



Consumer Board – Solid platform for profitable growth in the bioeconomy

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EVP, Consumer Board division

Our road to success in the bioeconomy

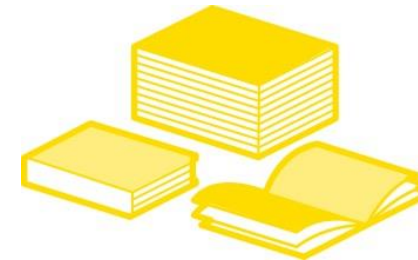
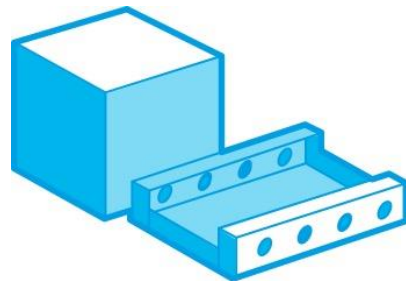


Introducing
new products
and services

Addressing
attractive
end-use
segments

Delivering
sustainable
profitable
growth

Generating
superior
ROCE



Solid platform for profitable growth in the bioeconomy

Consumer Board, a strong global partner



70 countries

2 342 MEUR sales 2016

+6.7% Q3 YoY 2017

- 1** Innovation centre
- 2** R&D centres
- 6** new products since 2014
- 40** joint customer projects
- 22** digitalization projects



Renewable material

from certified forests and plantations



5 mills

Finland, Sweden, China



3.1 Mt virgin board

216 MEUR EBIT Q1–Q3/17

17.7% ROOC Q3/2017



1 in 3

milk cartons made from Stora Enso board



4 170 employees
26% are women



High quality board for premium consumer applications

A broad range of solutions to fit customer demands



Strategic partnering across the value chain



Empowered consumers are driving change



CREATE TRUST OF ORIGIN



FUTURE GENERATIONS



JUST FOR ME



EXPERIENCES IN THE CENTRE



CONNECTIVITY EVERYWHERE



The industry has ambitious environmental 2020 targets...



Cap climate impact across the value chain at 2010 levels, regardless of business growth



100% sustainably sourced paper and board



100% FSC labelled packs



95% renewable cups and bottles



25% CO₂ reduction



All PET bottles to be bio-based



Packaging from 100% certified fibre-based or recycled sources

Source: Company web sites

... and our partnerships lead to commercialised solutions

82 MEUR or 3% of sales in 2017 from new products



” The new **Pure-Pak® carton** delivers on key values for Arla. It is **renewable, recyclable, reduces climate impact** and provides standout for the EKO brand to organic consumers.

Anna-Karin Modin Edman,
Sustainability Manager ArlaFoods



” We are very proud of the **new Fibre cup** suitable for e.g. crème fraîche. We have grown the proportion of renewable materials and removed all aluminum, which **reduces climate impact by just over 50%**.

Helge Skog
CEO Arta Plast

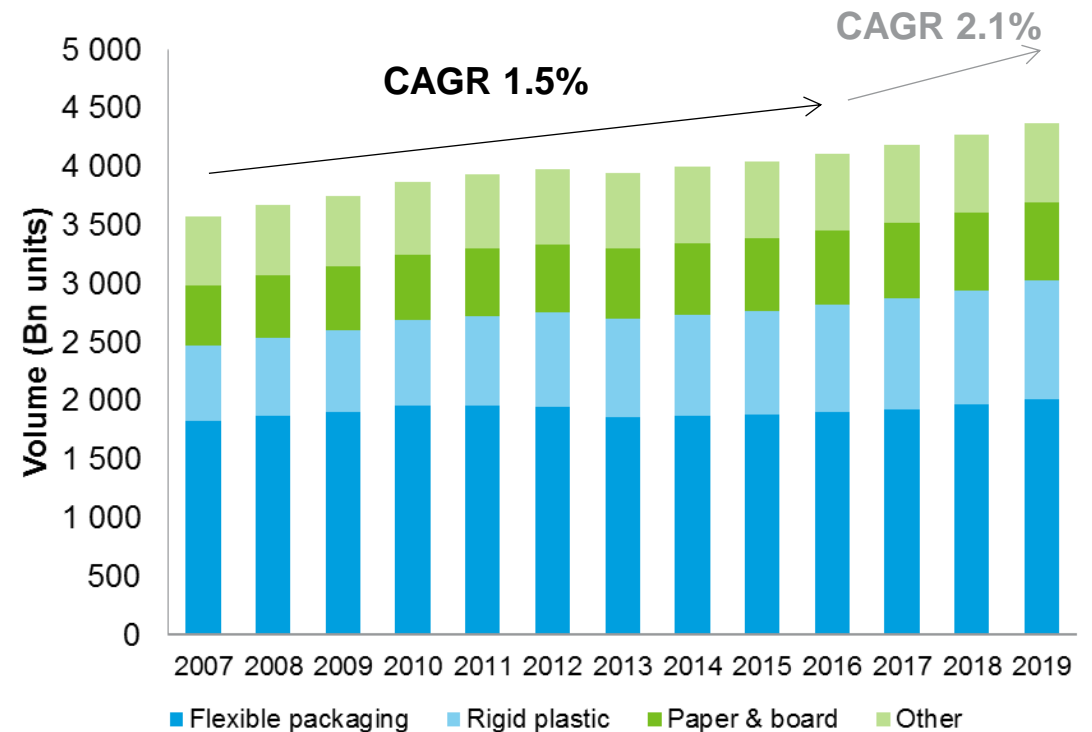


Packaging is growing by 2.1% CAGR by 2019...



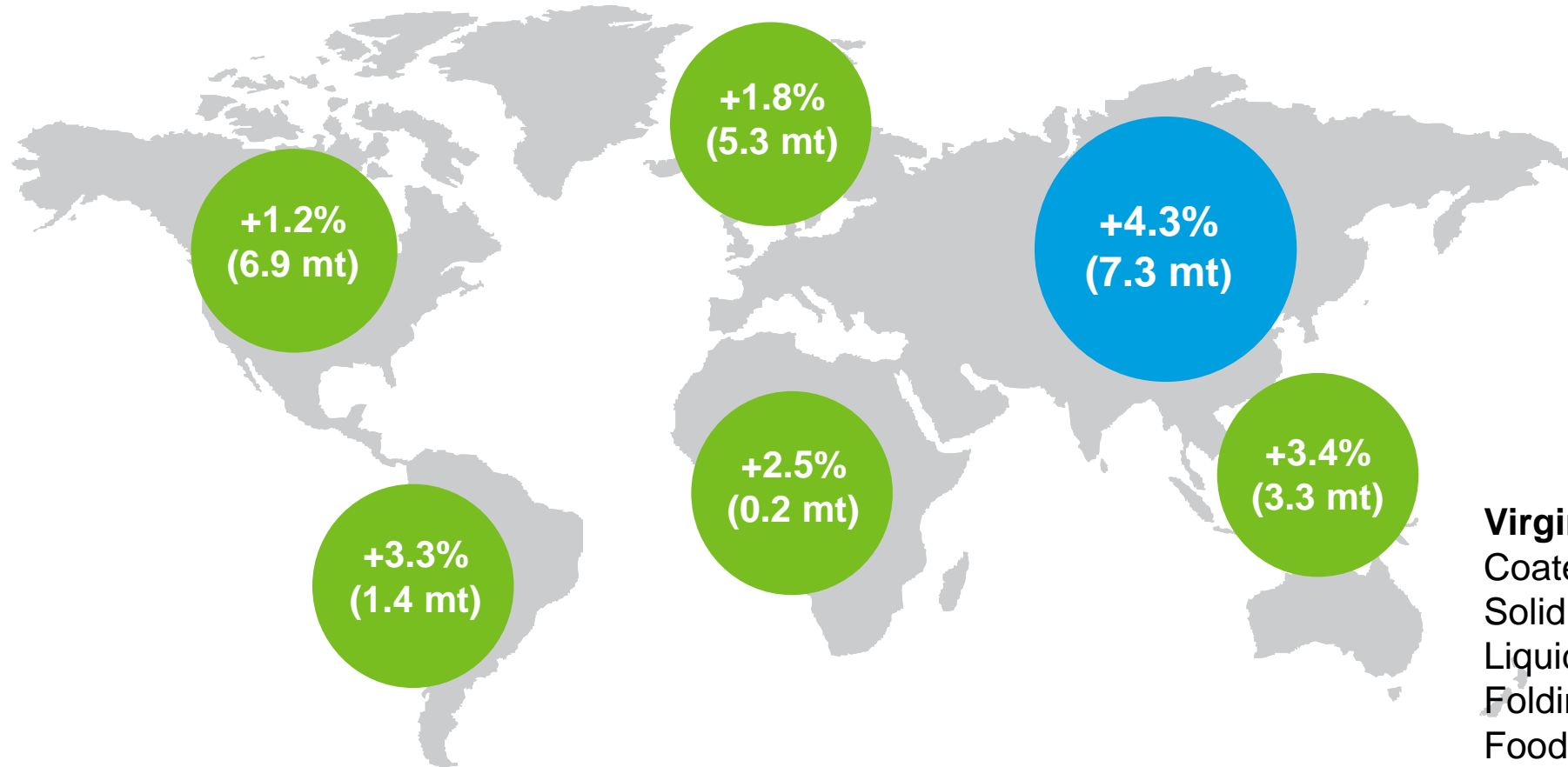
- Drivers are the economic growth rate of a region
- Demographics favour small, re-sealable and convenient packaging
- Innovation in packaging materials and design is driven by:
 - reduction of total cost of ownership
 - renewability and recyclability
 - ability to reduce food waste

Packaging development 2007–2019*



Note: * Segments: food, beverages, beauty and personal care and tobacco.
Source: Euromonitor, 2017

... and 2.6% CAGR until 2030 for virgin fibre board grades

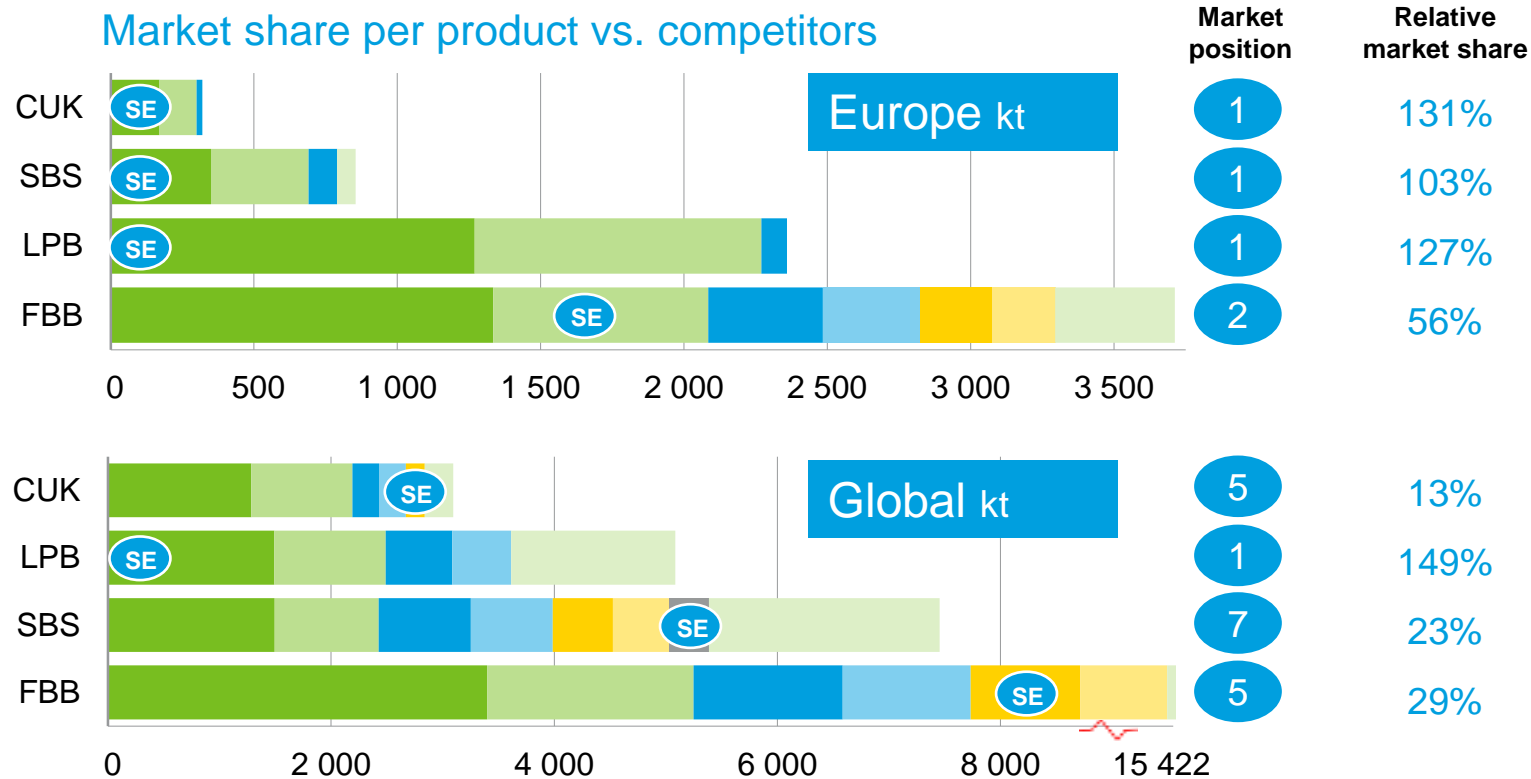


Virgin fibre board grades:
Coated Unbleached Kraft (CUK)
Solid Bleached Sulphate (SBS)
Liquid Packaging Board (LPB)
Folding Box Board (FBB)
Food Service Boards (FSB)

Source: Pöyry

We have a strong position with global customers...

Top 10 customers account for 53% of sales and 60% of EBITDA



Coated Unbleached Kraft (CUK), Solid Bleached Sulphate (SBS),
Liquid Packaging Board (LPB), Folding Box Board (FBB)

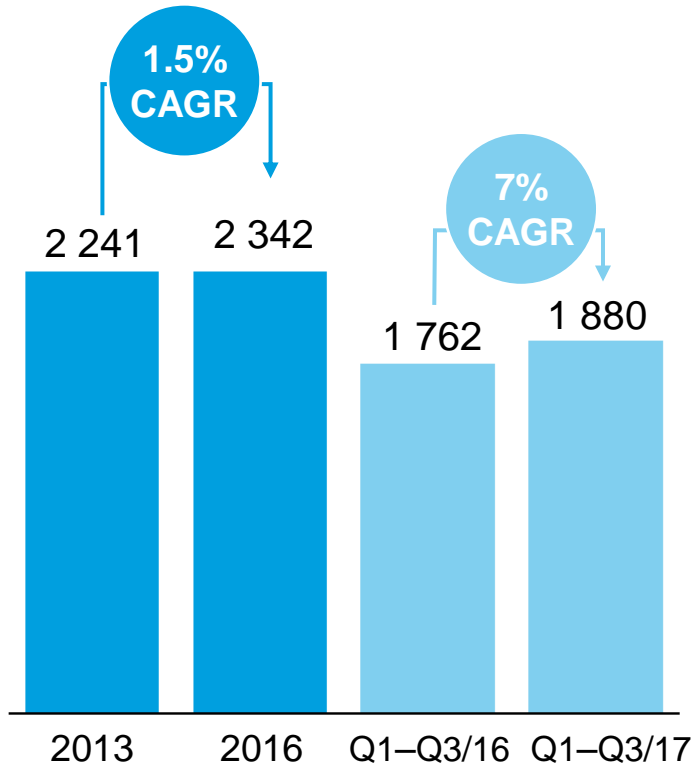
SE = Stora Enso

Source: Stora Enso, Pöyry

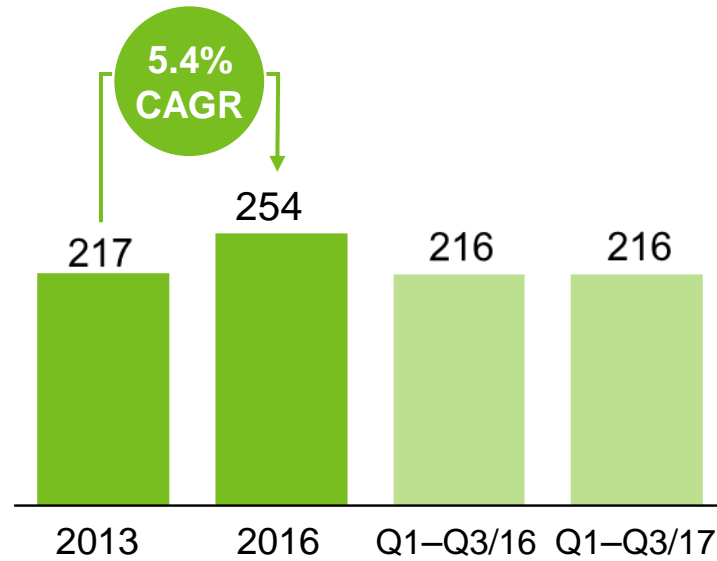
... generating profitable growth



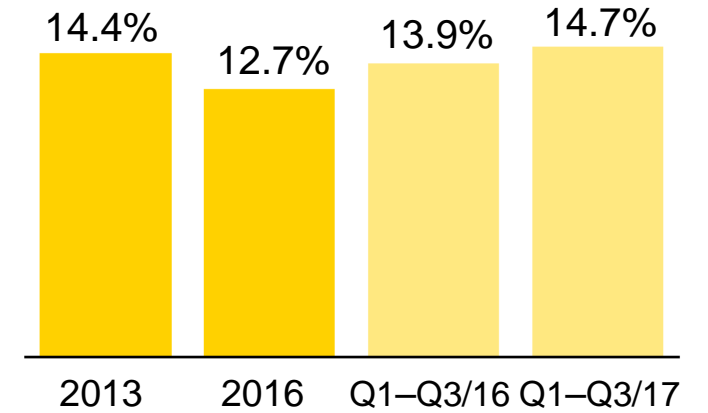
Sales MEUR



Operational EBIT MEUR



ROOC



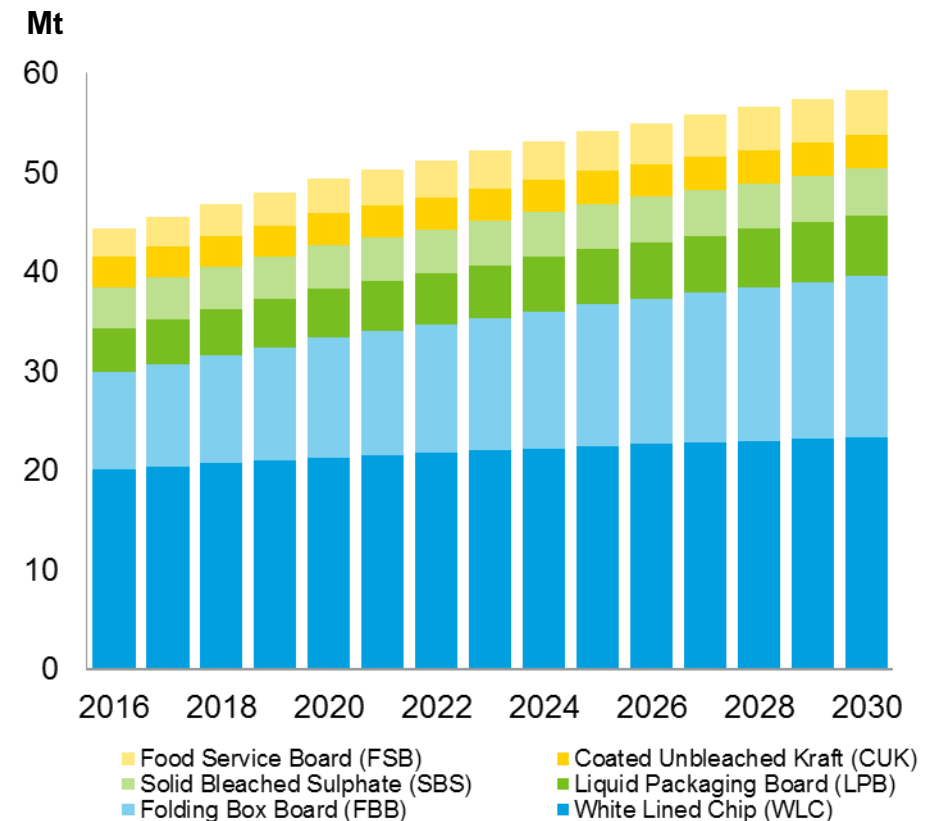
Our growth opportunities are within LPB, FBB and CUK

Beihai and the Nordic integrated mills are the growth engines



- LPB
 - Maintain strong market position in Europe
 - Grow in China and South East Asia
- FBB
 - Grow with the market in premium applications
- CUK
 - Global market making to challenge WLC
- Cost competitive mills
 - Integrated mills in Nordics with global reach
 - Current asset base can be further developed

Forecast per board grade CAGR 1–4%



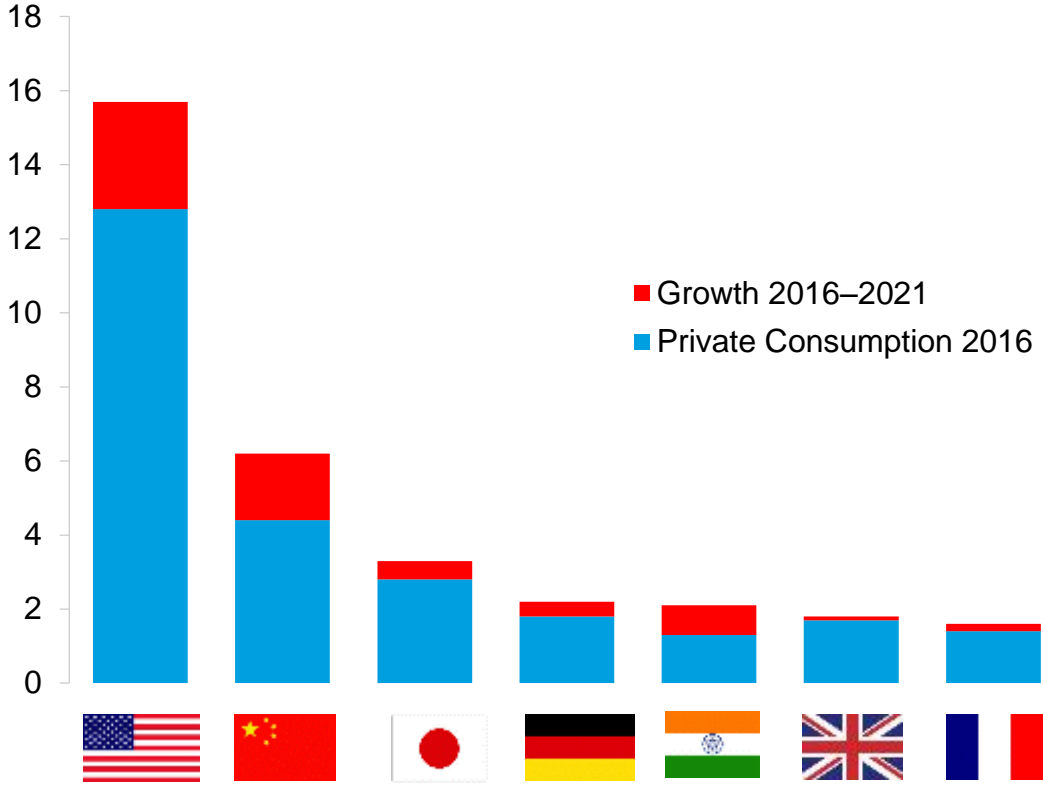
Source: Pöyry

China continues to be one of the fastest-growing markets...



Chinese consumption today matches US in 1920s

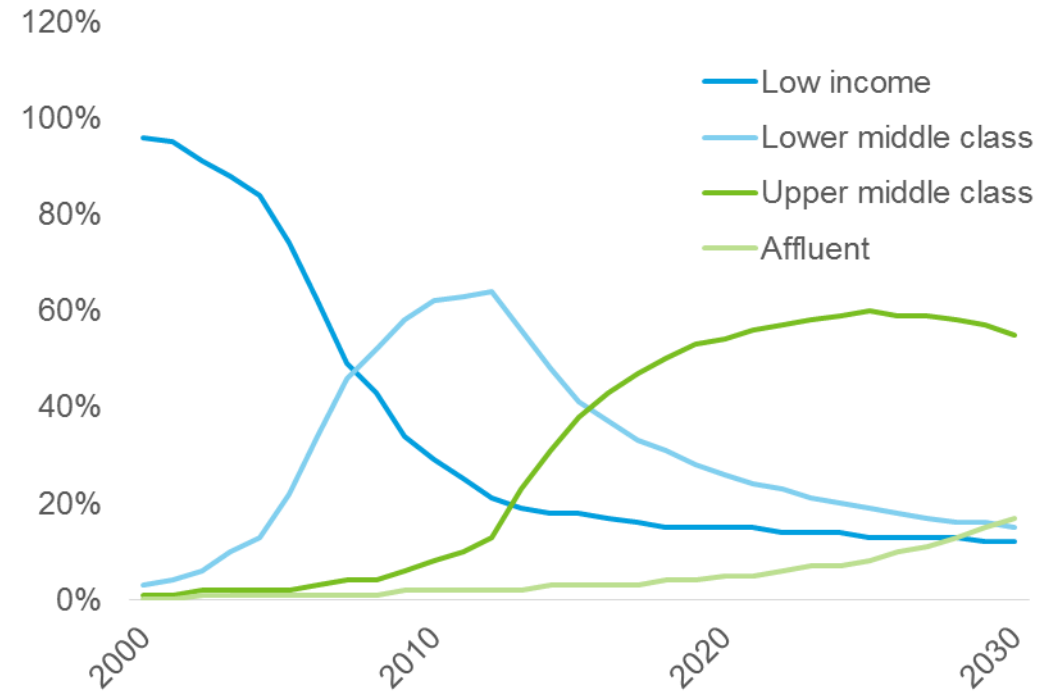
Nominal Private Consumption (USD, Tn)



Source: BCG

Middle class and urbanisation driving the change

Disposable income in China

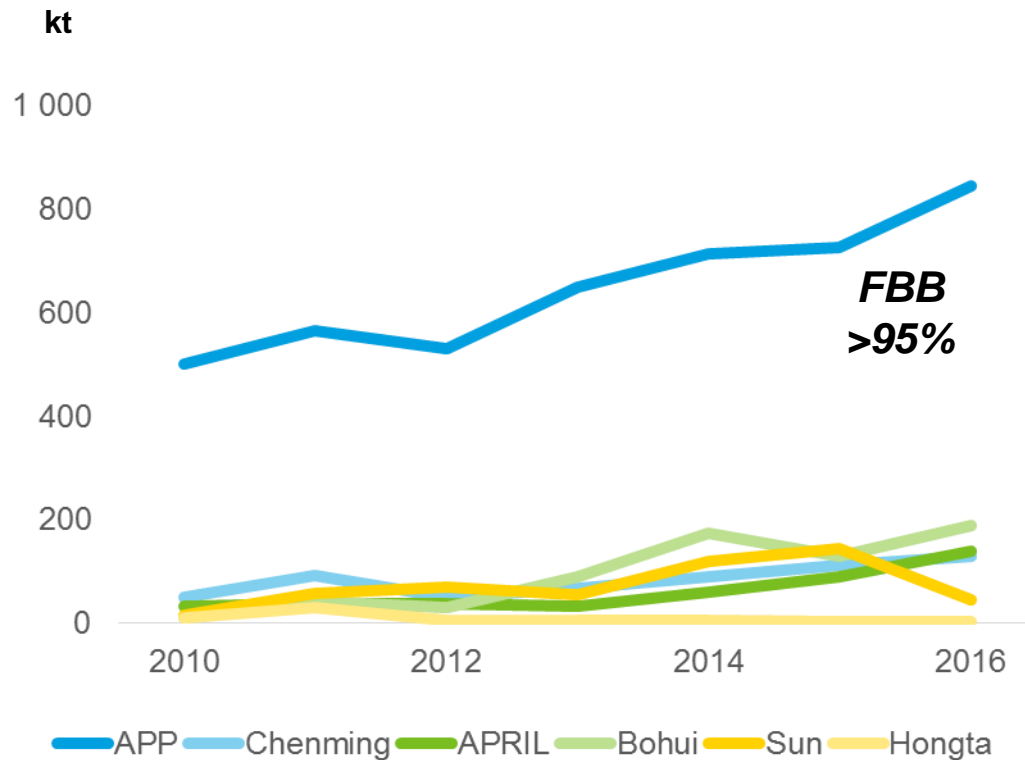


Source: McKinsey, as of Jan 2016

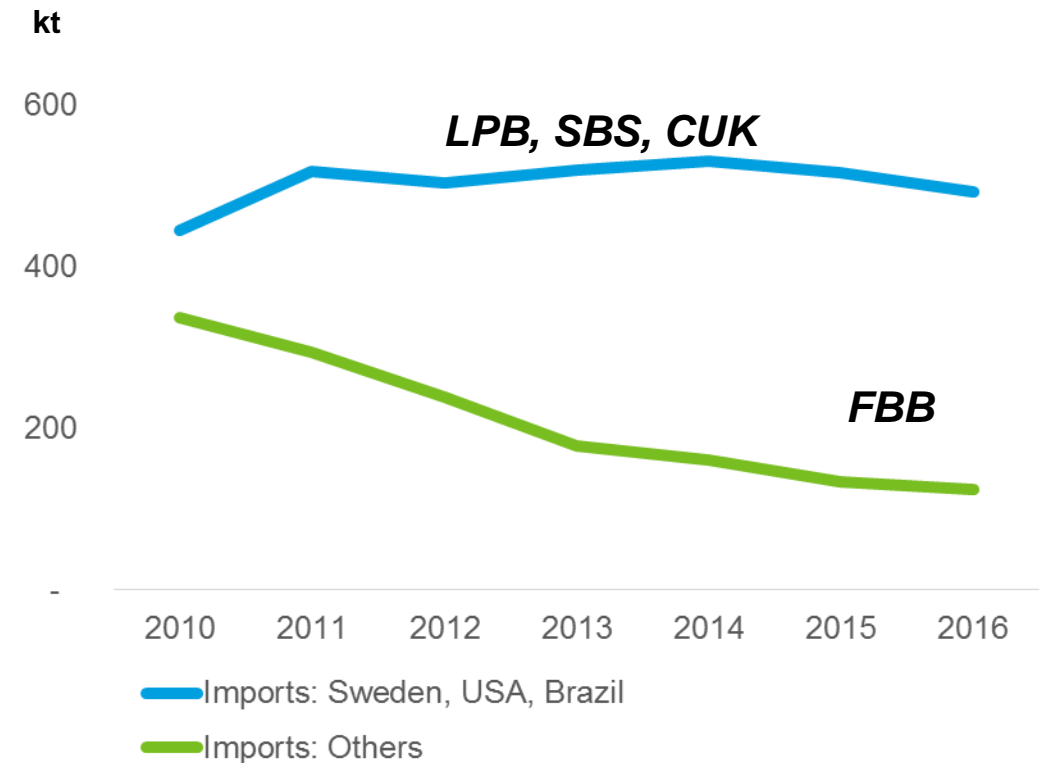
... with Beihai capturing premium positions in LPB, CUK and FBB



FBB overcapacity is exported



Imports of premium grades remain strong



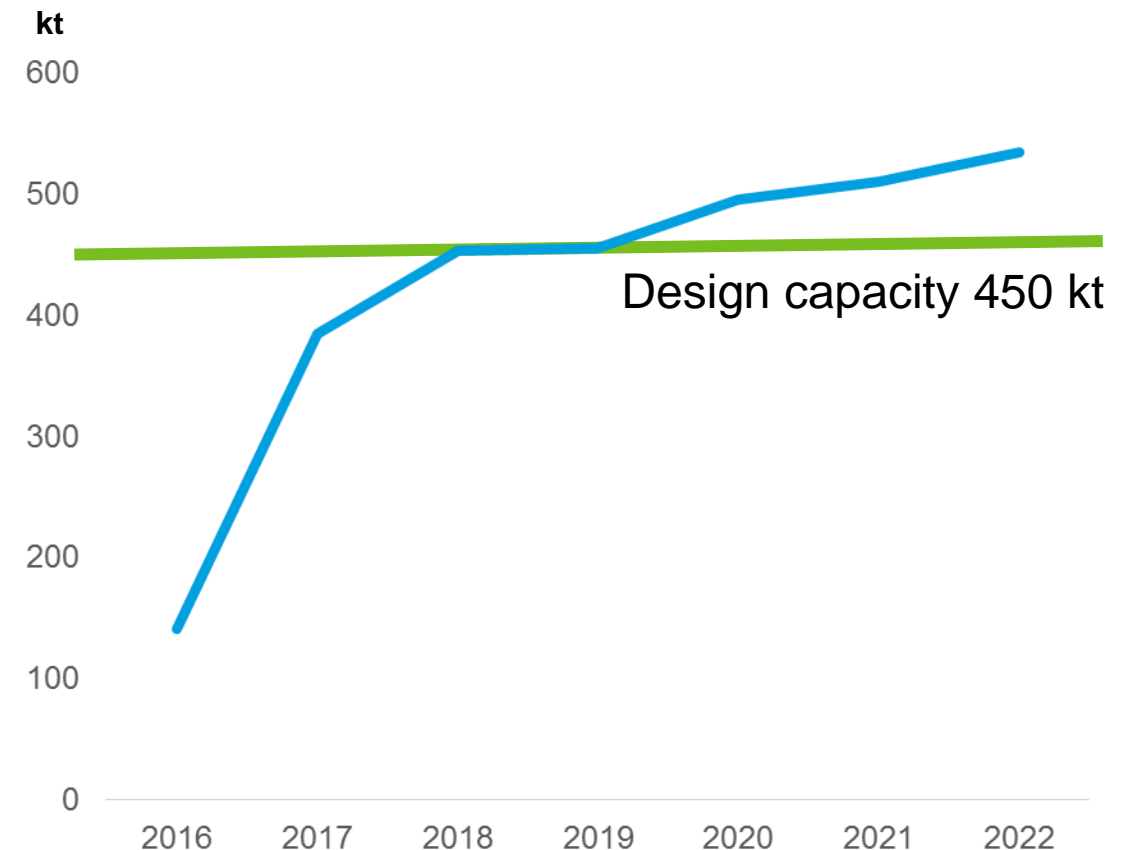
Sources: China customs and Stora Enso

Successful start-up of Beihai with EBITDA breakeven Q4 2017



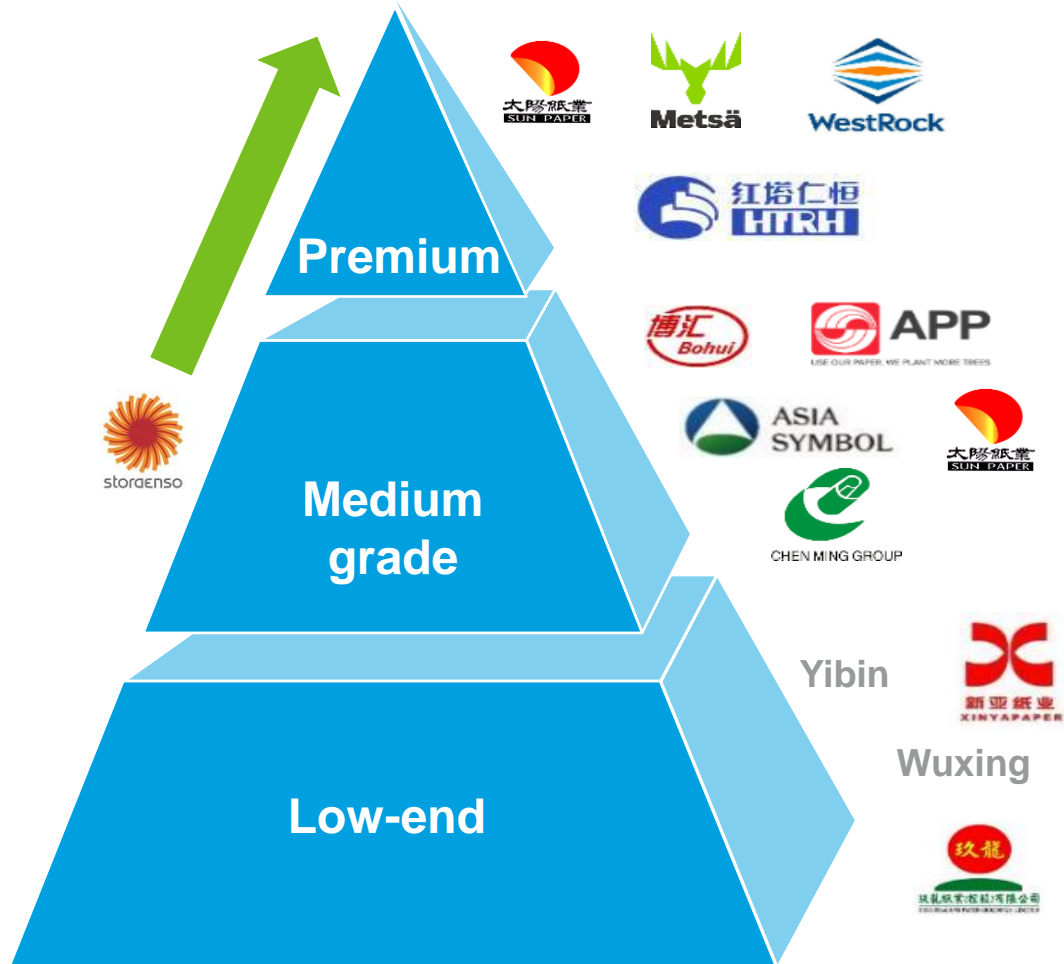
- Commercial deliveries ongoing to LPB customers
- FBB quality on par with domestic producers
- Polyethylene (PE) plant for FSB in operation Q4/2017
- Board machine capacity can be increased without investments
- Focus is to establish premium market position and improve cost competitiveness

Beihai board machine production capacity



Stepping up quality levels in virgin cartonboard grades

Example: Healthcare segment



2022E market size

2022E CAGR of segment

~150–180 kt

7–10%

~1600–1800 kt

6–8%

~850–950 kt

Future growth is coming from innovations in renewable materials



Micro-fibrillated cellulose (MFC)

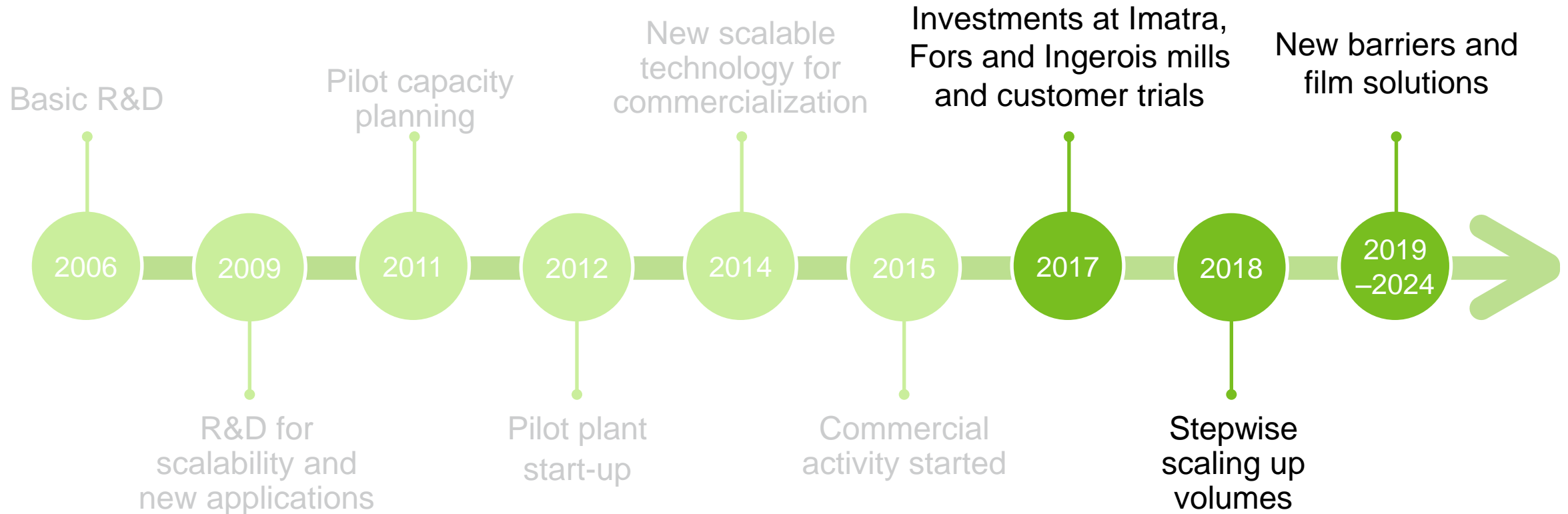
Bio-barriers based on MFC

Biocomposites



We are scaling up MFC

Strength enhancement, source reduction and new barrier solutions



Bio-barriers replacing fossil-based barriers



Biocomposites replacing fossil-based materials

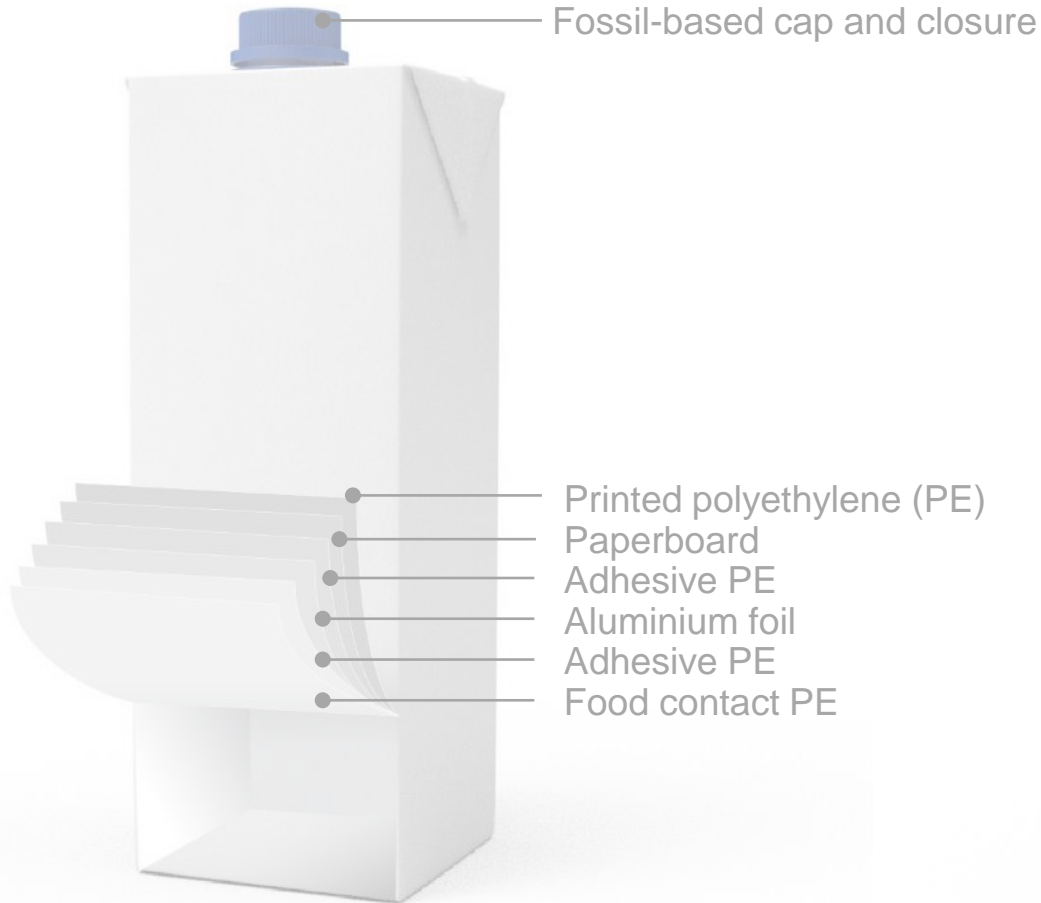
Cooperation with accelerators and start-ups



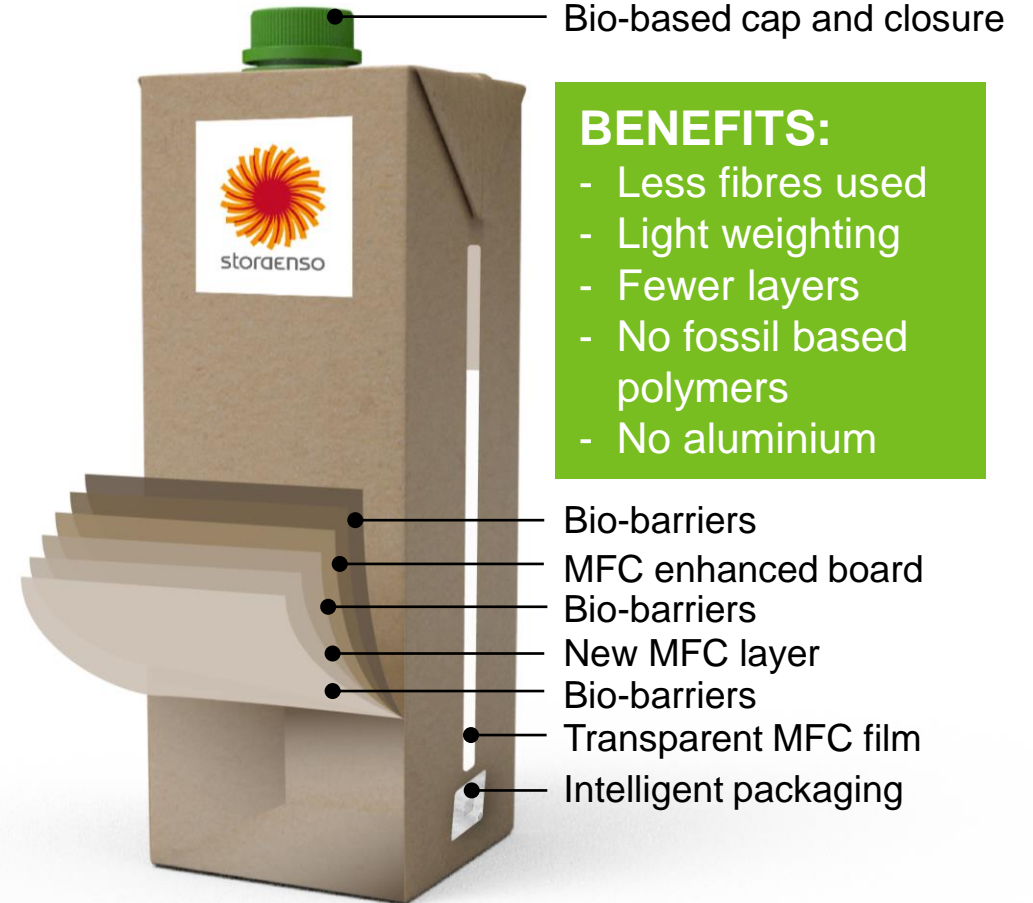
Image courtesy of Sulapac

Vision for a 100% renewable LPB packaging 2022–2025

Target is competitive packaging with reduced CO₂ emissions



Typical high barrier structure



Bio-based cap and closure

- BENEFITS:**
- Less fibres used
 - Light weighting
 - Fewer layers
 - No fossil based polymers
 - No aluminium

Future high barrier structure

Solid platform for profitable growth in the bioeconomy



- Global leaders in our focus segments for the most challenging applications
- Long-term partnering with customers and brand owners across the value chain
- Customer-driven development projects based on consumer insights
- Strong and well-positioned assets that can be further developed
- State-of-the-art mill in Beihai securing future growth opportunities in China
- **Innovations based on renewable materials**



**1% shift
from
plastics to
board**

=

**6 BEUR
renewable
business**

Disclaimer



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THE RENEWABLE MATERIALS COMPANY



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