

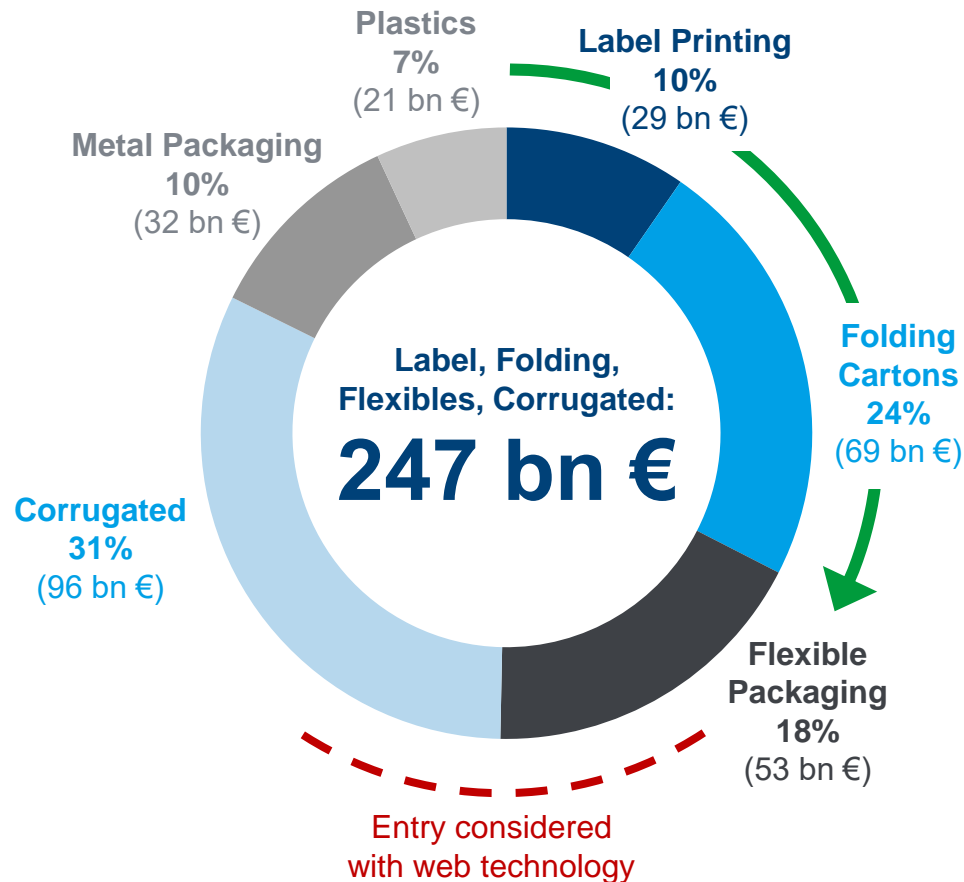
Update Segment Packaging | Boardmaster

Media Conference HEIDELBERG Days 2024

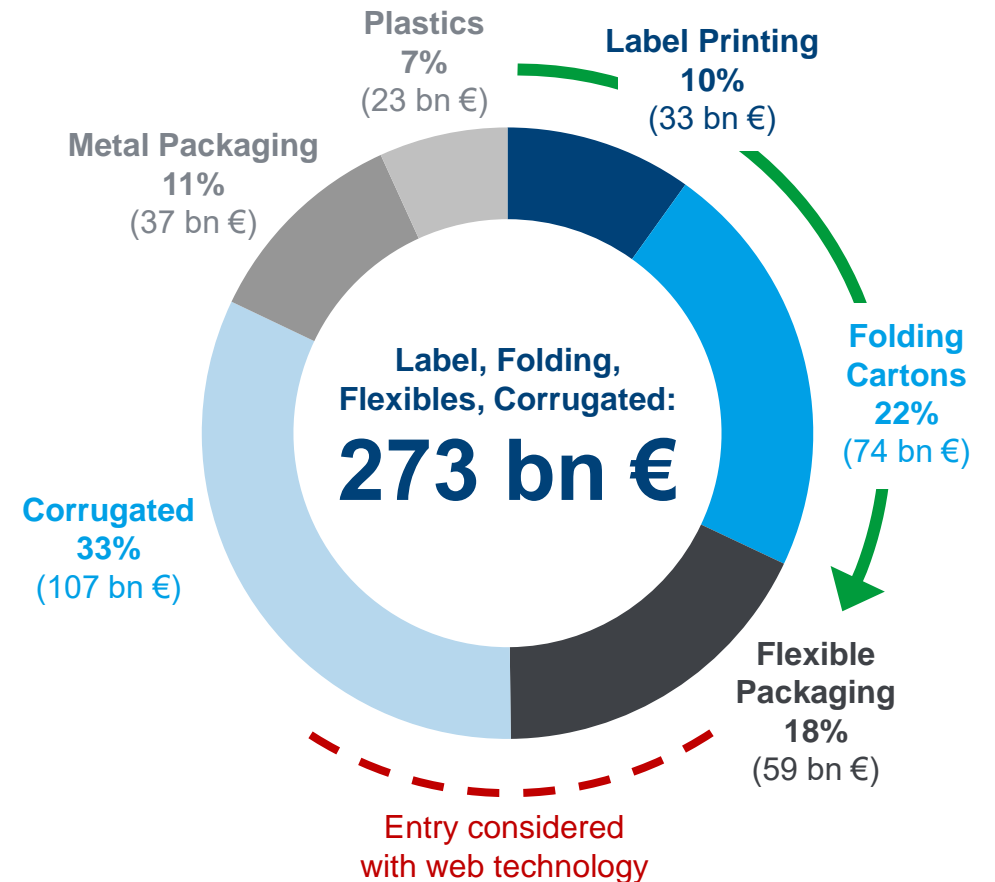
Felix Müller | Wiesloch, October 21, 2024

Packaging market grows – in all segments, in all regions.

Packaging Market 2023

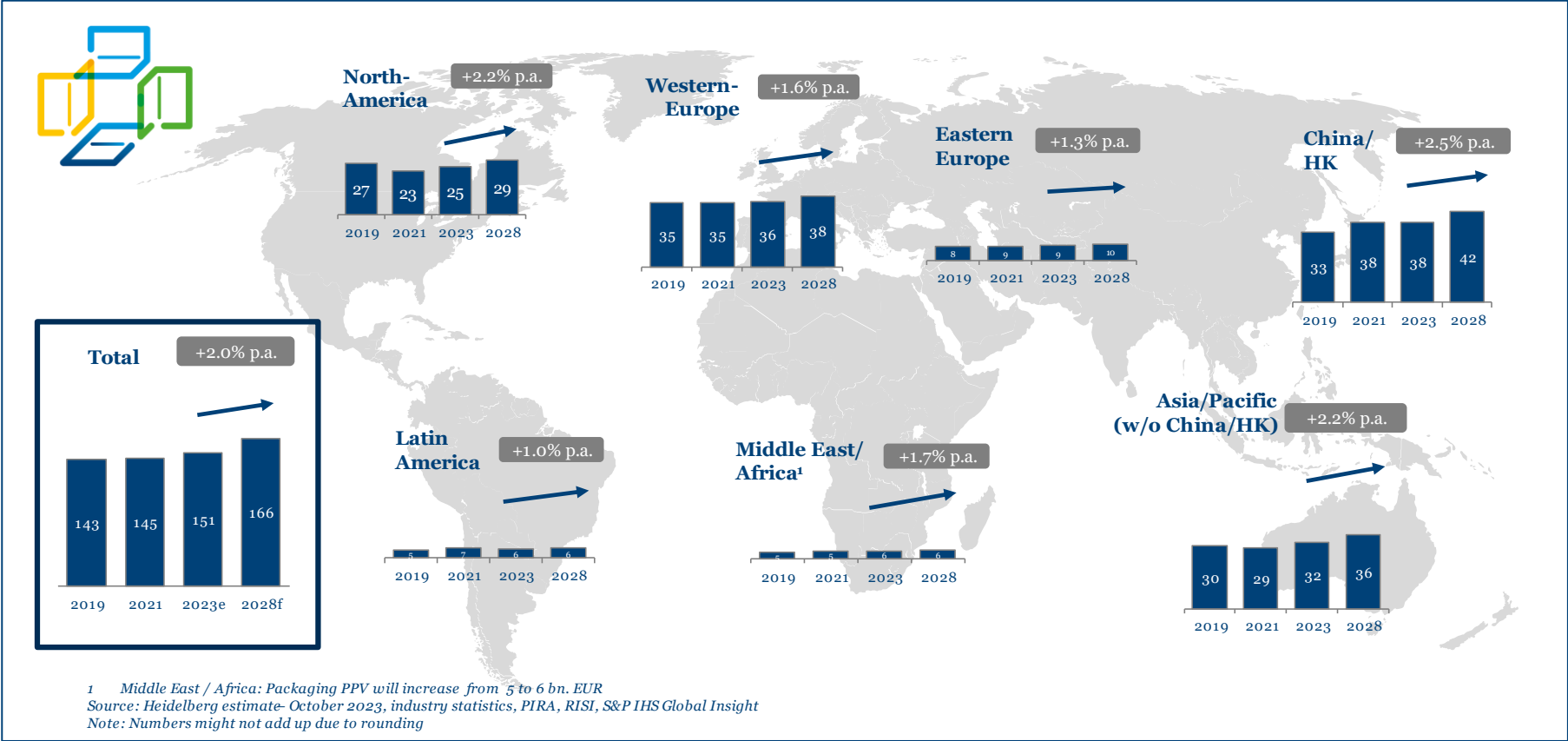


Packaging Market 2028



The worldwide packaging PPV* will increase within next 5 years driven by Asia-Pacific, but growth will slow down in the long run.

Packaging & Labels PPV by Region [bn. EUR]



Annual Growth Forecast

	'28-'33	'33-'38
Total:	1.1%	0.6%
NA:	0.6%	0.3%
WE:	0.5%	0.2%
EE:	1.0%	0.8%
LA:	1.2%	0.7%
MA:	1.8%	1.1%
GC:	1.9%	1.2%
Rest AP:	1.4%	1.0%

* Packaging PPV consists of Folding cartons, Flexible Packaging, and Labels

Packaging – Trends supporting fiber-based packaging.



- **Industrial growth** in China and Asia
- **Increasing middle class** and urbanisation
- **Aging population** in many industrialized and some emerging economies
- **More single households** in industrialized countries
- **Plastic replacement**, driven by favourable environmental footprint, recycling capabilities, consumer demand and also in some regions by law (e.g. EU: Packaging and Packaging Waste Regulation, but also in coastal Asia)
- **High recycling rates** with established recycling infrastructure
- **Development of functional barriers**

Megatrend Sustainability.

To reduce waste and promote sustainability, our policies and legislation needs to intervene!

SUPD: Single use plastic directiv

PPWR: Packaging and Packaging Waste Regulations

PFAS ban: PFAS are banned for food packaging



Packaging and Packaging Waste Regulation (PPWR).

- **The PPWR Regulation is** a revision of the PPWD 94/62/EG and is expected to apply from **2026 at the latest**.
- The initiative's object is to ensure that all **packaging is reusable or recyclable in an economically feasible way by 2030**.
- Prohibition of certain **single-use plastic packaging from 2030**.
- Food contact packaging is **not allowed to contain BPA and PFAS above certain limit values**.
- **Strict requirements for recyclability**.
- **Minimum targets** for the recycled content of **plastic packaging**.

→ **Fiber-based packaging!**



Partnership with chemical supplier for barrier coatings. Inline und multi-coating in flexo register replacing classic offline coaters.



Offers a complete range of barrier-coatings for a variety of paper- and corrugated packaging.
 Focusing on printability, application flexibility and adhesion.
 Solenis has the Goal to expand the coating business in converting.



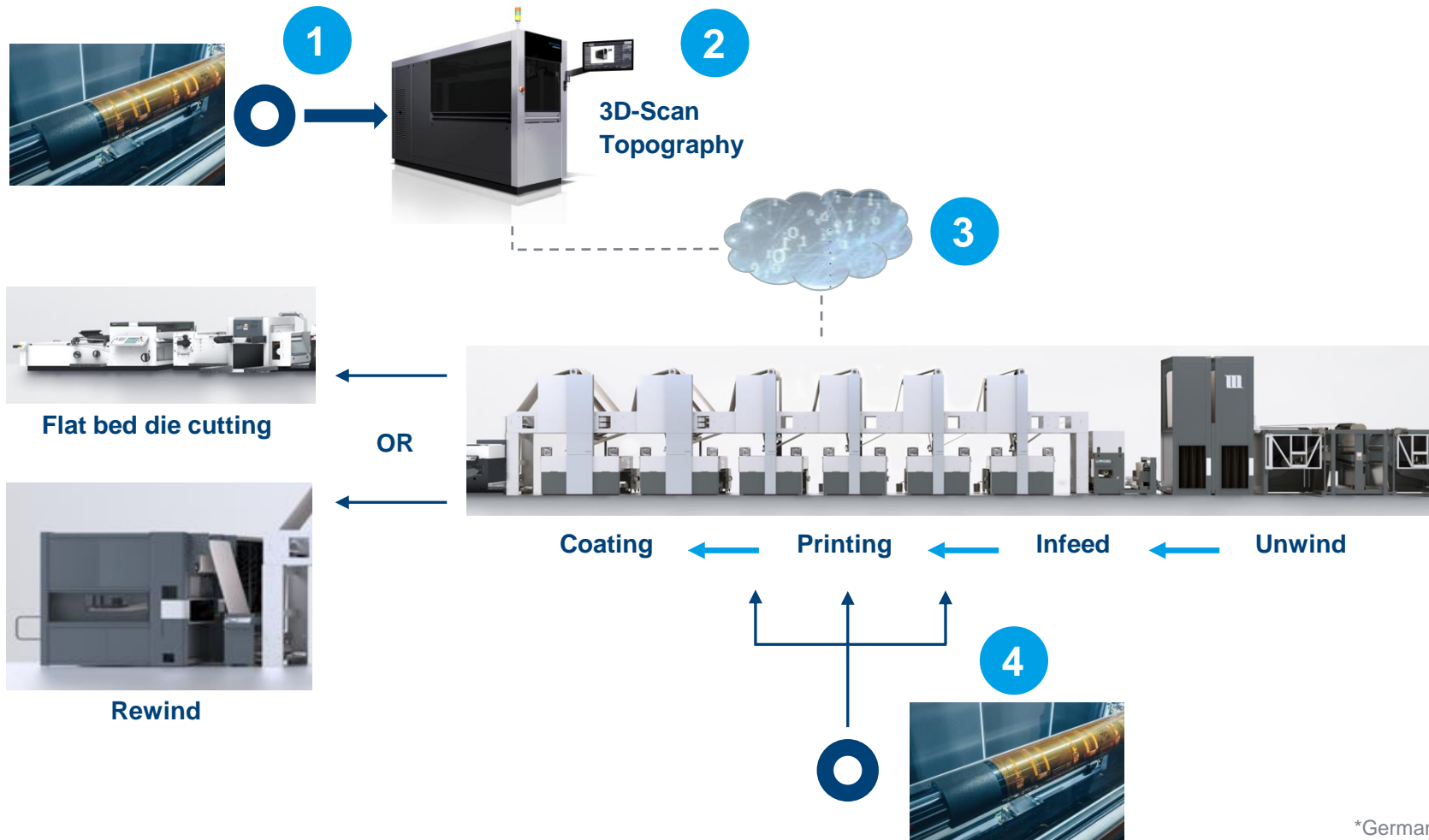
- **Water based barriers** for Paper and Corrugated Board
- **Liquid barrier** for “Cup-Stock”
- **Gas and moisture-Vapor barrierer** for envelopes
- **Oil- and greas barrierer** for Fastfood packaging and Paper

Boardmaster from HEIDELBERG successfully launched worldwide.

The collaboration between HEIDELBERG and Solenis is therefore about optimally coordinating the individual components of the Boardmaster, the chemical composition of the Solenis barrier coatings and the entire process technology and making them available to packaging producers.



Boardmaster for Non-Stop Production. Basic Operating Principle.

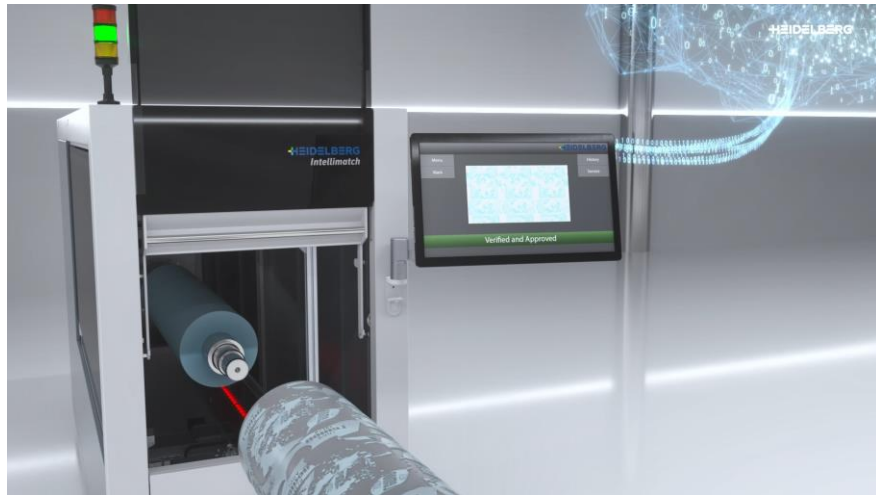


- 1 Printing Plates, mounted to sleeves, ready to scan
- 2 Plate topography scanned and verified
- 3 Plate information sent to data storage
- 4 Scanned plates loaded into inactive printing units and translated into press settings

*German and Worldwide Patents Applied for – Appl. # 06143/ 17P 06143 DE2

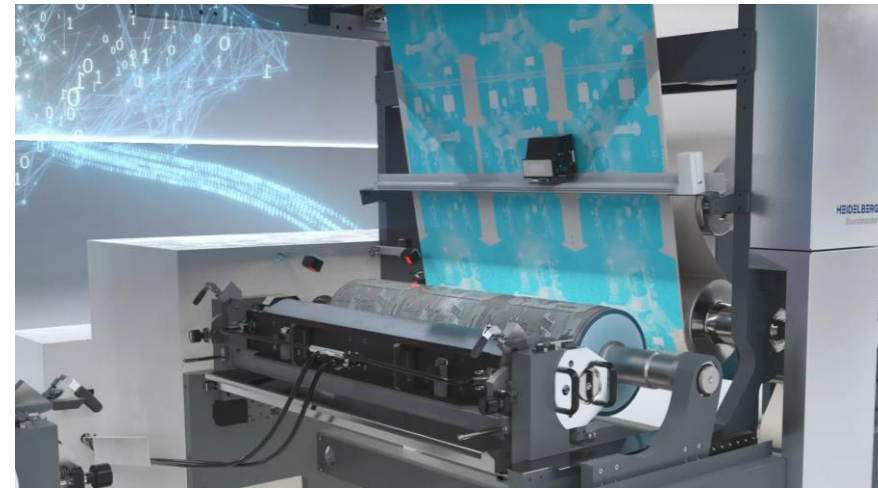
Concept and functioning of Boardmaster and Intellimatch.

Intellimatch



- Contactless offline printing plate verification
- Automatic setting of press parameters

Boardmaster



- ZERO changeover downtime
- Saves 90%+ of changeover substrate costs
- No interruption of print process

High market demand. Southern Champion Tray purchased a new Boardmaster.

SCT produce primarily carton products for the food industry. Think of fast-food, carry-out, & restaurant items. Such as: To-Go boxes, bakery boxes, french-fry containers, food containers & lids, pizza boxes



“Southern Champion Tray is a global provider of folding cartons and has a 97-year history of providing great packaging and distinctive service. As we move into the next century of delighting our customers, the innovative feature laden Heidelberg Boardmaster is ideal in aiding our team with a high-speed press that has proven technology to support a zero makeready environment. Similarly, the increased coating capabilities will aid SCT efforts in reducing plastic-lined packages, while the enhanced AI based Intellimatch scanners will directly support our customers’ sustainability efforts related to eliminating waste. Our team of customer champions is incredibly excited to partner with Heidelberg and look forward to delighting the world with beautiful and superior quality folding cartons!”

Brian Hunt, President & CEO

Speedmaster XL 106 for high end folding carton production. The new peak performance generation.

By addressing the major challenges of modern printing, HEIDELBERG is committed to maintaining its technology leadership in the printing sector.



21k maximum speed

Uptime XL concept



Improved operating concept (UX)

New design incl. Press Center XL 4



DryStar Combination Eco

PowderStar Pro & XL



Improved Color Assistant Pro

Intellistart 3



Increasing competitiveness. Higher productivity leads to lower cost*.

High volume packaging or wet glue label

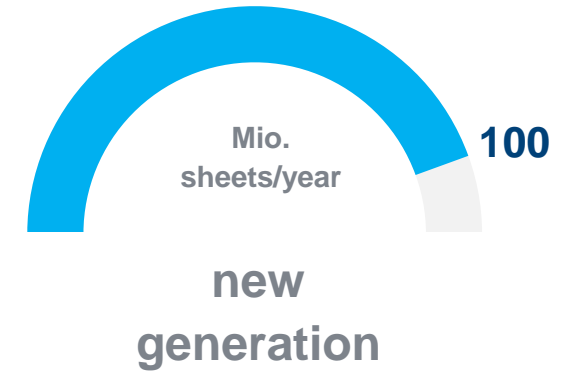
- Benchmark of 100 million sheets per year will soon be reached.

High value packaging

- 15 – 20% higher productivity.

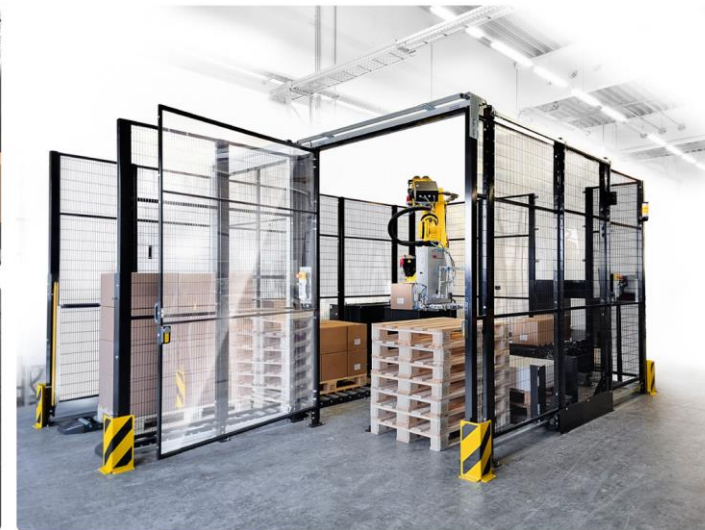
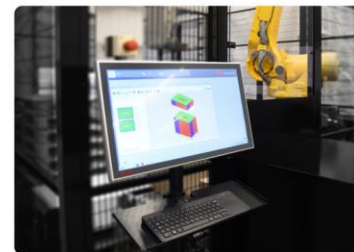
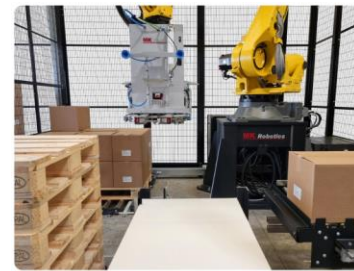
Pharma packaging

- Make-ready processes are shortened by up to 30%.



*Compared to last Speedmaster XL 106 generation

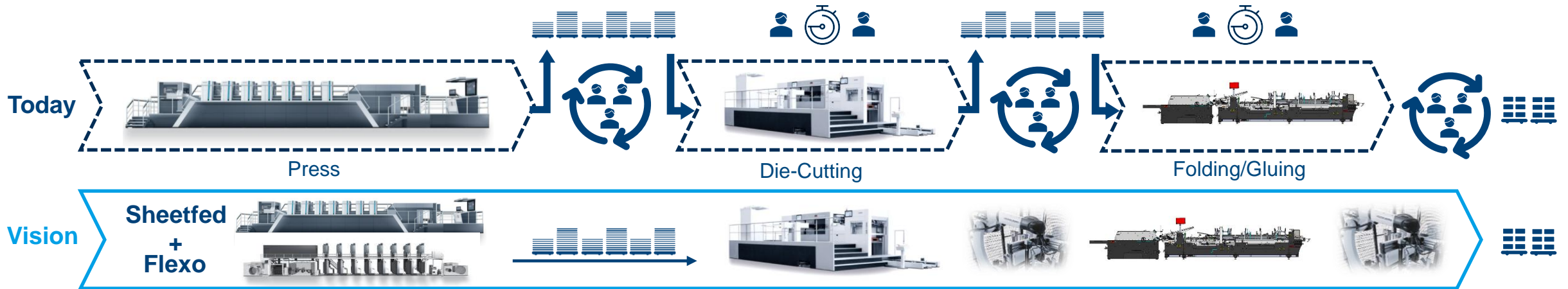
Postpress Packaging. HEIDELBERG covers the entire value chain.



Packaging Solutions – We shape the industry. It's all about the most efficient and smartest workflow.

Today's focus: press efficiency

Extended future focus: automatize & digitize E2E workflow



- Reduce make-ready times and operator related processes
- Scale flexo-print technology
- Reduce energy consumption and waste



Consistent and continuous **data flow** alongside each production step



Reduce significant **make-ready times** in post press phase



Robotics & automation solutions to simplify **material flow** and to counter **personnel intensity and labor shortages**

Thank you for your attention!