



TRIPLEF

FOSSIL FREE FREIGHT

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CONCITO Klimatplaner og kilimatbudgetter –
hvad betyder det for godstransporten?

14th May 2019, Copenhagen

TRIPLE F

FOSSIL FREE FREIGHT

Triple F is the Swedish Transport Administration's research and innovation initiative contributing to the transition to fossil free freight transport in Sweden.

Expected results are reduced CO₂ emissions from freight transport according to set objectives through collaboration and knowledge-building.

Consortium

Led by:



Triple F objective and deliverables 2018-2030

Objective: contribution to fulfilment of climate objectives in Sweden:

-70% for domestic transports 2030 compared to 2010 and net zero 2045)

Triple F deliverables:

- R&I projects: 200+100 MSEK
- 21 PhD students (90 MSEK)
- Annual report and conference

Government (2018):

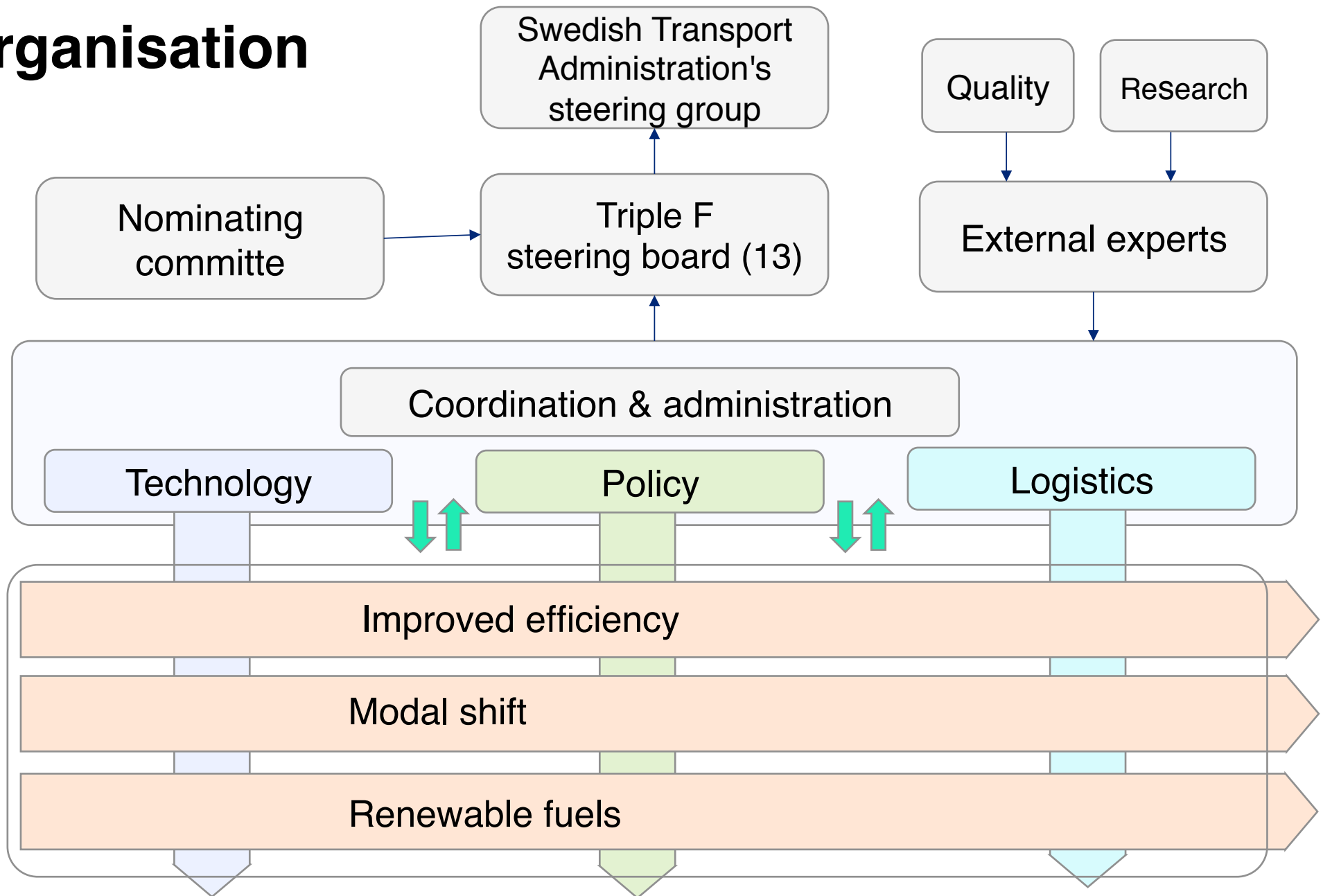
Efficient, high-capacity and sustainable freight transport – a national freight transport strategy


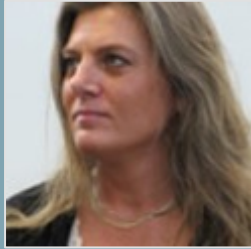

Triple F is a national platform for collaboration, innovation and impact

Triple F intention: "innovative projects"

- Powerful consortium (can expand over time)
- New collaborations
- New perspectives
- Achieve something more than "more of the same"
- So far fairly traditional call for proposals

Triple F organisation



| | | | | |
|--|---|--|---|--|
| |  <p>Maria Oscott (LSP)</p> <p>Programme director</p> |  <p>Jenny Karlsson (VTI)</p> <p>Logistics</p> |  <p>Patrik Klintbom (RISE)</p> <p>Technology</p> |  <p>Inge Vierth (VTI)</p> <p>Policy</p> |
| <p>Establishment projects 2018-2020</p> | <p>Road map</p> | <p>Logistics (SoA)</p> | <p>Monitoring Technology (SoA)</p> | <p>Monitoring Policy (SoA)</p> |

Establishment project: Monitoring

(work so far)

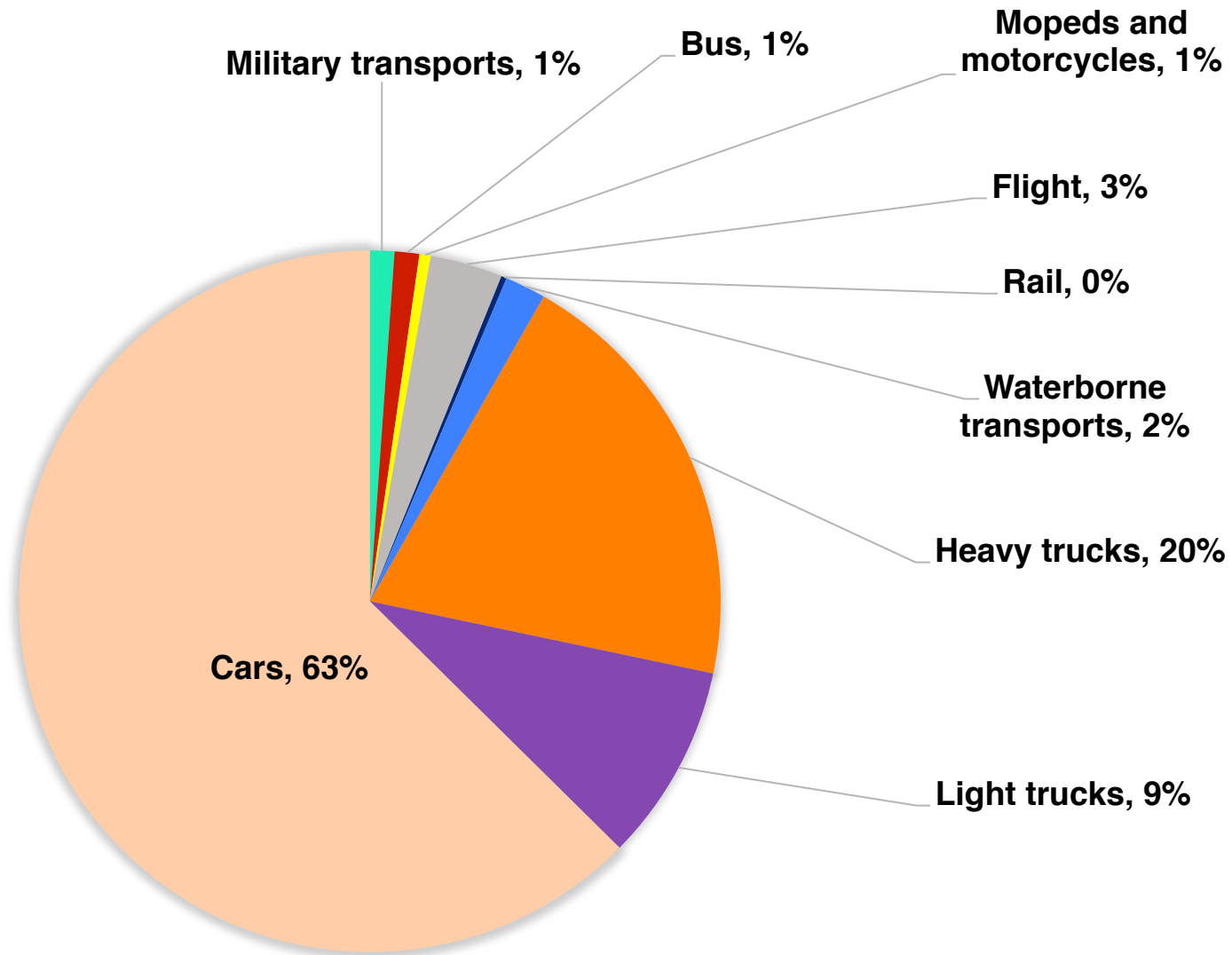
Objectives

- Consistent monitoring system
- Yearly report and database
- International comparisons
- Discussion of methods, missing statistics, system boundaries etc.



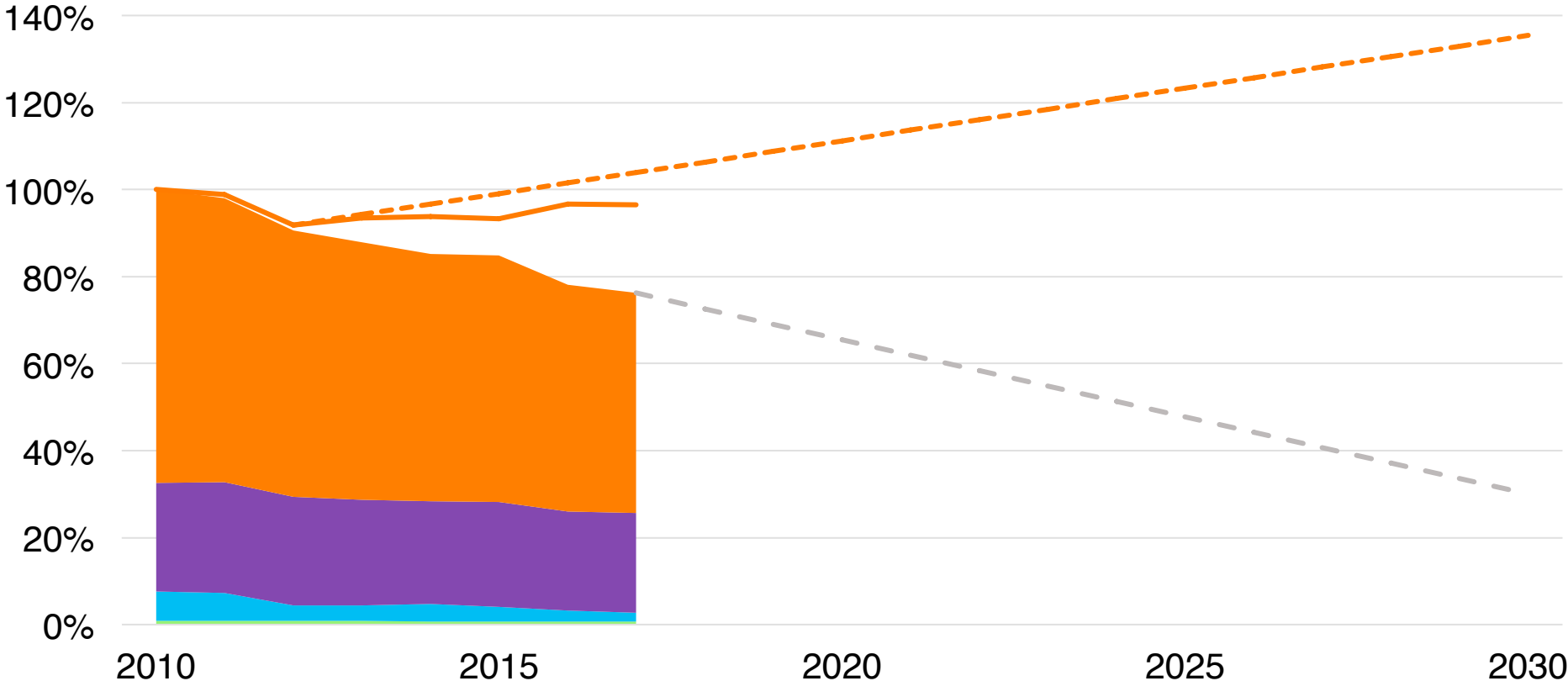
CO₂-emissions caused by all domestic transports in Sweden

CO2-emissions from different vehicle types 2017



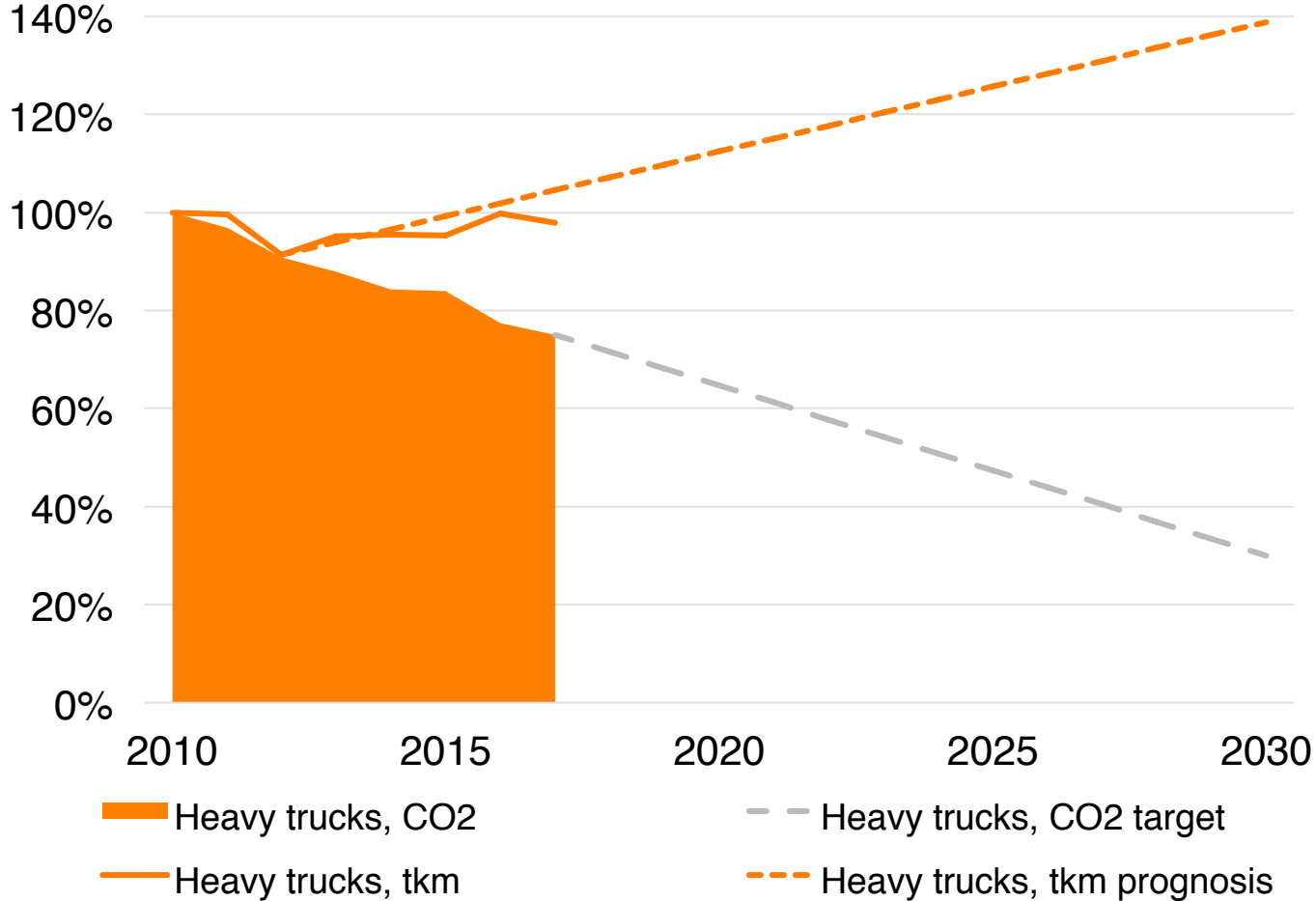
CO₂-emissions caused by domestic freight transports in Sweden

Comparison of tonne-km and CO2-emissions (domestic freight)



- Rail, CO2
- Light trucks, CO2
- Freight transport segments, CO2 target
- Freight transport segments, tkm prognosis
- Domestic waterborne transport, CO2
- Heavy trucks, CO2
- Freight transport segments, tkm

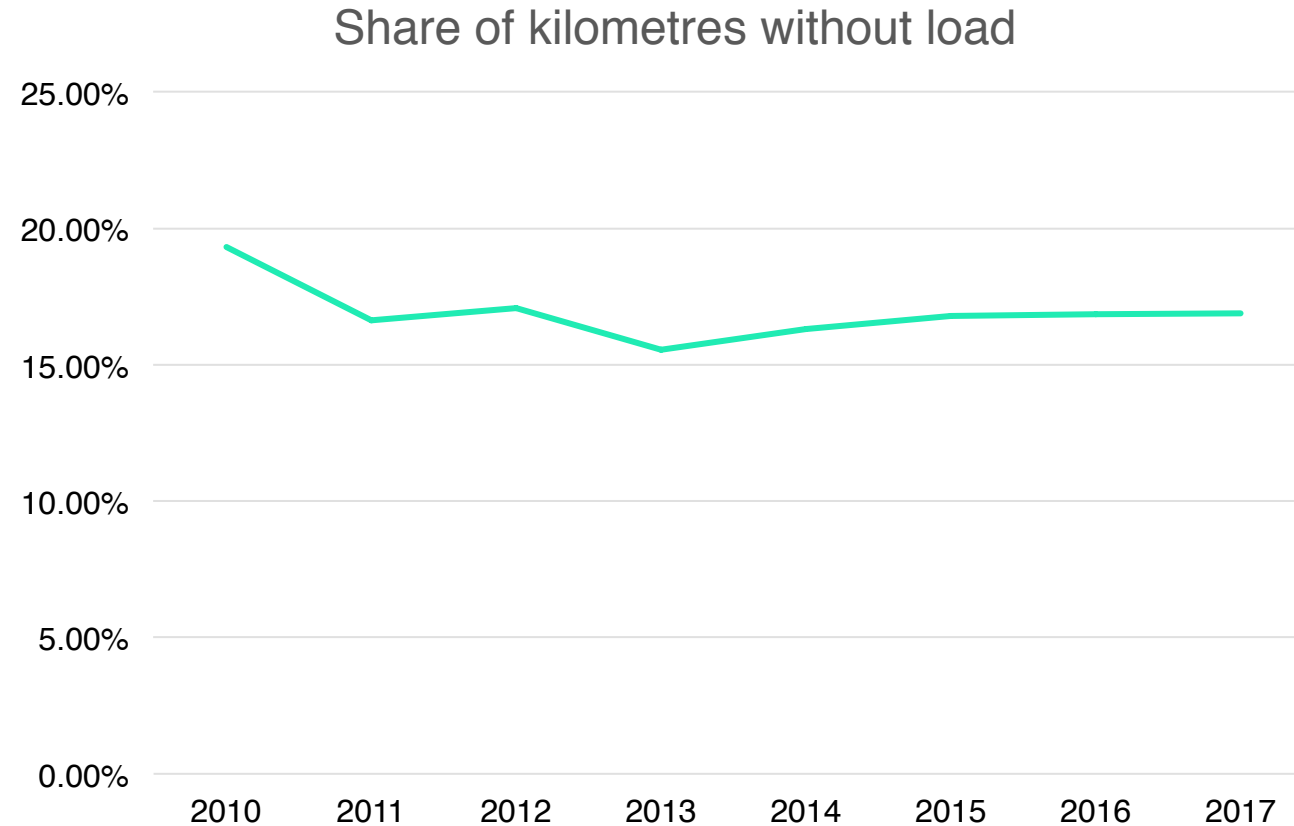
Completion of -70%-objective 2030 (heavy trucks)



A stylized illustration of a branch with several leaves, rendered in a light green color, positioned on the right side of the slide. The background is a gradient of green, darker at the top and lighter at the bottom.

Improve efficiency

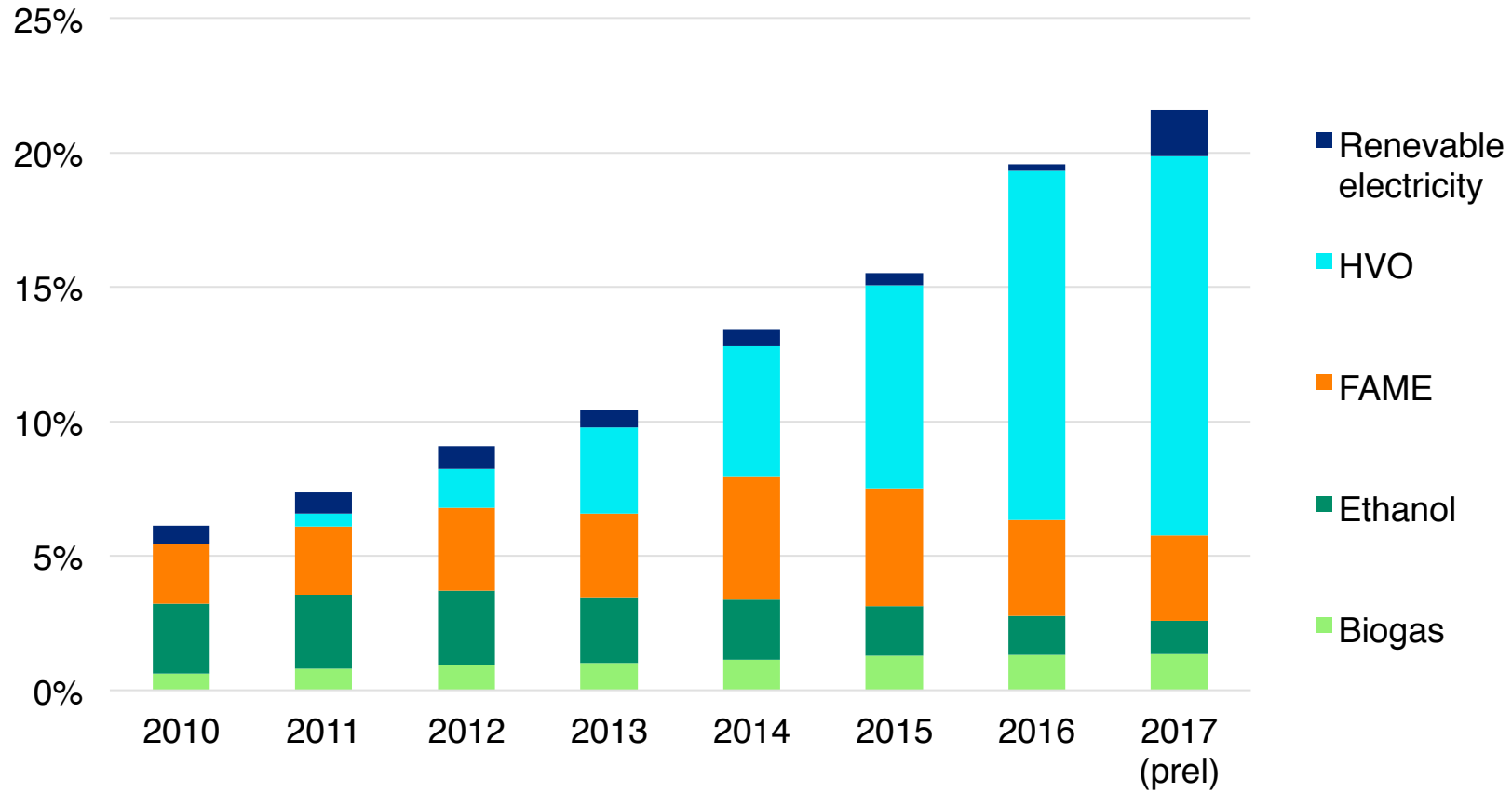
Limited information in official statistics; forest industry evaluates permission of 64 tonnes-trucks



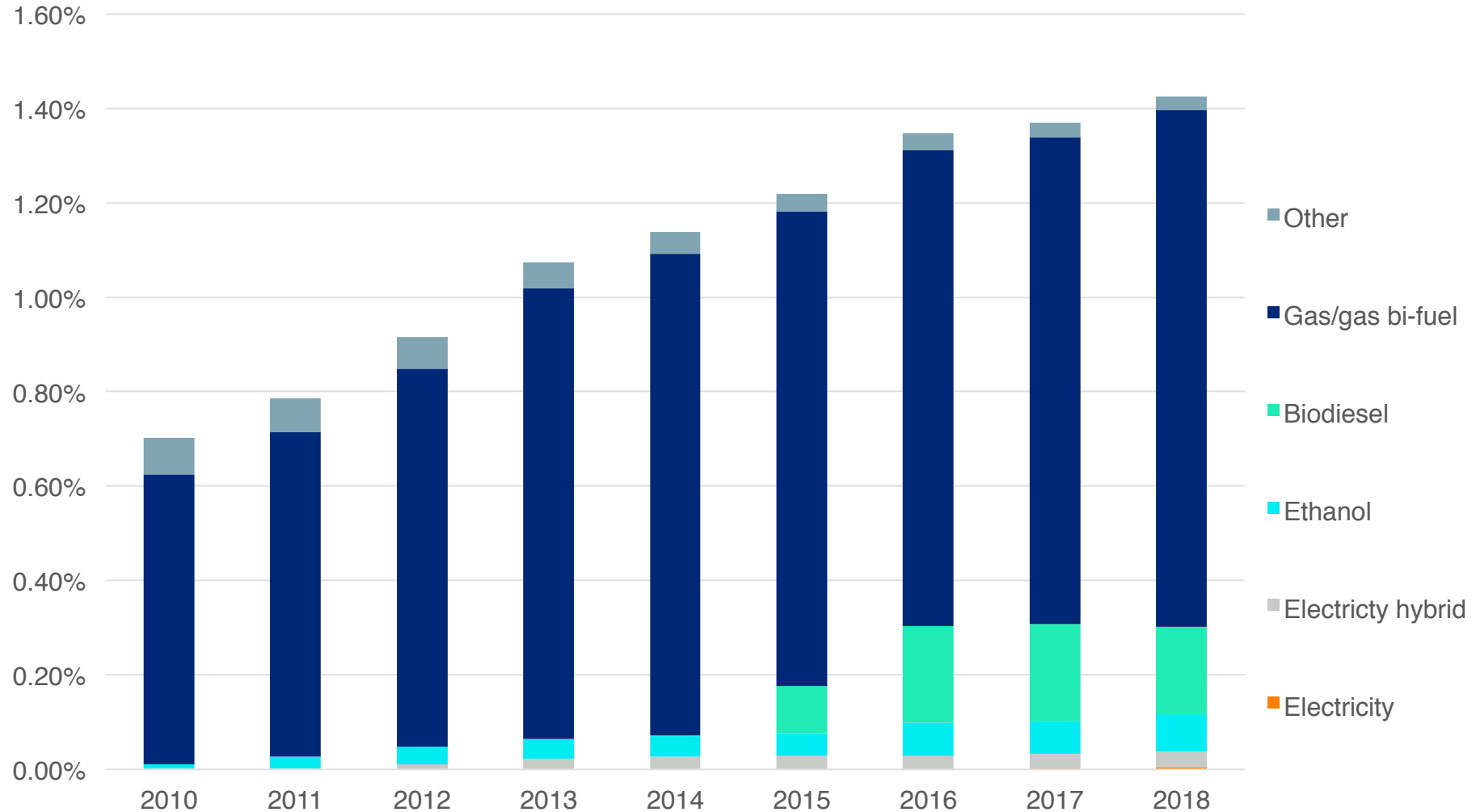
Use of renewable fuels

A stylized graphic of green leaves and branches is positioned on the right side of the slide, partially overlapping the main text area. The leaves are simple, rounded shapes with visible veins, and the branches are thin, curved lines.

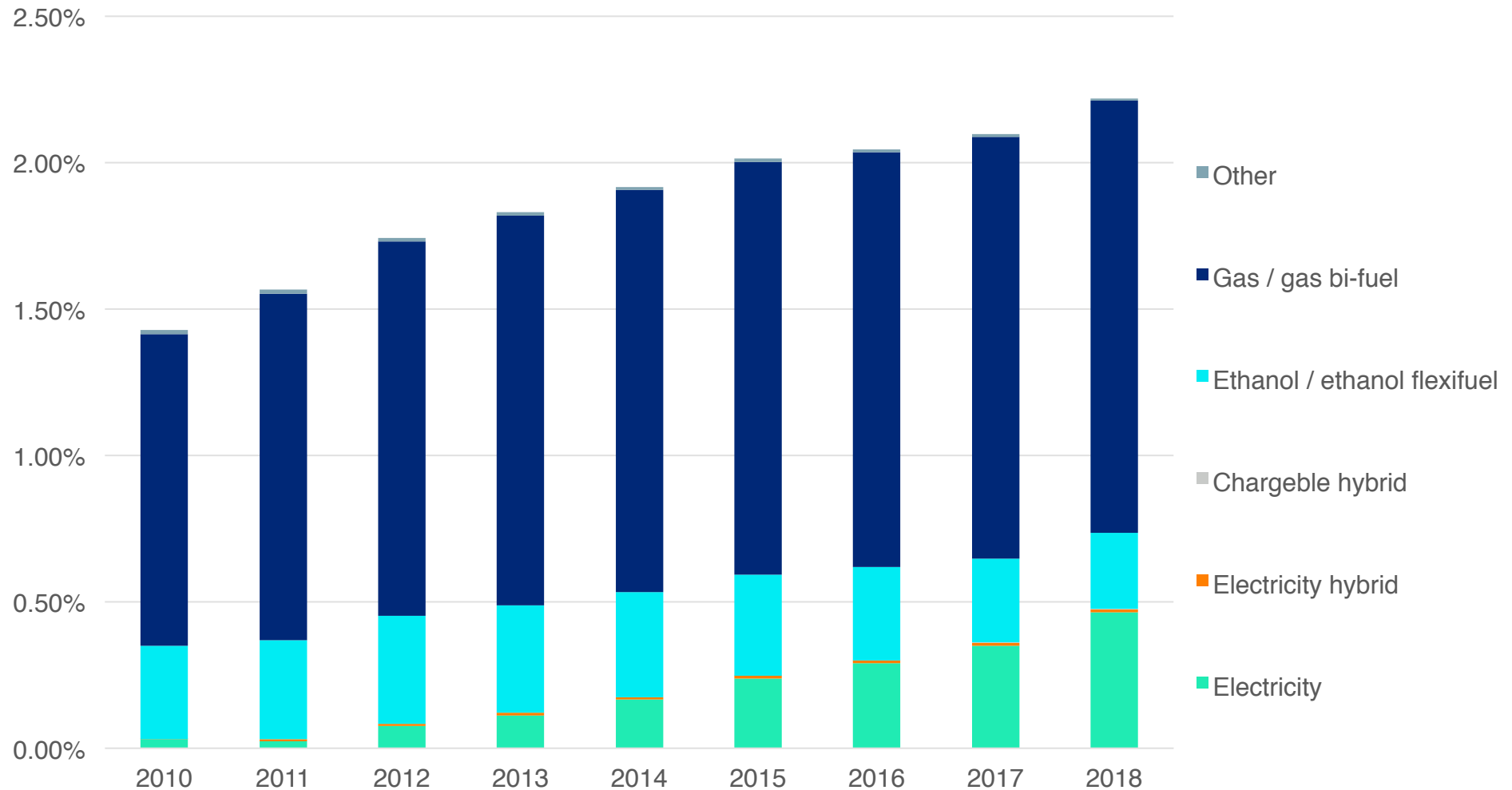
Renewable fuels in (whole) transport sector



Registered heavy trucks by renewable fuel (share of total)



Registered light trucks by renewable fuel (share of total)



Establishment project: Policy

(work so far)



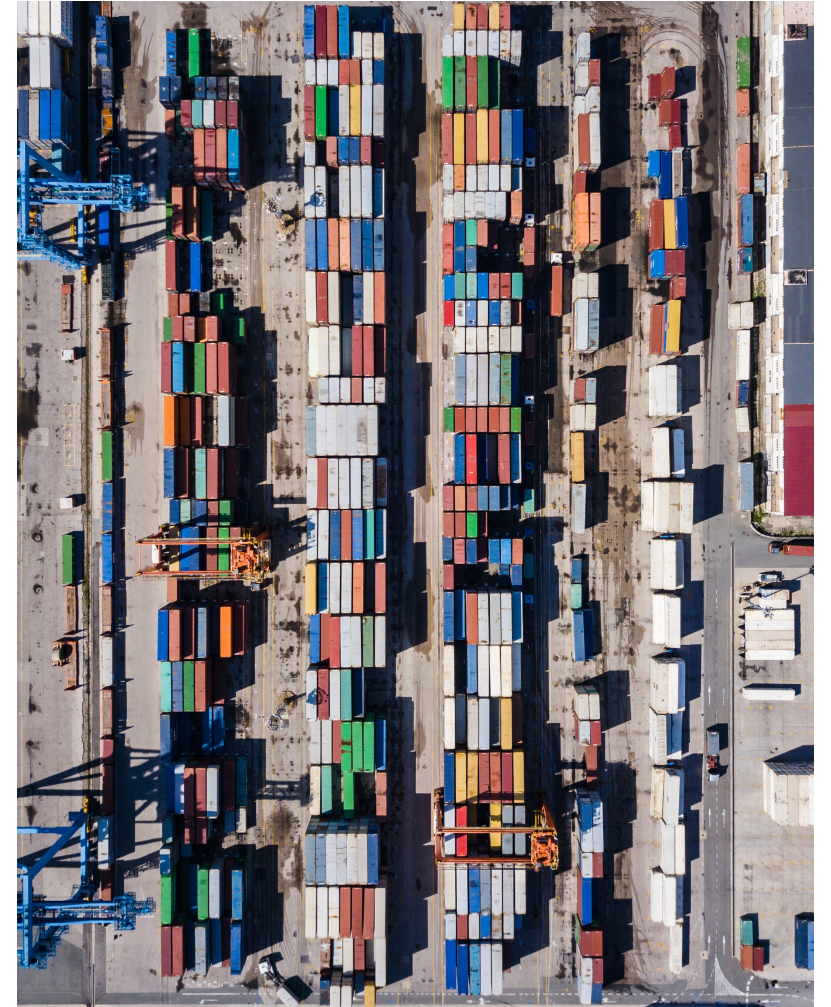
Objective: Analyze policy instruments to reduce CO₂-emissions caused by freight transports

Compile

- policy instruments
- research projects
- investigations

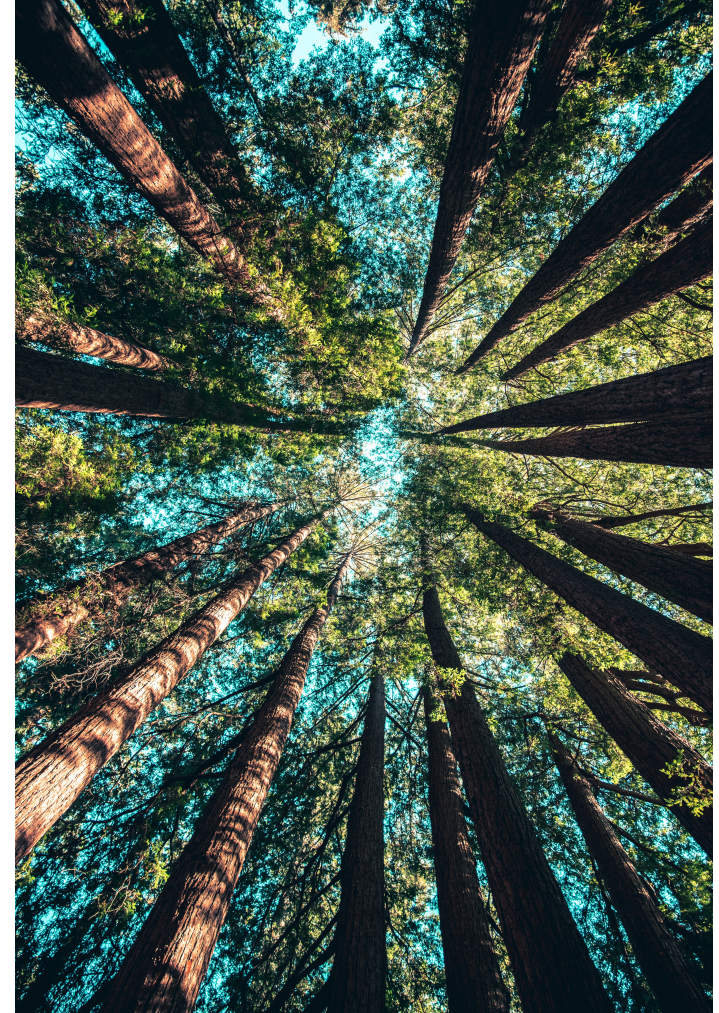
Identify

- "research gaps" as basis for Triple F
- "low hanging fruits"



Categorization of policy instruments

- **5 categories:** administrative, economic, informative, research and infrastructure
- **3 Triple F challenges:** improved efficiency, modal shift, renewable fuels
- **Type of transport** (distance, chains etc.)
- **Solutions that are promoted or restricted** (specific technique or technique neutral)
- **Actors addressed** (vehicle manufacturers, carriers, shippers etc.)



Material used so far

Reports

- Sterner & Coria (2018) "Policy Instruments for Environmental and Natural Resource Management"
- Nordic Council of Ministers (2018), Recent developments in freight transport in the Nordic countries and instruments for CO2 reductions
- Trafikanalys rapport 2019:2 Styrmedel för tunga miljövänliga lastbilar

Ongoing projects (VTI and Gothenburg University):

- Modal shift for an environmental lift
<https://www.vti.se/en/news/modal-shift-for-an-environmental-lift/>
- Carrots and sticks (sea transports)
<https://www.vti.se/en/Research-areas/carrots-and-sticks/>

R&I projects started first year

- Effektiva fossilfria logistiksystem för återvinningstransporter i tätorter (TFK)
- Fossilfri bygglogistik (Linköpings universitet)
- Biofuels for low-carbon shipping (IVL)
- Hållbara biogasbaserade transportlösningar för export (RISE)
- Framtida fossiloberoende tunga transporter inom gruv-/stålbranschen (Luleå univ.)
- HCT intermodalt – en genomförbarhetsstudie (COOP)
- Utvärdering av DME som drivmedel m a p partiklar och ljudnivå (VOLVO)
- Förstudie om effektiva återvinningsflöden (VTI)
- Förbättrad fyllnadsgrad för e-handel (VTI)
- Goods Distribution Challenge 2019 (RISE)
- Urbana distributions-system - vägen mot transporteffektiva städer (Lunds univ.)
- Förlängda sjöben: När- och kustsjöfartens potential (Region Skåne)

**Thank you very much
for your attention!**

**For more information
triplef.lindholmen.se**