

TA-INSTITUTIONEN UND -PROGRAMME

The Norwegian Board of Technology

von Kjetil K. Jasund

The Norwegian Board of Technology (Teknologirådet) is an independent office for technology assessment established by the Norwegian government on 31 April 1999. The Board consists of 12 members, appointed for 4 years, and a secretariat under construction. The secretariat is located together with The National Research Ethics Committee and the Norwegian Biotechnology Advisory Board in the centre of Oslo. The article outlines the aims and objectives, the organizational structure and main areas of activities of this newly established parliamentary TA unit.

Objectives

The Norwegian Board of Technology works at the interface of science and technology. It aims to further human and environmentally friendly technological development. The Board shall address technological challenges and the possibilities of new technology in all areas of society. It aims to stimulate public debate and to support the political opinion and decision making-processes. The Board monitors international technological development and the development of technology assessment methods (i.e. technology foresight methods, participatory methods etc.), and provides contributions to enable Norway to quickly address new technological challenges. The Board shall put special emphasis on lay-people judgements in the assessment of new technologies. The Board shall impart the results of its work to the Norwegian Parliament, public authorities and society.

Organisation

Norway has no tradition for independent bodies organized under the Storting (parliament). Therefore the Norwegian Board of Technology was, from the beginning, formally organized under the Ministry of Education, Research and Church affairs. In May 2000 however the Board was, due to a change of government, transferred to the Ministry for Trade and Industry. The secretariat of the Board is formally organized under The Research Council of Norway. The budget for 2001 is close to 750.000 Euro.

Present situation

After being transferred from the Ministry of Education, Research and Church affairs to the Ministry for Trade and Industry in May 2000, the Board went through a somewhat turbulent period. The new government under Stoltenberg asked the Board to increase the focus on technological possibilities for the benefit of industry and society. The parliament however maintained the view that the Board, in the tradition of European parliamentary technology assessment, should keep its focus on both the possibilities and consequences of new technology for the benefit of individuals and society. The government will present a White Paper in parliament in spring 2001, and the following parliamentary debate will settle the question concerning the focus for projects and working methods of the Board.

International co-operation

The Norwegian Board of Technology became an associate member of European Parliamentary Technology Assessment Network (EPTA) in November 2000 when the Annual EPTA Conference was held in Berlin. The Board intends to co-operate with other EPTA members on the development of TA methods and specific TA projects.

Projects 1999 – 2001

Biotechnology in top-level athletics

In February 2000 the Board organized a public expert conference on the use of modern medicine and biotechnology in top-level athletics. The conference addressed the following topics:

- New technological possibilities for increased performance in top-level athletics.
- The values of top-level athletics, sports and society.
- The societal consequences of chemical and biotechnological doping in top-level athletics.

Elderly people in the information society

The ageing of the western societies raises many challenges, and some of them are connected to technological questions. The Board of Technology has addressed some of these questions in a scenario workshop and a consensus conference, after the Danish model.

- *Consensus conference*

In June 2000 the Board organized a consensus conference on elderly people in the information society. The lay-people panel specially addressed two topics under the main theme of the conference:

- 1) How to avoid that elderly people are being cut off from the information society (i.e. information, communication, e-trade, e-democracy), due to difficulties with handling and access to the technology.
- 2) The use of smart-home technology in welfare services for old people and people with dementia.

The lay-people panel gave advice on different methods for educating the elderly for the information society, and the use of smart-home technology which they stressed mainly had to be installed for the benefit of the users, and not to save money, labour etc.

- *Scenario workshop*

In relation with the consensus conference, the Board of Technology arranged an expert based scenario workshop on smart-home technology

in welfare services for old people and people with dementia. The workshop formulated a vision for the use of this technology for the next ten years, strategies towards realisation of this vision and ethical dilemmas connected to the use of smart-home technology in welfare services for old people and people with dementia.

Genetically modified food

Together with The National Research Ethics Committee and the Norwegian Biotechnology Advisory Board, the Board of Technology organized a consensus conference on the topic of genetically modified food in November 2000. This conference was a follow-up conference to an earlier consensus conference on genetically modified food held in 1996. The follow-up conference was arranged with the same panel as in 1996, but over a shorter time-span than a regular consensus conference. The lay-people panel specially addressed the topic of a national moratorium on genetically modified food, which they finally recommended under certain preconditions. Before the moratorium can be terminated, the lay-people panel thought that a set of requirements had to be fulfilled.

The requirements were as follows:

- More knowledge in order to understand long-term effects on environment and health. We are faced with a technology with obvious positive and negative aspects. To be able to choose correctly it is necessary that we are aware of the real possibilities of choice.
- Co-ordination of laws and rules nationally and internationally.
- Increased concentration on supervision, control and traceability.

Energy

The Board of Technology has just recently started three projects in the field of energy.

- Internet and energy consumption.
- The future heating of houses and buildings in Norway.
- The Hydrogen society, with special emphasis on fuel cells.

Two other project themes are at an early planning stage:

- Food Safety
- Traffic.

Call for project ideas

In March 2001 the Board of Technology sent a letter to 200 organisations, educational establishments, private technology enterprises and civil service to invite them to propose ideas for parliamentary technology assessment projects. The idea behind the invitation was to pick up suggestions for technology assessment projects which needed more public elaboration and attention. The Board will make this a yearly tradition if it proves to be valuable.

Web

The Norwegian Board of Technology has a website (www.teknologiradet.no), but it is mainly in Norwegian. An English version is under construction.

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Technikbewertung in der Lehre

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Dies ist ein Erfahrungsbericht über einen erfolgreichen Prozess, das Fach Technikbewertung in die Ingenieurwissenschaften einzuführen. Erfahrungsberichte sind notwendigerweise subjektiv. Von daher können sie keine Blaupause für eine direkte Übertragung in andere Umfelder sein, wenngleich die hier vorgetragene Vorgehensweise durchaus exemplarischen Charakter haben kann.

Die Voraussetzungen

Einleitend beginne ich mit der stets zentralen Frage, *wer was warum wann und wo* fragt. Wenn diese Elemente bruchlos aufeinander aufbauend stimmig und glaubwürdig erscheinen, so ist eine wesentliche Voraussetzung für den Erfolg gegeben. Der Rest ist persönliches Engagement, strategisches Gespür und die Bereitschaft zur Übernahme zusätzlicher Verpflichtungen, zumindest in der Startphase.

Wer: Der Autor ist Ingenieur mit Erfahrungen in Strömungsmechanik, Thermodynamik und Allgemeiner Mechanik, also den wesentlichen strukturellen Grundlagen der Ingenieurwissenschaften, und im Management. Insgesamt gute Voraussetzungen für einen Start in Neuland. Ingenieur zu sein bedeutet, problem-lösungsorientiert zu arbeiten. Das erleichtert die Einführung neuer Lehrinhalte in die Studienpläne. Beispielhaft seien Informationstechnik und Qualitätsmanagement genannt, die erst in jüngerer Zeit in Lehrpläne aufgenommen wurden. Hier ist das pragmatische Wissenschaftsverständnis der Ingenieure sicher hilfreich, während das wenig ausgeprägte Selbstreflexionsvermögen der Ingenieure den Blick für das Erkennen von nichttechnischen Problemen häufig versperrt.

Was: „Die ökologische Wende“ der sechziger Jahre (von Lersner 1992) markiert den Beginn des Problembewusstseins. Die Diskussionen über TA (Technology Assessment) und über die „Grenzen des Wachstums“ (Meadows 1972) als ersten Bericht an den 1968 gegründeten Club of Rome haben in dieser Zeit begonnen und sind mit dem allseits akzeptierten Leitbild Nachhaltigkeit eng verknüpft. Dies wird in einem ersten Schritt in einer Sensibilisierungsvorlesung herausgearbeitet.

Warum: Zur Charakterisierung der Umweltpolitik hat Meyer-Abich (1988) den Dreisatz formuliert: „1.) So geht es nicht weiter. 2.) Was statt dessen geschehen müßte, ist im wesentlichen bekannt. 3.) Trotzdem geschieht es – im wesentlichen – nicht.“ In einer *Sensibilisierungsvorlesung* „Herausforderung Zukunft“ (Jischa 1993) behandle ich die Punkte 1 und 2. Der Punkt 3 ist Anlass für den zweiten Schritt gewesen, die *Operationalisierungsvorlesung* „Technikbewertung“ zu konzipieren.

Wann: Die Sensibilisierungsvorlesung „Herausforderung Zukunft“ fand erstmalig im