

ABM COMPOSITE

Arctic Biomaterials

# General Company Info

- Founded 2014 privately held , Technical site 2016
- 60 professionals with extensive biopolymer experience of 620 years
- Manufacturing and R&D sites in Tampere Finland
- New manufacturing site in China
- Medical and Technical applications – focus mainly in Injection molding technology

HQ



CN



# ABM Technical compounds application areas

Sustainable & clean alternative for fossil plastics



Food



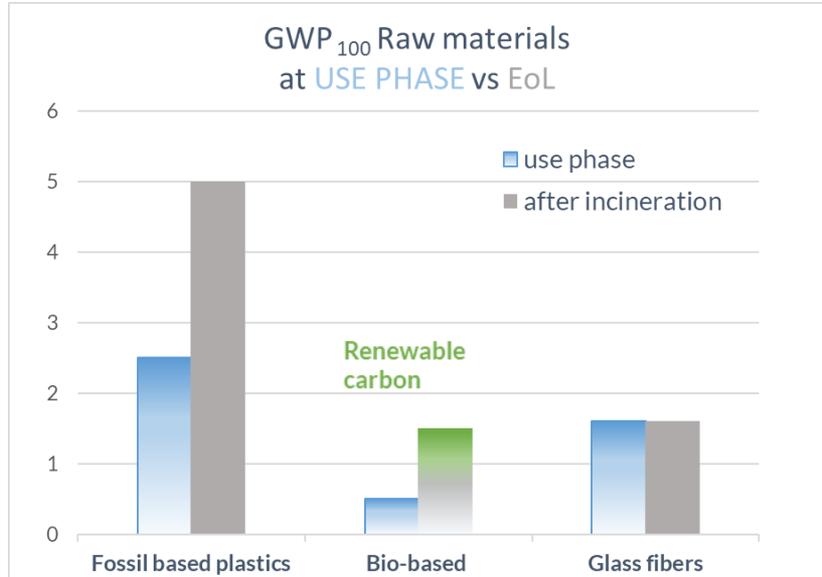
Industry



Personal Care  
& Home

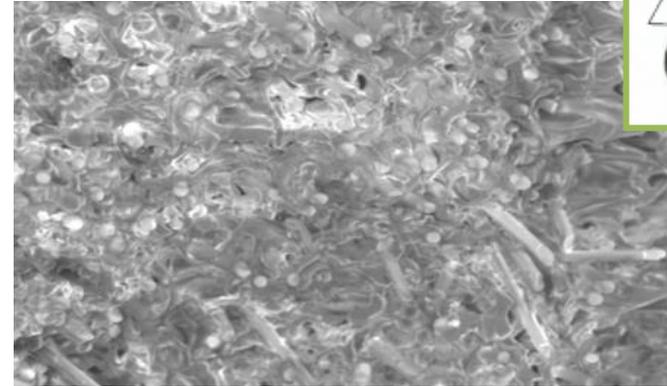


## Sustainable raw materials



Simplified scenarios: material from cradle to gate + EoL

Certified compostable

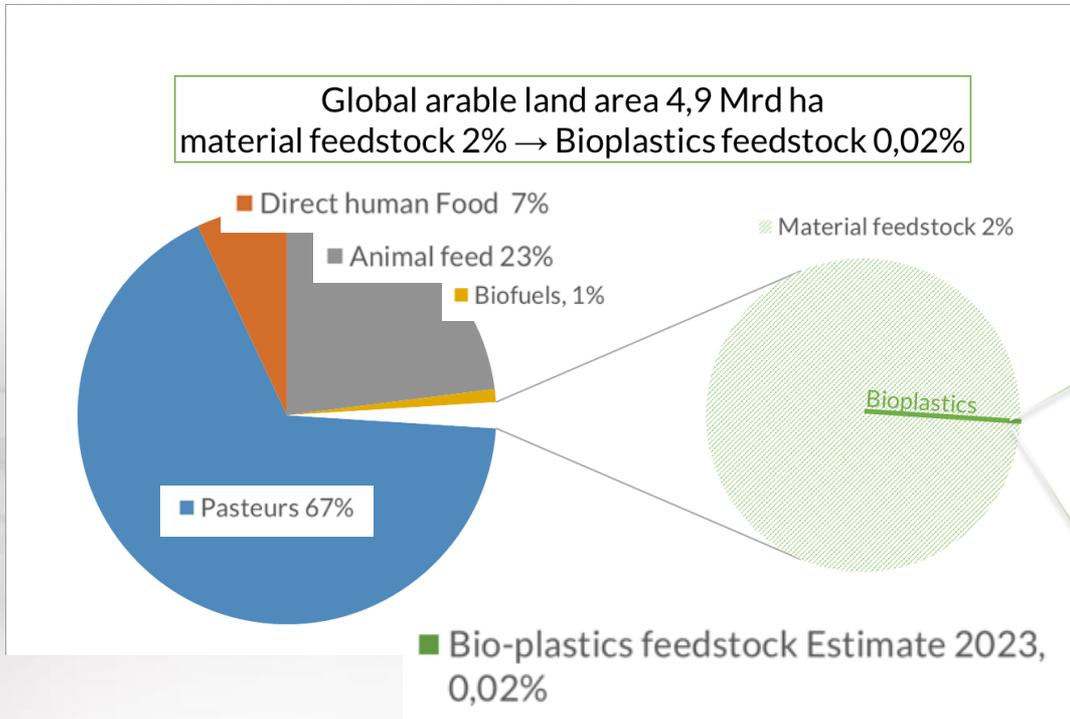


ABM Composite containing 70% polymer & 30% Glass fibres under 200 x magnification

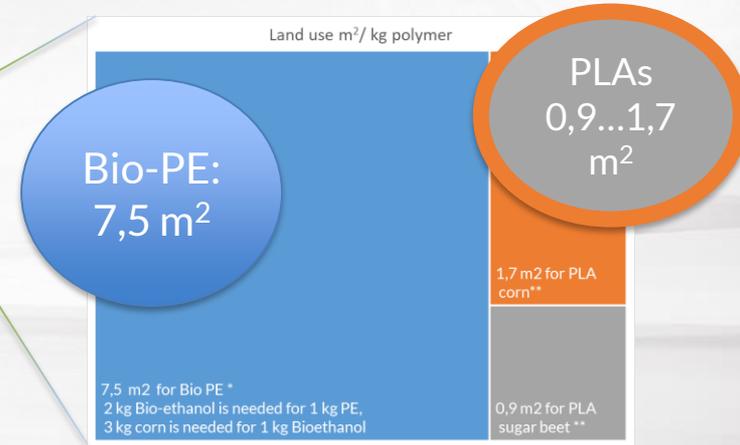
ABM Composite technology combines different sustainable bio-based polymers and additives to proprietary glass fibres that can break down to natural minerals when composting is chosen EoL.

# Supply chain awareness

“Maximize bio-based carbon content with resource efficiency”



Land use for PE & PLA  
[ m<sup>2</sup>/kg ] / produced polymer



Data source: European Bioplastics, Nova institute (2018), Institute for bioplastics and biocomposites (2016)

\*Ashby, Michael F. 2015 Materials and Sustainable Development., chapter 8, upscaling biopolymers  
\*\* Lovett, De Bie and Balde et al., 2016

## Plastics are needed!

The limit of extreme poverty: income under 2€/day

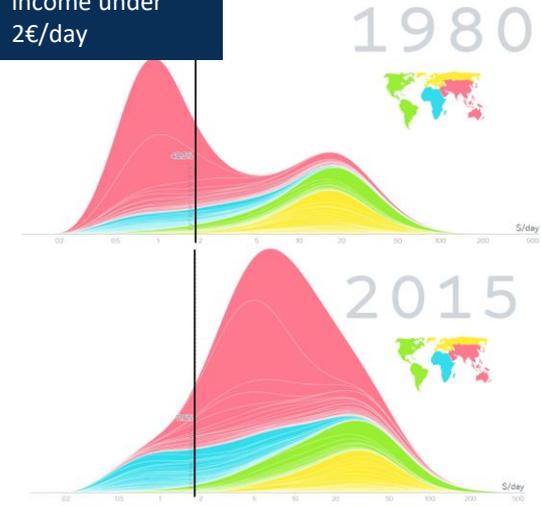
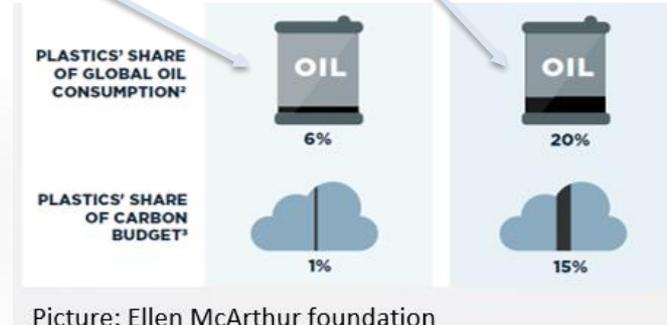
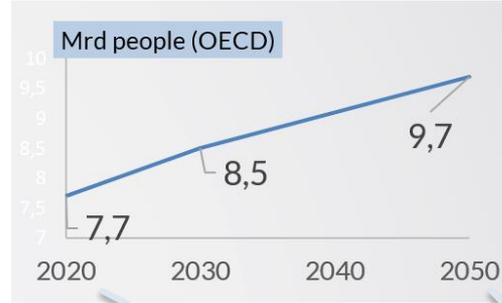


Figure adapted from: Gapminder.org



Picture: Ellen McArthur foundation

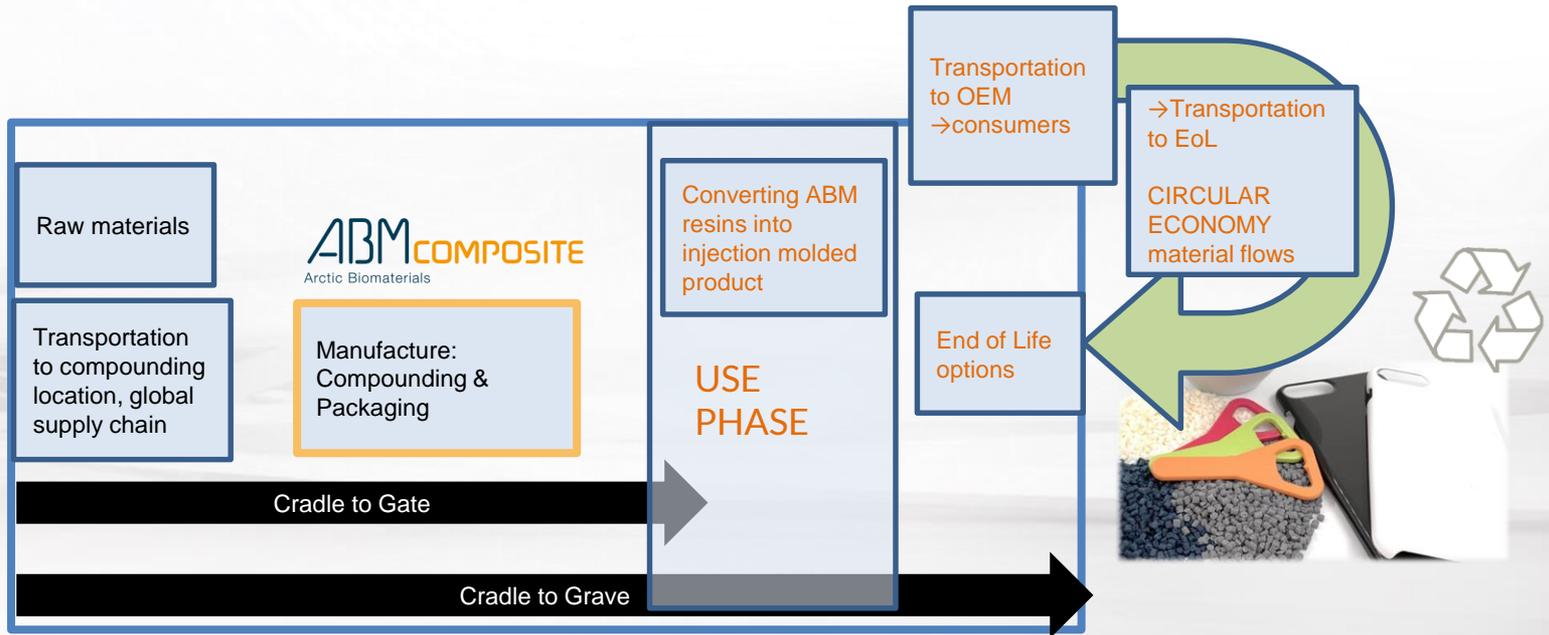
The demand for plastics is increasing. All solutions working for solving resource efficiency and sustainable production are welcome, recycling fossil plastics and creating bio-based solutions.

Paradox: We must simultaneously reduce carbon emissions and produce more materials

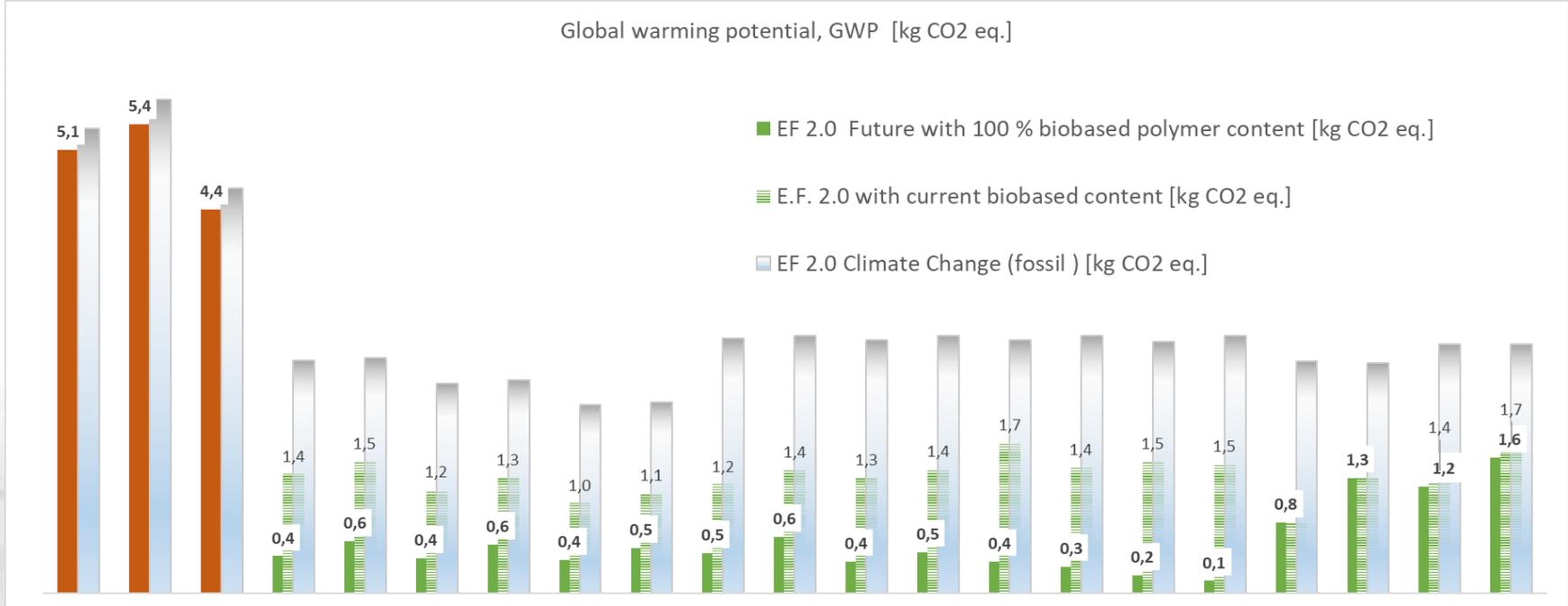
# Collaboration in R&D&D

Upstream: Sustainable supply chain, company culture, product development for applications. Accountability and collaboration.

Downstream: Circular desing demands information exchange from end-use and product desing.



Simplified scenarios: Products from cradle to gate and impact at EoL

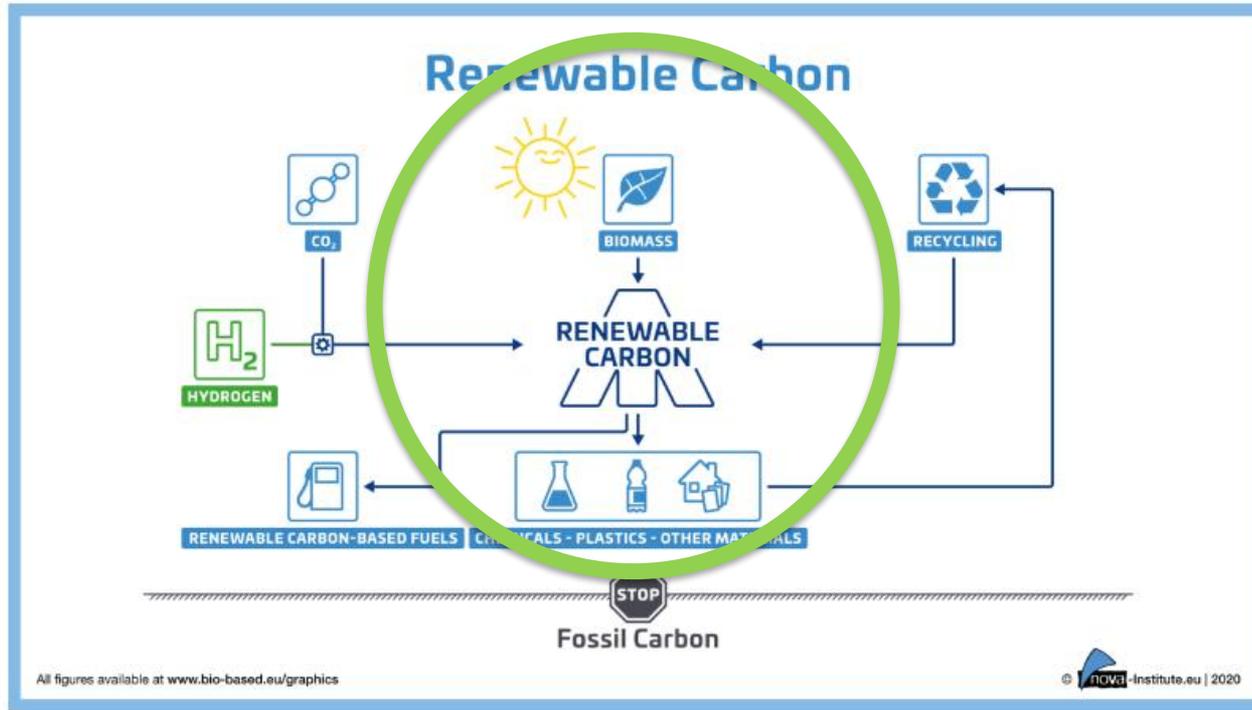


Fossil based reference scenarios, PP, ABS, PP-GF, EoL by incineration

**ABM products** →

composites with global supply chain: Use phase, EoL compositing & incineration  
→ Enables decoupling of the fossil energy use in material conversion

# Goal: Renewable carbon



Financial results  
Product quality

Customer satisfaction

Employee satisfaction,  
Health & Safety

Supply chain management  
, Ethics

ENVIRONMENT

# Thank You!



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LinkedIn: <https://www.linkedin.com/groups/8848234/> (European Bioplastics Research & Networking)

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ABM – World's strongest biodegradable composite materials

