

concept

Tore Sager

Foresight methods

Concept report no. 53



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English summary

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English Summary

The report is primarily about foresight methods applied for prediction. Chapter 1 defines the main concepts. Prediction is here delimited to attempts at figuring out what is possible and what is likely to happen in the future. Some of the foresight methods can even be used normatively for prescription. This goes for scenario construction, technology roadmaps, and backcasting, for example. What make these methods 'foresight methods' in the sense the term is given here, and thus justifies their inclusion in this report, is their use for explorative and forecasting purposes.

Foresight methods are based mainly on judgement, in contrast to other prediction methods that are here denoted 'conventional'. These methods are mainly quantitative and require statistical analysis of empirical data. Planning in the transport sector makes extensive use of quantitative methods and observations. In several other sectors, such as planning of land use and development patterns, quantitative prediction methods are less often applied. However, even planning by qualitative and judgmental methods depend on considerations of possibility and on some kind of foresight regarding expected consequences of projects.

When planners apply conventional methods for prediction, they extrapolate observed trends into the future. There is, however, no law-like regularity causing the future to mimic the past. The situation in the societal problem area requesting a plan, may develop very differently toward the planning horizon than it did in the observation period. Quite often it seems reasonable to expect that new and unknown events and processes both within and outside the area of study, can cause extant trends to end or change direction. Judgements about the causes of the break may then provide useful ideas concerning the future pattern of the variables to which people attach preferences. Foresight methods can broaden the consideration of future uncertainties. They create an opening for dealing with consequences of events and processes that are not clearly visible in the empirically based models.

Chapter 2 discusses the notion of breaking or shifting trends. By assuming that development patterns will change some time between the present and the planning horizon, the planners acknowledge that they are on shaky ground and no longer find sufficient support in data from the past. In lack of that support, there will be a trial-and-error process, often in cooperation with other experts or lay people, to find passable routes ahead. It is this search process toward feasible and plausible future states, which the foresight methods can help to make more efficient.

The report offers a systematic overview of types of foresight methods. The table in Chapter 3 displays more than thirty foresight methods. The survey tells from which kind of sources each method elicits judgmental data, and it is noted how each foresight method processes this judgmental input. The main feature of each method is outlined very briefly. Following that, eight foresight methods are described more fully. Chapter 4 explains how to apply the eight methods. Moreover, the chapter gives information about their purpose, how individual judgements are aggregated, potential participation by citizens, management of trend shifts, the method's limitations, similar methods/variants/combinations, available software, and additional references.

The report places special emphasis on construction of scenarios, which is given comprehensive treatment in an appendix. Recent examples of the use of scenarios in Norwegian public planning are also presented there. Scenarios are frequently used in long range planning, when it does not seem reasonable to describe the imagined situation on the planning horizon by a set of trend

extrapolations. Our view is that this is the normal state of affairs, and that long term forecasts are of limited value in open complex systems. If one does not plan with the intention of realizing a specific scenario in the far future, it is nevertheless worth contemplating what possibilities may open up, and what prospects may engender needs for alleviation and compensation as the planning horizon comes closer. The primary task of foresight methods is to make this search process fruitful.

Chapter 5 is an exposition of how foresight methods can possibly be used in the front-end phase of project planning. Predicting by foresight methods is particularly useful in the first part of this phase, that is, in the pre-study which ends with the choice of a conceptual solution. One reason is that the most promising concept shall not necessarily satisfy the needs likely to emerge in the continuation of empirical trends. The report on selection of conceptual solution should open for creativity, broad consideration of needs, and assessment of concepts that are feasible only in case of disrupted trends and patterns. Another reason for the relevance of foresight methods in this planning phase is that a conceptual solution is specified in far less detail than a project. The report on conceptual choice therefore gives more room for qualitative and judgmental information, and it has less use for accurate quantifications than is the case for the forecasts applied in ex ante project evaluation.

The discussion in Chapter 5 considers whether foresight methods can contribute to

- a) establishing lines of development for needs and demands in the long run,
- b) sketching scenarios for the part of society where the project belongs,
- c) delimiting the set of possible conceptual solutions, and
- d) taking into account uncertainties concerning long-term strategies and incorporate them in the analysis in a clear and informative way.

In the pilot project preceding the Parliament's decision for or against initiating the investment project, there is still some room for using foresight methods. Several of them are participatory methods and can have a positive effect on the democratization of public planning. Besides, the foresight methods can improve the analysis of uncertainty and inform parts of the impact analysis where empirically based models do not give credible estimates regarding the social impact of changes generated by the project. This notwithstanding, in general there is more scope for the use of foresight methods the earlier in the preparation of a project predictions are needed.

Finally, the report contains a concluding chapter and a copious list of references.

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