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Yes, we can drive for more sustainability in label production!

FINAT Technical Seminar 2022

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Sustainability in packaging Putting things into perspective



Sustainability in packaging is about reducing production waste & increase share of recyclable end products

- Packaging is the largest end-use market segment accounting for just over 40% of total plastic usage
- Including liner, 50% of overall label production is waste
- 99% of all food packaging is not reused
- Brand owners are price-sensitive when it comes to packaging

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Sustainability in packaging

Key drivers



- Equipment innovation
- Automation & Digitalization
- Quality Control
- Industry Partnerships
- Efficient recycling programs
- Substrate innovation

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European Green deal

How we define sustainability?



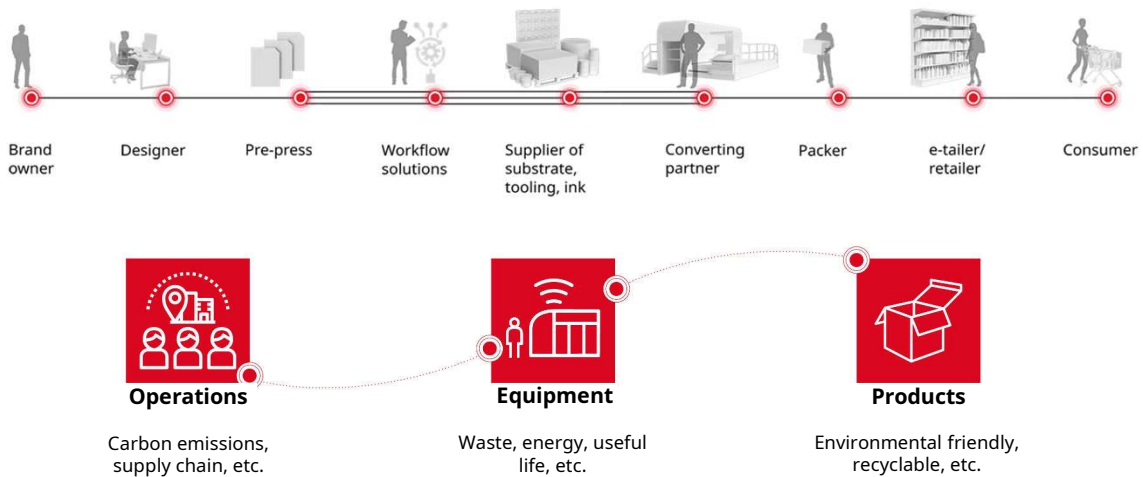
<p>fresh air, clean water, healthy soil and biodiversity</p>	<p>renovated, energy efficient buildings</p>	<p>healthy and affordable food</p>	<p>more public transport</p>
<p>cleaner energy and cutting-edge clean technological innovation</p>	<p>longer lasting products that can be repaired, recycled and re-used</p>	<p>future-proof jobs and skills training for the transition</p>	<p>globally competitive and resilient industry</p>

Source: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

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Boosting sustainability in packaging

3 key pillars (based on BOBST)



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What about Labels?

Main pain points (as described by our customers)

- Waste generation during label production process
- Ink and plate waste
- Challenges in workforce hiring
- Lack of efficiency in production processes
- Material market uncertainty
- Many others...

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Sustainability in Labels

Factors driving sustainability in label production

Product

- Improve substrate and liner sustainability
- Regulations
- Consumers & Brand owner choice

Processes

- Technologies for improved equipment efficiency
- Print process innovation and automation
- Regulations

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Sustainability in Labels & Packaging

Projects and focus areas at BOBST



WORKFORCE
TRAINING



DIGITIZING
COLOR oneECG



REDUCE WASTE with
INLINE SOLUTIONS



MEDIA COMPATIBILITY
to MATCH PACKAGING



QUALITY CONTROL



MINIMUM
SET UP WASTE



RECYCLABLE
PACKAGING



FOLLOW INK
REGULATIONS



ENERGY-EFFICIENT
CURING



MODULAR & FIELD
UPGRADABLE MACHINES



REMOTE SERVICE

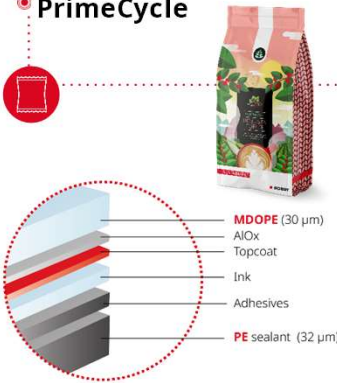
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Mono-material solutions: oneBARRIER

Polymer & paper-based applications

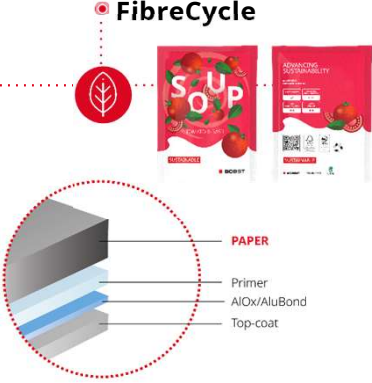
- Mono-material solutions
- Recyclable certified solutions
- Extensive partner network

PrimeCycle



MDOPE (30 µm)
AlOx
Topcoat
Ink
Adhesives
PE sealant (32 µm)

FibreCycle



PAPER
Primer
AlOx/AluBond
Top-coat

SOME PARTNERS

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oneECG (extended color gamut) sustainability impact

Customer case study

Factors	Flexo*	oneECG Flexo*
Total time (including job changes, etc.)	8,43h → (23 m/min)	3 h → 60 m/min
Energy consumption for the printing job	1004 kWh	357 kWh
Ink consumption	30 kg	15 kg
Waste rate (start-up, reel/job changes...)	8%	1%



-65% ENERGY




-24% CO2



-5% LABELSTOCK



-25% WATER



-50% INKS

oneECG has a positive impact on sustainability throughout the **whole production process**

*Study conducted on 525 000 printed labels (7 different sorts)

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UV LED compared to mercury-based curing

The main benefits



Downtime reduction

- Operate up to 10x longer than mercury lamps
- Less downtime related to replacing mercury lamps and shutters/reflectors
- No waiting time for lamp warm-ups and cool-downs



Resource-effectiveness

- UV LEDs use about 50 - 70% less energy compared to traditional UV curing
- Less labor time spent replacing lamps and cleaning/servicing other components



Sustainability

- UV LEDs don't generate ozone and are mercury-free
- Less operating power thanks to cost-effective drying

In-line quality control solutions

Performance is nothing without quality control

By **detecting errors at the time they occur**, production becomes more sustainable.

- **Prevent returns** due to quality issues
- **Reduce substrate waste & re-prints**
- **Increase equipment efficiency & reduce energy consumption**



Let's wrap up

- **Sustainability requires a joint effort** of all players in the industry including consumers
- **Innovations** improve significantly sustainability concerns
- **Partnerships** and co-developments play a crucial role in **fast-track developments**
- Sustainable packaging solutions are **not always price-competitive**
- **BOBST is committed to innovations**

Driving sustainability together

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