

Implementing Net Benefits as a Decision Criterion

or

***Helping Politicians Kill the Bad Projects
They Probably Want to Kill***

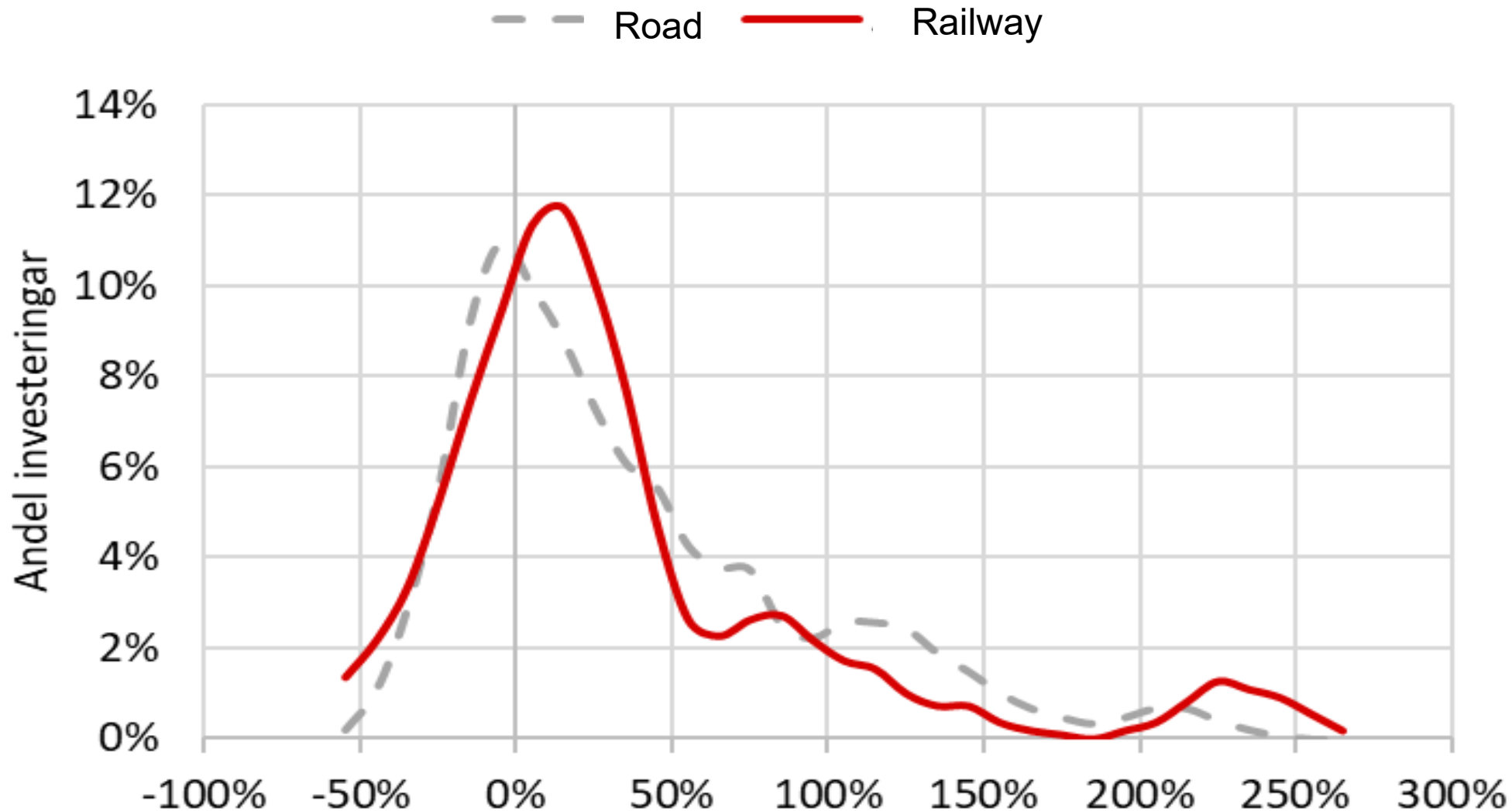
Jonas Eliasson

Director of Transport Accessibility, Swedish Transport Administration

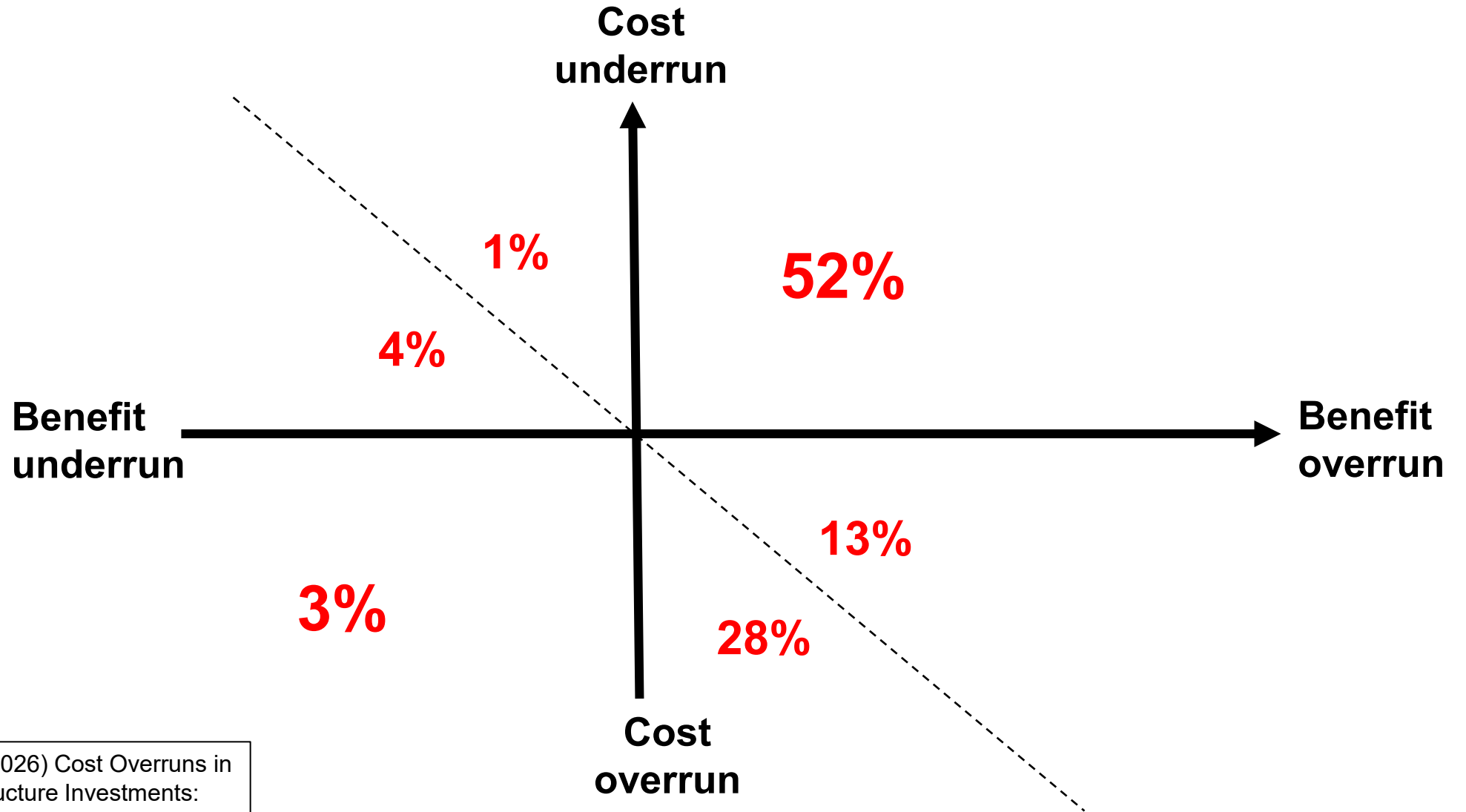
Professor of Transport Systems, LiU

Vice chair of the Governmental Expert Group of Public Economics

Cost increase from "investigation" to "decision to build"



Late-stage estimates of costs and benefits are rather good



Key insights

- Cost overruns are not uniform; they are mainly caused by a small share of projects
- The most serious problem is distorted project selection
 - Had we known the true costs and benefits, we would have chosen other projects
- General uplifts won't solve the distorted selection problem
- There are inherent, unavoidable uncertainties in early stages
- We can't know true costs and benefits until *after* planning/design/investigation phases
- **The fundamental problem is that (almost) irrevocable decisions tend to be made too early, before true costs and benefits are known**

Avoiding irrevocable decisions is difficult

- Status quo bias and loss aversion in politics
 - “promises” are costly to break
- Several connected planning processes by different stakeholders
 - e.g. spatial planning, housing, industry, rolling stock
- Planning and designing is costly (>10% of project cost)
- We need to help politicians kill the bad projects that they really *want* to kill

Additional problems caused by too early decisions

- Incentives for project beneficiaries to exaggerate benefits and underestimate costs
- Little incentives for project managers to search for thrifty project designs
 - Main concern is getting the project done, not finding the most cost-effective design
- Unfair bargaining power for stakeholders whose cooperation is necessary
- Increased risk for scope creep
 - Opportunity costs are not salient
 - Hard to weigh here-and-now benefits of suggested additions against other uses of money.

What to do

1. Make it clear to everyone that final decisions are not made until design, costs and benefits are known
2. Explore/plan more than you can eventually afford
3. Competition btw. projects as long as possible
4. Make opportunity costs salient by having an explicit “just outside the plan” list
5. **Transparent decision criteria (benefit/cost assessments)**
 - Explain as quantitatively as possible how you prioritize among competing projects
 - Makes it clear(er) when a project has become “too expensive” (compared to alternative projects)
 - Helps project managers in design phase: they need to know what to strive for

Other good things with explicit decision criteria

- Transparent, comprehensible
- Not person-dependent – ability to share tasks across an organization
- Objective
- Consistent, fair

Benefit-cost assessments

- Calculate (or judge) effects and costs of proposed investment (or policy)
 - Safety, emissions, accessibility, investment costs, maintenance ...
- Convert effects to common metric (money)
- Rank proposals after (total benefits)/cost
- **Adjust the ranking with respect to non-quantified effects**
- Pick from top of list until budget runs out

BCR rankings are generally robust wrt. uncertainties

Börjesson, M., Eliasson, J., Lundberg, M. (2014) Is CBA ranking of transport investments robust? *Journal of Transport Economics and Policy* 48(2)

Asplund, D. and Eliasson, J. (2016) Does uncertainty make cost-benefit analyses pointless? *Transportation Research A* 92

Eliasson, J., Savemark, C., Franklin, J. (2020) The impact of land use effects in infrastructure appraisal. *Transportation Research A* 141

Eliasson, J. and Fosgerau, M. (2013) Cost overruns and demand shortfalls: deception or selection? *Transportation Research B* 57

Transp. Adm (2021) Proposal for new national infrastructure plan 2022-2033

Transp. Adm (2025) Proposal for new national infrastructure plan 2026-2037

Adjusting ranking wrt. non-quantified effects

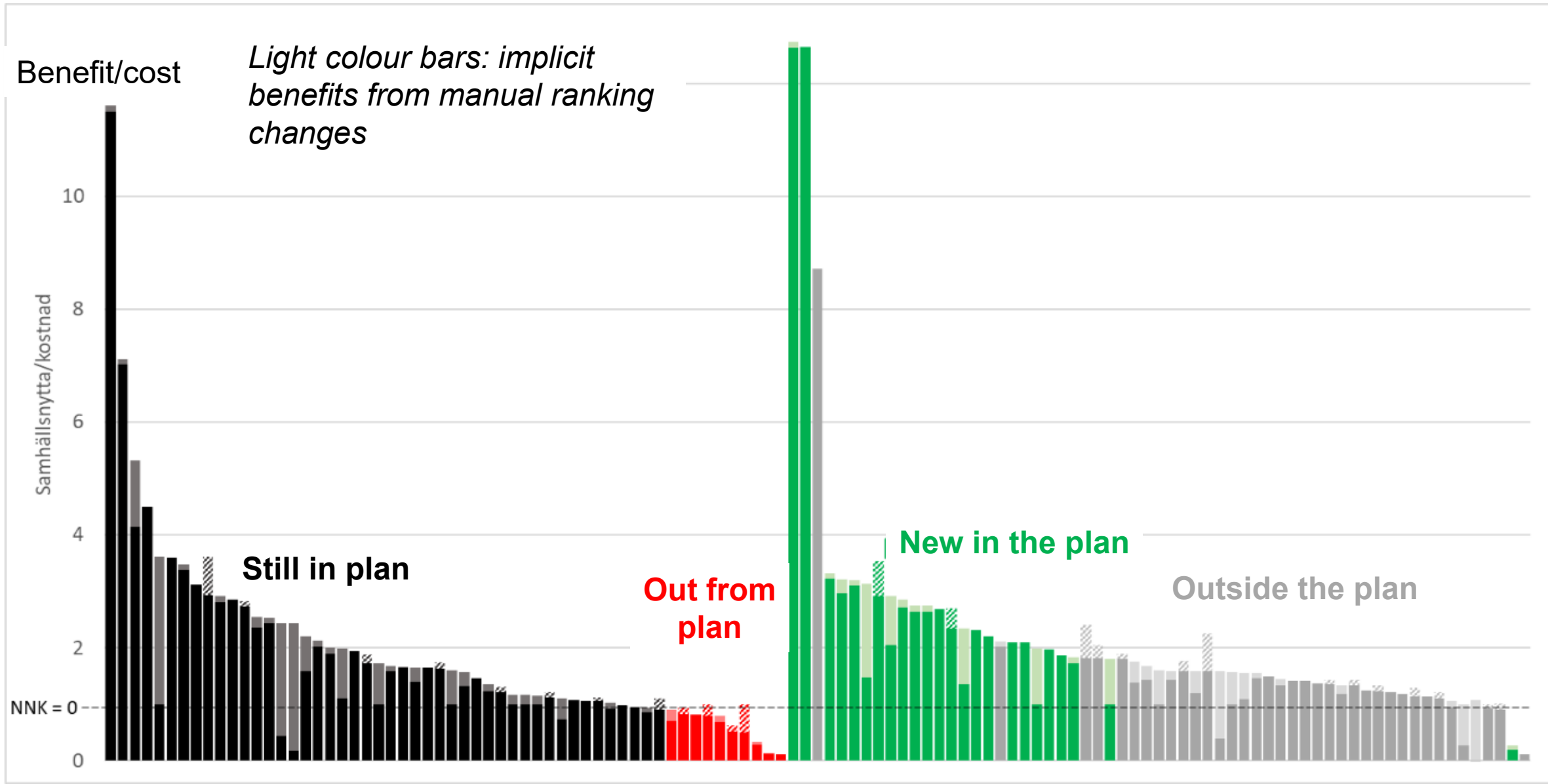
Group of experts adjusted raw BCR ranking considering (e.g.)

- Intrusion in natural and cultural environments
 - Uncertain benefits or costs
 - Delays, noise (sometimes)
 - Dependencies and system effects (mostly railways)
 - Importance for national defense
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- All material was then published
 - Implicit value of non-quantified effects can be calculated from adjustments

Adjusted ranking wrt non-calculated effects (ex.)

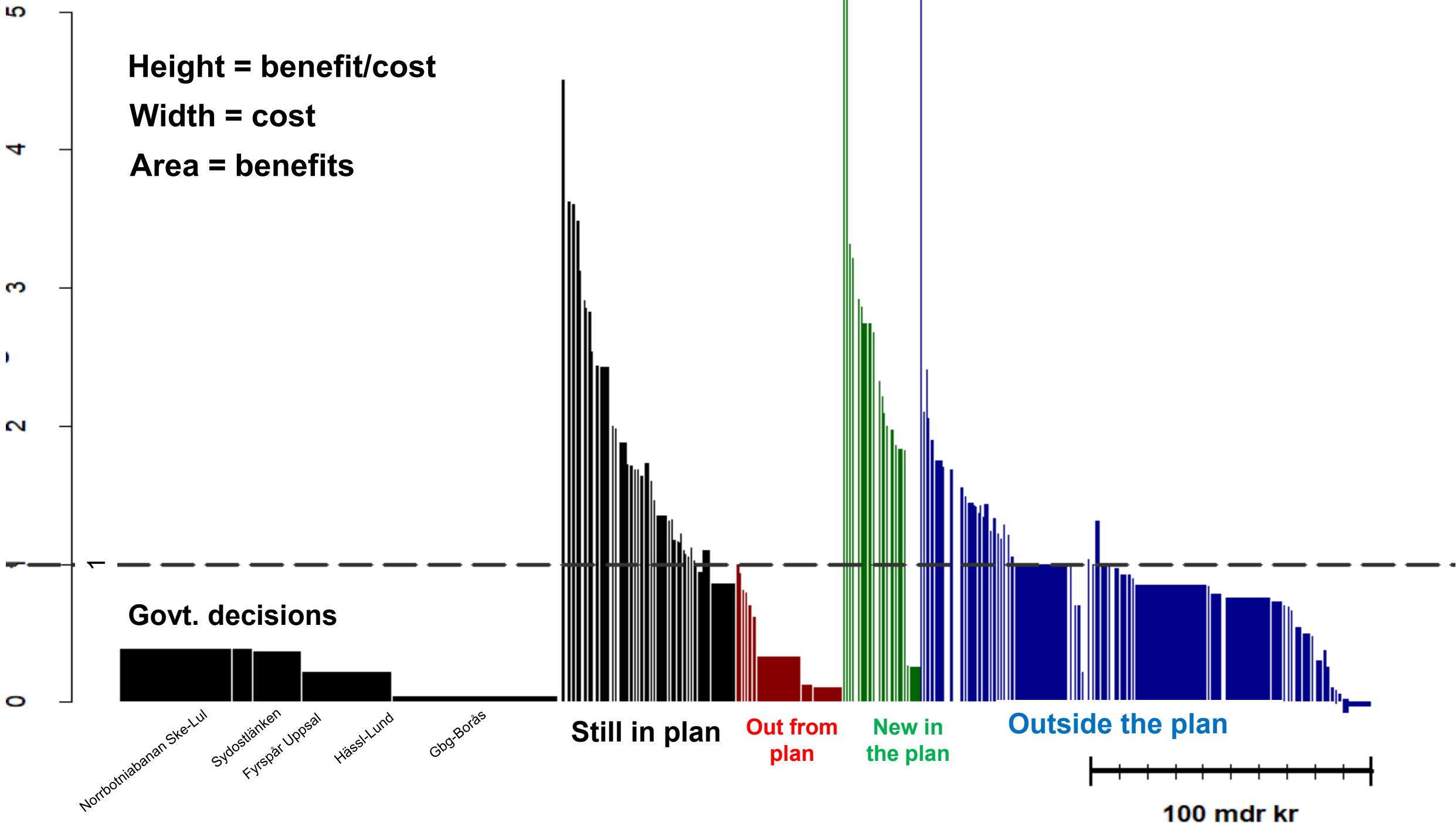
Objekt	BCR uncertainty	Net BCR	Adjustment	Motivation (abbr.)	Adjusted ranking
Road	Medium	1,6	↑	Positiva ej beräknade effekter.	23
Road	Low	1,8	↓	Negativ ej beräknad effekt.	24
Railway	Low	1,7	0	-	25
Railway	Low	1,4	↑	Underskattning av beräknade effekter.	26
Railway	Low	1,4	↑	Positiva ej beräknade effekter.	27
Railway	Low	-0,8	↑↑	Positiv systemeffekt.	28
Railway	Low	-0,6	↑↑	Positiv systemeffekt.	28
Railway	Low	1,7	↓	Överskattning av beräknade effekter.	29

Results (proposed plan)



Government decision

- All projects cancelled in the proposal were cancelled
- One high-BCR project outside the proposal was included
- A few new projects were included for further investigation



Conclusions

- Too early decisions main culprit of many problems
 - Cost overruns, benefit shortfalls, strategic behaviour...
- Reconsidering or cancelling projects after investigations is difficult
- Having an explicit, transparent, published ranking of projects seems to help
- Makes winners and losers more salient
 - Cancelling bad projects frees up money for new *specific and identifiable* projects – not just abstract "money";
 - Vice versa for keeping bad projects in the plan, and for accepting cost escalation

There's nothing more applicable than good theory.