

ETRMA

Sustainable and Resilient Natural Rubber Supply Chain

Brussels 18 November 2019

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**EUROPEAN
TYRE & RUBBER
manufacturers'
association**



OVERVIEW

- **Introducing European Rubber downstream industry**
- **The Characteristics and Importance of Natural Rubber**
- **Circularity and Resource efficiency**
- **A Sustainable & Resilient Natural Rubber supply chain**
- **Alternative Sourcing**

The European Tyre Industry at a glance

The tyre industry – a stronghold of European manufacturing



www.apollovredestein.com

www.bridgestone.eu



www.conti-online.com



www.coopertire.co.uk



www.goodyear.eu



www.hankooktire.com



www.michelin.com



www.nokiantyres.com



www.pirelli.com



www.srigrup.co.jp



www.trelleborg.com



200,000 JOBS ARE DIRECTLY RELATED TO THE TYRE INDUSTRY

300 MILLION PASSENGER CAR TYRES ARE PRODUCED IN EUROPE

18 MILLION TRUCK TYRES ARE PRODUCED IN EUROPE

14 THERE ARE 14 GLOBAL TYRE COMPANIES IN THE MEMBERSHIP OF ETRMA

324 MILLION TYRES WERE SOLD IN THE EU (CARS AND LIGHT TRUCKS) REPRESENTING 20% OF THE WORLD TYRE MARKET

3.5% OF TURNOVER IS INVESTED YEARLY IN R&D
5000 PATENTS ARE HELD BY EACH MAJOR COMPANY

25% Supplied to OE market
75% Supplied to the replacement market

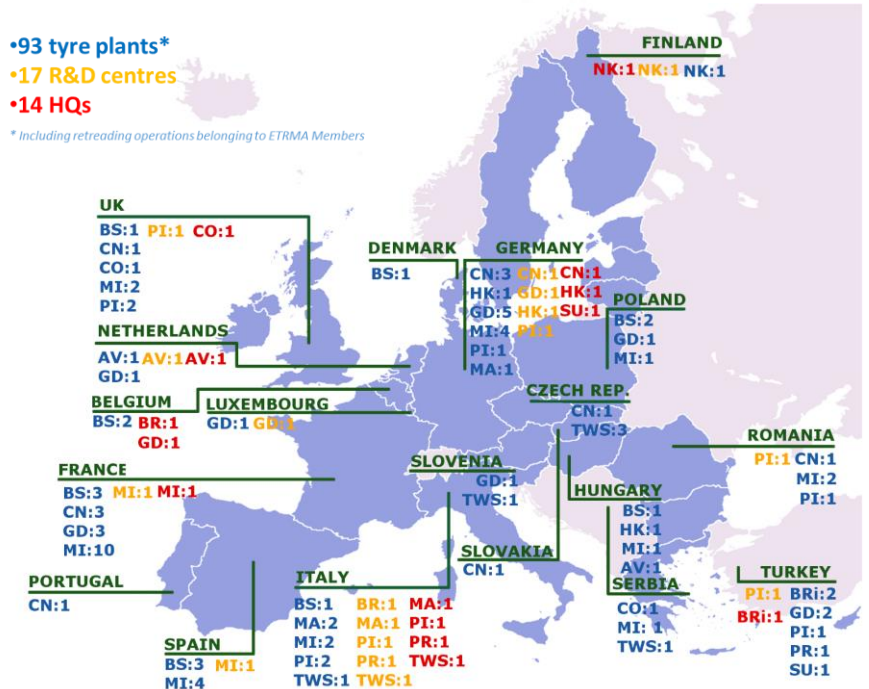
> 15,000 Distribution/Service Centres
> 50,000 Connected Jobs

•93 tyre plants*

•17 R&D centres

•14 HQs

* Including retreading operations belonging to ETRMA Members



The European Rubber Goods Industry

SMEs enabling the future

General rubber goods are used in the sky, deep in the earth and everywhere in between:

63%



Transport (automotive, rail, ships, aviation, aerospace, ...)

10%



Household appliances

8-10%



Industrial applications (construction, mining, agriculture, farming, machinery, ...)

10-12%



Energy/offshore

4-5%



Food contact (drinking water, baby care, medical devices, ...)

1-2%



Leisure and sports equipment



5% of the industry's annual investments are in **R&D**



> 6000 companies in Europe
98% SMEs



30 Billion turnover



~ 70000 jobs directly related to the Rubber Industry

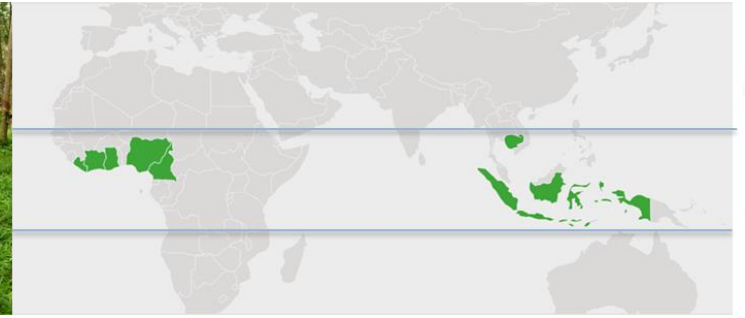
Rubber is a material that is unique and strategic¹ that cannot be replaced



THE CHARACTERISTICS & IMPORTANCE OF NATURAL RUBBER

NATURAL RUBBER

Hevea brasiliensis



- Native to Brazil, only thrives in tropical regions.
- Takes around seven years to mature before it can be tapped.
- Supplies 100% world production
- Unique performance characteristics
- Natural Rubber is a strategic product for the Automotive Sector>> 88%
- Natural Rubber is listed by the EU/European Commission as a Critical Raw Material since 2017
- Natural Rubber has a low substitutability

- High level of **supplier country concentration** (*91% from only 5 countries on two continents*),
- **Global requirement** for natural rubber steadily increasing with the economic growth,
- European **rubber industry fully dependent** on foreign imports
- Natural Rubber is **essential** for all types of vehicle tyres, securing global transport of goods
- **Natural Rubber** accounts for **34 % of the European tyre manufacturers raw materials costs**
- Natural Rubber Industry **heavily dominated by micro farming** often in remote forest areas,
- **Weak supply and demand equilibrium** (*risk of temporary and long-term supply deficit*),
- **Long supply chain** with many interlocutors and very limited traceability
- **Supply heavily volatile to climate change, disease and trade disruptions**
- High **environmental pressure** on limited geographical areas

Many of these factors raise the challenge of building and ensuring sustainability and resilience in the supply chain!



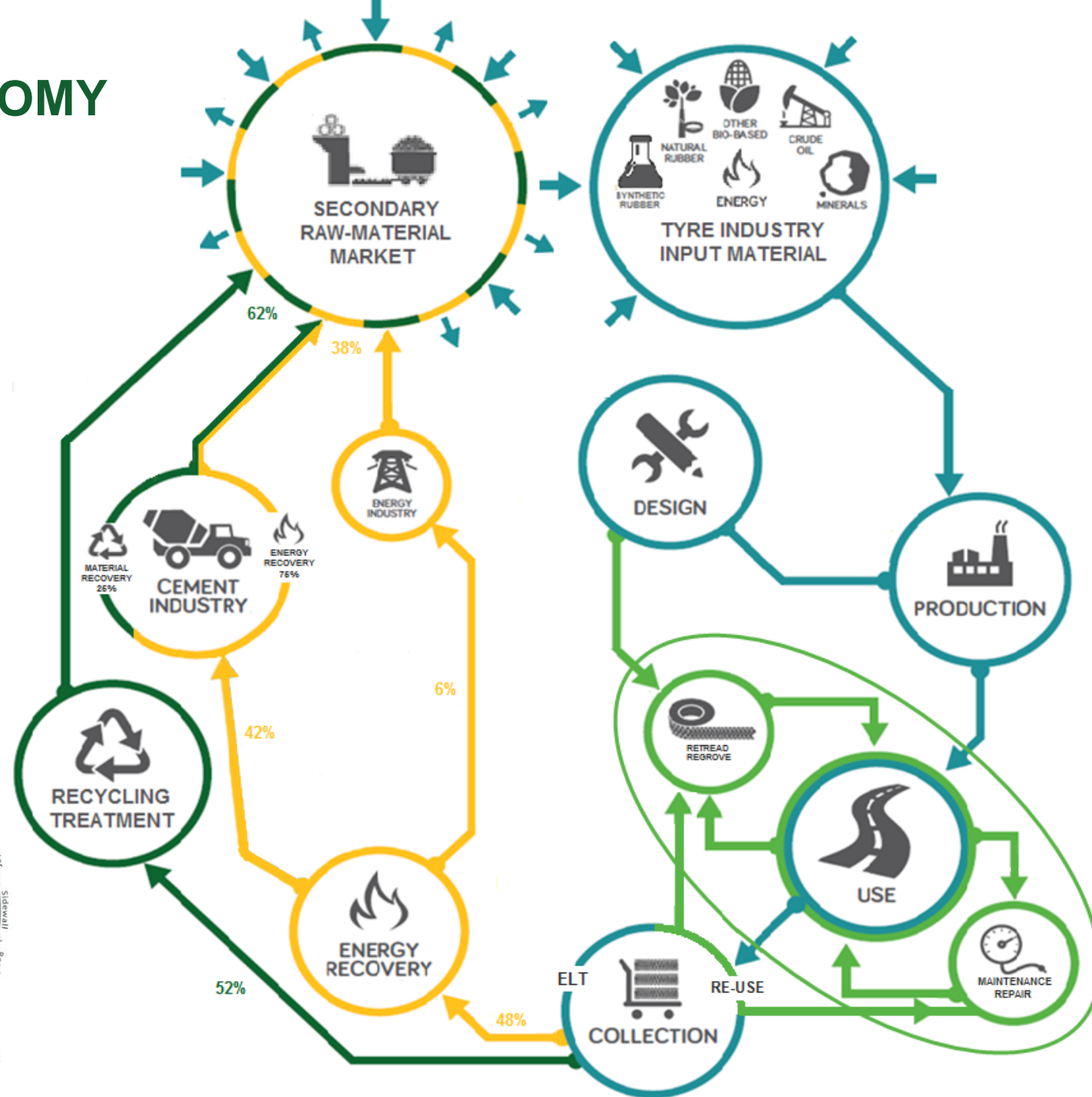
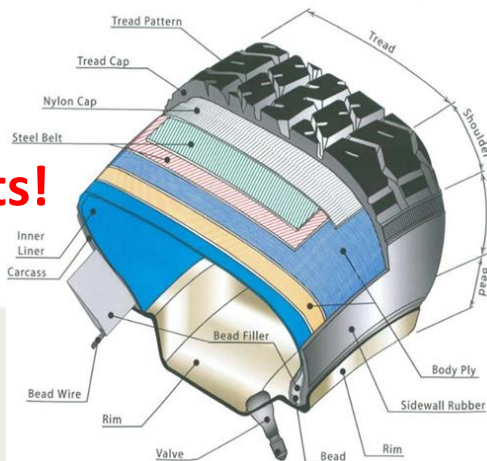
CIRCULARITY AND RESOURCE EFFICIENCY

THE EU TYRE CIRCULAR ECONOMY

Full Collection and Recovery

- Energy Recovery Output 38%
- Material Recovery Output 62%
- Still much potential to explore e.g.:
 - Recovery valuation
 - Market uptake of quality products
 - Increase Remanufacturing market
 - Maintenance and driving behavior

Tyres are complex technology products!



CIRCULARITY & RESOURCES

Recycling challenges

- Reduce material functionality loss during recycling circuits,
- Increase rubber-to-rubber material recycling RUBB-ENDURE

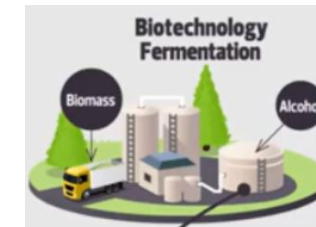
Raw-material challenges

- Increase alternative sustainable sources:
 - Alternative natural rubber sources (Guayule & Kazakh dandelion),
 - Bio-based building blocks for the manufacture of synthetic rubber from for instance wood biomass.



TOWARDS THE "END-OF-LIFE TYRES" CIRCULAR ECONOMY

Acronym: RUBB ENDURE | Innovation actions
SC5-07-2018-Subtopic b



EU Tyre industry circularity and resource efficiency is very advanced, recognizing there are still many objectives to achieve.

ALTERNATIVE SOURCING

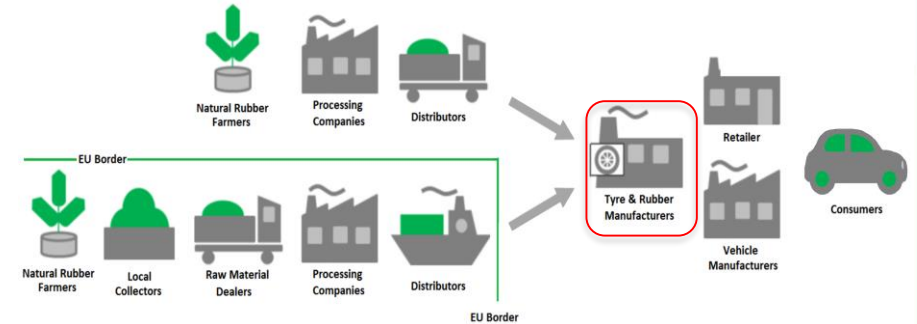
ALTERNATIVE SOURCING - ACTIONABLE AREAS

- **Natural Rubber listed as a Critical Raw Material**
 - Natural Rubber is and **must remain a critical raw material** for the future due to high import dependency and significant identified risks of supply disruptions.
- **Support and promote alternative sourcing**
 - Promote alternative sourcing from outside the main producing south east-Asian region
 - In 2018 some **26,4%** of EU imports originated out of the African continent
 - Promote alternative sourcing from agricultural sources other than *H.Brasiliensis* rubber
 - Intense research is ongoing to develop at least two alternative sources, which can be grown in the EU i.e. Guayule and Kazakh Dandelion
 - **5-10y –new agronomy will be in place!**



Alternative sourcing is in demand from the user industries!

- **Reduce production concentration** of global production,
- **Local sourcing** reducing supply risks,
- **Extending global geographical production area**,
- **Reduce volatility** from climate change, diseases and trade disruptions,
- **Reduce stress on supply and demand equilibrium**,
- **Potential sustainable production**.
- **Shorter supply chain** and increased supply flexibility and security
- **New agronomy** → EU employment in farming and processing



ADVANCING SUSTAINABILITY IN THE RUBBER INDUSTRY

- Is more than an environmental necessity.....
- It's also an instrument to build resilience and economic growth!

Thank you



[*www.etrma.org*](http://www.etrma.org)

