Abstract of 'Traditional and modern Technology Assessment: Towards a toolkit'

Approaches
The field of Technological Assessments (TA) is very divers, but there is common aim that underlines the different approaches to TA, which is to contribute to an optimal alignment between technological and societal developments. Four main types of TA approaches can be distinguished:
- Awareness TA: this approach is used to warn for unintended or undesirable consequences by forecasting technological developments and their impacts.
- Strategic TA: this approach is used for supporting specific actors or groups of actors in formulating their policy or strategy with respect to a specific technological development.
- Constructive TA: broadening the decision process about technological development, to shape the course of technological development in socially desirable directions.
- Backcasting: developing scenarios of desirable futures and starting innovation processes based on these scenarios.

Methods
The methods that are applied in TA are possibly even more diverse as the approaches mentioned above. In what follows, the writers of the article attempt to systemize these methods into a common framework. Three types of methods can be distinguished:
- Methods of analysis, which are used to analyze a specific aspect related to a TA problem. This method can be applied to every type of TA.
- Intervention methods, which serve as heuristic for interfering in the decision process on technology development. This method is used best in the strategic TA and constructive TA.
- Methods used in 'reflective studies'. Such studies concern the organization of the decision and development process itself.

Scope of methods
A second distinction concerns the scope of methods. In what follows the writers of the article restrict themselves to the first two methods:
1. Methods that serve as project lay-out. These methods aim at integrating different perspectives of the subject of study or of the decision process to be addressed. They mostly entail a complex set of actions to be performed.
2. Methods that serve as tools, mostly as parts of larger projects. These methods are generally well-described and can be executed in a relatively straightforward manner.

Most tools can be used within different approaches of Technology Assessment. As we will see, for some project lay-outs this is also the case. Others are only appropriate for a specific approach of Technology Assessment.

	Method of Analysis	Intervention Method
Project lay-out	- Technological forecasting - Impact assessment - Scenario analysis	- Intervention in innovation networks - Connecting separated networks - Demand articulation - Consumer CTA - Participatory technology assessment - Citizens' initiatives - Strategic niche management

Tools	▪ Trend extrapolation ▪ Structured interaction ▪ Delphi ▪ Cross-impact analysis ▪ Social simulations ▪ Checklists ▪ Socio-technical maps	▪ Consensus conference ▪ Structured interaction

Criteria for choice

There is no clear method to decide what type of TA, project outlay and tools for the solution of a specific problem have to be used. Therefore the writers of the article have to rely on current TA practices to develop criteria. From their own experience they would suggest the following ones:

▪ Phase in the development
▪ Degree of polarization
▪ Origins of the problem
▪ Type of technology
▪ Position on the R&D agenda
▪ Time dimension
▪ Aim of TA: analysis or intervention

Source and additional reading

This abstract is adapted from the article mentioned below, additional reading is recommended for more elaborate information;

▪ Jan van den Ende, Karel Mulder, Marjolijn Knot, Ellen Moors, Philip Vergragt, 1998, *Traditional and Modern Technology Assessment: Toward a Toolkit*, Technological Forecasting & Social Change 58, nrs 1&2, pp. 5-21