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Swedish broadband strategy

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Swedish broadband policy

An Information Society for All

OH ITree

The Swedish Riksdag (Parliament) has declared, based on the 2000 IT Bill, that the goal of Swedish IT policy is to make Sweden the first country in the world to be an information society for all. The Swedish Government has identified three areas of priority in which central measures should be focused:

- Confidence in IT, that is, ensuring that everyone has confidence in the security of using IT;
- Competence in the use of IT, by improving know-how as regards developing and using IT, not only among specialists but also through the provision of basic IT skills to all;
- Accessibility to the services of the information society.

However, an information society that includes everybody requires investment in education and infrastructure. Sweden's 20 inhabitants per square kilometre can be compared with Germany's 230, illustrating the differences in potential investment costs per inhabitant. But today we are focussing on accessibility and broadband development.

Infrastructure policy and development

The Swedish Government takes the position that households and businesses in all parts of Sweden should have access to an IT infrastructure with high transfer capacity (broadband) within the next few years. The Government stand is based on the policy described in the IT Bill of March 2000, "An information society for all".

OH 2. Infrastructure policy

The expansion of broadband will occur primarily via market channels. However, the state has an overall responsibility to ensure that the infrastructure is available throughout the country. Rural areas, including small towns with less than 3000 inhabitants and sparsely populated countryside areas, are the main parts of the country where the market will not be able to fund expansion without

assistance. Thirty per cent of the population live in such rural areas and small towns.

The Government and Riksdag have therefore decided on a number of measures to stimulate and facilitate the expansion of infrastructure in these areas.

OH 3Gov. initiative

A total of EUR 525¹ million of government money will be allocated towards these measures at the different levels of the network hierarchy. In addition, regional grants and structural funds (a total of EUR 57,5 million) may also be used as funding. The cost of a full expansion of optic fibre in rural areas is estimated at almost EUR 4 billion, which means that the government subsidy, covering 10–15 per cent of total costs, will only partially contribute towards financing a broadband infrastructure in the countryside (the Support Programme may also cover techniques other than optic fibre).

The role of regional and local authorities

Government subsidies are intended to be advanced primarily to network-builders operating in the private sector, but if private contractors are not interested, municipalities may build the infrastructure themselves. Funding is offered to the market in a public procurement process.

The municipalities (local governments) of Sweden are the authorities intended to administer the subsidy. There are 289 municipalities in Sweden. At an early stage, many municipalities had already started to create their own IT-infrastructure when the idea of government funding was proposed. This is why it seemed logical to involve the municipalities in the creation of networks with subsidies.

County Administrative Boards will make the formal decisions on applications for subsidies; a precondition being that the municipality has first drawn up a local IT infrastructure programme. In this programme, the municipality must specify the urban centres and areas to be prioritised for support in order to promote regional development.

So far, County Administrative Boards have received some 150 applications for support and about 10 per cent of the funding has been used. However, more applications are expected this and next year as more local IT infrastructure programmes have been drawn up. The support period will continue until 2005.

¹ Assuming that SEK 10 is the equivalent of EUR 1.

Government infrastructure support at different levels

A backbone network for all municipalities in Sweden

In August 2000, the Government instructed the National Electricity Grid Authority to hang optic fibre lines on top of their high-voltage poles and towers, forming a backbone broadband network. The cost of the investment should be commercially financed, affecting only the balance sheet of the National Grid.

The objective was to link all the main urban centres in the municipalities by December 2002. Due to the weak market situation, the National Grid has not been able to fulfil its assignment (some 190 out of 289 municipalities are now connected to this backbone broadband network).

In order to stimulate a backbone network in all parts of Sweden, the Riksdag decided in December 2002 that EUR 40 million (of the EUR 525 million mentioned above) should be earmarked for this purpose. This funding will be used by the municipalities that are not connected, under basically the same terms as when funding is used for the development of regional and local networks. The National Grid will now be a tender in the procurement process under the same conditions as other operators.

A regional network, linking small towns and villages

- The network that links together urban centres has been allocated a government grant of EUR 190 million. This corresponds to almost 30 per cent of the total cost for that part of the network.

This network level is meant to connect each municipality urban centre with the smaller towns and villages within the municipality. The support could be used both to build, buy and rent networks (making them available to all operators).

Local networks

- Municipalities receive a subsidy for building up local networks, i.e. inside towns or in specific areas in the countryside. Total support will amount to EUR 120 million. This corresponds to a few per cent of the total cost for that part of the network.

Approximately the same qualifying requirements exist for this support as for the regional network mentioned above. The most important difference is, however,

that this network should, as a rule, be new. However, in rare cases, the upgrading of existing infrastructure, such as an old telephone access network, e.g. for the purpose of an ADSL connection, also qualifies for support.

Property networks

- For property networks, the state gives private subscribers (house-owners and enterprises) tax relief totalling an estimated figure of EUR 160 million.

We do not expect this support to be widely availed of due to the high payment threshold of EUR 800, to be paid by private subscribers. The number of applications is still quite low.

Tax reductions will be provided in fiscal years 2002 – 2004.

Local models

Based on the applications that have been approved so far, it seems that various models for networks have been chosen in different regions in Sweden. In the northern areas of Sweden (such as Västerbotten), some of the municipalities have chosen a model for the establishment of new infrastructure based on voluntary labour. Village inhabitants must themselves contribute with their voluntary labour in order to get the network established with the funding. In this region, they have been very successful; there are examples of villages (such as Rökå) where 25 out of 45 households have optic fibre to their homes. In these areas, funding has been used together with structural funds. In other regions, funding has been used for renting a network (by Telia,– the former telecom monopoly in Kalmar county, or Teracom in the county of Värmland) or for establishing new infrastructure. Different techniques have been used, mainly optic fibre, but there are also networks using a combination of optic fibre, wireless and other techniques.

The dictate of geography

Geographical and demographic differences between the European countries and regions are clearly illustrated by this map. It also illustrates the differences in market opportunities.

OH 4. Map of Europe

Private sector companies are, as would be expected, expanding their networks especially in the bigger cities of Sweden without funding. There are quite a lot of different actors. Companies owned by the municipalities play an important role in this field. STOKAB, owned by the local government of Stockholm is a well-known example with its open-operator neutral network. But most of Sweden's 450 000 square kilometres consist not of cities but of large areas between settlements, almost devoid of people but well-supplied with forests, mountains, marshes and mosquitoes, having the same population density as the Sahara.

How to avoid distortion of market mechanisms

OH 5. To avoid distortions

- Three safeguards are used in the Swedish system to ensure that market distortions are avoided.
- Identifying the areas where the market will not supply infrastructure (described above),
- an open procurement procedure in order to engage market actors as far as possible,
- a requirement that networks should be open, i.e. operator-neutral.

Choice of areas lacking market actors

In comparison with other EU countries, Sweden (and Finland) as was shown above have vast areas with low population density, making it practically impossible to expect the supply of broadband infrastructure on market terms. Government support is very clearly concentrated to those municipality areas with a high proportion of rural areas and low population densities.

Open procurement procedures

Government support must be offered to the market through a public procurement process. Companies owned by the local authorities are also eligible to participate in this procurement process, providing there is full competition neutrality. If the procurement process does not attract any reasonable tenders, the municipality itself can choose to expand the broadband network and operate the network.

Operator-neutral networks

A further requirement, in order to avoid market distortions, is to keep the newly built network, open and operator-neutral. In the IT infrastructure programme, local governments have to describe, among other things, their measures to avoid

monopolisation and the way in which network capacity will be supplied on reasonable and non-discriminatory terms. If such measures are not explicitly described, the County Administration can reject a project application.

Openness and operator-neutrality is a central policy of the Association of Local Authorities and it seems to be in the interest of local governments to keep the networks as open as possible. So there are firm hopes that the broadband networks built with the help of these regulations will be truly open, i.e. operator-neutral.

Final comments

The market has been assigned the main role in the IT infrastructure area, both by the EU and the Swedish Government. However, the Government has taken on at least a moral responsibility for those regions where the market does not operate sufficiently. It is crucial to define the border between government and market responsibility in order to avoid market distortions.

Changes in the market during the past year have influenced the pace of investment and therefore also the formulation of policy. Co-financing requirements for local governments have been eased and are now fairly limited.

Complete regional broadband coverage is, of course, the ultimate vision, although the path there is clouded in mist.

The Government is firmly committed to stimulating competition, not least in the telecom sector, and has two dominant goals in this area: one, to stimulate the expansion of the broadband infrastructure, the other to stimulate competition at network and operator levels.

Where broadband is concerned, Sweden has until now chosen to give priority to stimulation of infrastructure investments rather than stimulation of demand. The Swedish broadband penetration is now 13 per cent of households. Some measures have also been taken to stimulate demand, e.g. in the school sector. However since lack of meaningful services and lack of demand are the main obstacles to a rapid extension of broadband, increased attention must be given to this in the future. That is also why in the future, the Government will focus more on the use of IT and how to stimulate demand.

Having said that, I have come to the end of this presentation and thank you for your attention.

Sources

Most of the publications below are in Swedish. There are, however, summaries in English of some of the material, which can be delivered on demand – write to anna.gillholm@industry.ministry.se

Government bills

An information society for all, IT Bill, 1999/2000:86. (Short summaries of certain parts available in English)

Budget Bill, 2000/2001:1 (areas of expenditure 19 and 22). (In Swedish only)

Tax reduction for costs of certain connections for telecommunications and data communications, Bill 2000/01:24. (In Swedish only)

Government studies

Municipal local IT infrastructure support (Kommunstöd till lokal IT-infrastruktur). An interim report of the Broadband Study, SOU 2000:68. (A short summary available in English)

IT-infrastructure in cities and the countryside (IT-infrastruktur för stad och land). Report of the Broadband Study, SOU 2000:111. (A short summary available in English)

Broadband for growth in the whole country. Report of the IT Infrastructure Study, SOU 1999:85. (A short summary available in English)

The ICT Commission's report from a hearing, A secure IT infrastructure for Sweden in the future, SOU 1999:134. (In Swedish only)

Other sources

IT – an engine for growth. Ministry of Industry, Employment and Communications. Ds 2000:68. (Available in English).

Facts about information and communications technology in Sweden 2001. Swedish Institute for Transport and Communication Analysis (SIKA), Stockholm. (Available in English. An updated version to be issued in 2002). See also www.sika-institute.se

Welcome to eSweden. An information society for all. Invest in Sweden Agency (ISA), Stockholm. (Available in English). See also www.isa.se

Sweden as an IT nation. The Swedish Institute, Stockholm. (Available in English). See also www.itsweden.com

Risks of monopolisation of broadband services in multifamily dwellings (Risker för monopolisering av bredbandstjänster till flerfamiljshus). Report of the National Post and Telecom Agency, 2000. (In Swedish only)