



120 ÅR 1901-2021

I miljøets tjeneste siden 1901

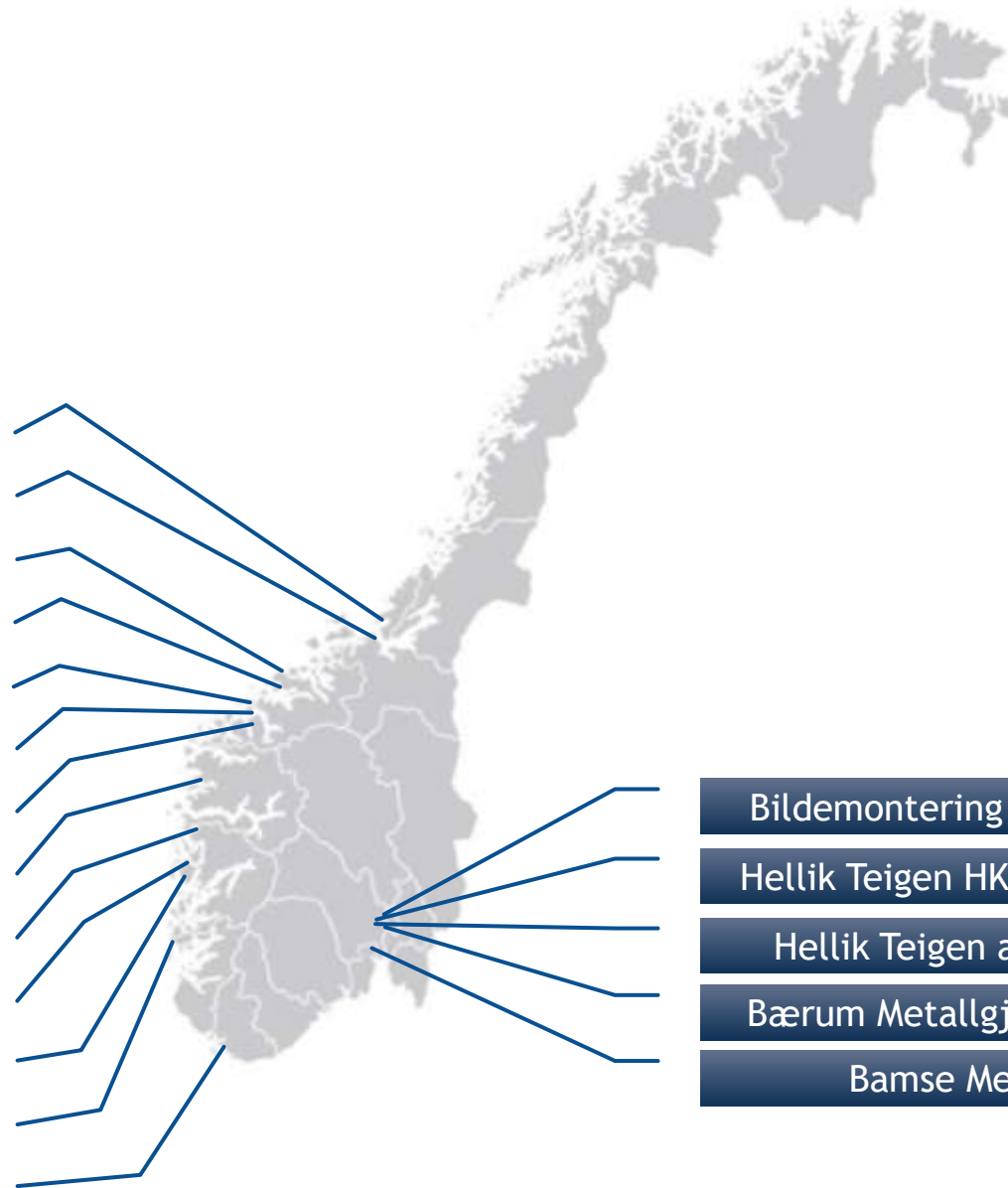
Hellik Teigen Group

- ▶ Family business founded in 1901
- ▶ Since its early beginnings as a traditional scrap merchant, the company has developed to become a modern, nation-wide recycling and industrial enterprise
- ▶ Recycling and trading of iron and metals
- ▶ 1 700 000 000 NOK
- ▶ 135 employees
- ▶ Currently handles 250.000-300.000 tons pr year
- ▶ 5 facilities on the east-coast and 13 facilities from Haugesund to Trondheim
- ▶ Certified under NS-EN ISO 9001:2015 and NS-EN ISO 14001:2015
- ▶ New investments 2024-2026



Our locations

- Fosen Gjenvinning
- Orkdal Gjenvinning
- Vartdal Gjenvinning avd. Kristiansund
- Tofte Gjenvinning
- Vartdal Gjenvinning avd. Ålesund
- Green Yard avd. Ulsteinvik
- Vartdal Gjenvinning avd. Vartdal
- Vartdal Gjenvinning avd. Florø
- Norscrap West avd. Mongstad
- Norscrap West
- Norscrap West avd. Rådalen
- Norscrap Karmøy
- Green Yard avd. Feda

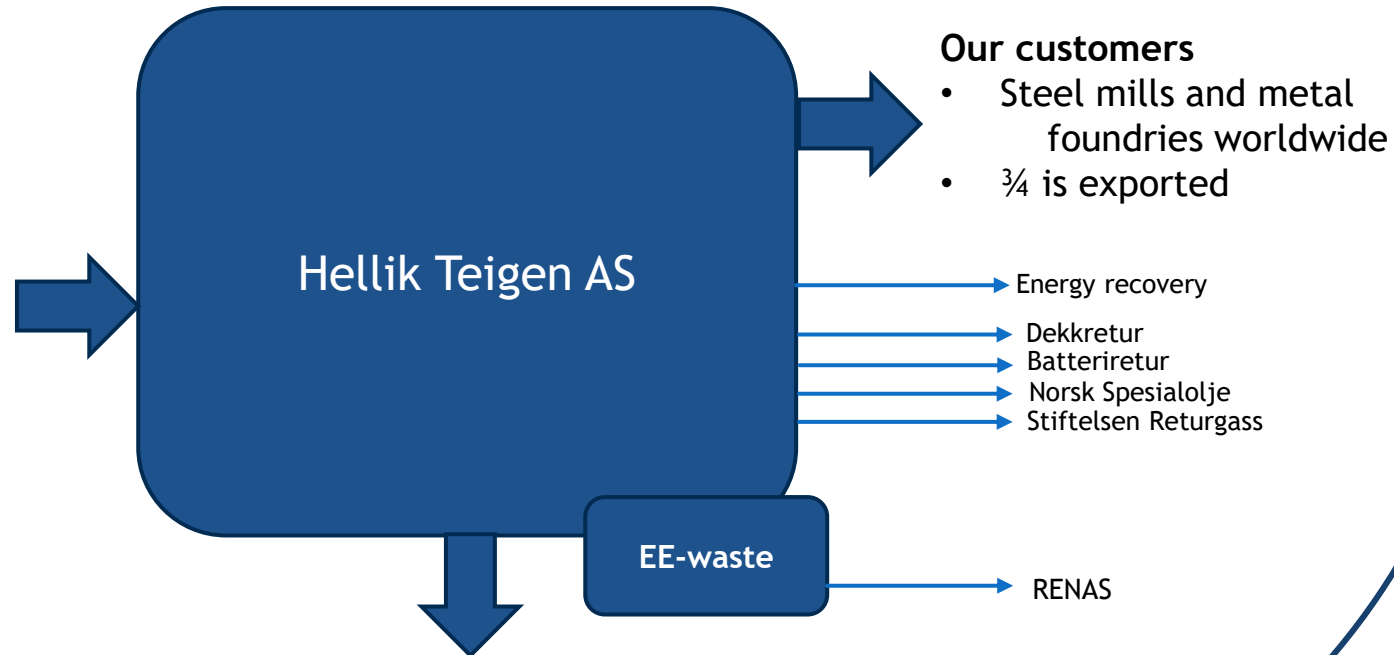


- Bildemontering Ringerike
- Hellik Teigen HK Hokksund
- Hellik Teigen avd. Lier
- Bærum Metallgjenvinning
- Bamse Metall

What we do

Our suppliers

- Industrial companies
- Private individuals
- Construction companies
- Waste companies
- Hydropower companies
- Oil companies
- Shipowners
- Recycling points
- Train companies



Our customers

- Steel mills and metal foundries worldwide
- $\frac{3}{4}$ is exported

- Energy recovery
- Dekkretur
- Batteriretur
- Norsk Spesialolje
- Stiftelsen Returgass

→ RENAS

Other business areas

- Property rentals
- Quarry and crushing plant

Since Norske Tog was established 2017 the following vehicles have been scrapped:

- ▶ Frame agreement with Norske Tog
- ▶ Class 69: 3 pcs
- ▶ Class 70: 10 pcs
- ▶ Class 92: 2 pcs



What has been done until now?



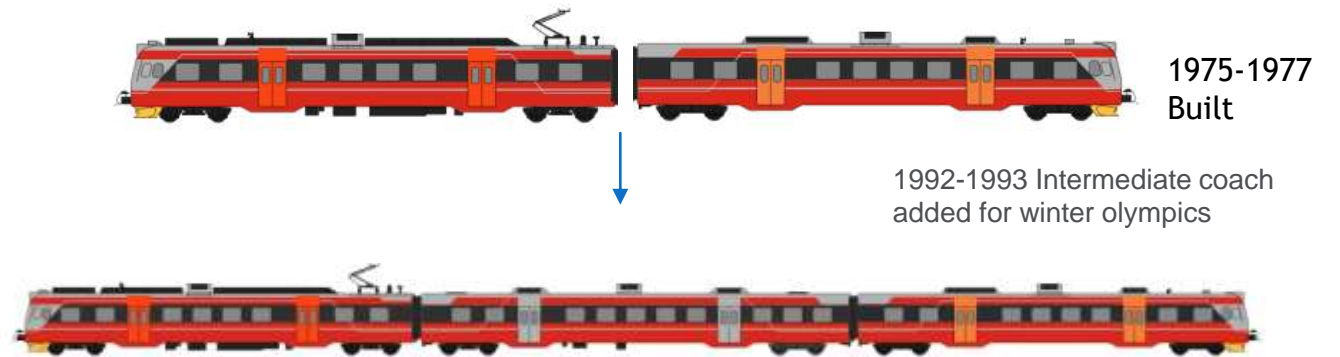
Several upgrades and life extensions of the vehicles



Technical as well as interior



Re-use

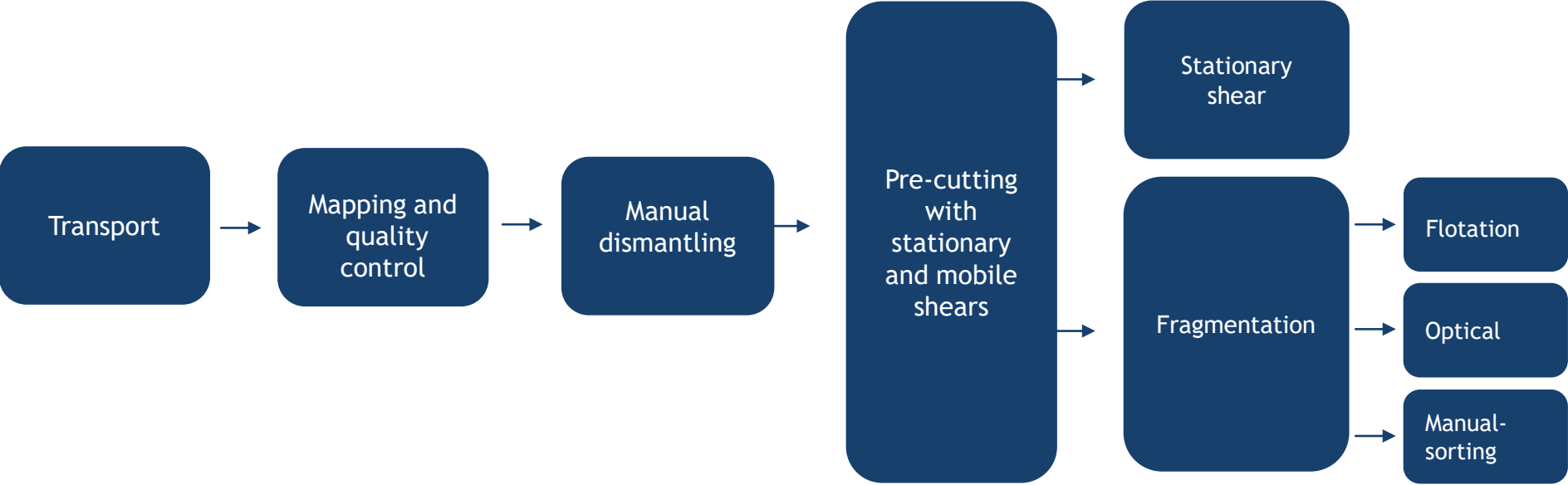


Phase-out planning 2024-2030

- ▶ Norske Tog will phase out 52 trains from 2024-2030
- ▶ Total amount: 7200 tons
- ▶ Today that constitutes approx. 1600 tons to energy recovery

	TYPE 69C-II	TYPE 69D	TYPE 69G/H	TYPE 70	TYPE 92
Weight pr train in kg	133 700	131 500	132 600	206 200	99 000
Amount of vehicles	13	14	12	6	7
Total weight	1 738 100	1 841 000	1 591 200	1 237 200	693 000

Recycling process



Manual dismantling

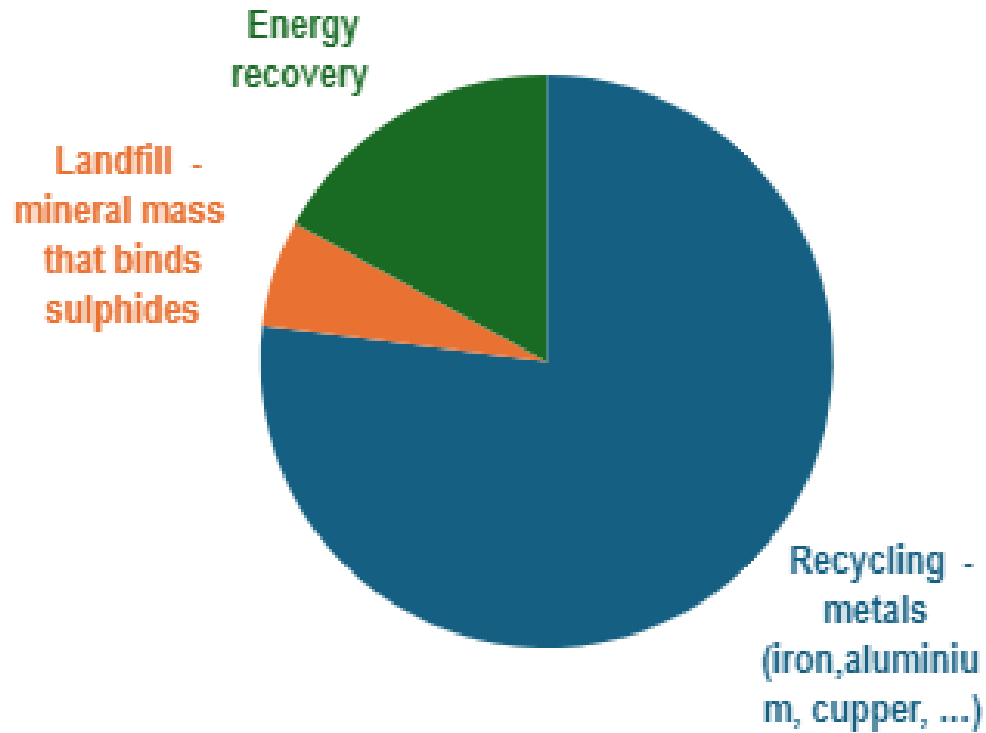
Current legislation - dangerous materials

- ▶ Oils
- ▶ Coolants from HVAC, F-gases
- ▶ PCB
- ▶ Lighting tubes
- ▶ Electronic equipment/EE-waste



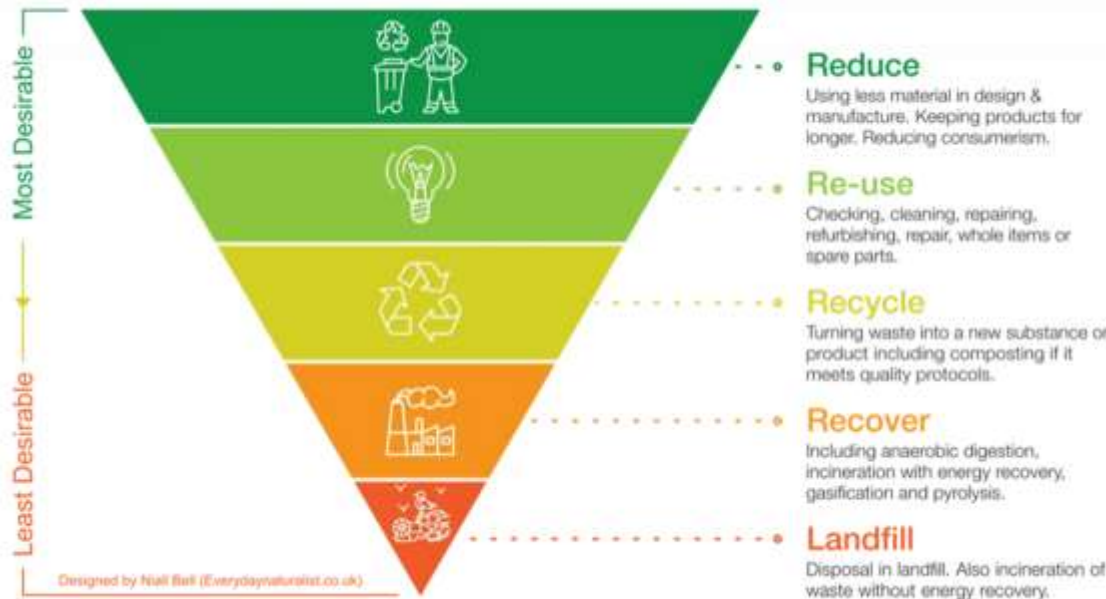
Material fractions - top level

TRAINSET TYPE 69 C2



- ▶ Metals is key business area of Hellik Teigen
- ▶ 16 – 24 % of material fractions today end as either energy recovery or landfill

New project: Mapping of materials



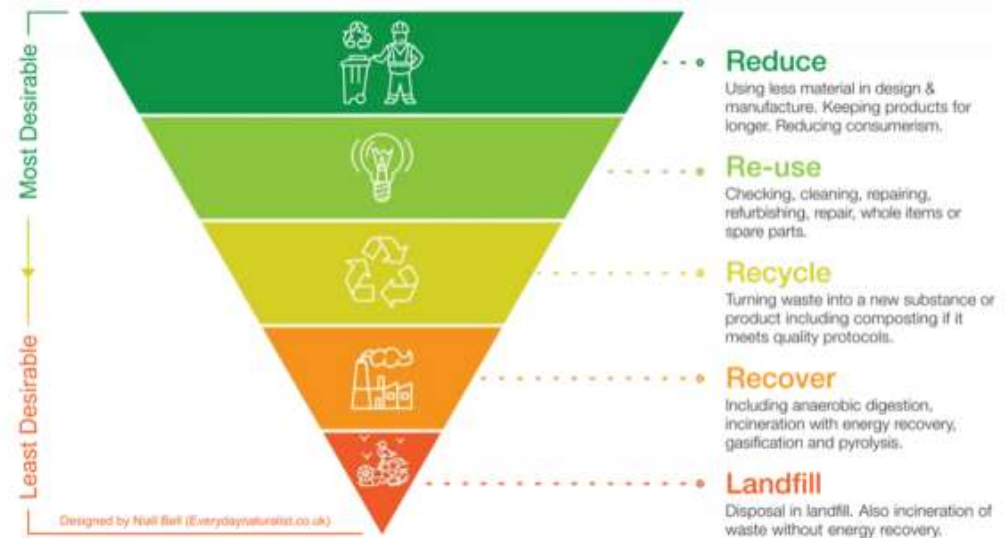
- ▶ Started February 2024
- ▶ 2-year project together with Norske Tog

Goals:

- ▶ Reduce the fractions that goes to energy recovery and disposal
- ▶ Find sustainable downstream solutions

Material mapping: how to find new solutions?

- ▶ To find new ways to reduce the energy recovery, we need to know exactly what the train contains
 - ▶ Dismantling the whole train
 - ▶ Sorting it into different fractions
 - ▶ Can these fractions be moved from energy to either re-use or recycling?





Kun gyldig billett / Valid ticket only

Sammenheng med billettkontroll

Sammenheng med billettkontroll





Kun gyldig billett



Kun gyldig billett

Kun gyldig billett
Valid ticket only



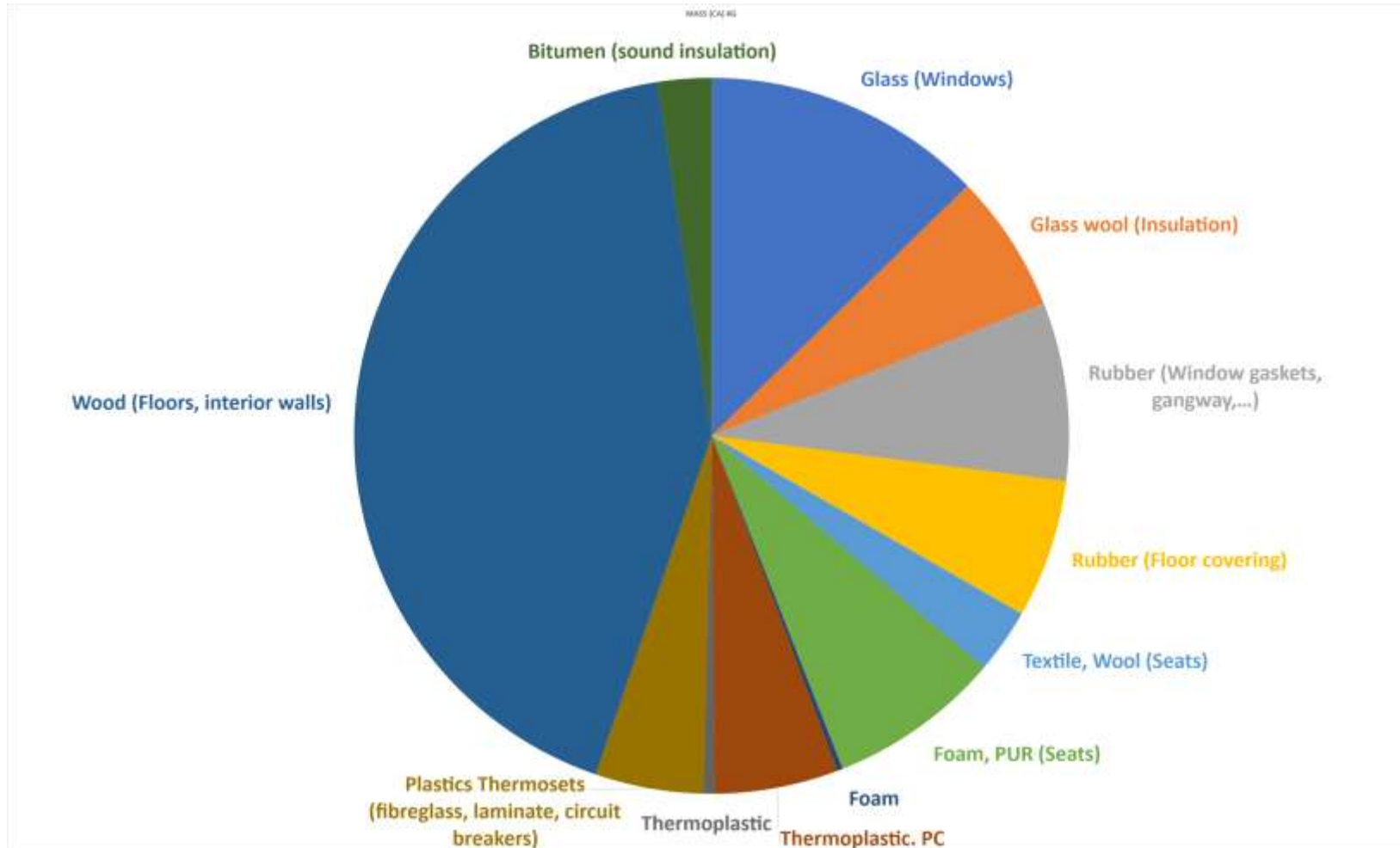
390







Material mapping: More than 15 material fractions



Downstream solutions

Material has downstream solution - Implemented as part of project	Material has downstream solution -but not implemented for train vehicle	No material recovery solution -> Energy recovery
Glass (windows,interior partitions)	Textile (wool-seat covering)	Fibreglass (interior side walls, toilet cabins, roof elements)
	Thermoplastics (PC, seat backplate, light cover)	Plastic thermosets (Laminate on wood panels)
	Foam (PUR, seat cushions)	
	Rubber (Gangway, gaskets, ..)	
	Wood (Floors, interior walls)	
	Glass wool (5 cm insulation)	

Material mapping: Preliminary results

▶ GLASS

- ▶ Contains approx. 1500kg glass pr train. (est 78 000 kg total for 52 trains)
- ▶ Glass can be sent to Glava for recycling
- ▶ The glass fraction is then moved from disposal to recycling in the waste hierarchy



Material mapping: Preliminary results

- ▶ Textile - *still an ongoing process..*
 - ▶ New legislation from 1.1.25 on textile use on clothes
 - ▶ Could open new possibilities for sustainable downstream solutions
 - ▶ Norsk Tekstil Gjenvinning processes textiles into fibers
 - ▶ Selbu Spindleri are testing the used fiber-material to make new thread
 - ▶ Re-use of the material as it is through sewing-companies



Material mapping: Preliminary observations and summary

- ▶ Some materials are easy and cost-effective to dismantle; for example, windowglass mounted in rubber gasket
- ▶ Mixed materials for example laminate on plywood are more challenging
- ▶ Many material fractions have limited economic value and downstream solutions, especially in small volumes
- ▶ Possible downstream customers often prefer “virgin” material because of lower raw material prices
- ▶ Downstream customers require documentation for what the materials they receive contains
- ▶ Original equipment manufactures are unwilling to take used parts in return
- ▶ EE-waste
 - ▶ Good downstream solutions but limited specific reporting on actual content (ongoing process) (Rear Earth Elements)

New investment 2024-2026

- ▶ New shredder with BAT and continue the investments in the newest sorting technology
- ▶ 3 sidetracks
- ▶ Indoor dismantling
- ▶ New water treatment plant with the capacity to clean surface water from the entire recycling plant of approx. 100.000 sq m
- ▶ Improve sustainability reporting (e.g. CSRD) both within own business and as support for suppliers and customers in their sustainability work



Løesmøvelen

Løesmøvelen

Løesmøvelen

Løesmøvelen

Løesmøvelen

Proiserudbakken

Proiserudbakken

Stein

228 Moen

Loselva



