



NTNU – Trondheim
Norwegian University of
Science and Technology

Norwegian perspectives on ex post evaluation

ITF Roundtable (by Zoom)

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Presentation outline

1. About the Concept Research Programme
2. What is a successful project?
3. How do we measure success?
4. Ex post evaluation in Norway
5. Some results from the evaluations
6. Conclusions

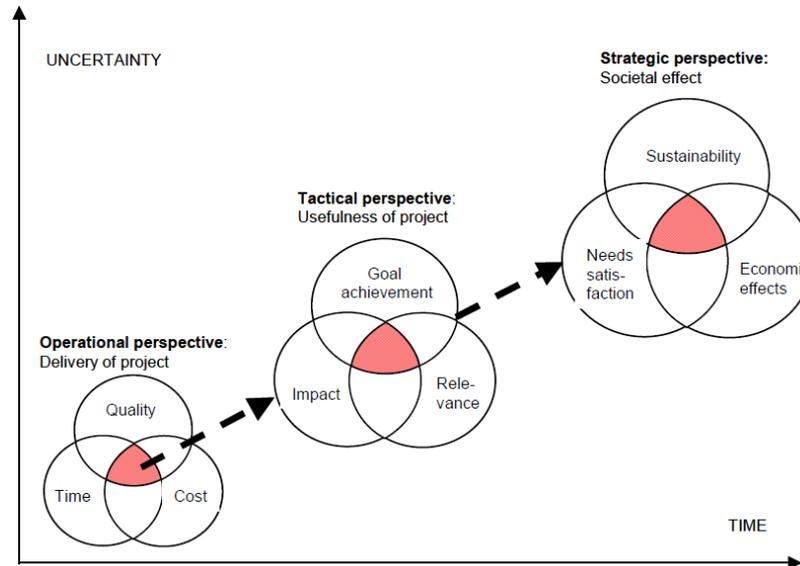
We represent the Concept Research Programme

- Research programme established in 2002 by the Ministry of finance
- Follows projects subjected to the mandatory QA-scheme (projects with an expected cost > 1 billion NOK)
- Placed at the Norwegian University of Science and Technology; uses both internal and external resources
- The perspective of the financing party; project governance
- Does research and evaluation
- <https://www.ntnu.edu/concept>

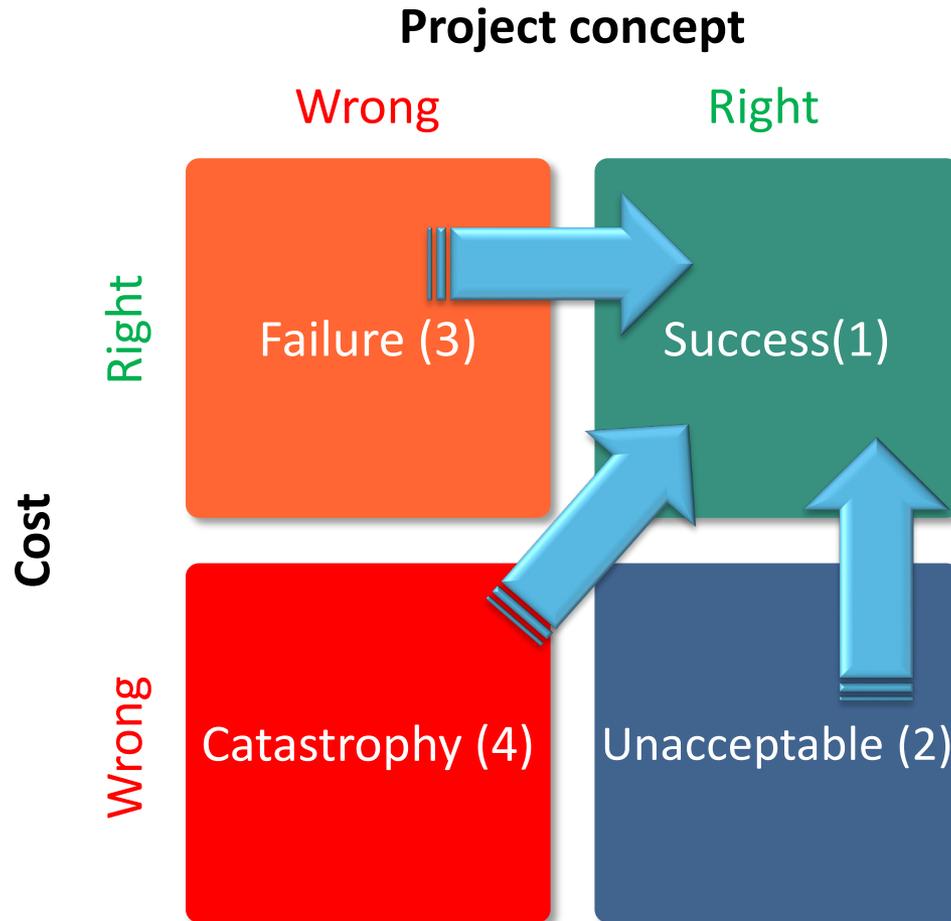
WHAT IS A SUCCESSFUL PROJECT?

User effects and social benefits must justify the costs

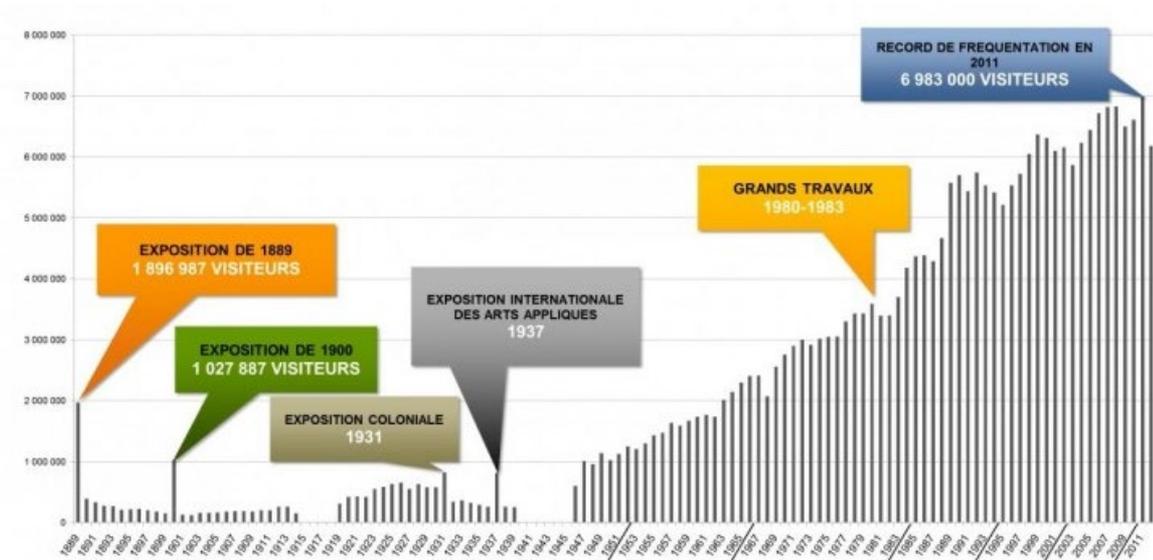
- “An new road” is not reason enough
- User effects is the main motivation for most transport schemes
- To create some sort of social benefits
- Ideally, the benefits should be higher than the costs
- Political goals also matter (but may not be formulated explicitly)



Success is selecting the right project and delivery it efficiently



Success may be difficult to anticipate



1889 World Exhibition. Purpose of the Eiffel Tower was unclear.

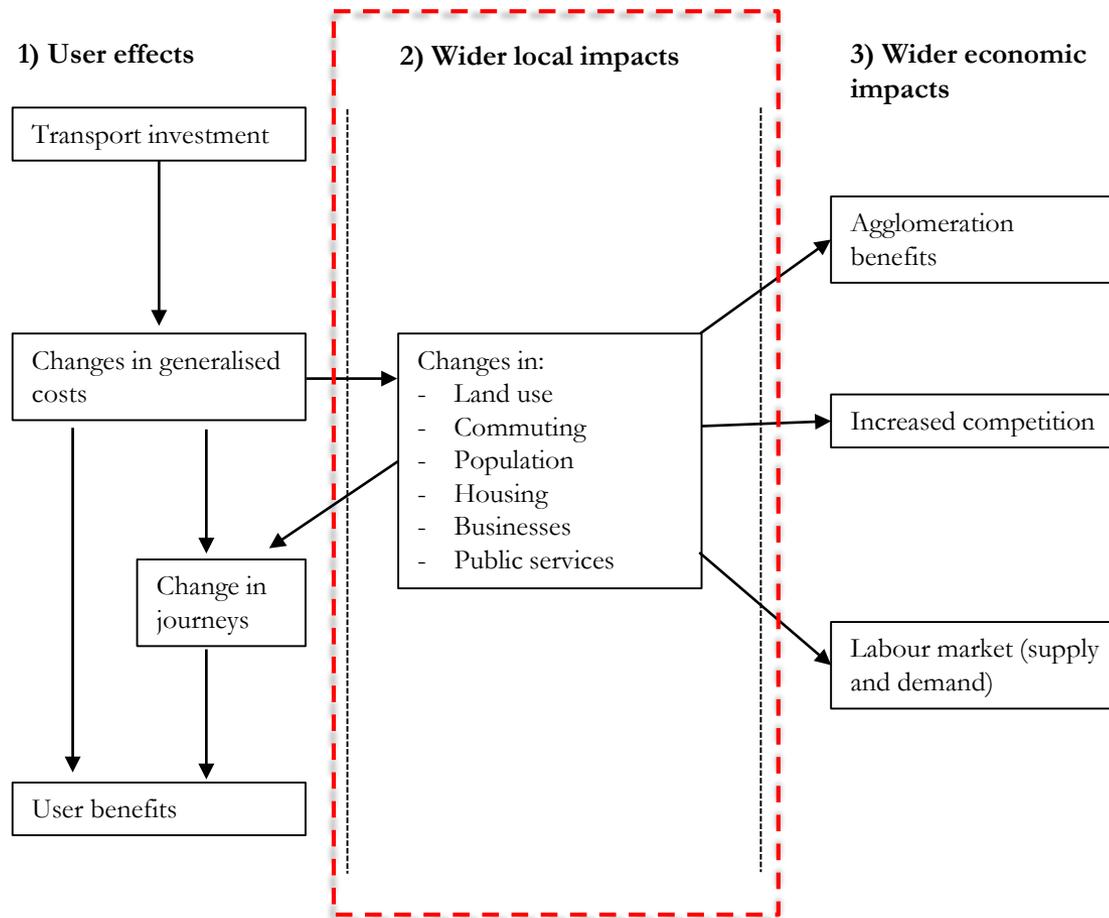
HOW DO WE MEASURE SUCCESS?

In a perfect world, CBA would capture all relevant effects of projects, however...

- The distribution of effects between groups and regions
- Negligible impact of environmental consequences on NPV
- Discounting negative future effects
- Uncertainty of input variables and huge variation of appraisal results in individual projects over time
- Promoting investment in affluent areas
- Projects with impact in conflict with societal goals

=> **Value for money has had little or no impact on project selection**

In reality, decision makers are more interested in other impacts than those measured by CBA



All projects have objectives

- Travel time savings
- Improved safety
- Increasing the population in selected areas
- Giving communities access to better public services
- Promoting increased economic activity in areas with particular challenges
- “Levelling up” the economy



The case for change (the strategic case)

- Gross impacts for selected areas or groups, rather than net impacts for the whole economy
- Mitigating spatial economic disparities
- Open up areas for development
- Promote sustainability (economic and environmental)

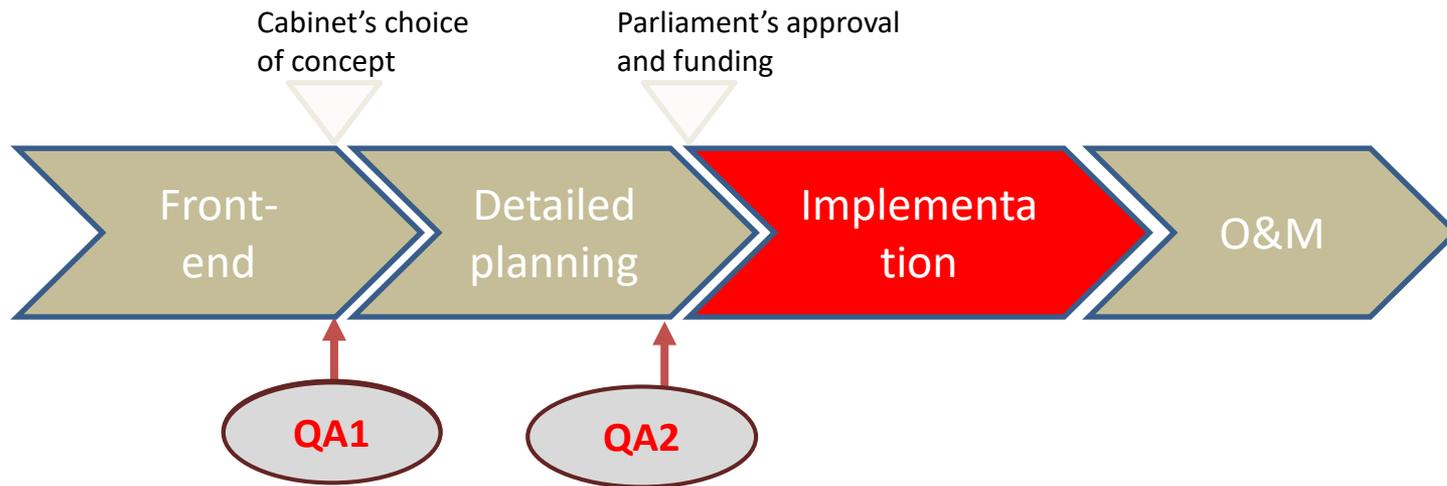
Project evaluation must cover the aspirations of decision makers and expectations of society

- If decision makers are concerned with other impacts than those measured by CBA, it would be arrogant to insist that evaluation should focus only on CBA
- CBA is not comprehensive – does not include all impacts
- The definition of success is normally defined in the project's business case
- The assessment of success should be mapped against the formulated goals

EX POST EVALUATION IN NORWAY

Extensive regime for ex ante appraisal

- Projects with an expected cost exceeding NOK 1 billion (≈EUR 100 million)



- Requires external quality assurance (QA) of decision documents at two stages. Decisions are elevated to the highest political level.
 - QA1 concerns needs assessments, possibility studies, CBA
 - QA2 concerns the cost estimate, contract strategy

Ex ante appraisal is an often long-drawn out affair that requires huge resources

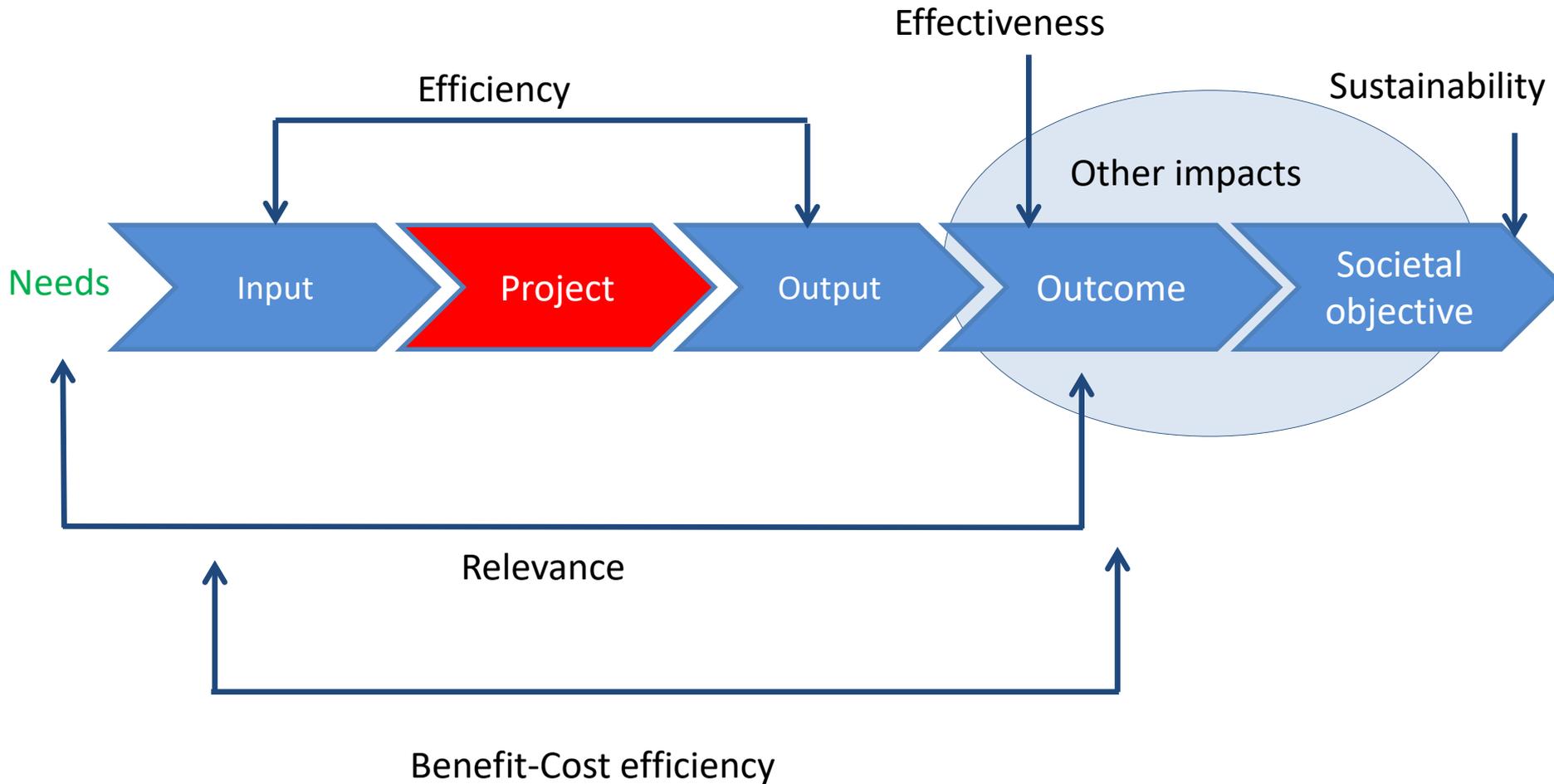
- Average time for planning and appraisal of Norwegian road projects is 8-12 years
 - In addition to the formal appraisal and quality assurance, projects are Planning and Building Act
 - Municipal sector plan
 - Local zoning plan
- } For final planning permission

The front-end phase is crucial to project success

Ex post evaluation in Norway

- A number of studies on the accuracy of cost estimates and traffic forecasts
- The Norwegian Public Road Administration's programme for ex-post benefit-cost analysis (monetised impacts only)
- The Concept Research Programme's evaluations
 - 2-3 evaluations per year
 - 34 projects evaluated since 2012
- Meta evaluations of sectors

The framework for evaluation



Evaluation criteria

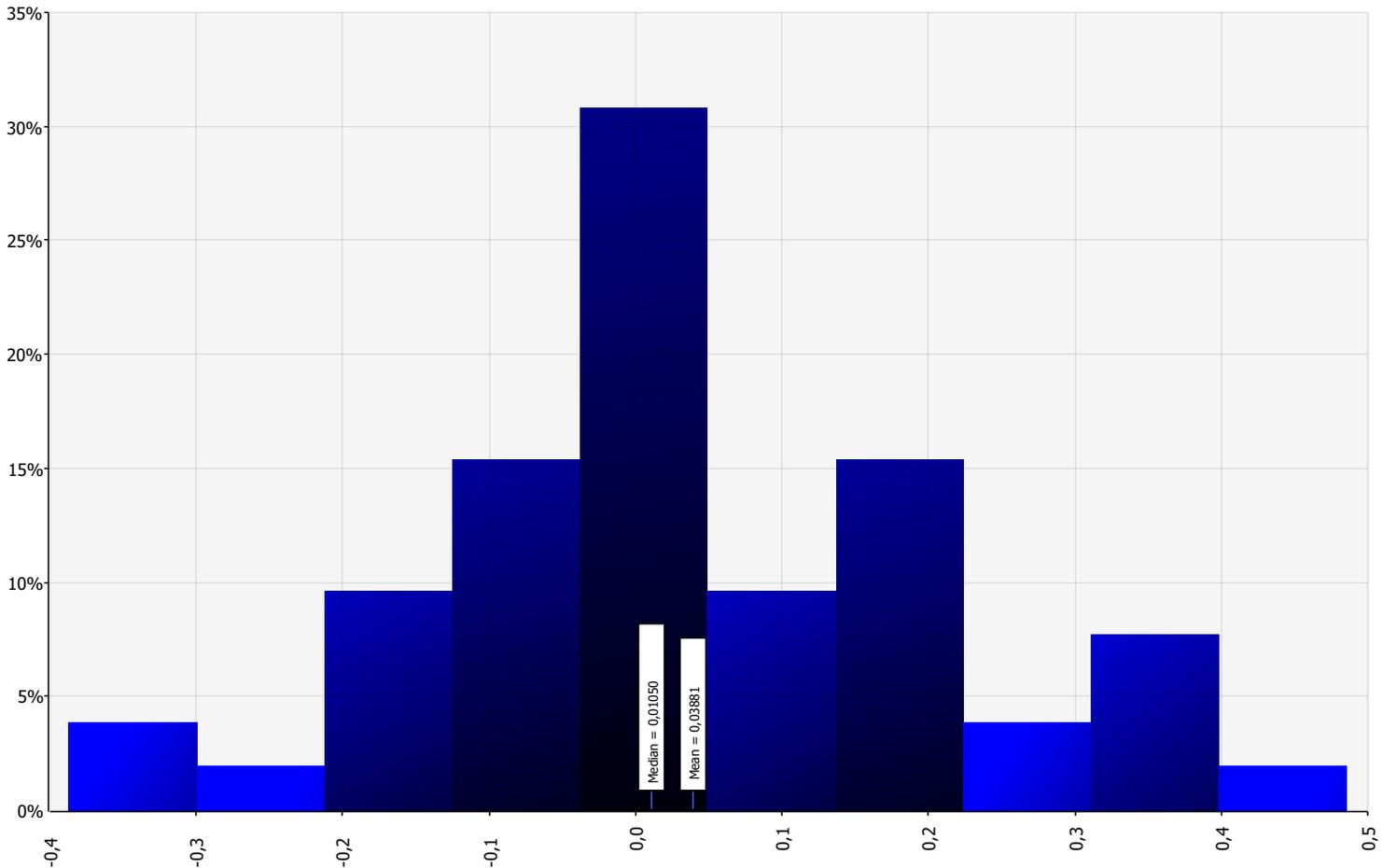
Level of success	Evaluation criterion	Definition
Operational	Efficiency	Concerns project implementation and outputs in terms of cost, time and quality, and how economically the project organization has converted inputs into outputs.
Tactical	Effective-ness	Concerns whether the agreed outcome has been obtained and to what extent the project has contributed to this outcome.
Strategic	Other impacts	This includes all consequences beyond the agreed outcome (i.e. side-effects) that can be attributed as the result of the project, positive and negative, short-term and long-term, for different stakeholders.
	Relevance	A project is relevant if there is a need for what the project delivers. Project relevance is measured in relation to national political priorities, but also stakeholders' preferences. It is essential to bring conflicts of interest to light as part of the evaluation.
	Sustaina-bility	A project is sustainable if its benefits are likely to persist throughout its lifetime. This usually requires that the total impacts (financial, environmental and social) are acceptable in the long run.
	Benefit-cost efficiency	This should be measured in terms of total willingness to pay in relation to cost, or secondarily in terms of outcome in relation to cost (i.e. cost-effectiveness).

A broad assessment of project success

- The project achieves its goals
 - Operational success: Time, cost, quality
 - Tactical success: The usefulness of the project for users
 - Strategic perspective: Long term social effects and sustainability
- Results are mapped against goals in the business case
- Evaluation goes beyond the monetized impacts and includes both intended and unintended outcomes

SOME RESULTS FROM THE EVALUATIONS

Cost performance in transport projects is relatively good (final cost/P50)



N = 58

Road projects generally more successful than rail projects

	Project	Operational success	Tactical success	Strategic success	Value for money
Road Projects	E6 Riksgrensen-Svingenskogen	5	6	5	6
	Fv 519 Finnfast	5	5	5	6
	Fv64 Atlanterhavstunnelen	3	5	5	6
	E6 Åsgård-Halmstad	6	5	4	6
	E6 Svingenskogen-Åsgård	4	5	4	6
	E18 Momarken-Sekkelsten	3	5	4	6
	Rv 653 Eiksundsambandet	5	6	5	5
	E16 Kløfta-Nybakk	4	5	4	4
	Rv 13 Hardangerbrua	4	4	3	3
	E10 Lofast	4	5	3	2
	Railway Projects	Lysaker stasjon	4	5	5
Lysaker-Sandvika		4	5	5	6
Sandvika-Asker		5	2	5	2
Stavanger-Sandnes		4	4	4	2
Gevingåsen tunnel		4	3	4	2
Barkåker-Tønsberg		4	3	3	2

Road projects often have trivial goals while rail projects have been over-ambitious

- Travel time and safety benefits often achieved immediately in road projects
- Rail projects depends on a range of measures to be successful
 - Rolling stock
 - New timetables
 - Road projects
 - parking
 - Land use policies
- Today: Much more emphasis on benefit management

Some evidence of wider impacts, but most likely gross impacts

- Some municipalities experience positive development impacts when roads are improved – and some negative
- Communities close to cities becoming within a commutable distance
- No evidence of net benefits for the economy



impact
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Conclusions ex post evaluations in Norway

- Ex-post analyses give valuable information on the quality of ex-ante assessments
- Success is a heterogenous measure
- Single point estimates ex ante and ex post obscures, rather than clarifies
- Evaluations (ex ante and ex post) must address the policy aspirations of decision makers
- Ex ante and ex post evaluation criteria should match
- Success on all measures is extremely unlikely

Thank you!

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