



REMOBILISE WEBINAR

MATERIALS - BRAM HENDRIX



Who is the rai association?



- RAI Vereniging (RAI Association) is the trade organisation of manufacturers and importers of road transport vehicles, parts and accessories for these vehicles and, suppliers of garage equipment.
 - **The RAI association exists of 9 mobility sections:**
 - Bicycles
 - Motorbikes
 - Passenger cars and light commercial vehicles
 - RAI Aftermarket
 - **RAI Automotive Industry NL**
 - RAI CarrosserieNL (Body shop)
 - RAI Equipment
 - Scooters
 - Heavy commercial vehicles

Furthermore, RAI is Founder and co-owner of RAI Amsterdam, and shareholder of Autorecycling Nederland (ARN).

AUTOMOTIVE ROADMAP 2020 – 2030

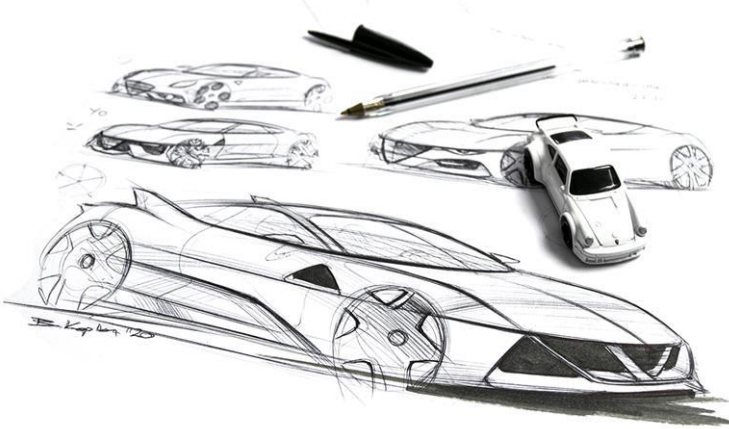
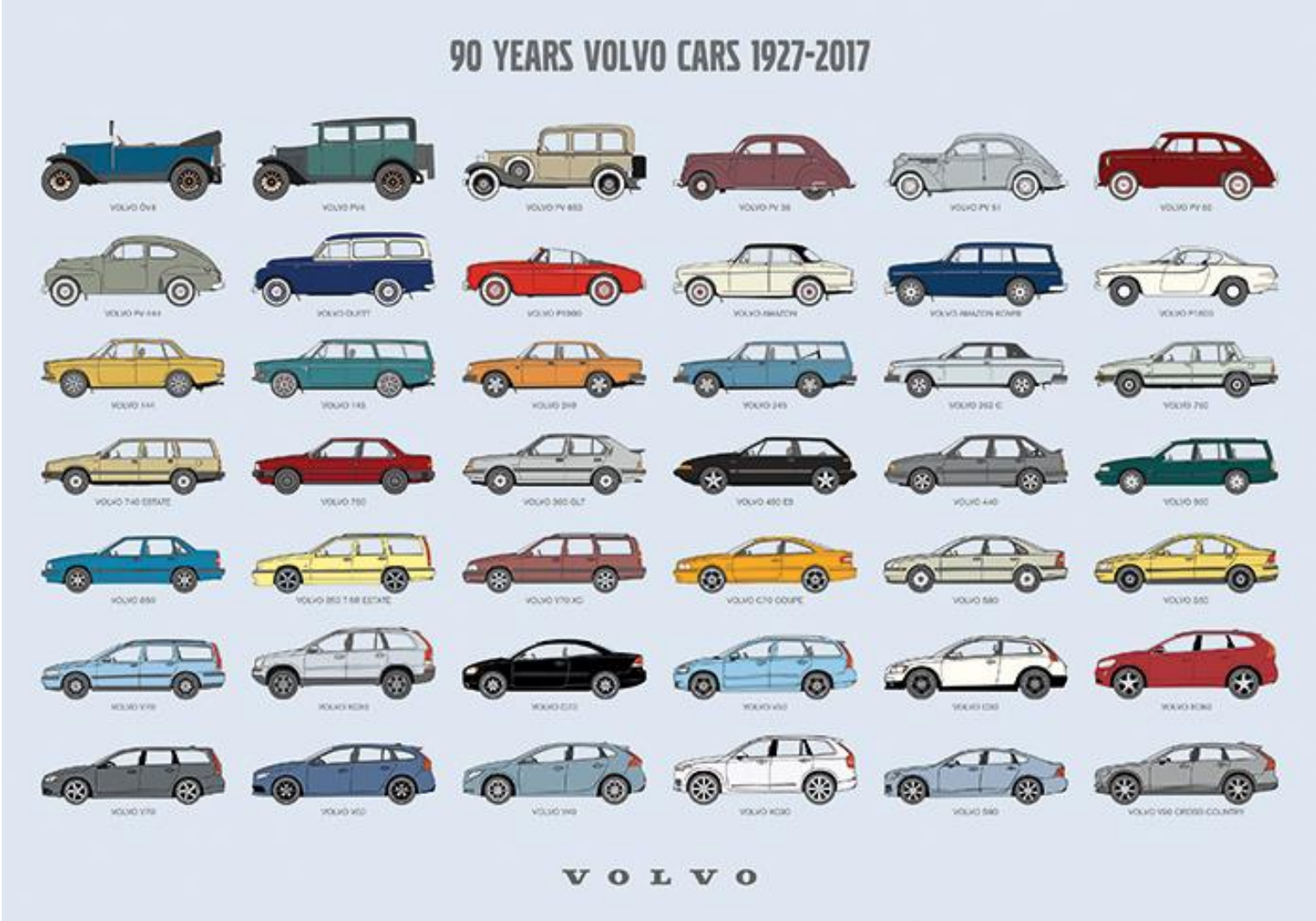
In The Netherlands we are continuously working hard on achieving zero emission, zero accidents and zero congestion. We contribute to these goals with a number of thematic programs based on the strength of the Dutch Automotive sector:

- Smart Mobility
- Green Mobility
- **Manufacturing & Materials**
- Human Capital
- Internationalization



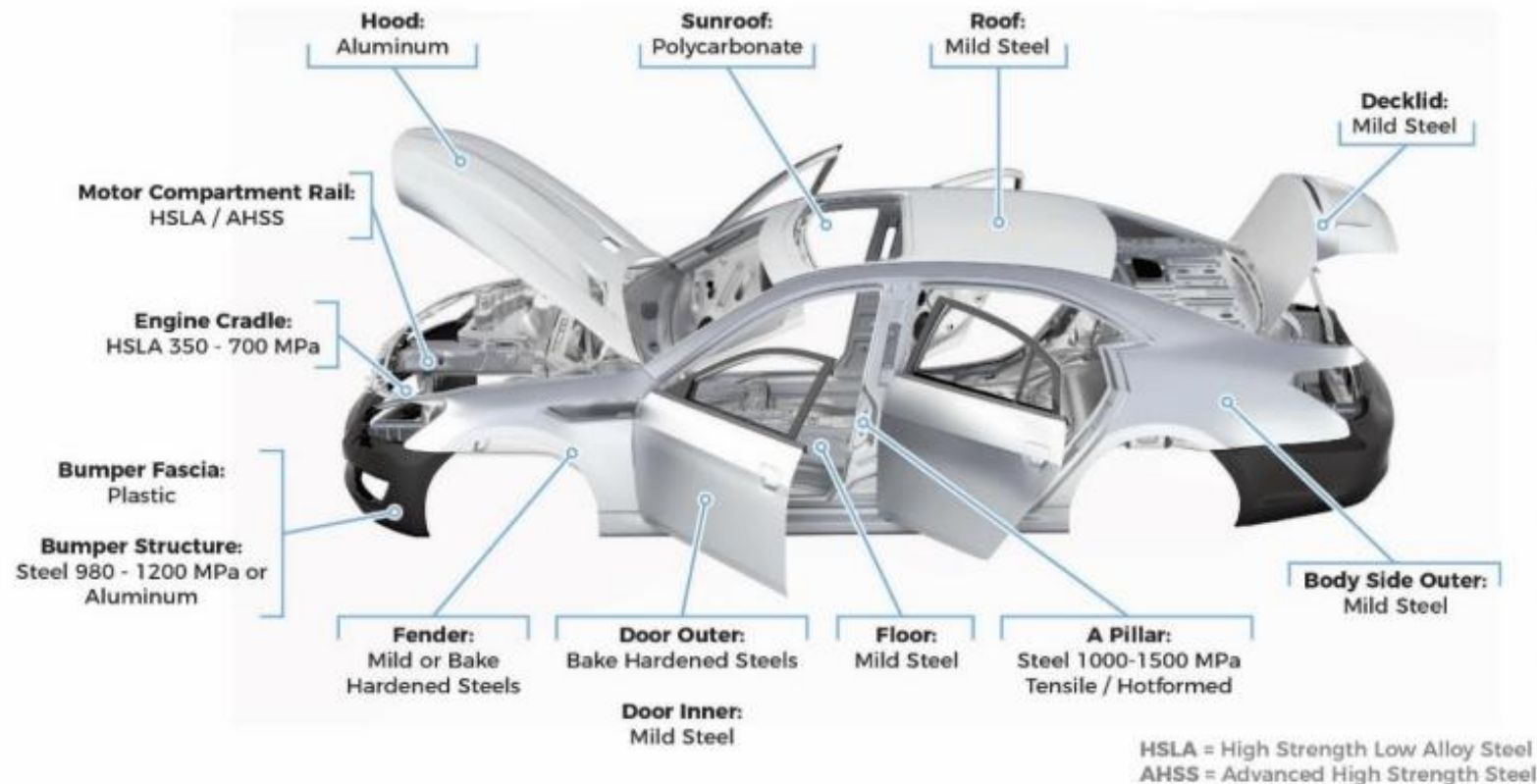
Please, read the [HTSM Automotive Roadmap](#) 2020-2030 for more details about these challenges.

MATERIALS FOR FREEDOM OF DESIGN



REDUCE WEIGHT TO REDUCE FUEL CONSUMPTION

- Original equipment manufacturers (OEMs) are facing criticism from different government bodies and NGOs, as almost a [quarter of all greenhouse gas \(GHG\) emissions](#) are from road transport.
- It is expected that a 10% reduction in curb weight can result in a 6%-8% reduction in fuel consumption.



BIOBASED MATERIALS



**Let's rediscover
the power of hemp!**

EXAMPLE



Nature wins!

HEMP FIBRE FOR A SUSTAINABLE FUTURE

Hemp fibre is the natural and environmentally friendly alternative for industrial applications. It's quite simple: hemp fibre with a supplement of biodegradables can be used as an alternative to plastic, cotton, wood, steel and synthetics. You name it, and a hemp version can be produced: from clothing to paper, from tableware to automotive and scooter parts, from musical instruments to bird feed, from yoga mat to furniture. There are literally endless possibilities.

BENEFITS OF HEMP-BASED INDUSTRIAL APPLICATIONS

- Automotive interior parts from hemp are lighter and safer compared to glass fibre. In addition, they are lighter and more durable than steel and won't rust
- Hemp based construction materials are more user-friendly than materials based on glass or rock wool
- Hemp paper lasts many times longer than paper from trees
- Hemp fibre-based bioplastic is many times stronger than oil-based plastic. And biodegradable!
- The production of petrochemical plastics creates tremendous CO₂ emissions. Hemp actually absorbs CO₂!
- The production of cotton requires huge amounts of pesticides. Hemp requires virtually none!
- With the development of hemp nano materials, hemp fibre even becomes suitable for use in batteries and accumulators

CIRCULAR ECONOMY



CAR RECYCLING, IT'S WHAT WE DO.

About us

Together with our partners, ARN has succeeded in increasing the gainful reuse of end-of-life vehicles to over 98 per cent, by weight. Recycling targets for starter and car batteries are also being easily exceeded. But the quickly changing complexion of the automotive world is setting new challenges. Read how ARN is meeting them.



DUTCH AUTOMOTIVE ROADMAP

MATERIALS & DESIGN

Dutch Automotive Materials and Design

- **Light weight**

- Towards zero emission
- More range



- **Bio-based**

- Less CO2 Emissions
- Saves energy sources



- **Circular economy**

- Renew
- Re-use
- Recycling
- Remanufacturing



**RENEW
REUSE
RECYCLE
REMANUFACTURE**



**AUTOMOTIVE
INDUSTRY NL**