Packaging and Label Production - The HEIDELBERG and Gallus way

SHIFT23 LABELS & PACKAGING CONFERENCE, Bangkok, 21 September 2023

Thomas Frank | HEIDELBERG Asia-Pacific

Changing Demography, Sustainability and Supply Chain are the challenges for Packaging Production

Growing World Population
Growing middle-class in Asia
Increasing Urbanization

More single-occupancy households

eCommerce

Sustainability
Regulations & Restrictions
Pledges from Brand Owners

Supply Chain driven by:
- **Costs**
- **Political situation**

Growing Packaging Volume

Shorter production runs
Smaller pack sizes

Different 'moment of truth' (product presentation)

- **Reduce waste !**
- **Move from plastic to carton board**

Packaging production may move to different location

Impact on use of material and printing process

Indonesia plans to ban single-use plastic by end of 2029*

* Channel News Asia, 06 Jun 2023

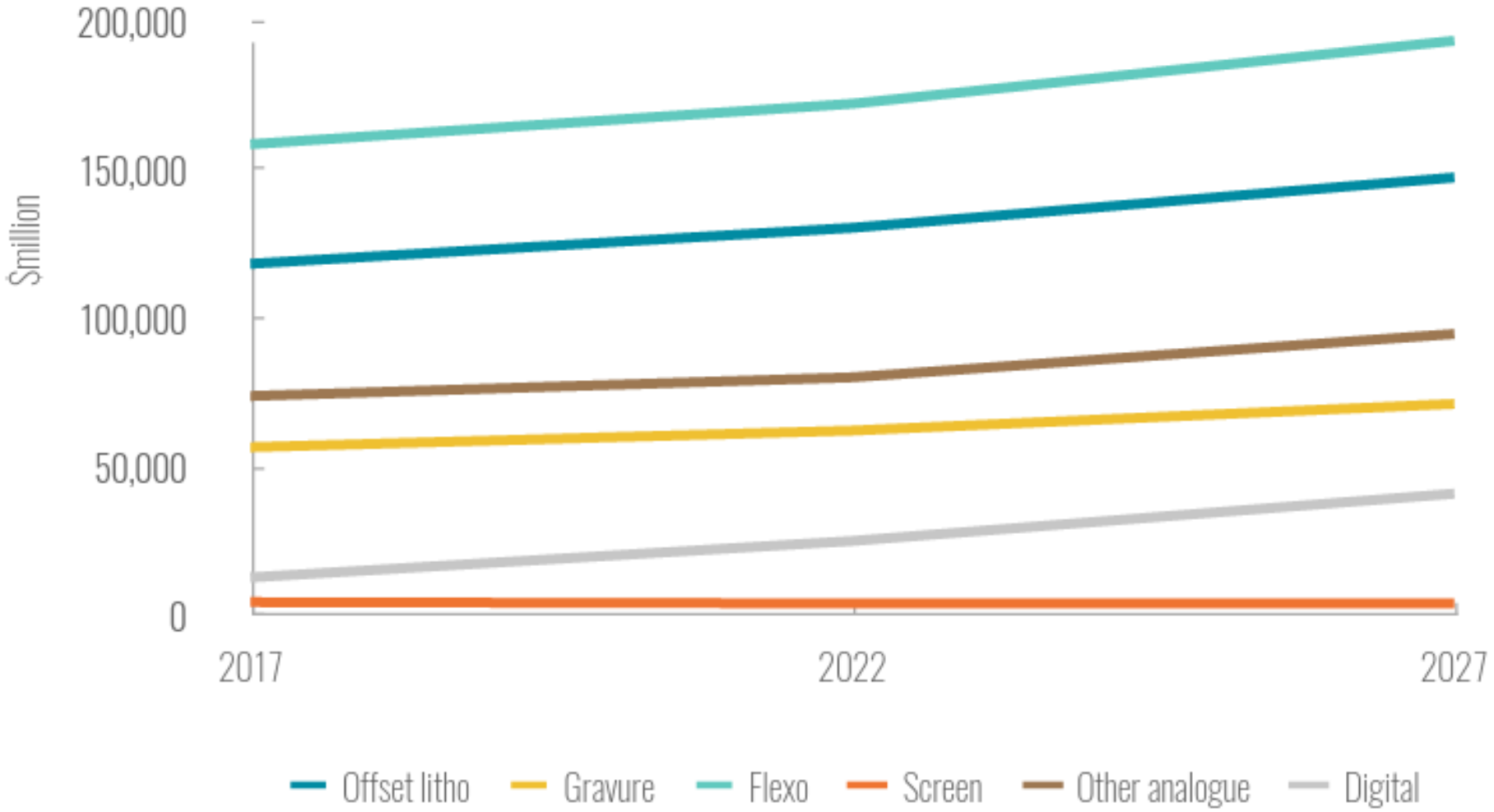
EU SUPD (Single Use Plastic Directive)

Target to decrease plastic consumption in all packs with single rotation/for on-the-go consumption. Banning where more sustainable options exist.

In common with corrugated packaging, cartons are benefiting from the increased focus on sustainability as they are derived from renewable sources and can be readily recycled. Printed cartonboard is replacing plastic in applications such as beverage and food multipacks, and trays in food packaging. Source Smithers: **The Future of Package Printing to 2027, page 96.**

Print Processes: Flexo & Offset are and remain the major revenue generators

Package print processes by value (mil. USD, constant 2021 prices & exchange rates)



Source Smithers: The future of Package Printing to 2027

Global Printing Output in mil USD – Cartons and Labels

Folding Cartons

$ million, constant 2021 prices & exchange rates	2017	2018	2019	2020	2021	2021 CAGR (%), 2017–21	2022	2022 % change, 2021–22	2027	2027 CAGR (%), 2022–27
Offset litho	80,602	82,533	84,997	83,725	85,844	1.6	88,315	2.9	99,101	2.3
Gravure	16,272	16,697	17,247	16,931	17,218	1.4	17,798	3.4	20,098	2.5
Flexo	8,798	8,981	9,200	8,990	9,237	1.2	9,561	3.5	10,426	1.7
Screen	0	0	0	0	0	n/a	0	n/a	0	n/a
Other analogue	0	0	0	0	0	n/a	0	n/a	0	n/a
Digital	848	1,102	1,643	1,985	2,216	27.1	2,536	14.4	4,735	13.3
Total	**106,521**	**109,313**	**113,087**	**111,630**	**114,516**	**1.8**	**118,211**	**3.2**	**134,360**	**2.6**

Labels

$ million, constant 2021 prices & exchange rates	2017	2018	2019	2020	2021	2021 CAGR (%), 2017–21	2022	2022 % change, 2021–22	2027	2027 CAGR (%), 2022–27
Offset litho	7,116	7,201	7,300	6,967	7,234	0.4	7,380	2.0	7,754	1.0
Gravure	4,842	4,952	5,110	5,008	5,270	2.1	5,484	4.1	5,891	1.4
Flexo	14,660	14,992	15,469	14,973	15,746	1.8	16,347	3.8	17,353	1.2
Screen	1,453	1,450	1,466	1,385	1,430	-0.4	1,456	1.9	1,463	0.1
Other analogue	2,216	2,261	2,346	2,280	2,410	2.1	2,512	4.2	2,880	2.8
Digital	9,337	10,171	10,821	11,566	12,600	7.8	13,467	6.9	17,486	5.4
Total	**39,625**	**41,027**	**42,511**	**42,179**	**44,689**	**3.1**	**46,645**	**4.4**	**52,827**	**2.5**

Source Smithers: The future of Package Printing to 2027

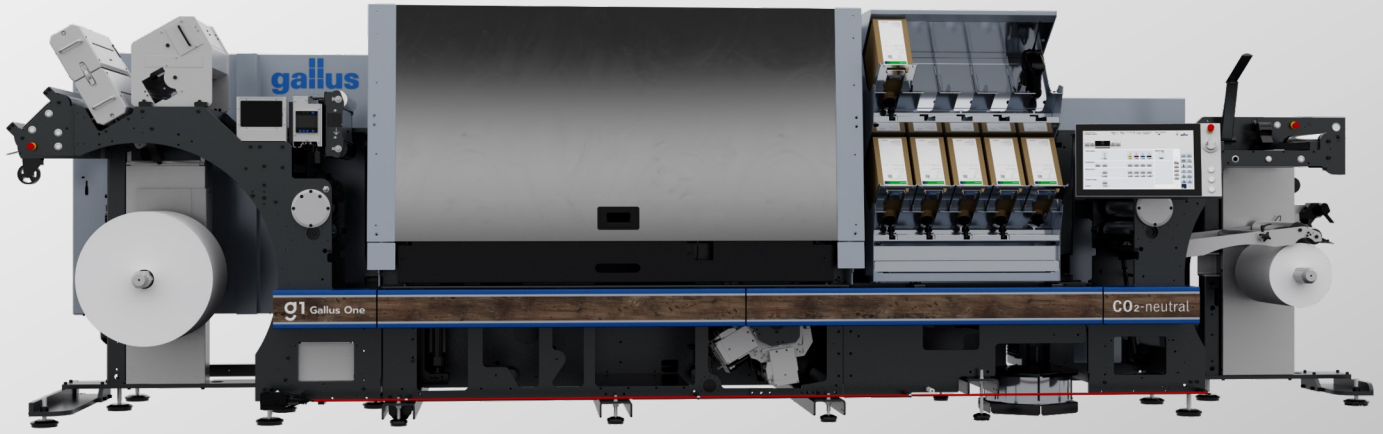
Gallus One at Labelexpo Brussels

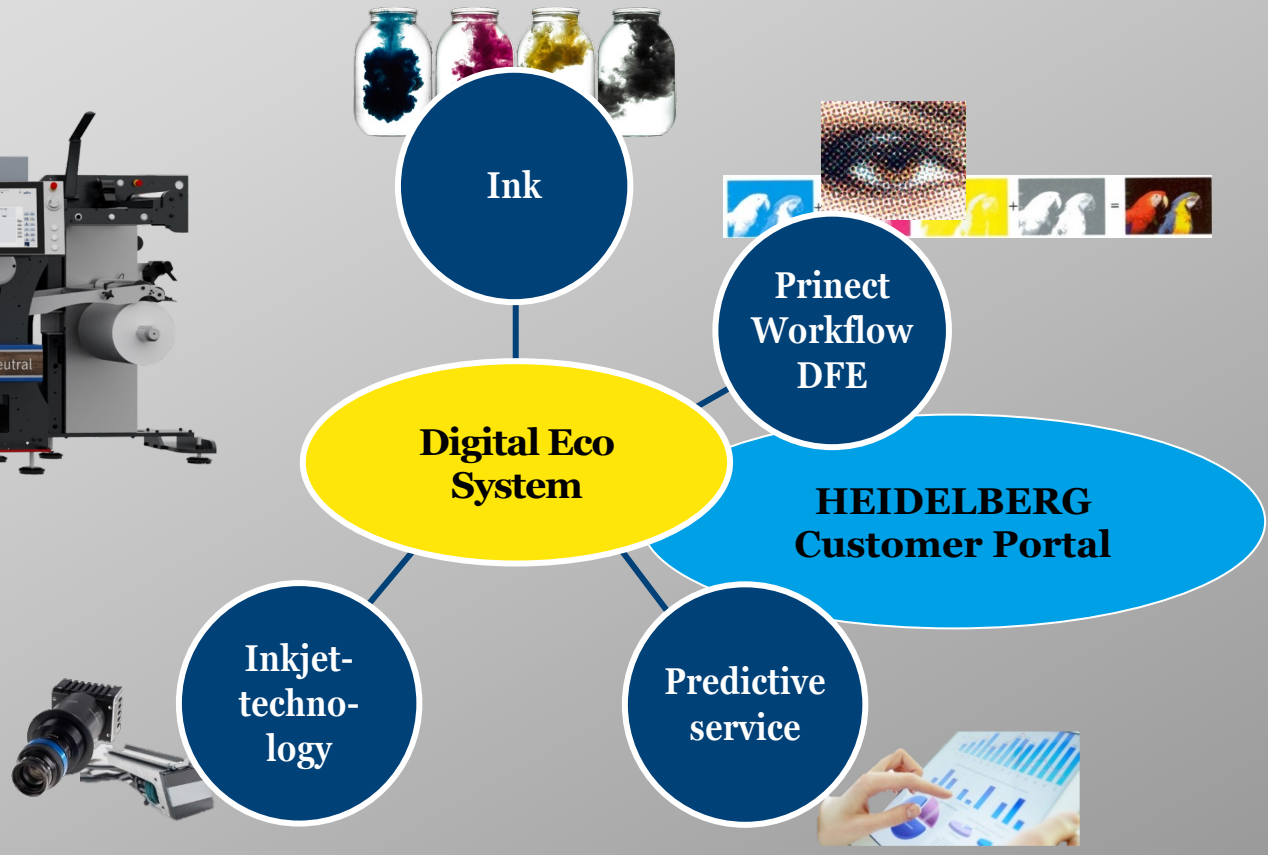
1200 x 1200 dpi | CMYK (up to 88 % PANTONE®) | White 85 % opacity (70 m/min) | 340 mm printing width | Productivity 1428 m²/h

drop freeze pinning | automatic cleaning | inkjet control - vision system | CO2 - neutral

g1 Gallus One

Digital Ecosystem - from a single source





Changing Demography, Sustainability and Supply Chain are future challenges for the Packaging Production

HEIDELBERG

		Our Solution:
Growing World Population **Growing middle-class in Asia** **Increasing Urbanization**	**Growing Packaging Volume**	**Heidelberg Boardmaster**
More single-occupancy households	**Shorter production runs** **Smaller pack sizes**	**Gallus Digital Presses** **Prinect Digital Workflow** **Push to Stop / AI**
eCommerce	**Different 'moment of truth' (product presentation)**	**Special Effect & Embellishing**
Sustainability **Regulations & Restrictions** **Pledges from Brand Owners**	• **Reduce production waste !** • **Move from plastic to carton board**	**Prinect Digital Workflow** **Heidelberg Boardmaster**
Supply Chain driven by: • **Costs** • **Political situation**	**Packaging production may move to different location**	**Service, Consulting and Parts Infrastructure in all countries**

Prinect Packaging Workflow

Business

Prinect

Business

- MIS
- Job Creation

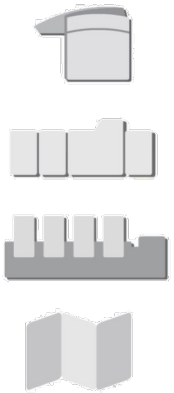
- E-Shop
- Service
- Printshop Analytics

Cloud

Prinect

Portal

- Online Interface to Print Buyers
- Online Job tracking



Production

- Integration of all production areas
- Push-to-Stop/AI

Push-to-Stop: the power of Artificial Intelligence

Air Assistant	Quality Assist	Intellistart
Color Assistant Pro	Roller Check Assistant	Intelliguide
Color Fast Solution	Wash Assistant	Intellirun
Device Assistant	Powder Assistant	Intelliline

Heidelberg UX offers a modern and attractive working environment. A great advantage to attract and motivate skilled people.

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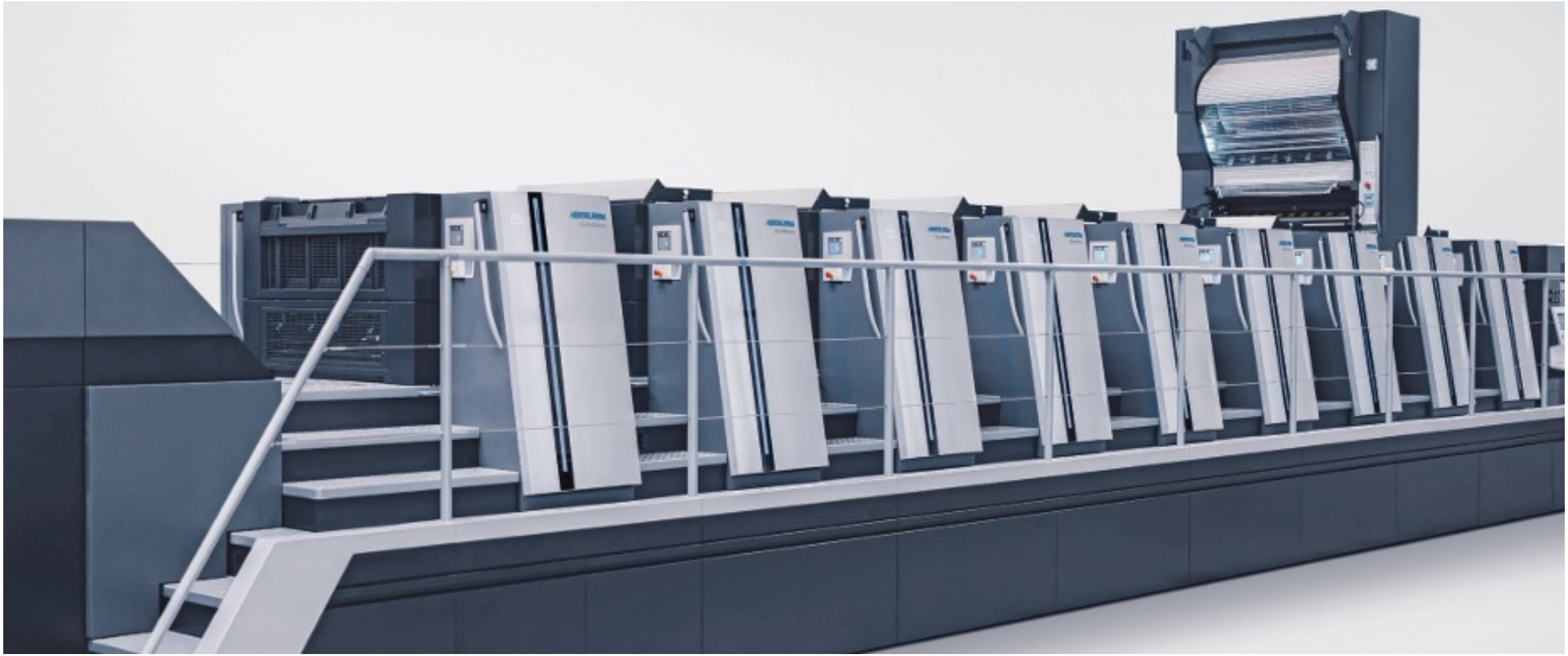
HEIDELBERG Speedmaster | Customized configurations for Folding Carton and Inmould Label production

Special Effects and Embellishing

CX 104-9-YY+L

CX 104-1+LY+7-LYY+1+L

HEIDELBERG FoilStar for inline Cold Foil Applications



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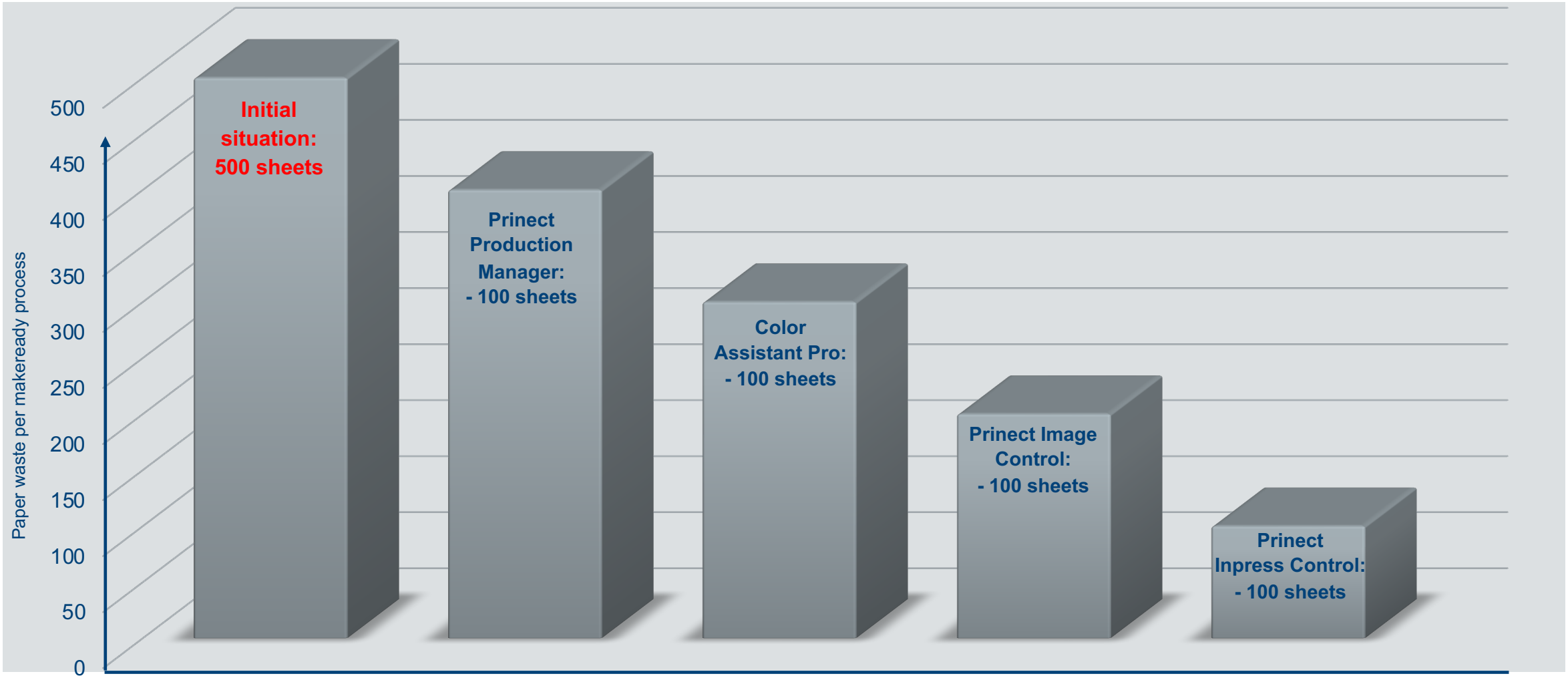
Sustainability: Significantly less waste through controlled processes with Prinect Production Workflow



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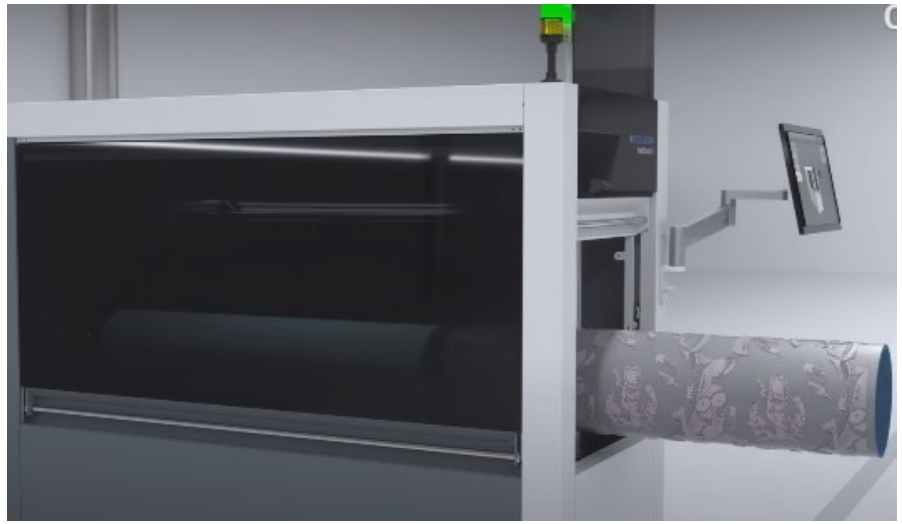
HEIDELBERG Boardmaster for High Volume Packaging

- Flexo Inline press with flying job change at full speed and unique double ink decks
- Boardmaster has no job changeover downtime
- Web width 85, 100, 140 or 165 cm; Speed of 600 m/min
- Hybrid print units for waterbased and UV inks

Intellimatch – Scanning the Flexo Plate and Presetting the Press



- An optical, non-contact plate-scanning system reads the ‘topography’ of the flexo plate
- Plate information is transmitted to drive controls of the press and available for fully automatic print pressure setting

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