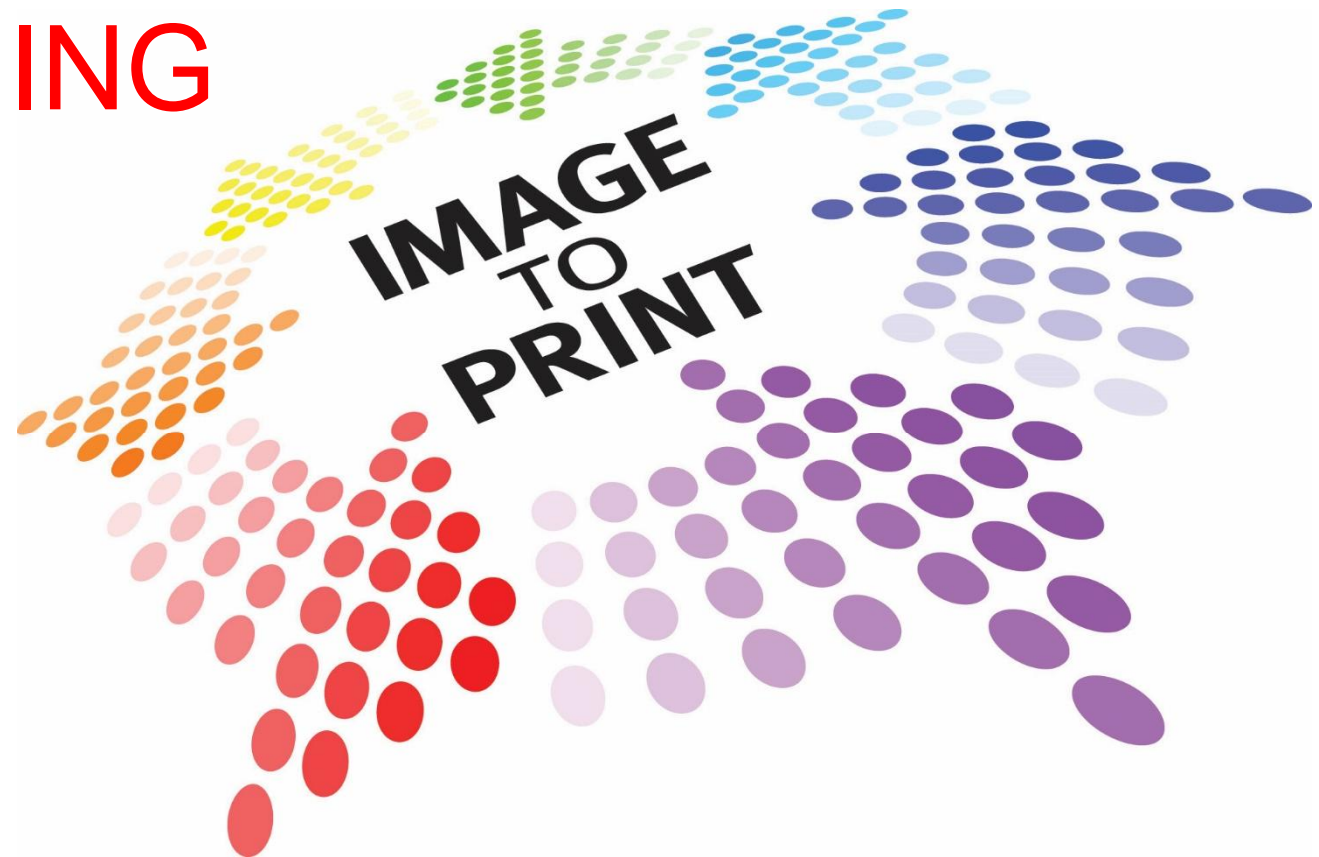


PRINTING TECHNOLOGY & INNOVATION DAYS FOR FLEXIBLE PACKAGING

20/21 November 2019
Kuala Lumpur, Malaysia





PRINTING TECHNOLOGY & INNOVATION DAYS FOR FLEXIBLE PACKAGING

Printing market and press developments

Ulrich Harte

Product Management Printing and Finishing Machines
WINDMÖLLER & HÖLSCHER

First Image-to-Print in KL in 2009



Kuala Lumpur 2019



WINDMÖLLER & HÖLSCHER HQ in 2009 vs. today



Market for flexible packaging is growing continuously!

The Future of Global Packaging to 2022

World market „Flexible Packaging“ grew from 2012 to 2017 by 4,0%.

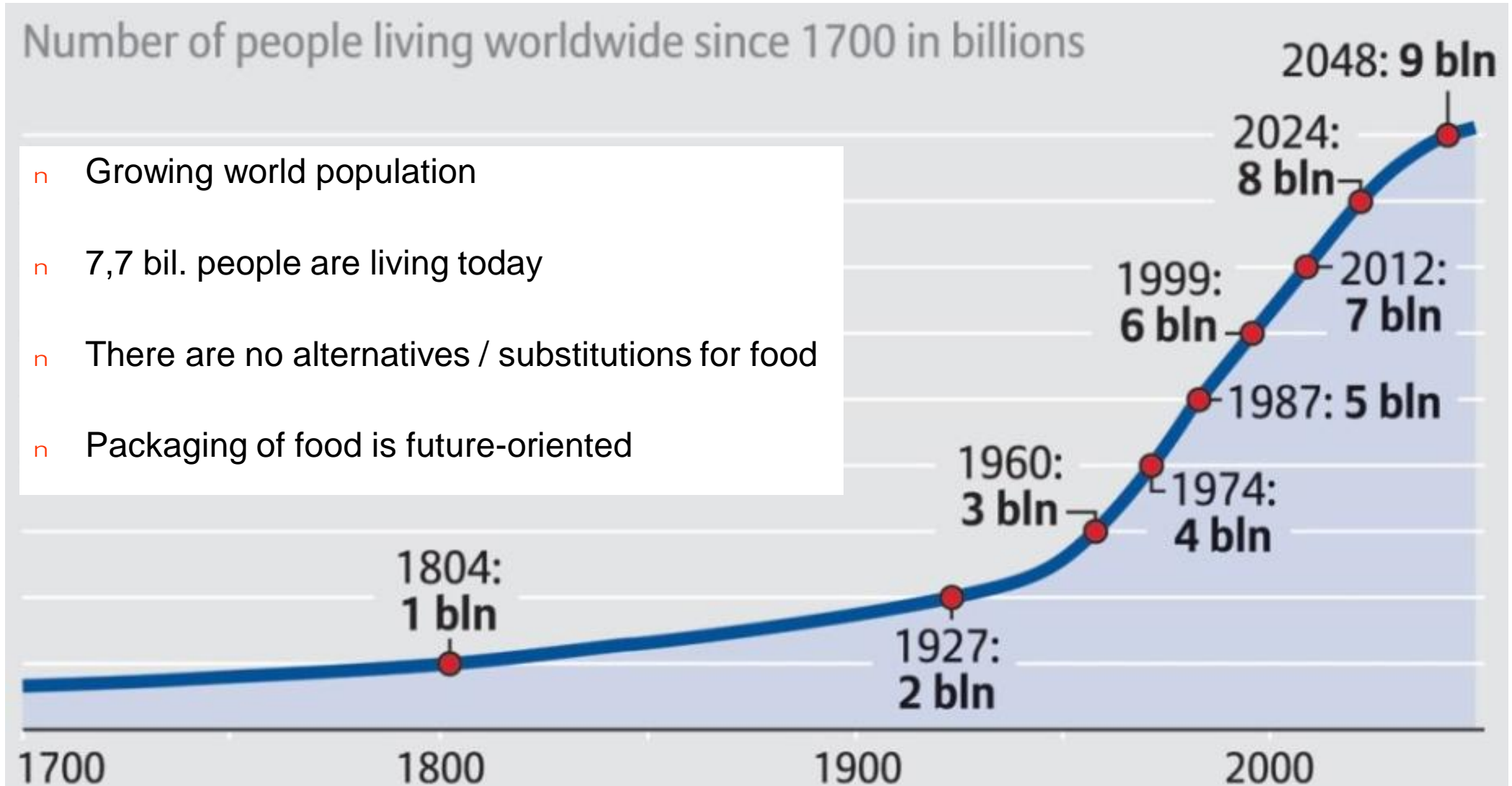
Until 2022, a continued annual growth rate of 5,0% is predicted.

For Asia Pacific the growth rate 2012 – 2017 was 6,5% annually and is expected by 7,1% annually until 2022.

Table 5.2 Flexible plastic packaging products: sales by region, 2012–22 (\$ million)

	2012	2013	2014	2015	2016	2017 (p)	CAGR (%) 2012–17	2022 (f)	CAGR (%) 2017–22
Western Europe	24,458.2	25,765.8	26,278.7	23,927.5	24,493.2	25,167.1	0.6	28,383.6	2.4
Eastern Europe	8,142.7	9,068.6	9,228.8	8,631.7	9,310.0	9,954.6	4.1	13,512.1	6.3
North America	26,428.8	27,946.1	28,092.9	29,662.9	30,254.2	30,824.6	3.1	34,340.2	2.2
South & Central America	3,761.2	3,711.7	3,563.3	2,924.2	2,840.3	2,917.1	-5.0	3,305.4	2.5
Asia-Pacific	49,790.2	51,452.9	54,805.6	57,882.2	62,849.1	68,098.7	6.5	95,897.8	7.1
Middle East & Africa	8,490.9	8,567.9	8,937.8	9,411.8	9,884.9	10,420.4	4.2	13,038.3	4.0
Total	121,072.0	126,513.1	130,907.1	132,440.3	139,631.8	147,382.5	4.0	188,477.4	5.0

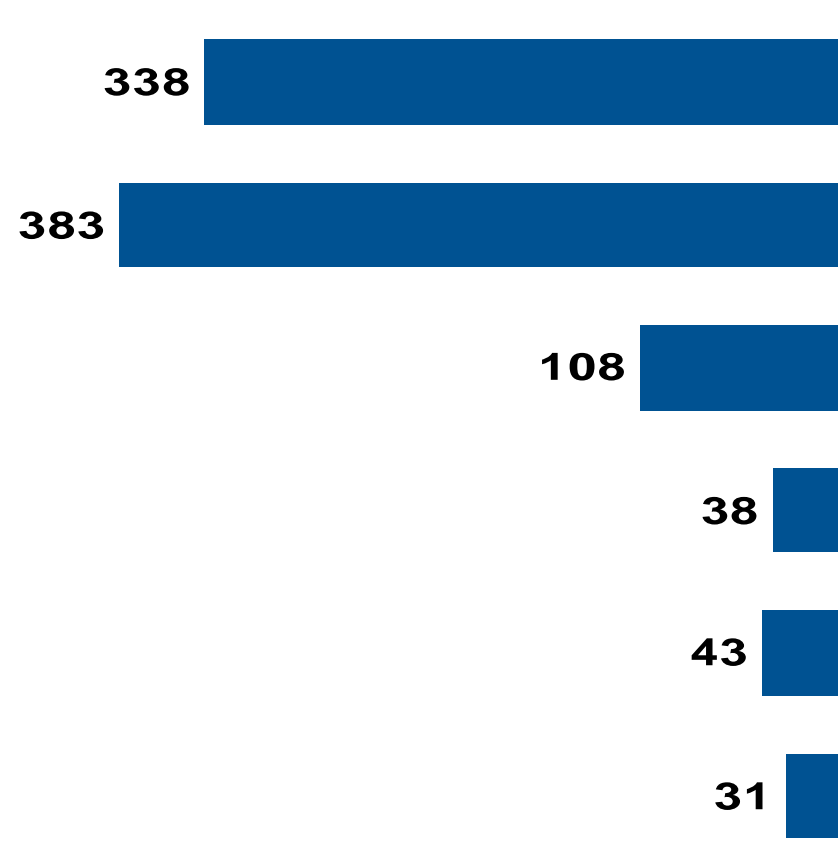
Global population development





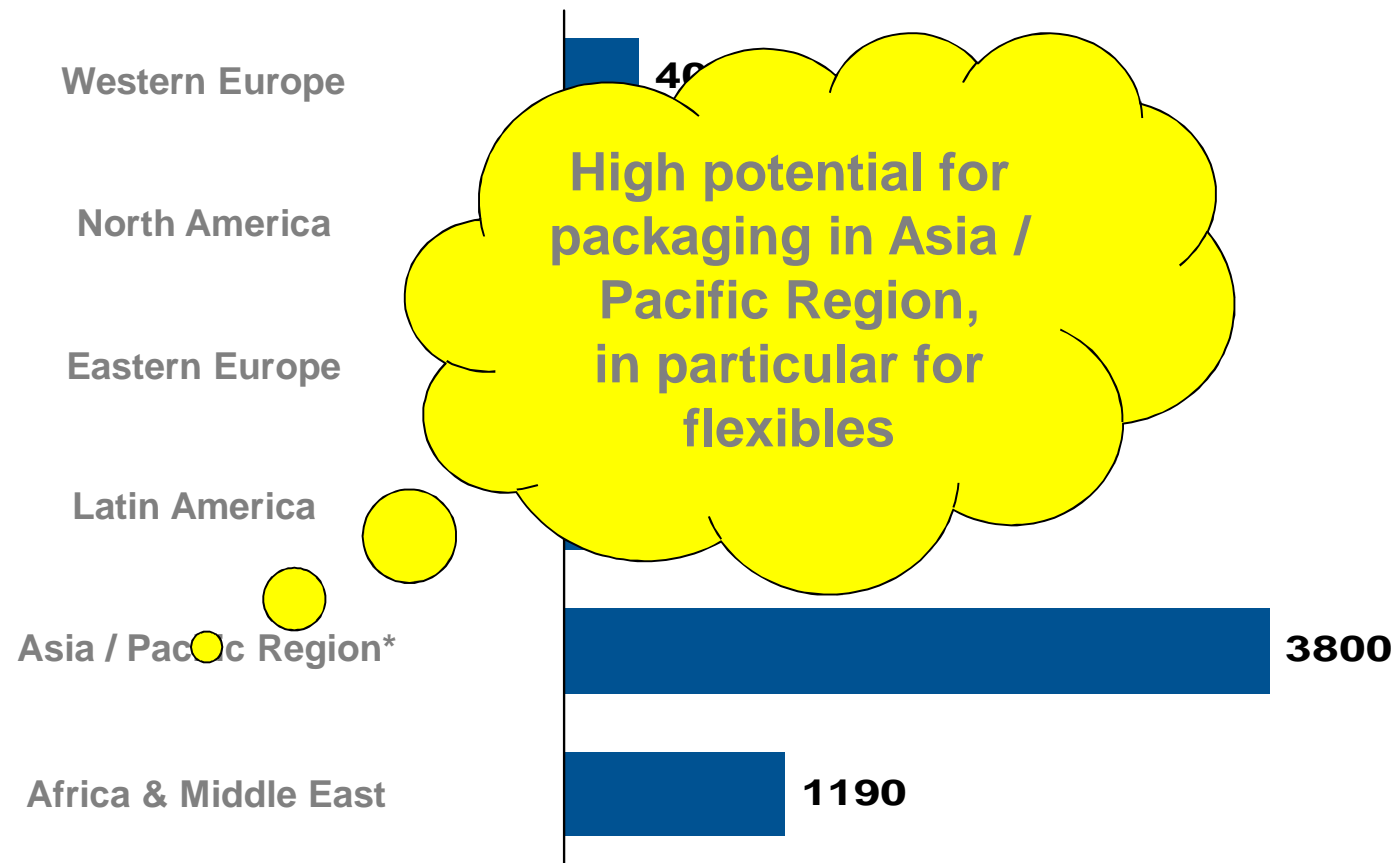
Per capita consumption of packaging material

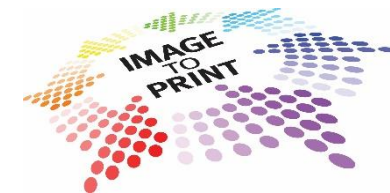
In US \$ per head



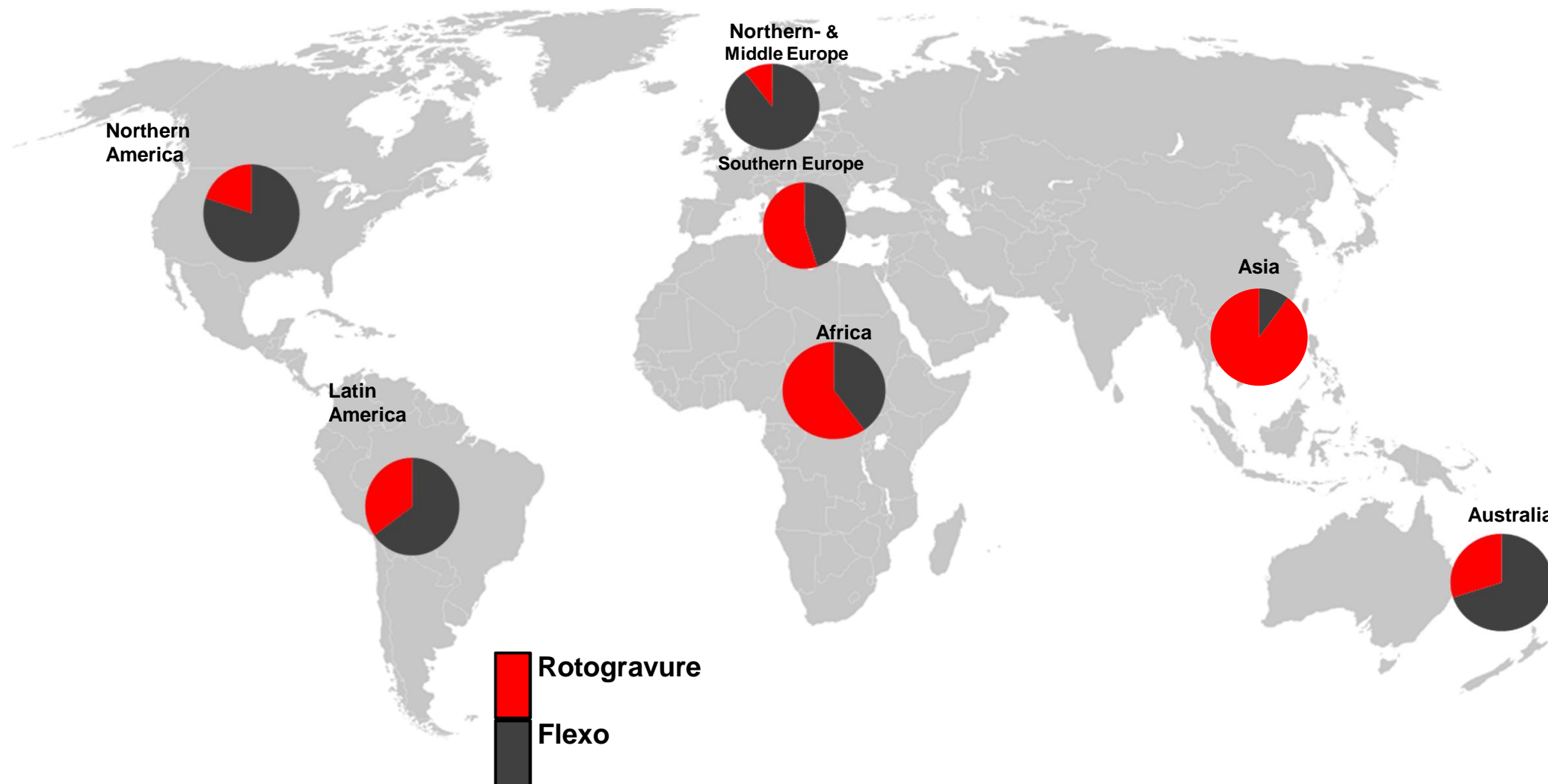
Region

Population in million





Regional market share by printing technology



CI-flexo-presses

small & wide, medium & high speed, front- & sideloading, ...

VISTAFLEX C



NOVOFLEX[™]



Launch:
2019
K-Show

MIRAFLEX[™]



MIRAFLEX[™] SINGLE PORT



The press for core sector of flexible packaging!

- 8 or 10 printing decks
- Repeat: 800 mm or 1130 mm
- Printing width: 820 mm, 1000 mm, **1270 mm**, 1450 mm
- Speed: 400, 500, 600 m/min.
- Winder Ø: 800 mm, 1000 mm, 1300 mm
- VISION Package
- TURBOCLEAN
- ...





DYNASTAR

Rotogravure Presses



HELIOSTAR''S, HELIOSTAR''A



WINDMÜLLER & HÖLSCHER

HELIOSTAR "S" HELIOSTAR "A"

- Repeat: 450 - 920 mm
- Printing width: 800 – 1400 mm
- Speed: 400 / 500 / 600 m/min.
- Winder Ø: 800 mm, 1000 mm, 1300 mm

500 / 600 m/min.
???



HELIOSTAR™S



Certificate by customer's management:

- 360000 linear meters printed in 12h production time

à Average speed 500m/min

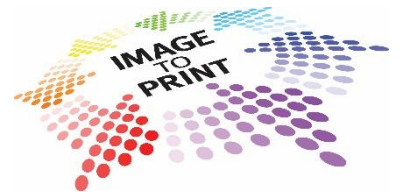


The future of rotogravure printing

Wouldn't it be fantastic to optimize the rotogravure process for short jobs?



We did the first step!



DYNASTAR – Our answer to shorter jobs and digital printing

Innovative press concept

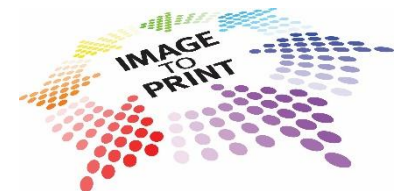
- § Designed for hollow cylinders
- § Fastest change-over
- § Job preparation beside the press
- § High printing efficiency and overall output
- § Same printing system, same inks, same printed product just as with wide presses

DYNASTAR is running
in South East Asia already!



DYNASTAR – The answer to shorter jobs and digital printing

- § Small-scale investment
 - § Minimum storage space and -costs
 - § Reduced cylinder handling costs
 - § Low transport costs and shorter delivery time
-
- § Innovative lightweight cylinders are under development by  & **Janoschka** and other partners.



It's not only the presses: Service is most important as well!

- 2 local Service Engineers and 1 Office Manager to take care of spare parts in Malaysia
- Main support are from Bangkok Hub
- Operator training in HQ or at customer's site
- Qualified specialists 24/7 (Information and Diagnostic Center (IDC) located in Germany, USA and SE-Asia)
- Smart Service support
- Advice and support by telephone or Smart Glasses:
 - Trouble shooting of technical problems and malfunctions
 - Questions regarding maintenance and repairs
 - Printing process questions





Digital printing for flexible packaging

Digitalization is the greatest challenge facing the economy.

Packaging will survive the e-commerce supply chain.

Printing will stay as an important element in the supply chain business.



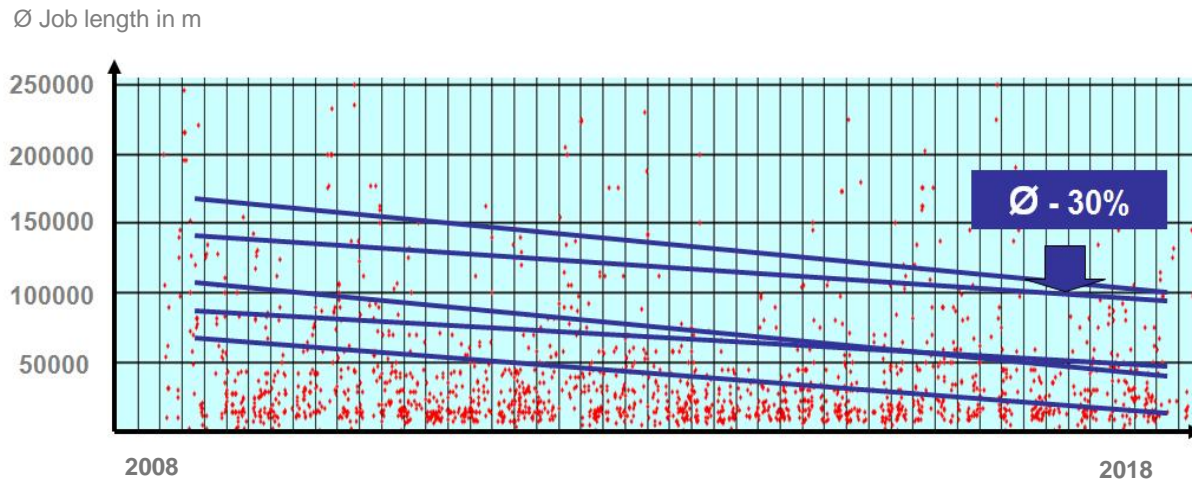


Today's key requests / driving forces in printing technology:

Shorter jobs

and

Faster deliveries



These are real concerns in the market.
It's more than just printing technology!
It's effected by the entire process from IMAGE-to-PRINT!



Thinking about digital printing ...

- § We believe that digital printing will grow in long term.
- § In the next decade, digital printing will be developed to the third accepted printing technology.
- § It will reach a considerable level, but will not become disruptive.



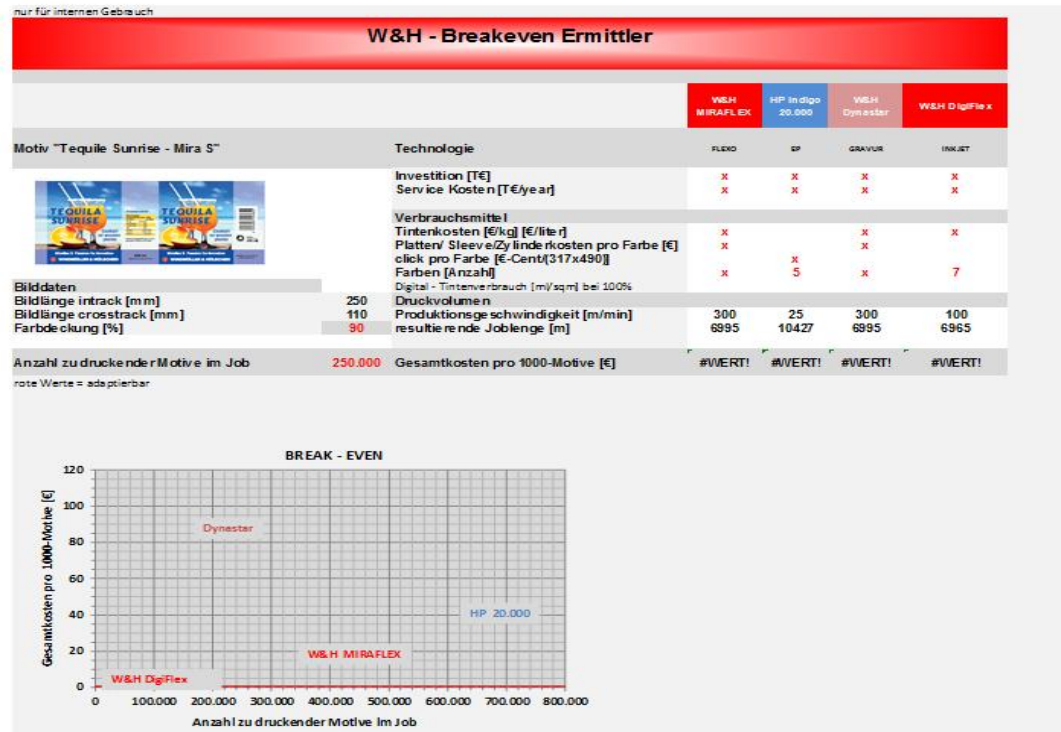
Inkjet printing – What are we actually doing:

W&H is teaming up with:

- § leading print head manufacturers to supervise inkjet development.
- § hardware and software companies to develop a concept for a stable and reliable print quality.
- § ink manufacturer to optimize print quality based on machine, substrate and ink.

W&H stands for long term flexible packaging solutions!

Digital printing – we are prepared for your individual break-even calculation



Target cost calculations depend on...

- § run length
- § printing technology
- § number of repeat orders
- § ink costs
- § ...
- § internal production workflow
- § downtimes
- § ...
- § consumables costs
- § substrates
- § utilization rate
- §

Let us meet at drupa 2020 to verify our results



THANK YOU FOR YOUR ATTENTION.

janoschka

