RESELO

Next-gen rubber for 21st century production

High performing elastomers
for a resource-conscious society

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Rubber is everywhere
- but we lack truly sustainable alternatives

Leading to deforestation of tropical rainforest, oil exploration, and diminishing biodiversity or carbon emission from fossil fuels.

Problem 1

Synthetic rubber

- Oil exploration
- Massive carbon emissions

Problem 2

Natural rubber

- Deforestation of tropical rainforest
- Diminishing biodiversity

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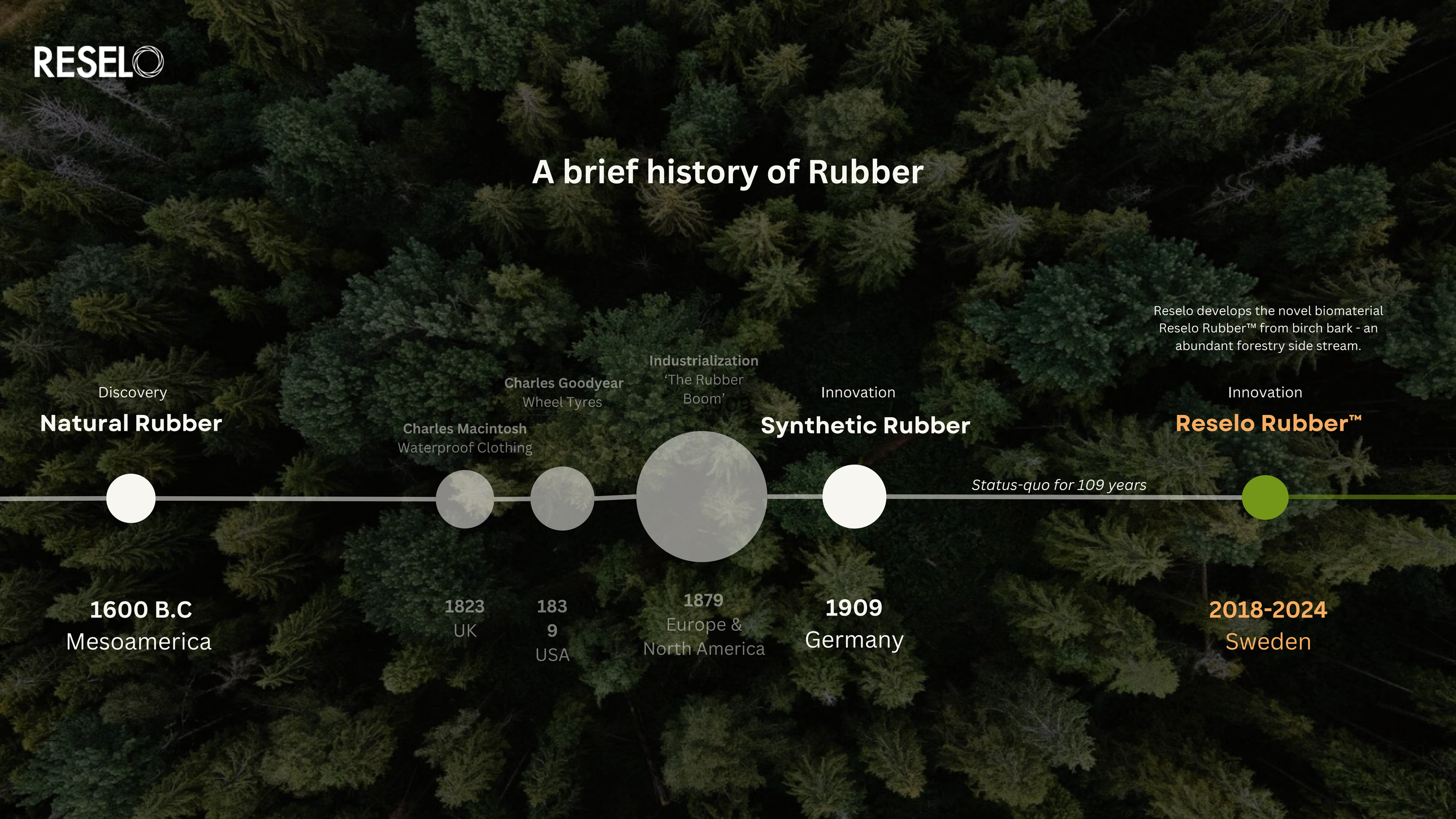
A brief history of Rubber



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Reselo in the value chain -
Forest to End-consumer

90%
Cut emissions

Pulp & Paper

Sawmills

Birch bark

Raw Material

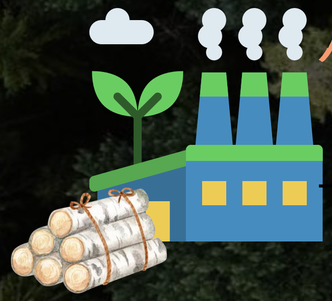
Brand

Compounder

Outsole Manufacturer

Shoe Assembly

Birch



De-barking

Energy Recovery

Material Supply
Up-stream

Production
Down-stream

*(2022)

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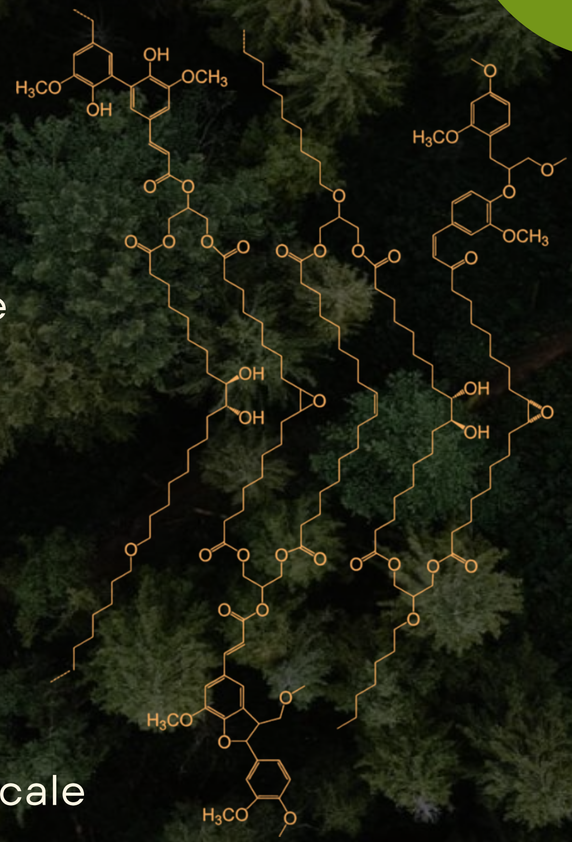
Driven by customer demand and coming restrictions - The Reselo™ rubber:

- Toxic free
- Derived from renewable source
- Sustainable
- Curing Material properties
- Cost-effective production at scale



100% GENERATED FROM **BIRCH BARK**

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THE ROADMAP

Infliction points towards commercial scale

RESELO Roadmap

Reselo Rubber™
Invented by
Thomas Baumgarten PhD

2018

WWSC
WALLENBERG WOOD SCIENCE CENTER

KTH Innovation Incubator

Sweden's Royal Institute of Technology

2020

Impact Accelerator

<norrsken>

2020

VINNOVA
Sweden's Innovation Agency

Swedish Energy Agency

IVA
Royal Swedish Academy of Engineering Sciences

2021

Sting

Deeptech Accelerator

2022

European Innovation Council

Verified by

RI.SE Research Institutes of Sweden

Successful Prototyping

2023

(We're here)

Partnerships

2024

5 TON/y
2025

10 TON/y
2026

700 TON/y
2027

5000 TON/y
2028

Application Validation Project

Project Agreement & Technical Workshop

- Select Application
- Outline Project Scope Details
- Set Requirements and Targets
- Project Risk Analysis
- Business Case Feasbility

Phase 1

Compounding

- Small Batch Recipe Adjustments
- Small Trial Tests
- Testing to be performed at Reselo or Customer

Phase 2

Material Verification

- Pilot Trials at Production Facility
- Quality Control Testing Scheme
- Fine Tuning of Compound
- Long-term Testing if Necessary

Phase 3

Supply Chain Verification

- Supply Chain Test at Minimum Production Size
- Takeover by Commercial Department (after Project Completion)

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Project pipeline – Customer Material Adoption Projects

- Soles for Shoes
- Fashion wear details
- Automotive Interior & Exterior Parts
- Car Tires
- Parts for Sport Equipment
- Coated fabrics
- Sealing and gaskets

Collaborations with Academia

Academical co-labs

- Wallenberg Wood Science Center
  - Basic research
- KTH
  - Basic research
- RISE & VTT
  - Process verification
  - Process scaling
  - Bio degradation
  - Material characterization
- Fraunhofer
  - Process verification
- DTI

Need of academic support

- interdisciplinary research – biomass to polymers
- Compounding and mixing (and/or equipment)
- Analysis – (and/or equipment)
- Molecule development
- Testbeds

Academia and industry co-lab improvements

- Improve knowledge sharing from academia to industry
- Business perspective in research co-lab
- Adopting research timeline to the need in the industry
- Research institute pricing for small companies
- Co-lab complexity – simplify and make it possible with smaller projects
- Access to testbeds

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www.reselo.se

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