Innovationsdriven tillväxt – Case Neste

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Dr. Lars Peter Lindfors, Teknologi direktor



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The grey area represents the world's oil consumption (4200 Mt/a), still growing 1.5% per annum

- Neste's renewable fuel production
- 3 million electric cars, globally



Global jet fuel consumption



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Global jet fuel consumption

- Breakthrough innovations and several technological solutions are needed for combatting climate change. Let's not put the technologies against each other!
- Energy efficiency improvements and innovations in renewable transportation, bioeconomy as a whole and development of the circular economy are key areas of development.

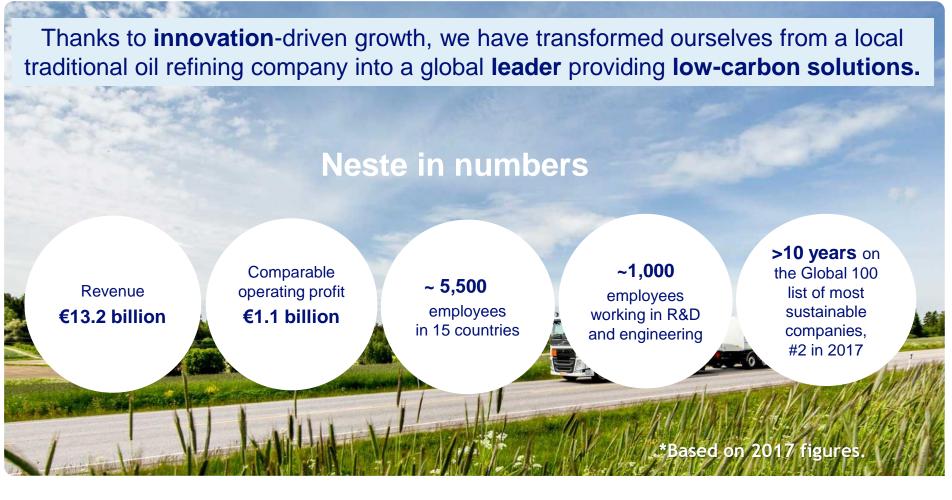


PROGRESSIVE REGIONS blaze the trail Selected countries' envisioned renewable fuel targets 2030











From low-quality renewable raw materials to high-quality renewable products

We are the world's number

1

renewable diesel provider with a capacity of 2.7 million tons (planning to reach 4 Mt in the early 20's)

Waste and residues account for nearly

80%

of our renewable aw materials usage Neste MY Renewable Diesel helps reduce GHG emissions by an amount equaling emissions of

>3

million passenger cars annually



Key success factors in our transformation

Strategic vision

Risk taking

Competence

Innovation

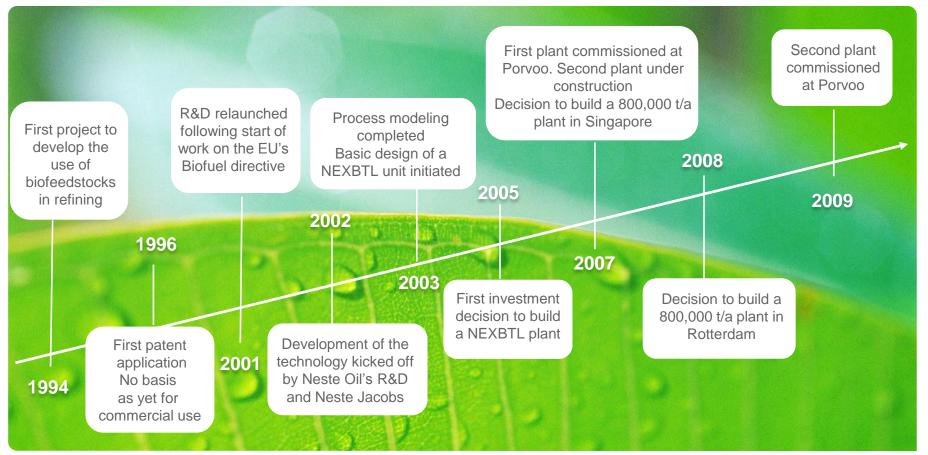
Ability to focus

Hard work/patience





Innovation pathway for NEXBTL renewable technology







Neste's proprietary Renewable Diesel (NEXBTL) process

Feeds in:

Lipids; mono-, di- and triglycerides

- Used cooking oil
 - Animal fat
- Waste/residual streams from the vegetable oil industry
- Algae oil (R&D phase)

Pretreatment Units

Turning the feedstock into pure glycerides by various pretreatment steps removing e.g. metals, phosphorous and plastic waste

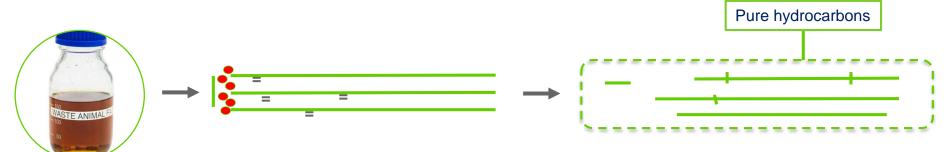
NEXBTL Process Units

Hydrotreatment and Deoxygenation → Removing nitrogen and oxygen

Isomerization →
Creating the final product quality, optimizing e.g.
the cold properties

Product

- Behaves exactly like fossil diesel
- Can be blended without limitations
- Fully compatible with existing infrastructure
- Excellent solution for improving air quality
- Offers up to 90%
 CO₂ reduction





Responsible choices in the city:

Renewable cities of California

 Several large cities in California and elsewhere use Neste MY Renewable Diesel in their city fleet, lowering their GHG emissions by up to 90% and improving the local air quality.

Responsible choices in the air:

Cleaner flights

 Neste MY Renewable Jet Fuel has been used on more than 1000 international, commercial flights.

Responsible choices at home:

Redefining the future of plastics

 Neste's partnership with IKEA provides the basis for future production of renewable, bio-based materials utilizing Neste's renewable solutions in polymer production.

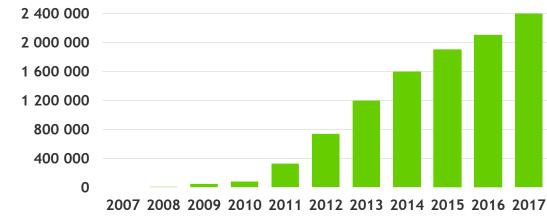


Flexibility - Building a global sustainable feedstock pool

All our feedstock comply with EU RED and/or US EPA / CARB sustainability requirements



Significant increase in waste and residue use (ton/a)





Expanding the feedstock portfolio further

Short term



Waste animal fats, waste oils, residue and side streams

Long term



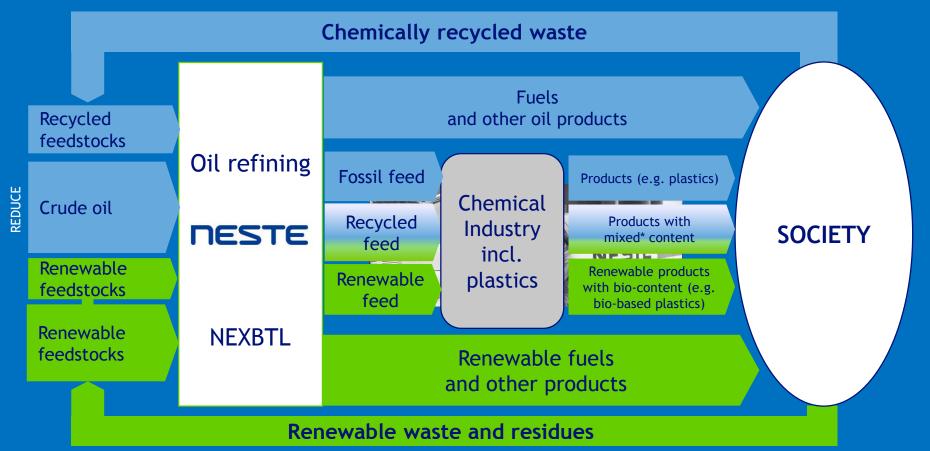
Biological pathways



Photosynthesis Fossil waste liquefaction



Neste - growing through bio- and circular economy





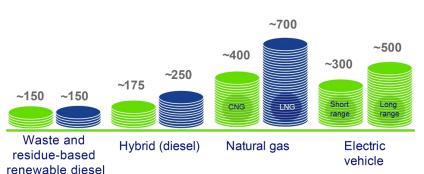
The role of our solutions in the bigger picture

Cost efficiency

Timing

Growth potential

Average cost to society (EUR) to reduce 1 ton of CO₂ emissions in passenger cars and heavy duty vehicles



Notes: CNG = compressed natural gas; LNG = liquefied natural gas. Data shown here reflect the median of the cost range and refer to situation in 2030. Oil price range of 70-113 USD/bbl. Expected 2030 cost for alternative powertrains. Includes required investments into infrastructure. EU average projected power mix (IEA).

Source: Neste based on Roland Berger, Integrated Fuels and Vehicles Roadmap to 2030,

Heavy duty vehicle
Passenger car



