

Transforming **Flexo** Since 2008

SHIFT_018

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WhatTheyThink?

Market Intelligence for Printing and Publishing

**Fifth drupa Global Trends
Report Reflects Positive
Mood in Printing Industry**

Tuesday, April 17, 2018

Some key findings:

“increasing confidence in a strong future for printers in most markets and regions”

“Printers globally report that the pressure on prices and margins continues and is coped with best by ever increasing capacity utilization”

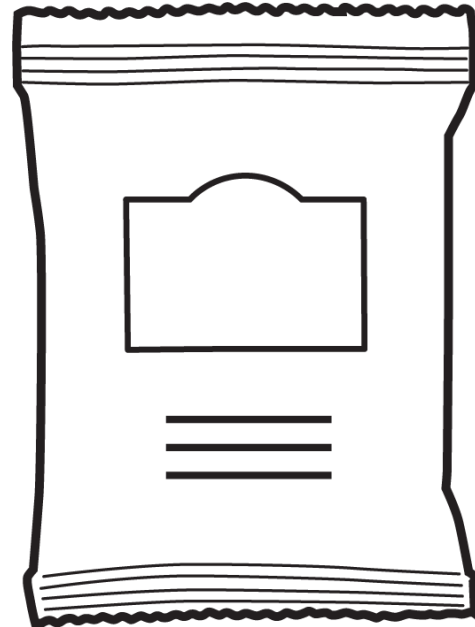
“Plans for print investment in 2018 depend on the market sector, with flexo as the most popular choice in packaging”



Why flexo?

Historically...

Flexible
packaging



=

Gravure

Excellent quality

Brand confidence



But market trends now demand...

Shorter run lengths

Increased cost pressures

Thinner films / substrates

Faster time to market

No compromise in
image quality

No compromise in
consistency

Greater use
of ECG

A CHALLENGE FOR GRAVURE



But market trends now demand...

Can Flexo respond?



Evolution of traditional Flexo in late 1990's

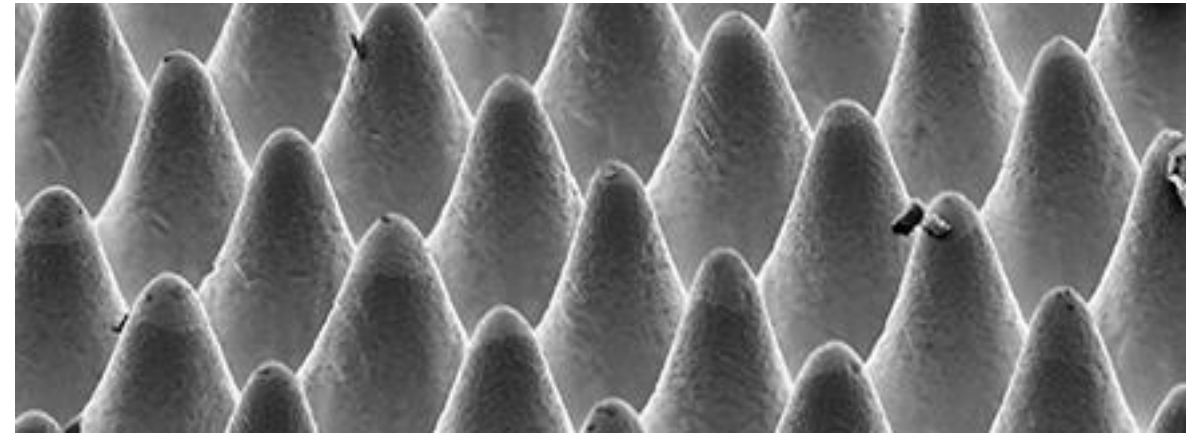
Historically >>>>>>>>>>>>>>

- Flexo was labeled with its **'rubber stamp'** image
- Line work, 1 – 2 color work
- Insufficient resolution capabilities
- Variable production process



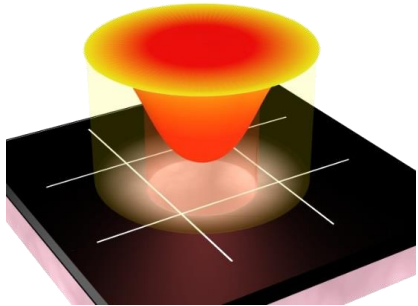
Digital plates

- Digital imaging
- Fewer plate-making steps
- Smaller highlight dots
- Higher line screens
- Expanded applications



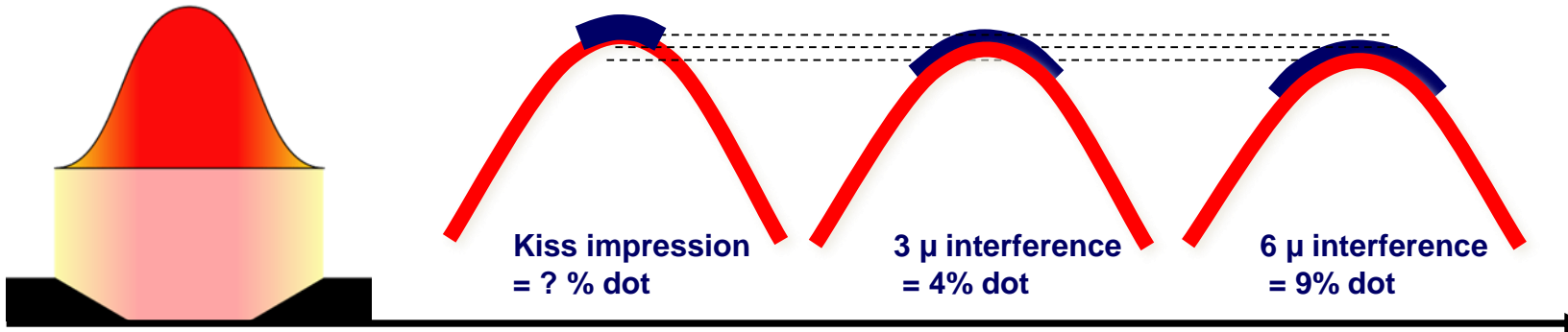
Evolution of Flexography ...

What started off as advantage
turned out to be a limitation



Gaussian

- Inconsistent imaging
- Compressed tonal range
- Poor highlights
- Insufficient resolution capabilities
- Variable production process



And clearly not a
match for gravure

Could Digital Printing be the answer?



Short run lengths



Faster time to market



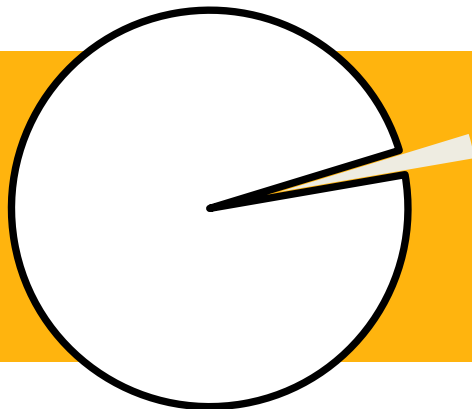
Substrate flexibility



Quality on film



Cost effectiveness for 'typical' production volumes



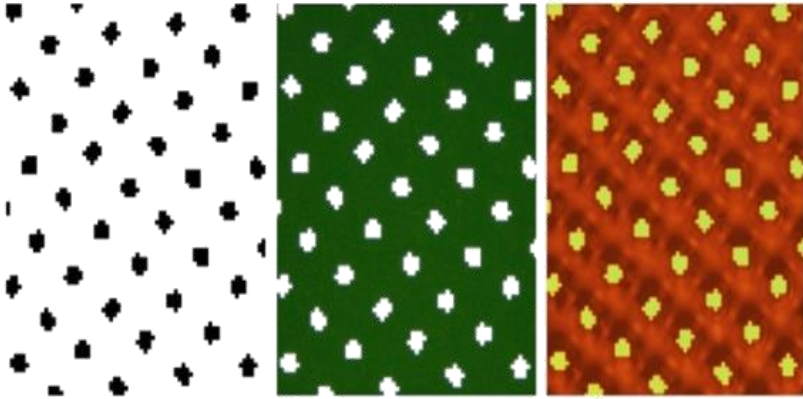
Today 2% of packaging is digitally printed;
90% of that is labels.

Inkjet Digital Printing with inline flexo is a move in the right direction

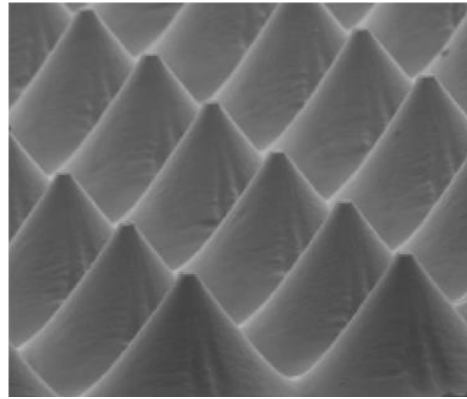


2008 witnessed the introduction of a new generation of Flexo technology

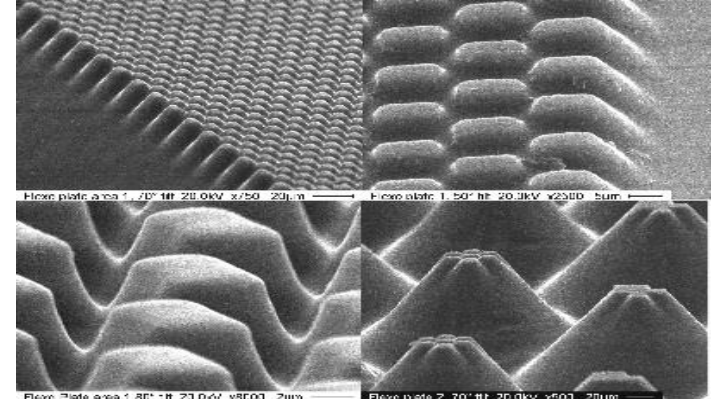
Unique advanced technology ...



1:1 pixel for pixel reproduction



Digital flat top dots



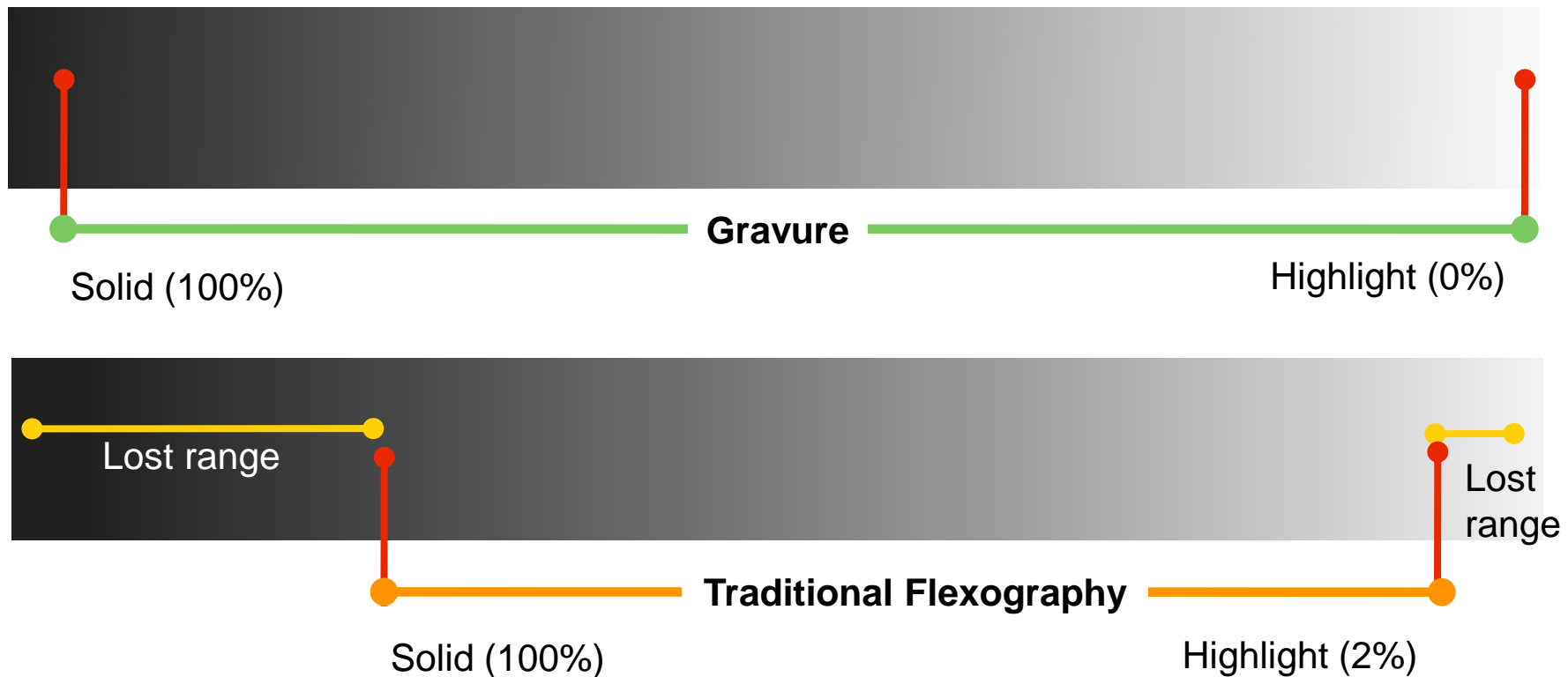
Micro level plate surface texturization

... that enabled:

- ☑ Predictable, reliable results
- ☑ Print performance and efficiency
- ☑ Highest print quality and capability
- ☑ New and **broader** opportunities for flexo – gravure to flexo conversion

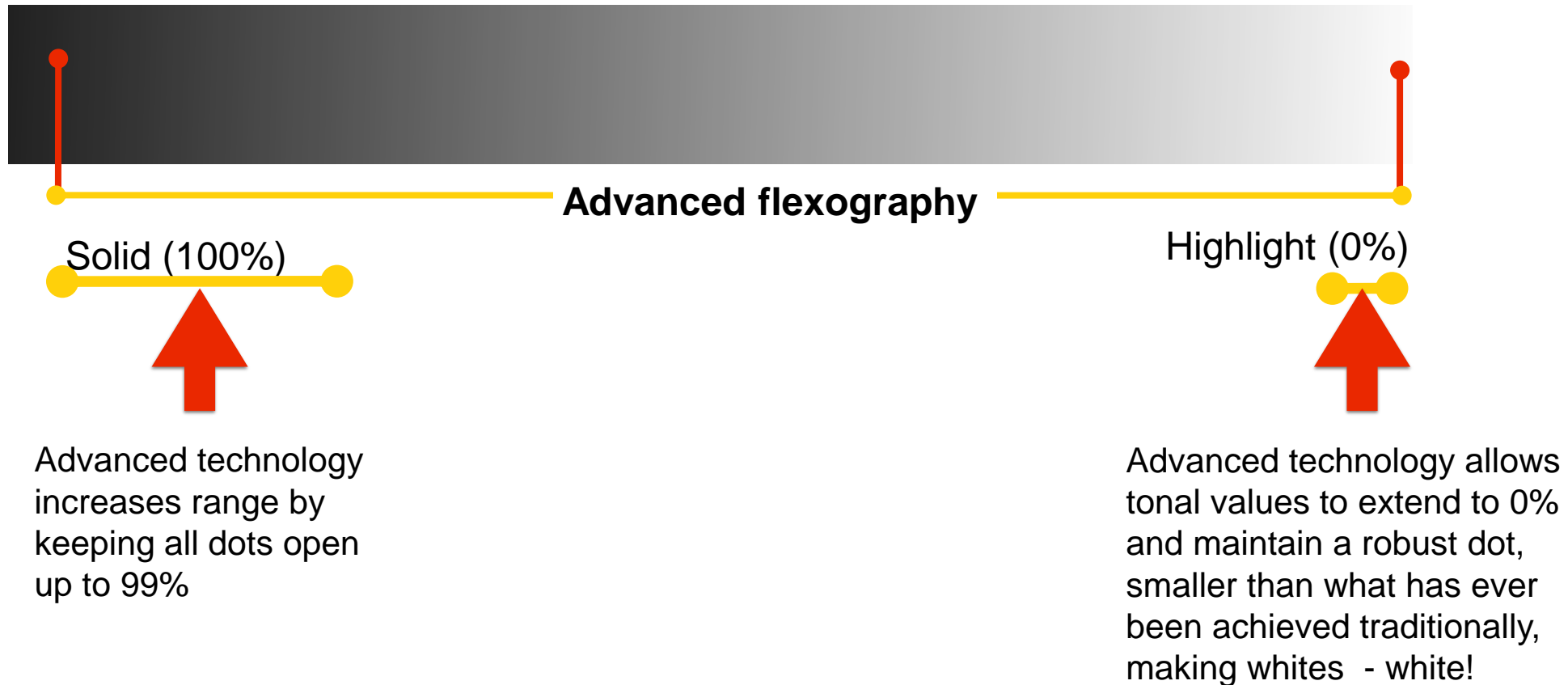
Traditional flexo was challenged with tonal range

Gravure traditionally has been able to maintain a greater tonal range.
Longer range means more shades of colour.



Tonal range today with advanced flexo

Utilising advanced technologies, Flexo has enabled the range to be extended to match Gravure,



A new benefit: good contrast

Low
Under 40%

Good
between
40%- 60%

High
Over 60%

The first time flexo can produce contrast well.



Flexography has improved: Solid ink density and fine detail

- Solid ink density and smoothness of ink laydown
 - Using Advanced surface patterning with the latest digital plates has matched the solid ink quality of gravure
 - Potential of increasing density above Gravure



Advanced flexo offers text benefits

Conventionally engraved 4pt text in gravure



Advanced flexo 4pt text



Advanced flexo offers benefits for ECG

- Flexographic printing can use all angles available between 0 and 90
- Gravure with conventional engraving can only achieve angles between 30 and 60 making angle selection more difficult

Advanced flexo technology also has the **color gamut predictability** and **small dot holding capability** to make ECG flexo a practical reality



The 'sweet spot' of advanced flexo enables maximum on-press efficiency

Minimal impression.

Faster set-up times.

Longer plate life.

Fewer press stops.

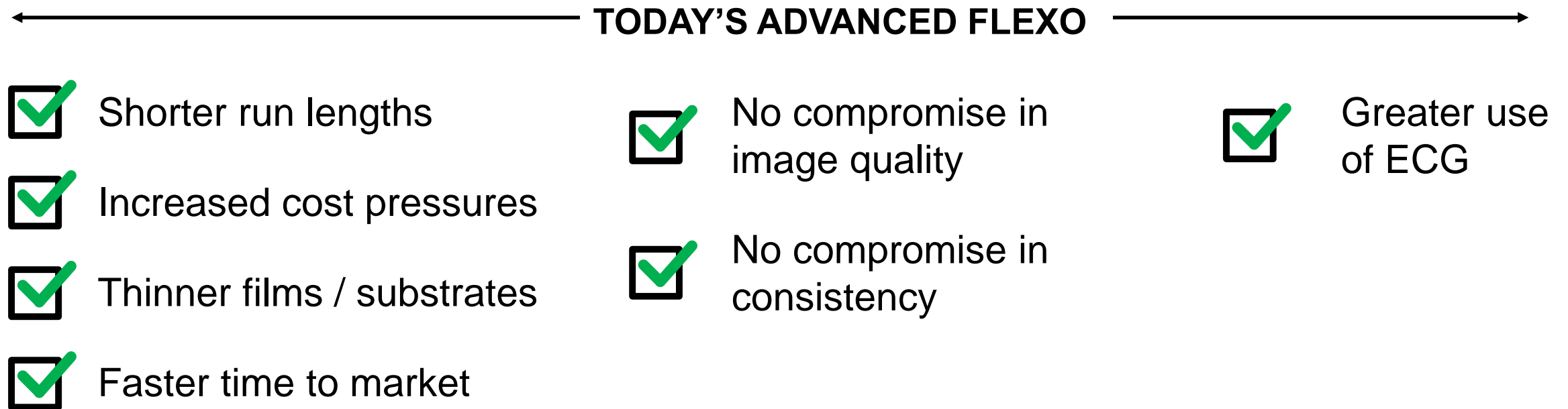
Faster press speeds.

Greater press yield



But market trends now demand...

Can Flexo respond?



Yes it can.



Conversion of Gravure designs to Flexography has become a practical reality



What the future looks like

Co-existence and collaboration.

Brands will increasingly be able to specify a quality and cost requirement, without specifying a particular print process.

Design development.
Market research.
Personalization.

DIGITAL
PRINTING

GRAVURE

Brand needs:

- Long run
- Standard repeat design

FLEXOGRAPHY

Designs become product.
Mainstream print process.

Brand needs:

- Frequent design changes
- Freedom of design
- Run length and SKU's





**10 years ago we set
great expectations.**

**Today, our customers
exceed every one.**

10 years of driving industry transformation

Design freedom | Print capability | Productivity and efficiency

KODAK FLEXCEL NX System



Kodak. Delivering benefit for the entire value chain.

We deliver: Kodak technology – unique and unmatched

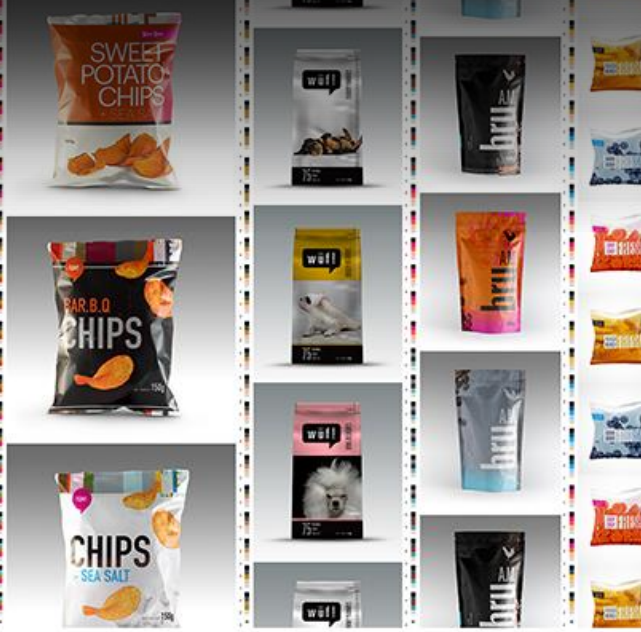
We enable: Cost-effective flexo process – without compromise

Our customers: Come for the quality and stay for the productivity

1. *Predictable and reliable*
2. *Print performance and efficiency*
3. *Highest print quality and capability*

FOR THE BRAND

Highest quality graphics,
color consistency and
design freedom



ON THE PRESS

PRINT CAPABILITIES
that surpass brand needs

Far greater productivity
in the pressroom



IN PREPRESS

PLATES that surpass
printer needs

Efficiency in the plate
making process

Simple plate portfolio
helps manage
inventory and cash



Investing in the future of flexo





Thank you

Transforming
Flexo Since
2008

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