

Scenario analysis driving and evaluating GHG transition progress

Program

Scenario techniques as a method to drive and follow-up transition progress

Håkan Johansson, Trivector

Swedish Transport Administration scenarios towards 2045

Helen Lindblom, Trafikverket

Shipper based scenario analysis towards 2050 based on NTM tools

Magnus Swahn, NTM

Discussions

Opportunities and risks with scenario analysis

Data quality and its connection to scenario analysis

Ideas for the coming annual member meeting



Shipper based scenario analysis towards 2050

- Based on NTM tools

Magnus Swahn



GHG trade-offs related to optimum transport solutions

- Sales increase
- Cost
- Capacity
- On-time delivery
- Lead time
- Flexibility
- Redundancy
- Collaborative transport models
- Product protection (packaging)

accessibility	vs.	large transport resources
large transport resources	vs.	frequency
frequency	vs.	filling grade
filling grade	vs.	efficient transfer operations
direct transport	vs.	terminal network
speed	vs.	fuel consumption
fuel consumption	vs.	tied-up capital

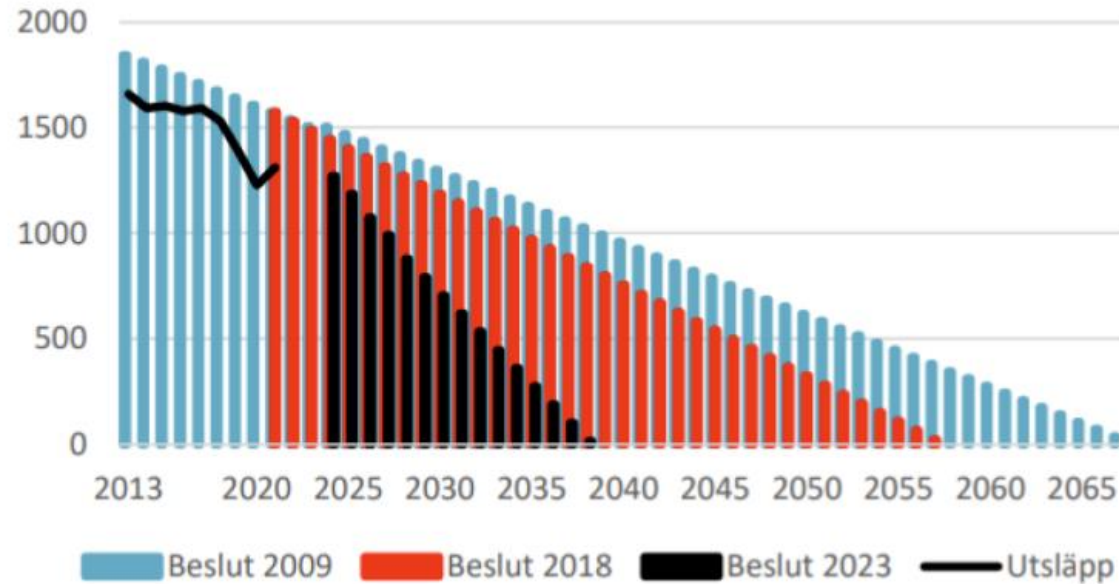
Source: Johan Woxenius



Societal GHG targets

Figur 5.2 Årlig utgivning av nya utsläppsrätter inom ETS1 enligt beslut 2009, 2018 respektive 2023, samt utsläpp inom systemet 2013-21

Enhet: Miljoner ton CO_{2eq} per år

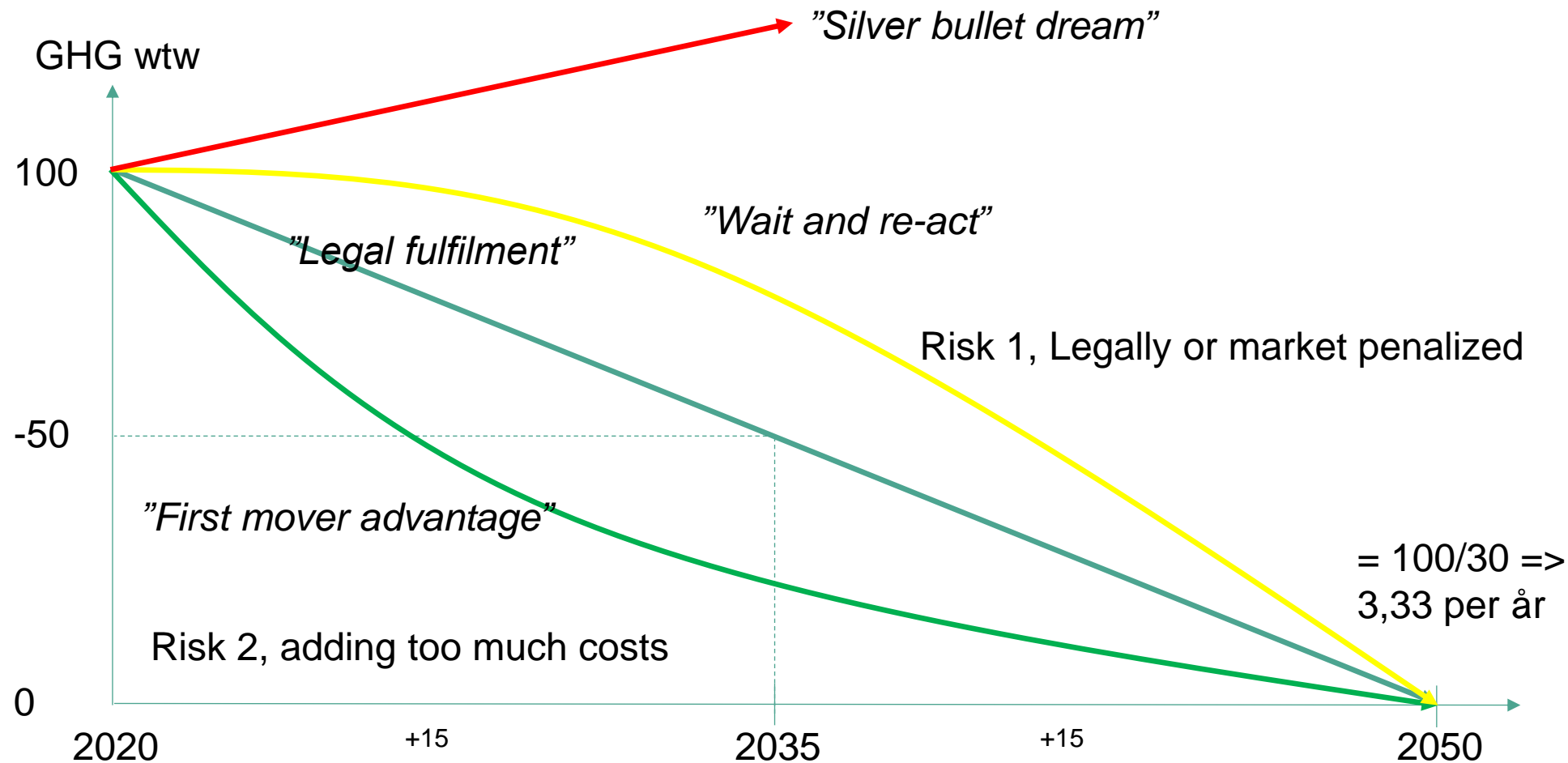


Källa: EU Emissions Trading System (ETS) data viewer (EEA) samt beslut 2009, 2018 och 2023 om ändring av utsläppshandelsdirektivet.



Shippers' strategies towards 2050 transport GHG targets

- Risk assessment





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NTM CALC

CALCULATION OF ENVIRONMENTAL IMPACT
- evaluate

NTM ECAP

DEFAULT AND BENCHMARK TRANSPORT DATA
- improve

NTM DELTA

TRAILBLAZERS TOWARDS SUSTAINABLE SOLUTIONS
- develop

NTM LABS

CONCEPT DEVELOPMENT PROJECTS
- understand

NTM METHODS

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NEWS & BLOG

NEWS

11 November, 2022

Presentation from 2022 member autumn meeting now available

In the annual autumn member meeting 2022 Professor Alan McKinnon held a ground breaking lecture on supply chain resilience and decarbonisation. The slides are now available. The lecture was recorded ...

NEWS

4 October, 2022

Gas fuels in NTMCalc

Through many hours of hard work, we are now able to present solid gas data for road vehicles. The first challenge was...

NEWS

29 September, 2022

Supply chain resilience and environmental sustainability

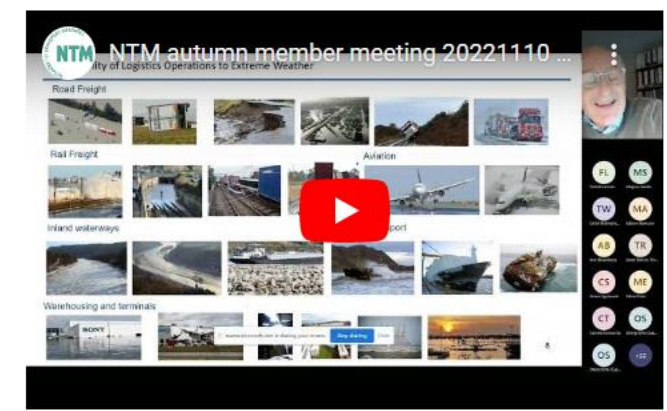
NTM are proud and happy to announce a very exciting autumn member meeting on the 10th of November. Our much respected key note speaker, Professor Alan McKinnon will attend and present his knowledgeable views on the topic of supply chains resilience and environmental sustainability...

MORE

MEETINGS

NTM Autumn member meeting "Supply chain resilience and environmental sustainability"

VOICE FOR SUSTAINABLE TRANSPORT



Professor Alan McKinnon, KLU on Supply Chain Resilience and Decarbonisation

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Shipper case study – use of improvement levers

Present 2020 (baseline)

Shipper of 20 000 ton/year

Transport system: Multi modal ITU*

Modal split:

Road: 60%

Rail: 10%

Sea: 30%

Road biofuels: 0%

Marked based electricity: 0%

Sea biofuels used: 0%

Transport efficiency programs: Cost driven

Fuel/electricity saving programs: No

Mid target year 2035

Shipper of 36 000 ton/year (4% growth per year)

Transport system: Multi modal ITU remains

Modal split:

Road: 44%

Rail: 24%

Sea: 32%

Road biofuels: 100%

Marked based electricity: 100%

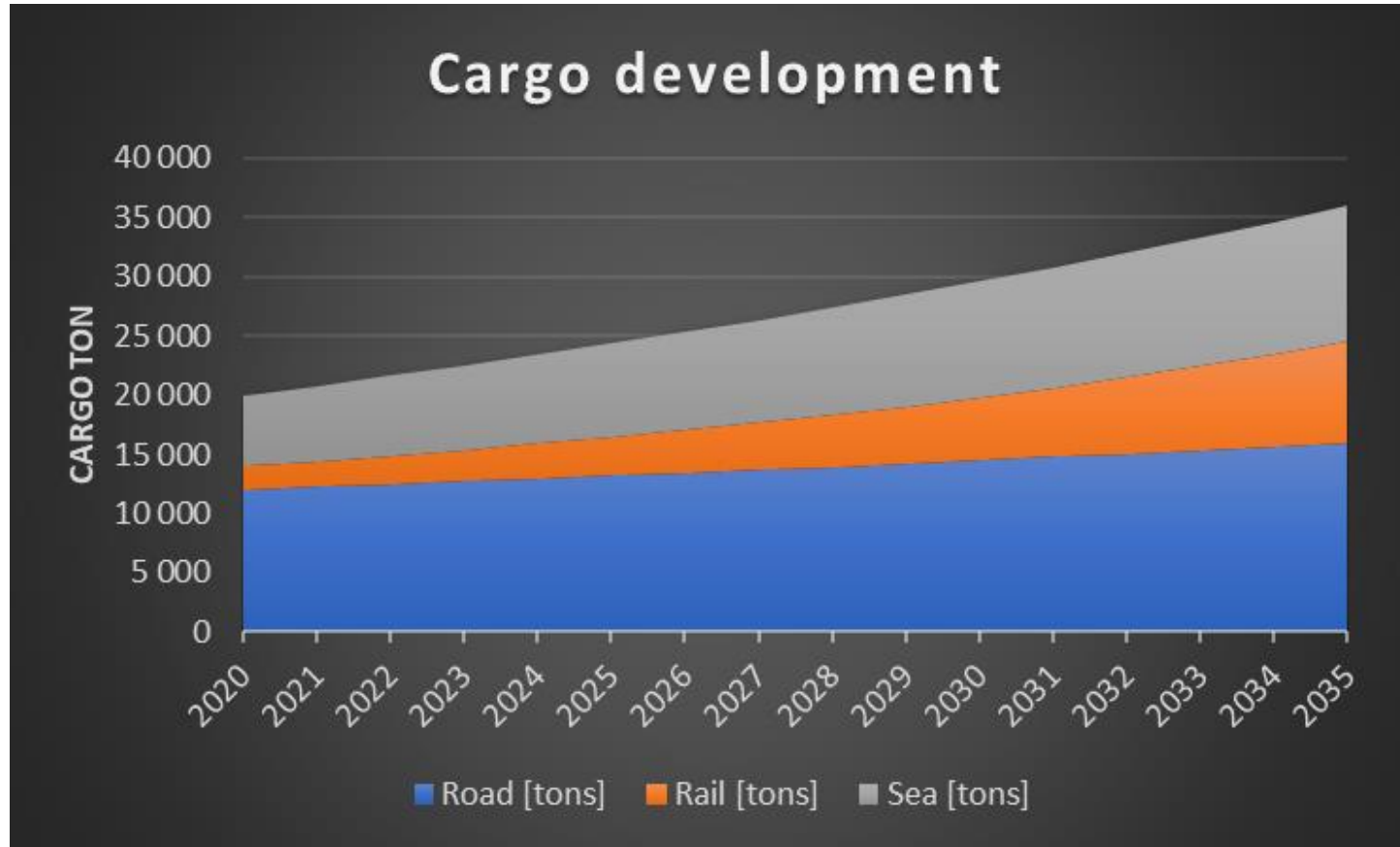
Sea biofuels used: 60%

Transport efficiency programs: 1%/year

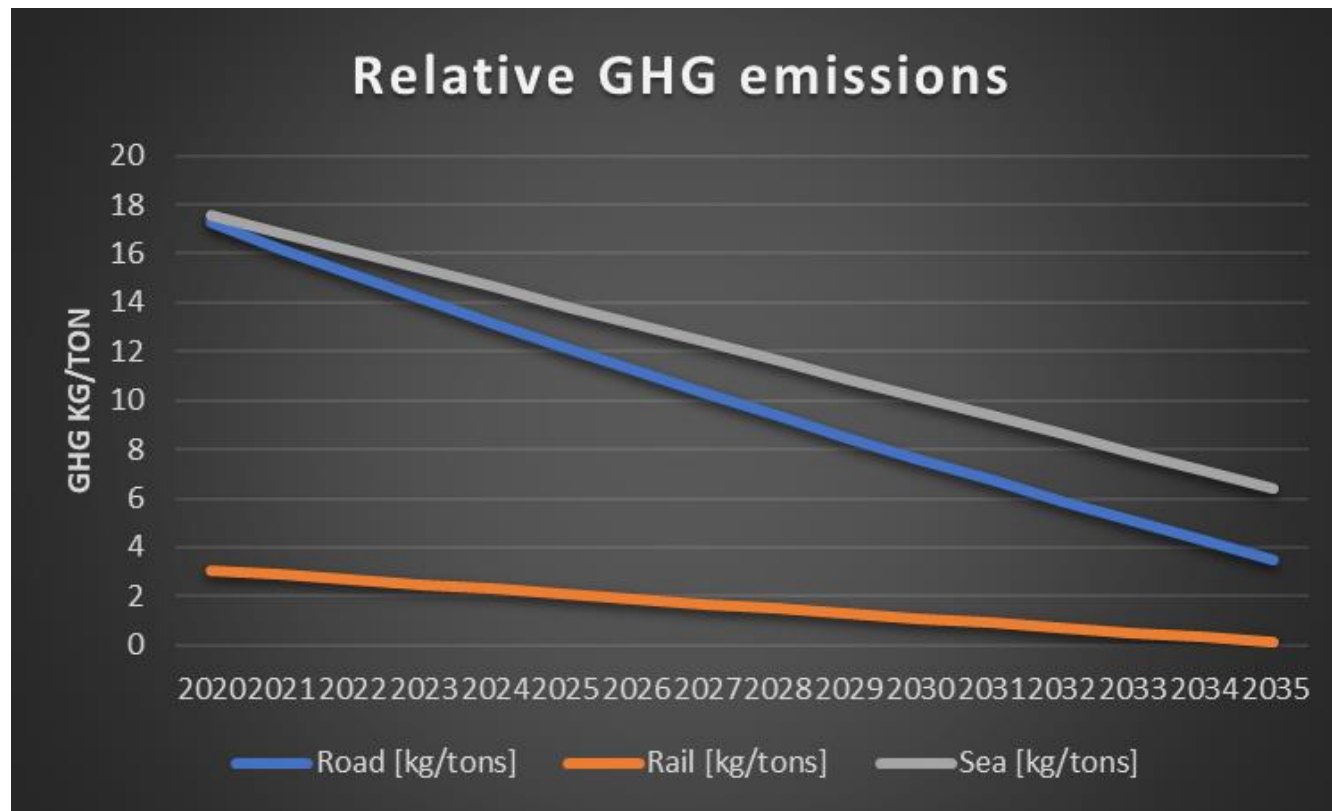
Fuel/electricity saving programs: 0,5%/year

* Intermodal Transport Unit, 45 ft equals 2,25 TEU

Business development towards 2035



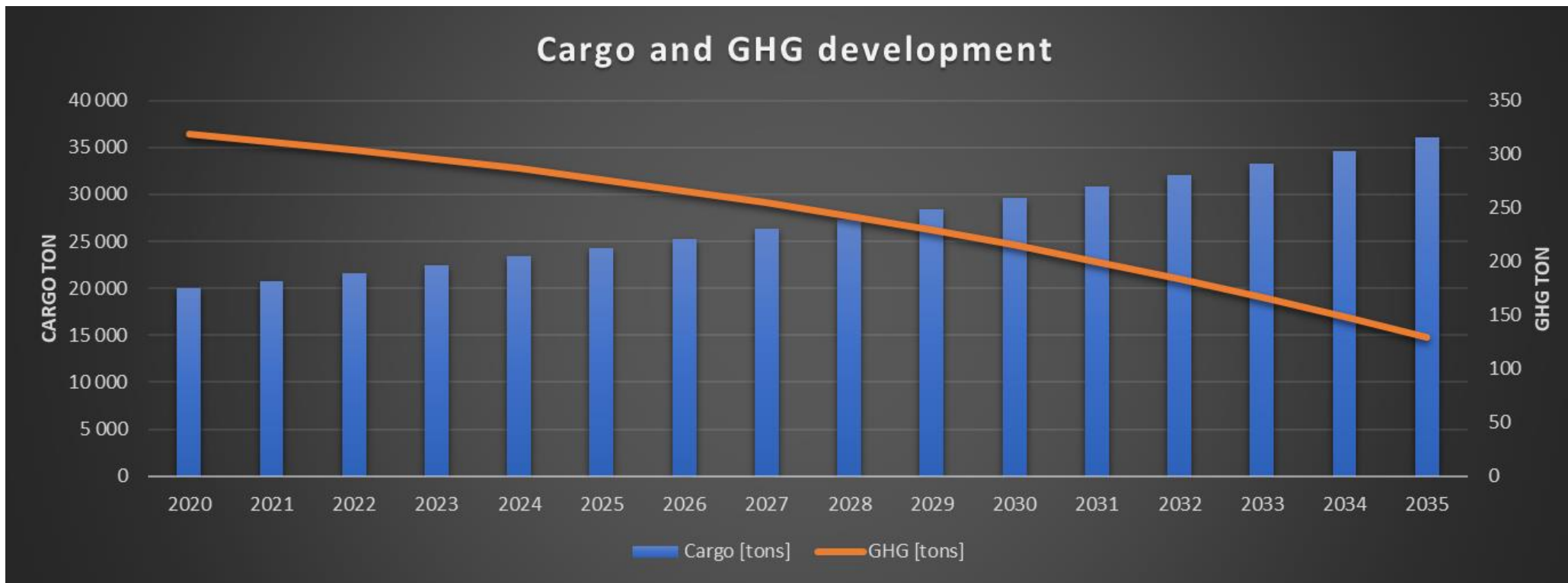
Mode levers



Levers	Road	Rail	Sea
Size			
Load factor			
Fuel & Electricity consumption			
Distance			
Fuel & electricity climate intensity			



Summary



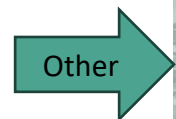
Risks

Transport demands increases more than savings (partly based on operational efficiency accomplishments)

Severe lack of biofuels

Cost per transported ton increase

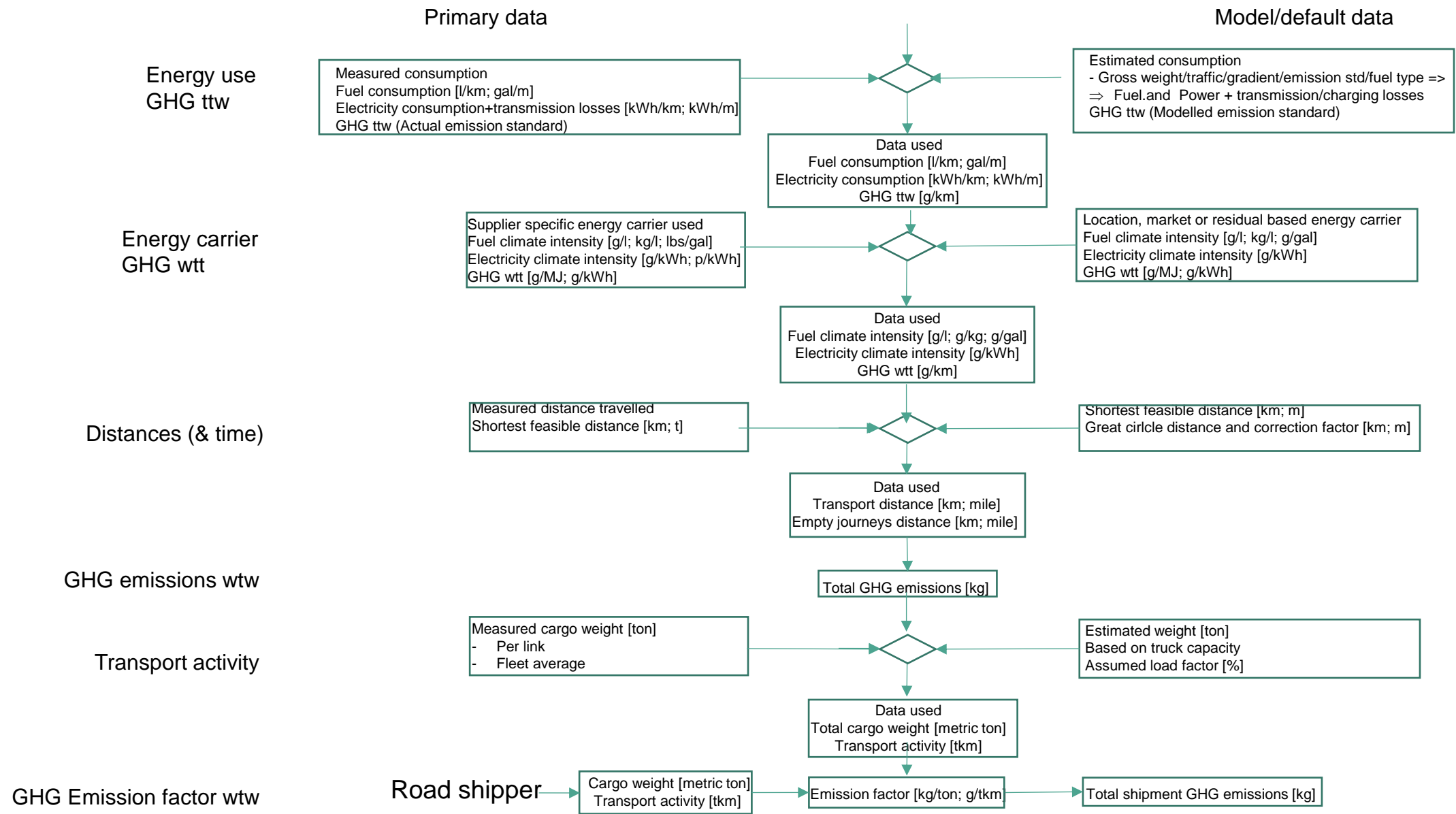
Other?



Data quality introduction



Road transport GHG-emissions?



Discussions



www.transportmeasures.org

Contact: info@transportmeasures.org

