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English summary

Conceptual appraisal (CA) is a central part of the Norwegian State Project Model. It aims to ensure that major investment projects are thoroughly appraised before the government decides which concept should form the basis for further planning in the pre-project phase. The main intention of the scheme is to provide the government with a broad decision-making foundation in which alternative solutions to the problem are compared. However, previous studies show a clear tendency to recommend large projects, while simpler and cheaper solutions – so-called do-minimum alternatives – rarely gain traction. This raises questions about whether the range of possibilities is explored broadly enough and whether do-minimum alternatives receive genuine and serious consideration.

The starting point for this study has been the need to improve the handling of do-minimum alternatives in CA processes. We aim to strengthen knowledge about what characterises a good do-minimum alternative, which methods are suitable for identifying and appraising such alternatives, what barriers prevent them from being included and evaluated, and how these barriers can be overcome.

Data sources and methods

The study is based on three main sources: a systematic document analysis of 112 CAs, semi-structured interviews with 46 informants from various sectors and roles in Norway and other countries, and an extensive literature review. The interviews constitute the most important data source, providing insights into practices, experiences, and assessments from actors involved in CAs and similar processes. The document analysis provides both quantitative and qualitative data on how do-minimum alternatives are treated in the studies, offering examples of both good and poor practices. The literature review spans project and appraisal-related literature, as well as perspectives from transport economics, sociology, and political science. It includes both research literature and guidance material from Norway and comparable countries.

The empirical material was analysed collectively by the research team to strengthen the analytical output. The study adopts a normative approach, aiming to develop practical solutions and recommendations.

What is a good do-minimum alternative?

Interviews reveal broad agreement on what constitutes a good do-minimum alternative. It should be significantly cheaper than investment alternatives, provide some benefits, and be clearly better than the zero alternative. It must meet safety and other minimum requirements and function as a real solution – not just a theoretical reference.

Do-minimum alternatives can include measures such as regulation, pricing, organisational changes, or technology. CAs should conduct broad and creative searches for do-minimum alternatives, preferably beyond the agency's core responsibilities. Several informants suggest that phased development can be a good approach, in which the first phase serves as a minimum standard, with the option to expand later. Standardised solutions and off-the-shelf products can work, but only if they remain truly standardised and do not require extensive customisation.

In practice, many CAs mention a wide range of measures early in the options analysis. Still, the few do-minimum alternatives that pass the initial screening are mostly limited upgrades of existing infrastructure. Measures outside infrastructure or beyond the agency's domain are often discarded. This suggests untapped potential for developing effective measures that do not involve infrastructure.

Appraisal methods and experiences

The four-step methodology is the most common approach to identifying measures with varying levels of ambition. Inspired by the Swedish "first principle" from the transport agency Trafikverket, it is widely used in the transport sector and has influenced other sectors in Norway. The method involves an intervention hierarchy where measures are assessed in four steps:

1. Influence demand
2. Optimise existing systems
3. Minor expansion
4. Major investment

In some digitalisation projects, a dimension-based framework is used to define the solution space along axes such as capacity, flexibility, and functionality.

These methods are useful because they provide a framework for systematic assessment of options. However, they are not strict methodologies – rather mindsets requiring creativity and willingness to explore small measures seriously. Effective use depends on a team capable of thinking broadly and pragmatically.

The initial screening appears critical, as many do-minimum alternatives are eliminated at this stage. Reasons often include insufficient goal achievement or being outside the assessor's toolkit. The study shows that screening often lacks systematic and methodological support. Alternatives are usually considered against a set of criteria, but cost rarely features among them. This can lead to eliminating measures with low benefits but also low costs without a proper cost-benefit analysis.

In the detailed analysis phase, practices vary widely. Many CAs assess do-minimum alternatives far more superficially than other options, and proper evaluations of benefits and costs are often missing. Where do-minimum alternatives are considered, they generally perform poorly on both benefits and overall evaluation. Modelling tools commonly used in the transport sector are rarely applied to small measures, and simplified models are uncommon. In other sectors, benefit assessments are often qualitative and judgment-based, which can bias against small measures.

Barriers and how to overcome them

The study identifies a broad set of barriers preventing serious inclusion and assessment of do-minimum alternatives, grouped into two main categories:

- Methodological and capacity-related barriers
- Incentive and institutional barriers

The first category includes limited access to expertise and guidance, weaknesses in method use and process design, and time/resource constraints. The second category involves path dependency and groupthink, political directives and expectations, and a culture of high ambition and the belief that "only the best is good enough."

To further understand these barriers, we use a social science framework, dividing analysis into three levels:

- Micro (individual attitudes and choices)

- Meso (group and organisational dynamics)
- Macro (societal structures and systems)

The study shows how barriers manifest across these levels. The owner ministry plays a key role in setting frameworks and expectations. It can influence barriers at the macro level and in the transition to the meso level, for example, through the CA mandate and follow-up. The agency conducting the KVU has significant influence at the meso and micro levels. It can contribute by promoting diverse teams, improving process facilitation, using systematic methods, and driving cultural change. Regulators and guidance providers, such as the Ministry of Finance and the Norwegian Agency for Public and Financial Management (DFØ), can help by requiring inclusion of do-minimum alternatives and better documentation of screening. Improved guidance, including a clear definition of a good do-minimum alternative, may be needed. External quality assurers play an important role as independent parties and should challenge judgment-based assessments and ensure that serious consideration is given to do-minimum alternatives.

The way forward

The study highlights the need for further research, particularly on measures in steps 1 and 2 across sectors and their effects and profitability. The literature is limited, and there is little documentation of such measures outside the transport sector.

Better methods and tools are needed to assess small measures, both within CA processes and for prioritising portfolios of minor measures. More research is also needed on what constitutes an appropriate scope for a CA, as both overly narrow and overly broad scopes can hinder effective exploration of options.

In conclusion, the report finds that do-minimum alternatives likely have significant potential but often receive insufficient attention. This is due to both methodological weaknesses and deeper structural and cultural factors. To ensure more cost-effective and sustainable solutions, both public administration and research communities must contribute to developing better methods, strengthening competence, and changing incentive structures.

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Forskningsprogrammet Concept skal utvikle kunnskap som sikrer bedre ressursutnytting og effekt av store, statlige investeringer. Programmet driver følgeforskning knyttet til de største statlige investeringsprosjektene over en rekke år. En skal trekke erfaringer fra disse som kan bedre utformingen og kvalitetssikringen av nye investeringsprosjekter før de settes i gang.

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The Concept research program aims to develop know-how to help make more efficient use of resources and improve the effect of major public investments. The Program is designed to follow up on the largest public projects over a period of several years, and help improve design and quality assurance of future public projects before they are formally approved.

The program is based at The Norwegian University of Science and Technology (NTNU), Faculty of Engineering Science and Technology. It cooperates with key Norwegian and international professional institutions and universities, and is financed by the Norwegian Ministry of Finance.

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