Future of food packaging

OP Kiertotalousseminaari

May 29, 2019

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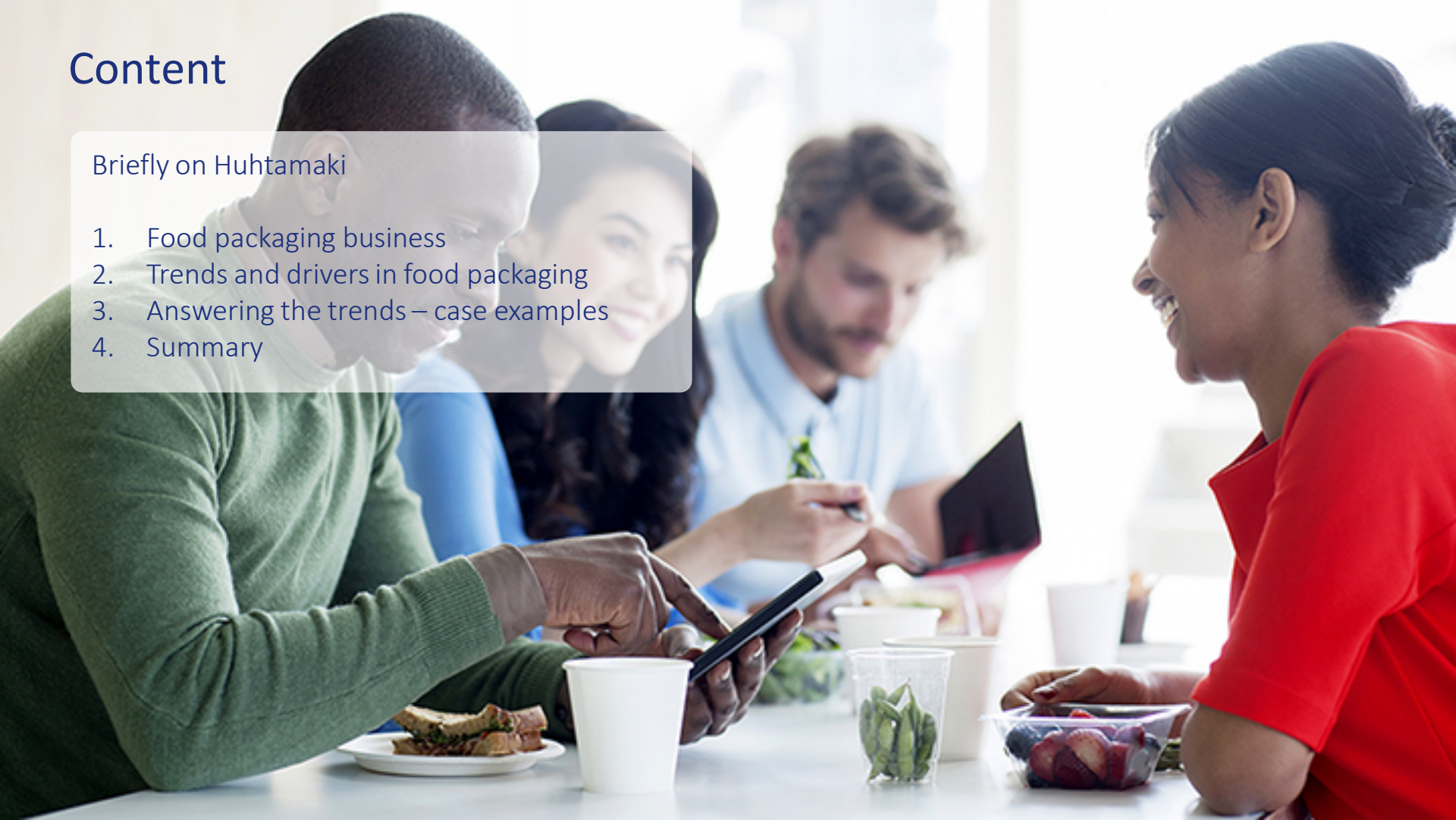
Content



Briefly on Huhtamaki

1. Food packaging business
2. Trends and drivers in food packaging
3. Answering the trends – case examples
4. Summary

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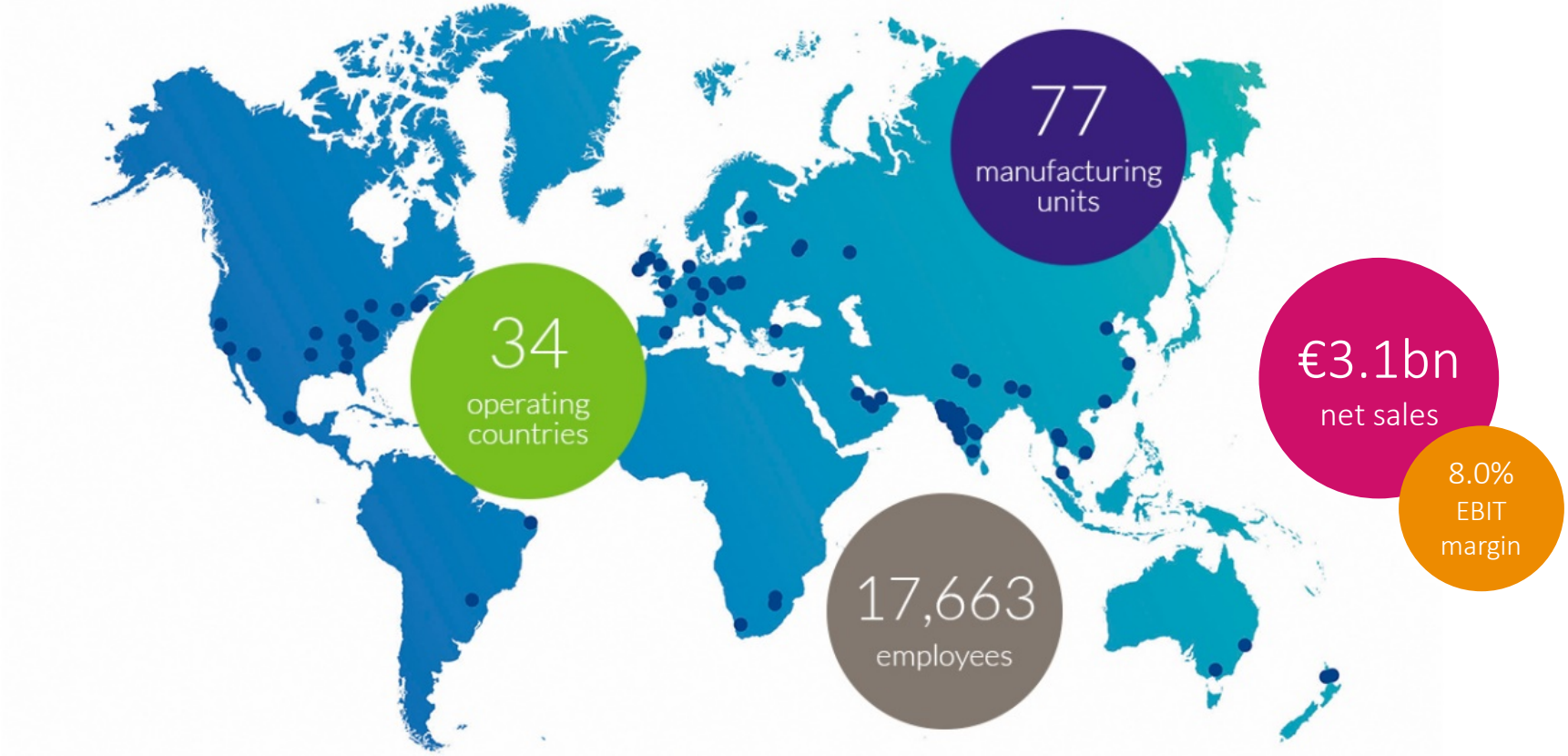

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Our business is consumer food and drink packaging

Food-on-the-go — Pre-packed food




Convenience — Short shelf life — Food safety — Long shelf life — Food waste prevention

Our packaging protects food and drink products, delivering them to consumers safely and in good condition, helping to reduce waste.

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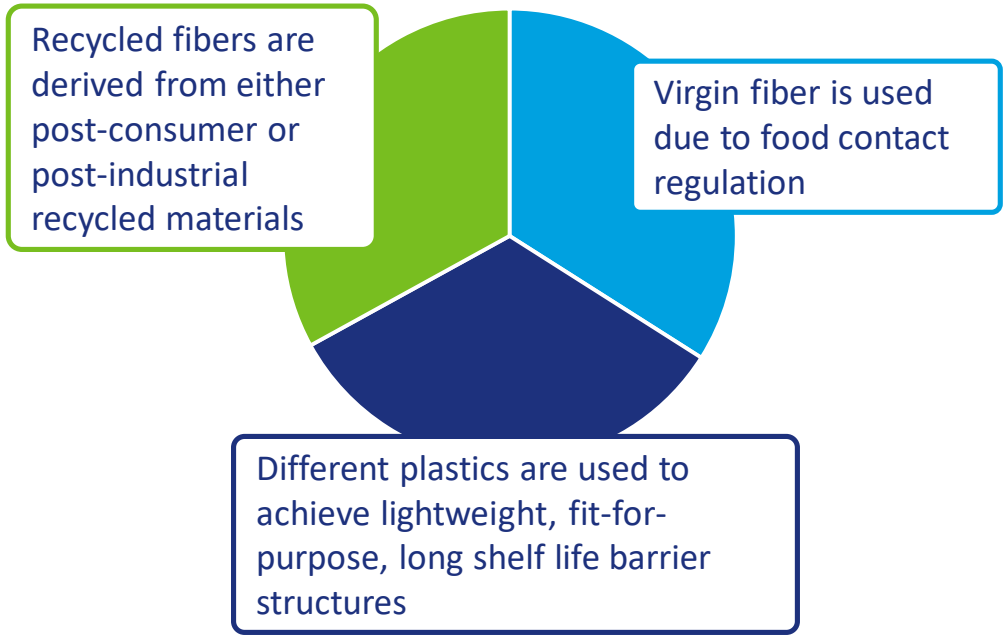
Our raw materials

2/3 of raw material we use is renewable



All main paper packaging units have PEFC, FSC or SFI Chain of Custody certification to ensure that the fiber is traceable and comes from sustainably managed forests.

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1. Food packaging

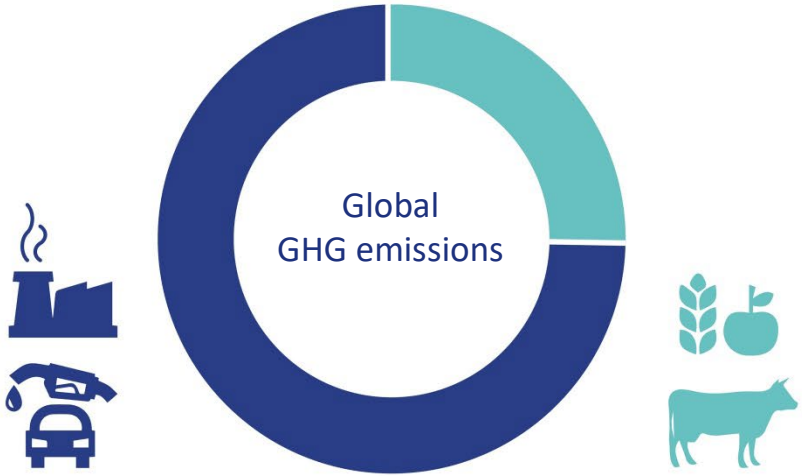
Food packaging enables our way of life

Thanks to packaging, people can safely consume food that is produced elsewhere, even on-the-go

Different materials are needed for different purposes – our aim is optimal packaging, designed for circularity

Packaging reduces the overall greenhouse gas emissions by reducing food waste

Food is a major contributor to climate change



approx. 25%

of global GHG emissions come from food systems

8%

of global GHG emissions come from wasted of lost food

Source: CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS)

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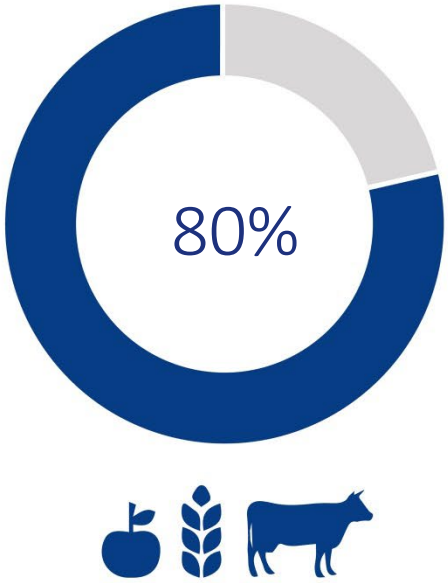
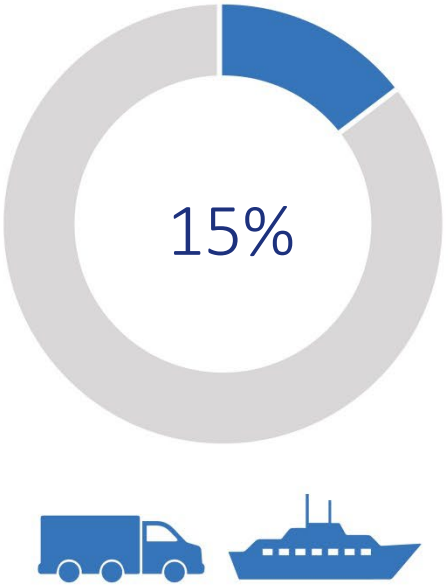
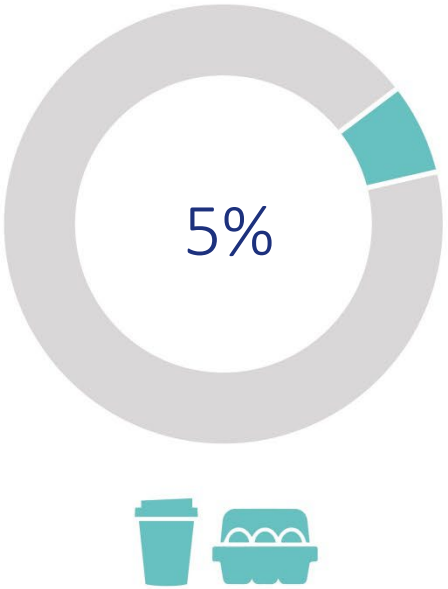
Packaging accounts for approx. 5% of food's CO_2 footprint



Food production



Transport and distribution



Packaging

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Food packaging materials

Plastic

- Excellent barrier: improves food hygiene and safety and reduces food waste by increasing the shelf life of food items
- Light weight; reduces the environmental footprint of transportation when compared to other packaging materials
- Recyclable when right sorting and infrastructure in place
- Material, energy and cost efficient to produce
- Versatile, see-through material

Paper, paperboard & other fiber-based packaging

- Renewable, recyclable, compostable
  - suitable for several end-of-life treatment options
- Need for a barrier layer to hold liquid, fat, oxygen and aroma
  - plastic, bio-plastic, chemical

Metal (tin, aluminum, steel)

- Widely recyclable
- Heavy, does not degrade
- Good barrier, durable, cheap, non-toxic
- Vulnerable for corrosion (oxidation)

Foil

- Great barrier to light, oxygen, moisture and bacteria
- Not-see-through, easily torn
- As monomaterial widely recyclable
- Strong and resilient material, does not degrade

Glass

- Endlessly recyclable but value of recycled material low
- Heavy and space-consuming, breakage
- Does not degrade

Pictures: Huhtamaki, Can Manufacturers Institute

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Packaging stuctures and their implications for recycling

Monomaterials

Structure examples

Printable material & barrier for food hygiene and safety

Plastic, metal, glass

Implications for recycling

Easy to recycle when monomaterials recyclable (for example from plastics PET and PP are, whereas PLA and PS are not)

Coated monomaterials

Printable material, heat retention

Paperboard

Barrier for food hygiene&safety

Plastic

Possible to recycle when materials are sortable and separatable in the recycling process (for example paper cup with plastic barrier can be recycled in dedicated recycling plants)

Multimaterials with multilayers

Printable material

Plastic or paper

Barrier for food safety, aroma, and longer shelf life

Aluminum

Sealing media

Plastic

More difficult to recycle if multilayers hard to separate. Challenge also in sorting materials, as sorting technology (infra-red) understands only the top layer/wrap/sleeve/label.

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The issue with plastics is its ”end of life pathway”

Picture: Youtube, Bo Eide

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2. Trends and drivers in food packaging

Five drivers that shape megatrends and consumer behaviour

Population change

Demographic shifts reshape consumer lifestyles and purchasing desicions

Shifting economic power

Shift of emerging and frontier markets

Technology

Rapid uptake of new technologies accelerates the rate of change

Environmental shifts and pressures

Competing demands and supply constrains create pressure on environmental resources

Changing values

Beliefs about the world are evolving, shaping priorities, perceptions, attitudes and motivations

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Four new global consumer segments

Fitness enthusiast (27 % of consumers)

- Regularly exercises
- Consumes six portions of fresh food daily
- Prefers outdoor activities during travel

“Good-for-me” seeker (17 % of consumers)

- Closely reads nutrition label on food and beverages
- Prefers products that are natural and organic and from trusted organisations

Eco-conscious consumer (16 % of consumers)

- Worried about climate change
- Looks for clean labels and sustainable product features

Leisure traveller (13 % of consumers)

- Takes domestic /international trips often
- Spends money on experiences rather than things

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Key strategies of global packaged food companies

Snacking and meeting health concerns:

reflected in snacks' and on-the-go meal solutions' dominance in the market

Growing need for external certification:

sustainability and environmental footprints from trustworthy sources

Investments towards technology:

growing AI and increasing food personalisation

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Food packaging –towards renewable materials and circularity

Environmental shifts and pressures

Changing values

Battle against plastics and littering	Resource scarcity	Climate change	Experience
Substituting plastics where possible	Moving towards circularity and closing the loop	Moving towards renewable materials	Moving towards naturalness

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Consumer food packaging in the future

- Fit-for-purpose and affordable packaging which is safe, hygienic and convenient to use
- Designed for circularity
- Manufactured efficiently from responsibly sourced materials
- Easy to dispose of and recycle after use

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Towards circularity of food packaging

Requirements for success:

- ✓ Holistic understanding and close cooperation of the whole packaging value chain
- ✓ Better and more harmonized separate collection and sorting systems
- ✓ Further development of recycling infrastructure and end market for food safe materials
- ✓ Raising consumer awareness on circular economy
- ✓ Governmental support for enabling circular economy

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3. Answering the trends – case examples

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Case 1: Paper straws provide an alternative to plastic straws

An excellent high-quality alternative to plastic straws.

Responsible, sustainable and certified to highest standards and quality.

Made from 100% PEFC certified virgin kraft paper.

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Case 2: Fresh ready meal tray –Recyclable and compostable alternative to black plastic

Microwave and oven safe

Cooler to the touch than plastic

Natural look

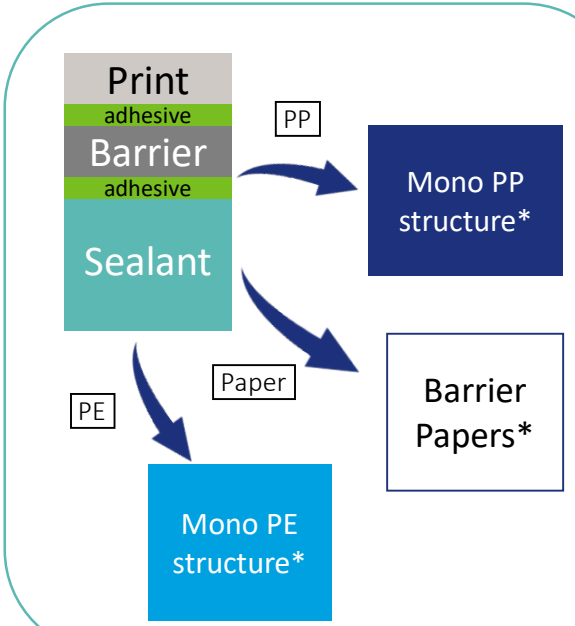
Huhtamaki Fresh, in partnership with Södra

Case 3: Advanced multilayer films substitute other substrates

15%

growth of e-com sales per year. Today, e-com stands for 10% of retail sales globally.

On-going development for improving recyclability:



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* Excluding barrier coatings and printing inks

Case 4: 100% renewable FutureSmart product line for mitigating climate change

Made from plant-based renewable materials

Fossil oil -based polyethylene lining replaced with plant-based PE coating from sugarcane

Paperboard from PEFC certified forests

Suitable for hot and cold beverage, ice cream and food

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Case 5: GreeNest – Natural feel and touch

Made from 50 % grass fibers and
50 % of recycled fibers

Grass sourced from nature reserves,
wood fiber FSC certified

Recyclable, compostable

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Summary

- Food packaging enables our way of life
- Different materials and structures are needed for different purposes
- Environmental concerns and consumer preferences are driving food packaging industry towards renewable materials and circular economy

Sustainable food packaging in the future:

- Fit-for-purpose and affordable packaging which is safe, hygienic and convenient to use
- Designed for circularity, manufactured efficiently from responsibly sourced materials, easy to dispose of and recycle after use
- Natural look, feel and touch

Thank you!

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