

**Summary:**

# **Economic appraisal at the choice-of-concept stage in major transport projects**

The Norwegian Quality Assurance Scheme (QA) for major public projects was introduced in 2000 (QA2) and extended in 2005 (QA1). With QA1, a new early decision point, Choice of Concept, was introduced, requiring the ministry in charge of the project to produce four documents describing the need for the project, the strategic aims which are to be achieved by it, the constraints that it will have to respect, and finally, an analysis of alternative designs, called concepts, and a recommendation on the choice of concept. The four documents are subject to quality assurance by an independent group of experts before being decided upon by the government. The purpose of QA1 is to secure political approval of the main direction of the project before planning at a detailed level starts, and to avoid committing too much planning resources and political prestige to unrealistic project ideas.

In the transport sector, the four documents as a whole are called a Study of the Choice of Concept (SCC, or KVV in Norwegian). The task to produce such a study has been delegated by the Ministry of Transport and Communications to the national transport authorities. 13 such studies have been made up until now.

The main purpose of the present report is to advise the Norwegian Public Roads Administration and the Norwegian National Rail Administration on the task of performing cost-benefit analysis (CBA) of alternative concepts at a stage when relatively little is known in detail about the alternatives. Our main finding is that standard methods and tools can also be applied in this case. These are the EFFEKT software (broadly similar to the UK COBA software), the CBA tool of the Rail Administration, and the national and regional transport model systems with their accompanying CBA tools (broadly similar to the UK TUBA). Good knowledge of the systems is however required to make efficient use of them with scant data. Thus we recommend that users are offered training focusing on this issue in particular.

However, we have also outlined a very rough first appraisal of costs and benefits of the concepts, mainly for internal use in SCC of projects outside of the big cities. For the big cities, some model development may be necessary to be able to appropriately analyse the composition of “city transport packages” at an early stage.

To identify the problems that have been met up until now by those responsible for SCCs, current CBA practice in the SCCs known to us and their accompanying QA1's has been studied. A questionnaire on the reasons for the choice of methods was answered by persons in charge of 8 of the available SCCs. This has led us to go beyond the problems of doing CBA to the broader problem of how to integrate goal achievement and CBA in the final recommendation of alternatives. A simple grading system based on a matrix of the most important impacts is proposed.

The treatment of risk and uncertainty, and of the ability of the alternatives to meet finance requirements, have been identified as weak spots of current SCCs. Some elements of our recommendations regarding these issues will have to be decided upon by the Ministry of Finance and the Ministry of Transport and Communications.