



MANNVIT COWI

SOCIOECONOMIC STUDY OF SUNDABRAUT

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COWI & MANNVIT POWERPOINT PRESENTATION

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Methodology



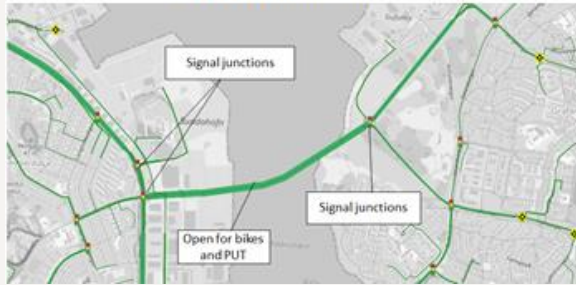
Sundabraut - Samgöngugreining

- Unnin í nýju samgöngulíkani höfuðborgarsvæðisins
- Líkan greinir áhrif á bílaumferð, umferð hjólandi og almenningssamgöngur
- Greiningin er unnin ofan á grunnspá 2034 (0-kostur) þar sem allar framkvæmdir samgöngusáttmálans eru komnar til framkvæmda



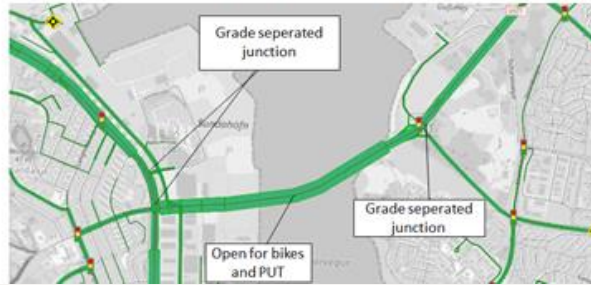
Helstu forsendur sviðsmynda

Sundabrú1



- > Ljósagatnamót
- > Opið fyrir alm.s. og hjól

Sundabrú2



- > Mislæg gatnamót
- > Opið fyrir alm.s. og hjól

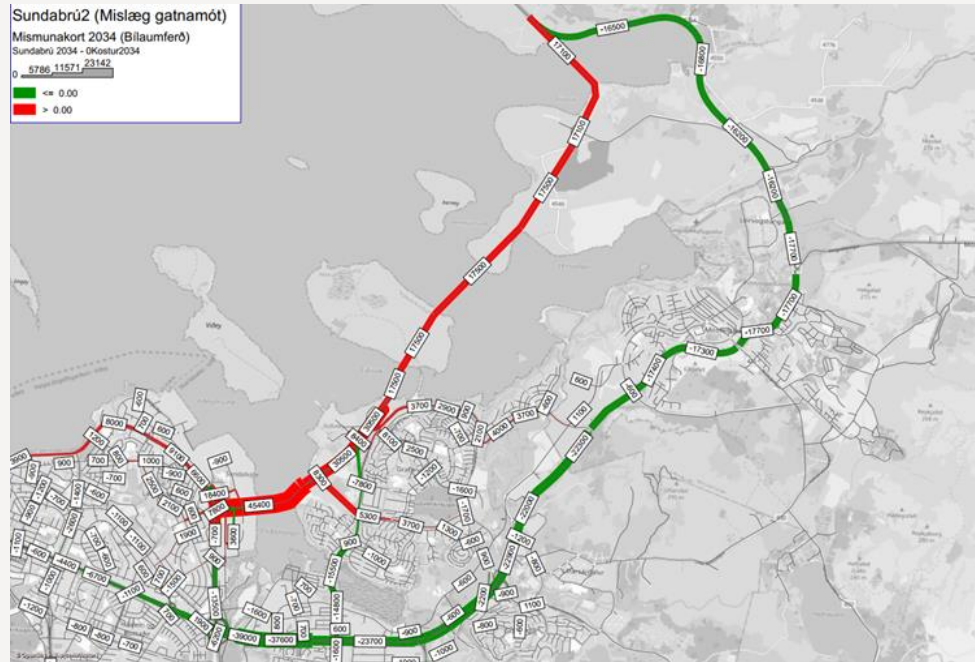
Sundagöng



- > Göng með mislægum gatnamótum.
- > **Ekki** alm.s. og hjól

Helstu niðurstöður

- Sviðsmyndir eru bornar saman við 0-kost
- Í heild um 44-45.000 ökutæki á Sundabraut
- Fækkun ferða með almenningssamgöngum og á hjóli
- Mikill sparnaður í aksturskílómetrum, frjálsum ferðatíma og tafatíma (ferðir með bíl)



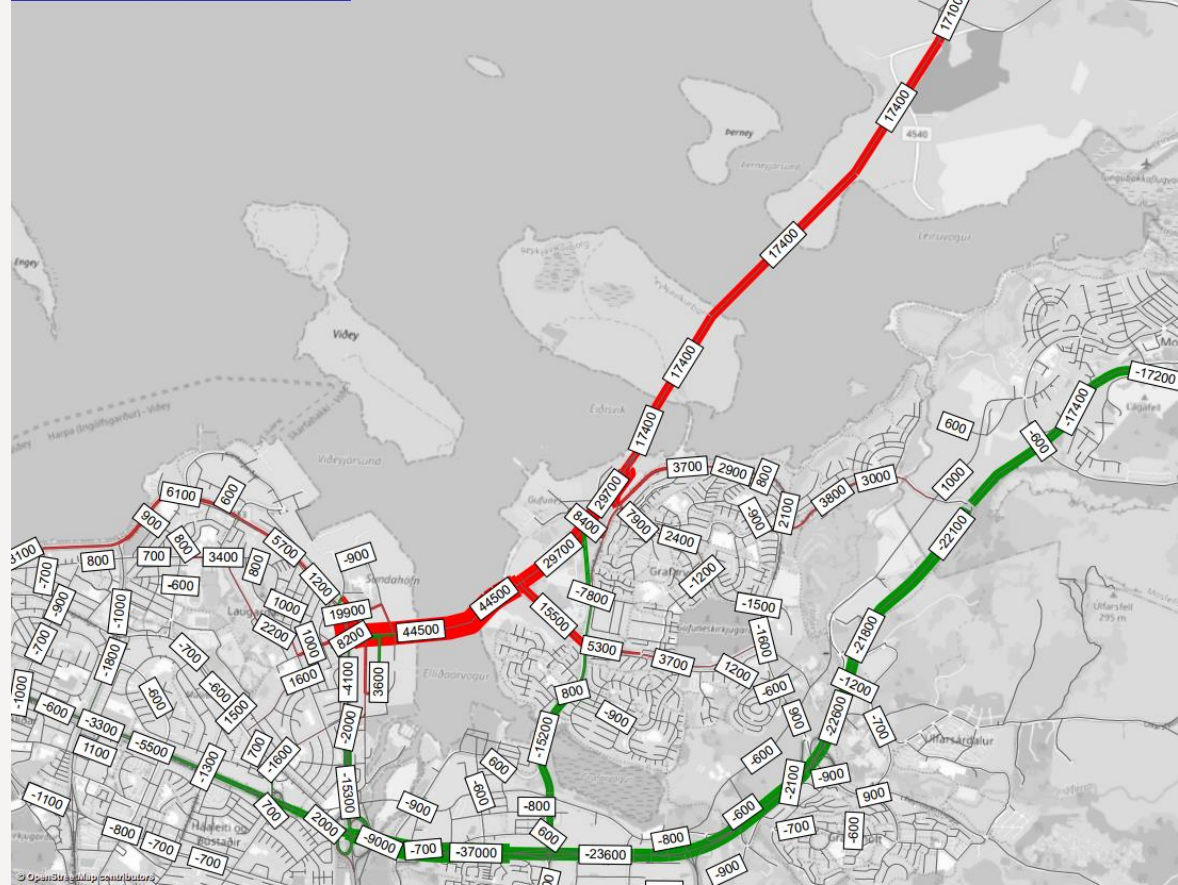
A comprehensive analysis of all effects

- Traffic effects on different transport modes assessed within a traffic model taking all effects into account.

- Red = increased traffic load
- Green = less traffic load

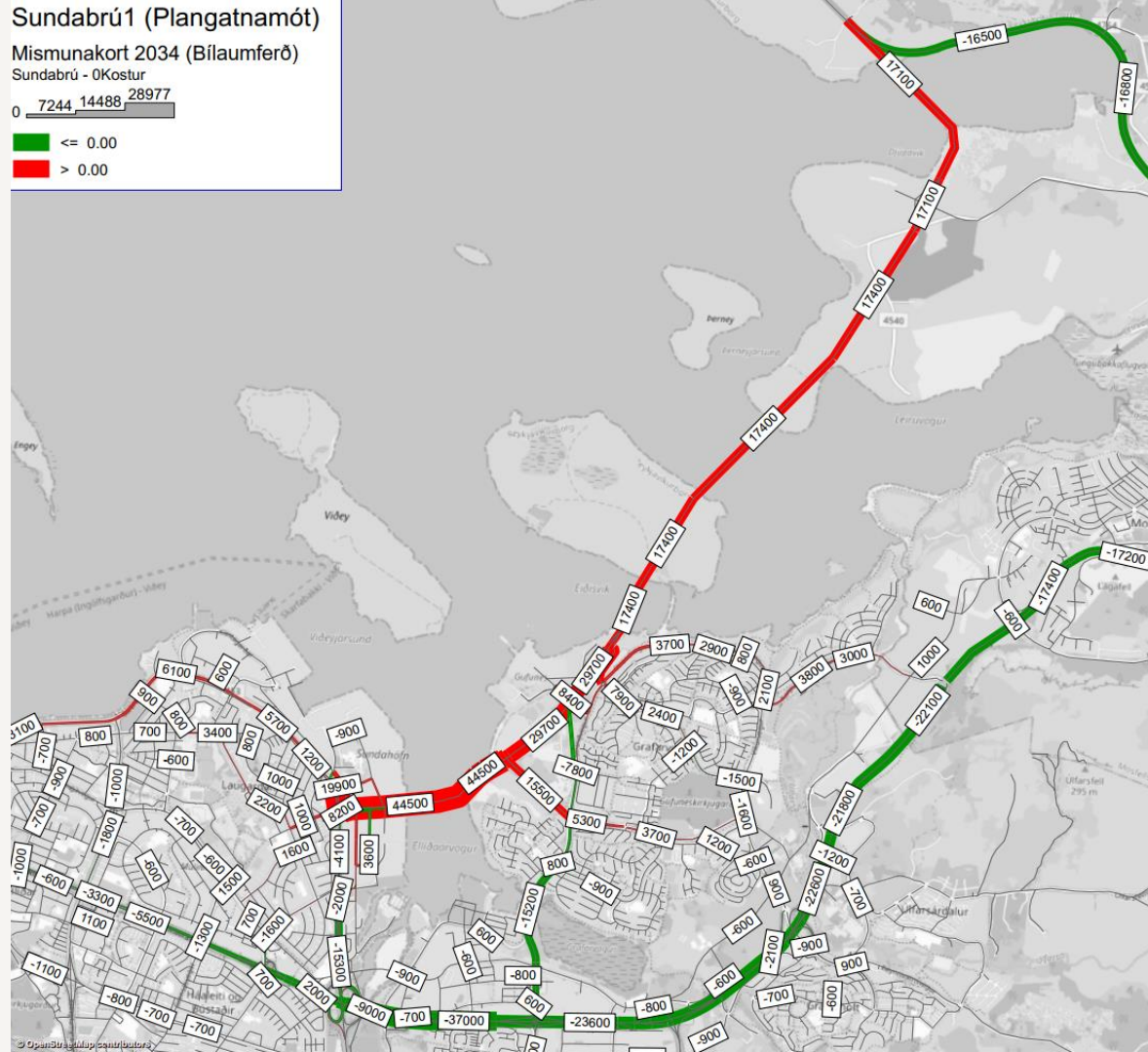
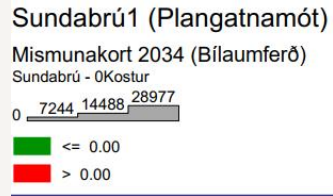
Sundabráú1 (Plangatnamót)
Mismunakort 2034 (Bilaumferð)
Sundabráú - 0Kostur
0 7244 14488 28977

≤ 0.00
> 0.00



What is evaluated?

1. What is the present value of all costs associated with the project?
2. What is the present value of the traffical effects over decades in economic terms?
3. Does 2 outweigh 1?



Einingaverðin

- > Notast við sömu aðferðafræði og í einingaverðslíkani Danska ráðuneytisins
- > Ýmist notast við íslenskar hagtölur og rannsóknir alfarið eða notast við yfirfærslu danskra einingaverða í samræmi við alþjóðleg viðmið
- > Slík yfirfærsla er oft notuð í greiningum COWI og innan Evrópusambandsins almennt

Transportøkonomiske Enhedspriser
til brug for samfundsøkonomiske analyser

Version 1.96

Introduktion Oversigt Print enhedspriser

 Unit prices in English

Denne beregningsmodel og dens indhold stilles til fri afbenyttelse for alle interesserede.

Eventuelle spørgsmål eller kommentarer til modellen bør rettes til
Transport DTU, Modelcenter
Email: cta@man.dtu.dk
eller
Transport-, Bygnings- og Boligministeriet
E-mail: trmanalysekontoret@trm.dk

Udvalgt af Transport DTU og COWI for Transportministeriet
2020



Yfirlit yfir einingaverðin

Katalog - enhedspriser

Oversigt

Print ark

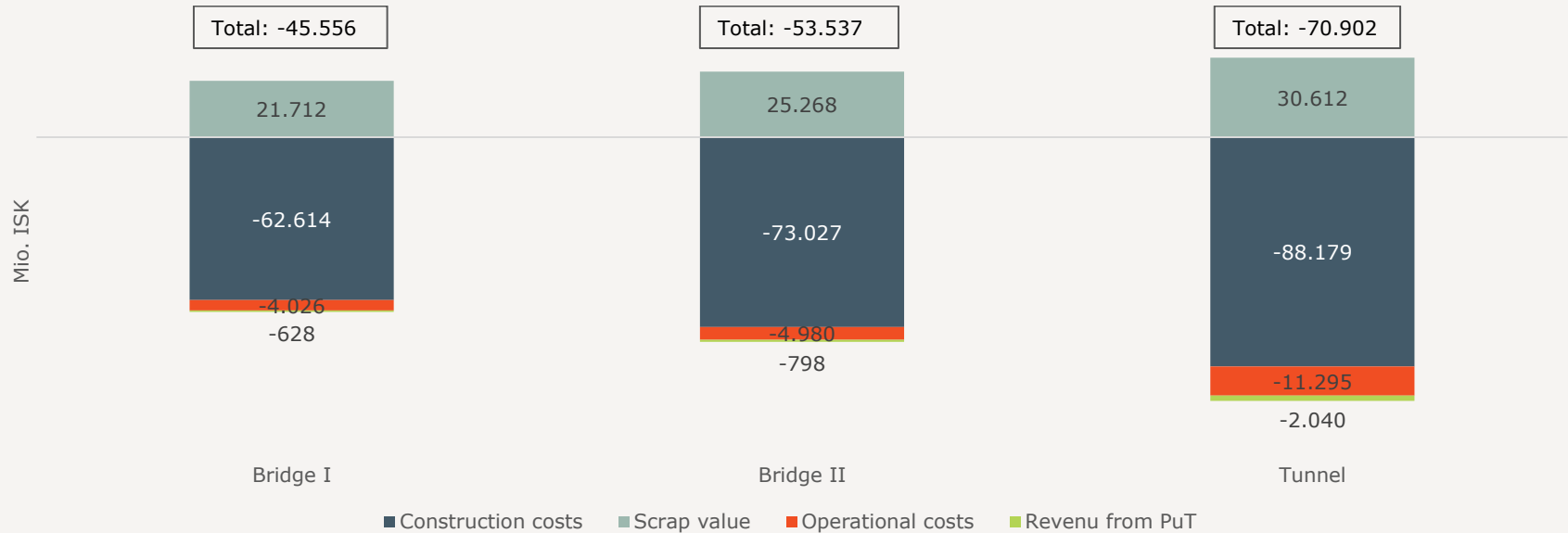
Kataloget her præsenterer de mest centrale enhedspriser til brug for samfundsøkonomiske analyser på transportområdet. Enhedspriserne er angivet for året i priser - indtast prisår her

Arket omfatter tidsværdier for person- og godstransport, kørselsomkostninger for person-, vare- og lastbiler, operatøromkostninger samt eksterne omkostninger opgjort ved enhedspriser og marginale eksterne omkostninger.

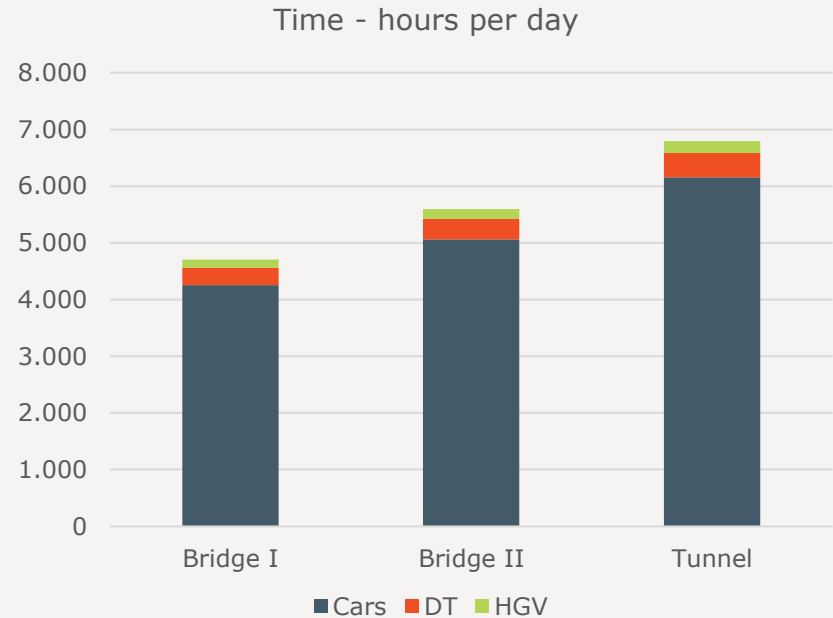
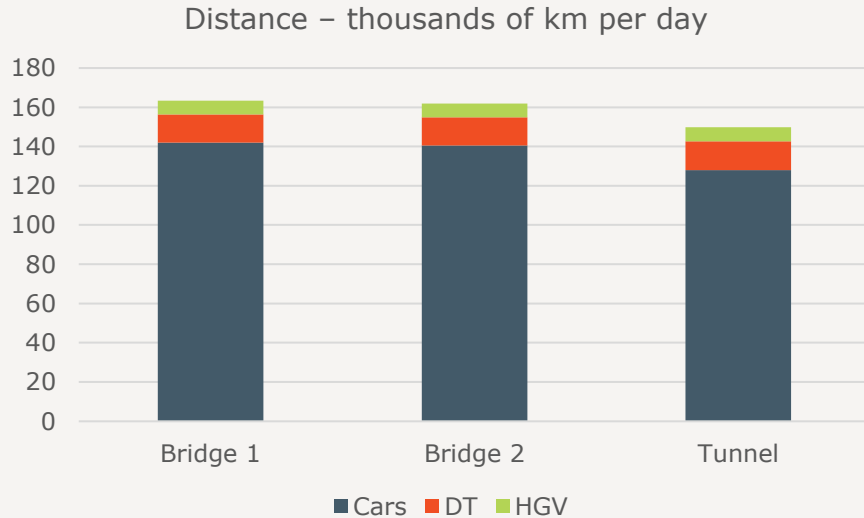
Tidsværdier for persontransport
Tidsværdier for godstransport
Kørselsomkostninger for personbiler
Kørselsomkostninger for varebiler
Kørselsomkostninger for lastbiler
Kørselsomkostninger for cykler
Eksterne omkostninger - enhedspriser
Eksterne omkostninger - km-priser

Results

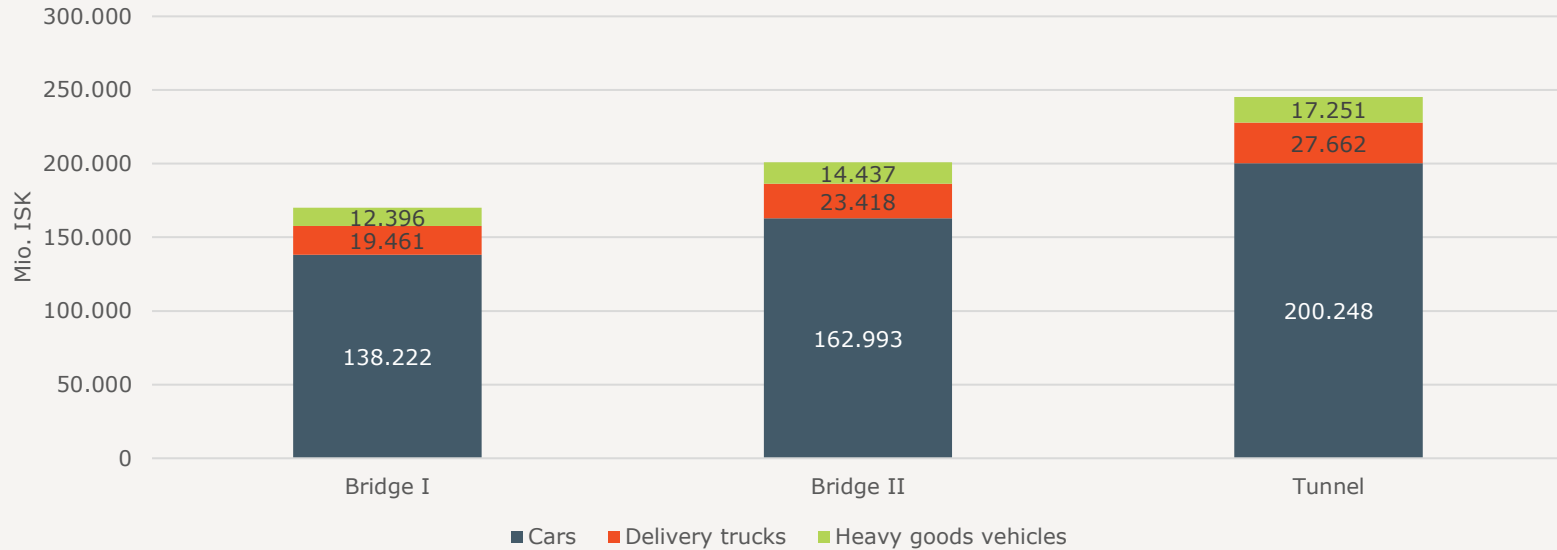
Present value of net costs amount up to 71 billion



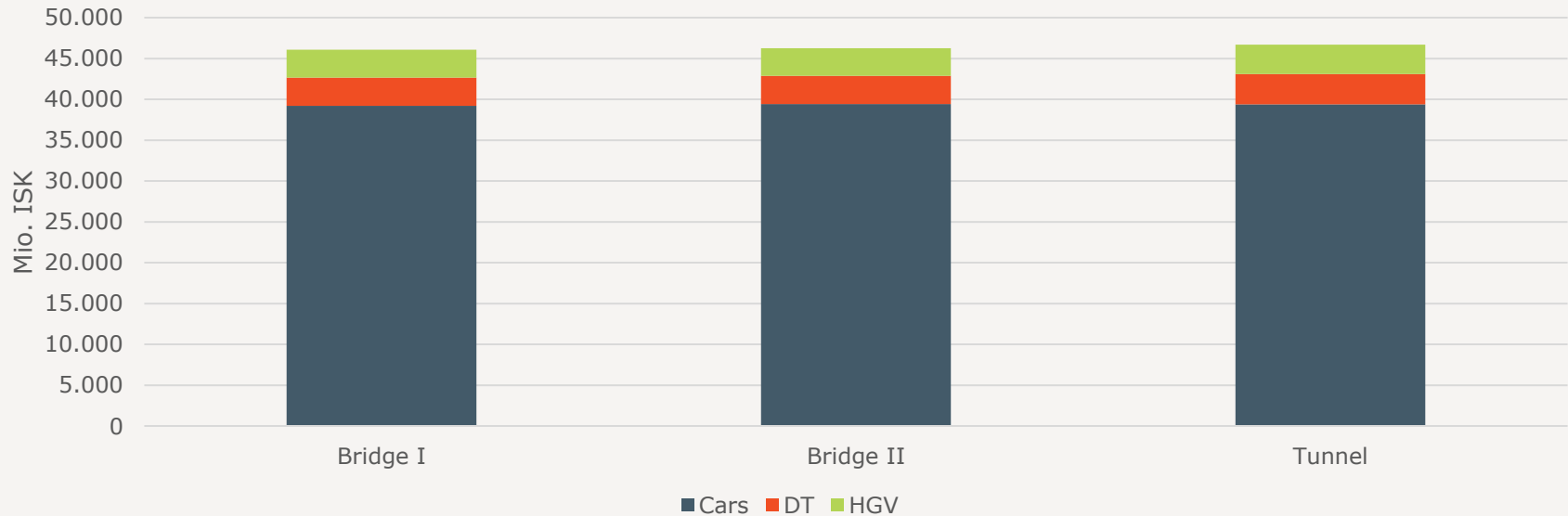
Savings in distance and time



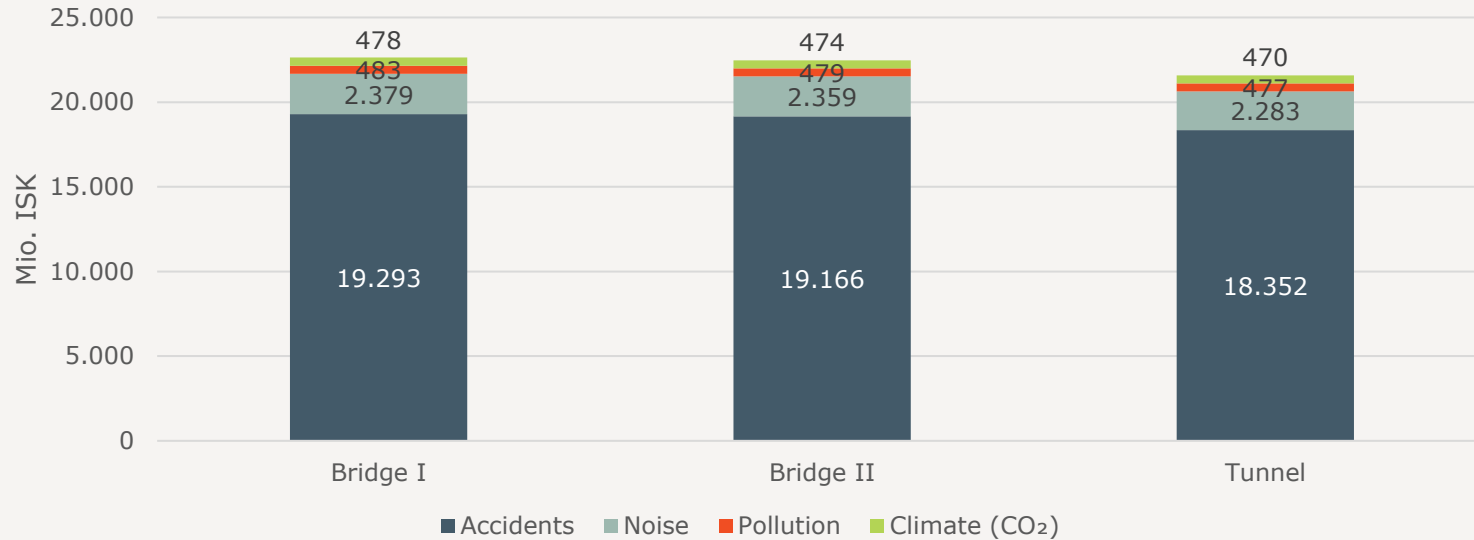
Travel time benefits: Up to 245 billion ISK



Benefits from shorter distances – reduction in driving costs



The external effects are positive
at a total of up to 22.6 billion ISK



Result of the socioeconomic analysis

Million ISK	Sundabraut bridge w. level intersections (Bridge I) NPV	Sundabraut bridge w. grade separated intersections (Bridge II) NPV	Sundabraut tunnel (Tunnel) NPV
Construction costs:	-40.902	-47.759	-57.567
Operational costs:	-4.654	-5.778	-13.335
User impacts:	216.392	247.317	292.567
External impacts:	22.633	22.478	21.582
Other consequences:	-7.943	-7.658	-7.762
Net present value	185.525	208.601	235.486
Internal rate of return	12,2%	11,9%	11,5%
Net benefit to cost ratio	3,34	3,29	2,91

Sensitivity analysis

- > The results are robust towards changes in the primary input
- > IRR remains high and NPV (not reported here) is positive in all sensitivity runs
- > The same project scenario remains the most economically feasible across sensitivity tests

Internal Rate of Return	Bridge 1	Bridge 2	Tunnel
Basic assumptions	12,2%	11,9%	11,5%
Labour supply distortion from public financing 0%	12,7%	12,3%	11,9%
Low construction costs -25%	14,9%	14,5%	14,0%
High construction costs 25%	10,5%	10,2%	9,8%
Low driving costs -25%	11,9%	11,6%	11,2%
High driving costs 25%	12,6%	12,3%	11,8%
Low operational costs -50%	12,2%	11,9%	11,5%
High operational costs 50%	12,2%	12,0%	11,5%
Low unit prices for time values -25%	10,6%	10,2%	9,7%
High unit prices for time values 25%	13,8%	13,5%	13,1%
Only benefits for existing users	10,5%	10,2%	9,4%
Low external costs -50%	11,8%	11,6%	11,2%
High external costs 50%	12,6%	12,3%	11,8%
Low time values for goods -100%	12,2%	11,9%	11,5%
High time value for goods 400%	12,3%	12,0%	11,6%
Low Traffic growth 1 %	11,2%	10,9%	10,4%