for foreign ICT specialists to the coordination of government agencies serving the industry. New issues were also addressed like the need to rethink certain policy instruments in order to deal with the new features of many young companies in the ICT sector, such as their extremely international character already from their creation ("born globals").

The strategy for 2001 also contained a brief outline of priorities for outreach activities outside Norway which was further developed in the strategy for 2002-2003.
Policies relating to building ICT skills

Professional IT skills

Recent years have shown that one is dealing with an international labour market. Employees cross frontiers and there is growing competition between employers in different countries to get qualified workers. In particular this can be seen in the ICT-business. In March 2001 the Norwegian Government launched a programme to amend regulations in order to simplify recruitment of skilled workers and specialists from countries outside the EEA area. With the amended regulations, the dealing time of applications will be abbreviated, and a non-EEA citizen will be able to get a labour permit more rapid than previously. The regulations came into force from January 2002.

ICT studies in upper secondary and higher education

In the Action Plan "ICT in Norwegian Education: Plan for 2000 - 2003" the issue of ICT studies in upper secondary and higher education is highlighted as follows:

"The development of ICT as a subject and the integration of ICT in subjects in higher education and upper secondary education is to be researched. The report will form the basis for a national strategy for ensuring that Norway remains up-to-date internationally in selected ICT areas".

The Ministry of Education, Research and Church Affairs will commission a report on the actual need for ICT competence in the years to come. The report will focus on both the needs of the users (industry, education, and public management) as well as ICT as a prerequisite for economic and industrial development. The report will be carried out in close co-operation with the organisations for computer science and information science in higher education.

Basic IT skills

In a national as well in an international context there is a growing awareness of the importance of stimulating and advancing digital literacy of the adult population. In Norway, The Competence Reform is the prime policy framework for lifelong learning. Within the reform, a separate project is to be established with the working title "ICT for Everybody". The project aims at raising the general awareness and knowledge of ICT among adults and avoiding new divides between those whom use ICT and those who do not. Introduction to writing and arithmetic are essential elements along with a guide to the utilisation of Net-based services such as online banking. A CD-ROM will be produced and distributed through the public library sector.

In addition the Government has funded the Seniornett association, aiming at giving older people a chance to learn ICT-skills. Seniornett make use of public rooms such as libraries, service centres for the elderly and schools to give ICT access and training in addition to general information and awareness-activities.

Other skills development policies which affect IT skills

Recruitment of women to studies in Science and Technology
In Norway, the Norwegian University of Science and Technology (NTNU) introduced in 1997 a special quota system for women in computer technology studies. The project soon produced positive results. In the first two years, the percentage of female students increased to more than 30%. In addition, the Government has carried into effect several initiatives to increase the number of female pupils and students taking up IT and technology-related skills. Finally “ICT Norway”, the largest IT-organisation in Norway initiated in 2002 a special mentor-program to increase the number of women in the IT-sector, titled “OD@”.
Assessment and evaluation

ICT-statistics and benchmarking

Relevant statistics are important to keep track of the development of the Information Society in order to identify necessary political actions. Today, a wide range of surveys and analyses are conducted by both public and private agencies. For example, work is in progress on defining indicators that will measure views of attitudes on quality in the educational system, on starting ones own business and on carrying out electronic trade or business. However, there seems to be a need for, to a larger extent, strengthening and co-ordinating these efforts. Hence, the Government is preparing a national strategy for measuring the Information Society. This strategy will serve as an overall guidance for the development of ICT statistics and with regard to benchmarking of the national results.