

# BEST-IN-CLASS FLEXO

The KODAK FLEXCEL NX System '16 promise:  
GOLD STANDARD PRINT QUALITY  
and COMPELLING PRODUCTION EFFICIENCY

Delivered with the simplest plate portfolio in the industry  
Fully integrated and differentiated plate making solution  
Unparalleled consistency  
Fastest imaging  
Fully upgradeable platform

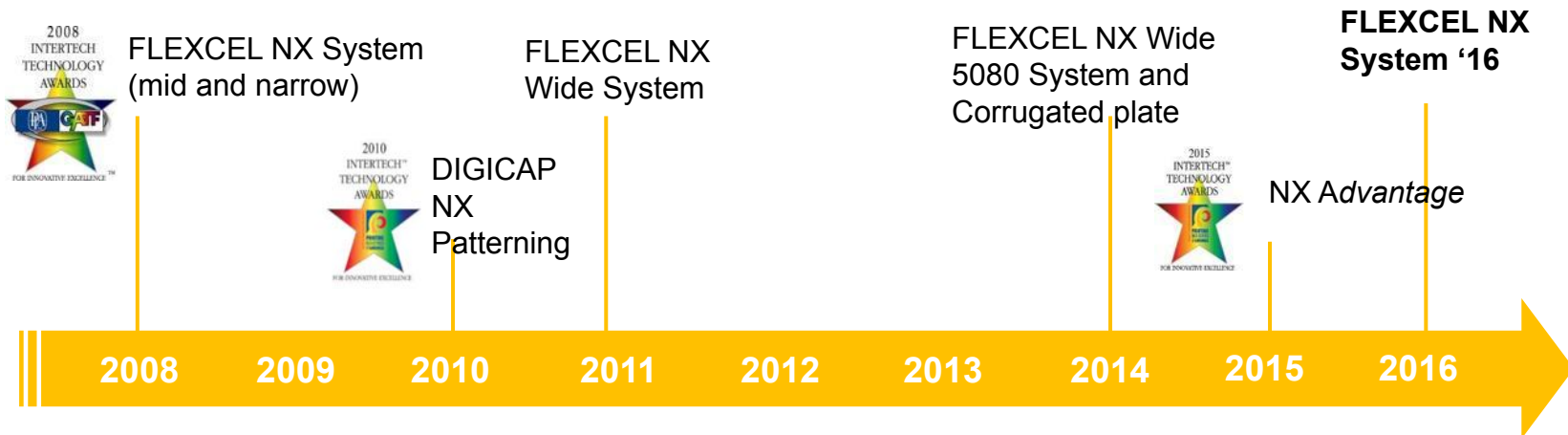
Across the broadest range of applications and print conditions:

Tag and Label | Flexible Packaging | Folding Carton | Corrugated Boxes | Security



# Success is proven and real

- **500** FLEXCEL NX Systems sold in over 70 countries
- Leading printers are switching to FLEXCEL NX Plates
- Track record of gravure/offset to flexo conversions
- FLEXCEL NX Plate sales growth rate = **4x** industry growth rates
- Continuous stream of technology innovation that fuels our customers' competitive advantage and efficiency



# **FLEXCEL NX System '16**

## **Benefits**

# Gold standard print quality with compelling production efficiency

**FLEXCEL NX** has set the benchmark for exceptional process printing:



Greatest  
color  
consistency



Widest  
color  
gamut



Best  
highlight  
performance



Greater use  
of process printing

**FLEXCEL NX System '16** delivers innovation that expands performance:



Best  
ink laydown  
across all  
print conditions



Broadest  
contrast  
range



Cleanest  
and smallest  
reverses



Cleanest  
and brightest  
print

For all flexo applications and print conditions



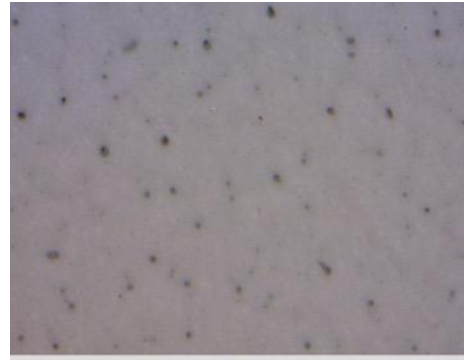
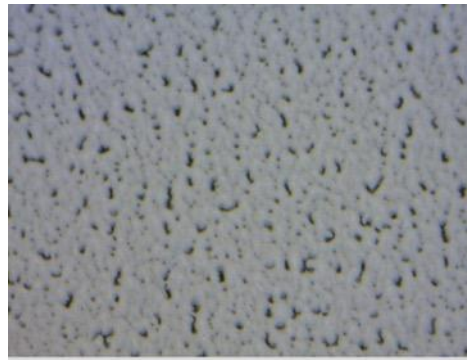
# Best ink laydown

- FLEXCEL NX: Already proven to deliver best performance for process printing
- LATEST Advanced DIGICAP NX Patterning expands capability
- NOW a plate can be optimized for **all** ink types @ **all** anilox volumes for **all** applications
- ACHIEVE target ink density, pinhole-free with lower coated ink weights

FLEXCEL NX System '16



Other flexo



Med Volume anilox

High Volume anilox

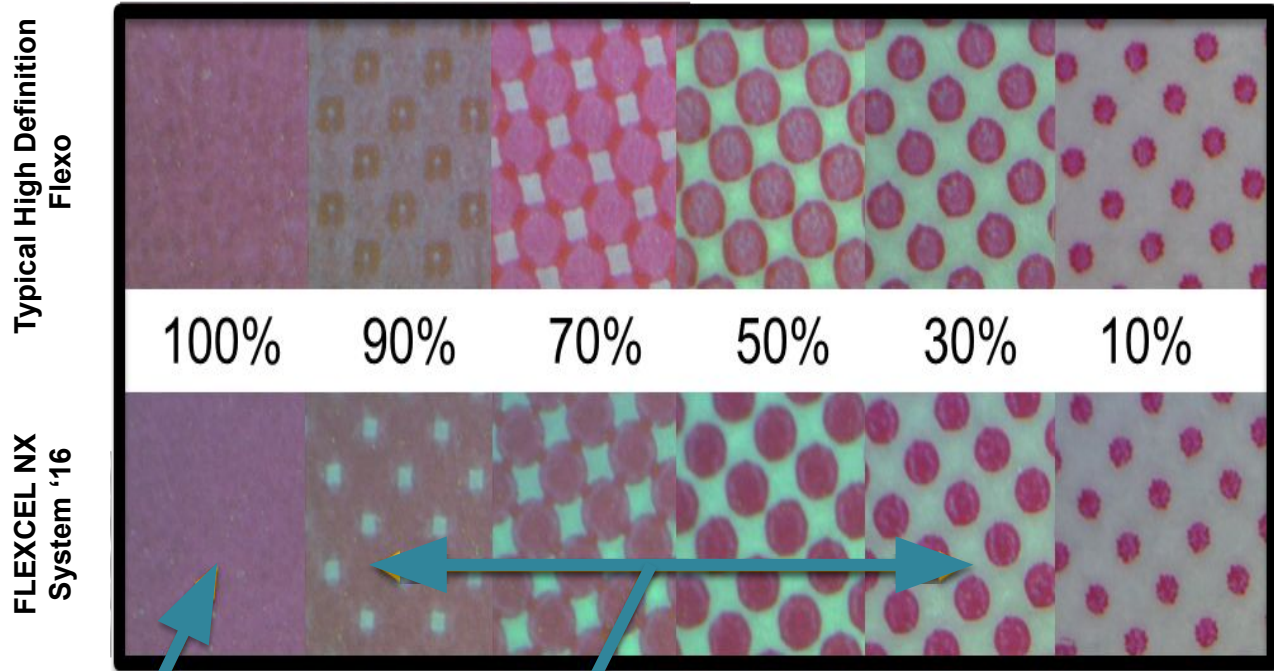
## ENABLING...

- Superior white ink printing on film
- Improved spot colors
- Better coverage for varnishes, metallics & specialty inks
- Exceptional ink transfer on corrugated board

*Full range of capabilities with just two plate types*



# Broadest tonal range & contrast



**RESULTS IN ...**

- More color range
- More contrast
- More shadow details
- More shelf appeal

**Improved solid ink laydown**

**More open shadow to mid tonal range  
Increased contrast and color gamut**

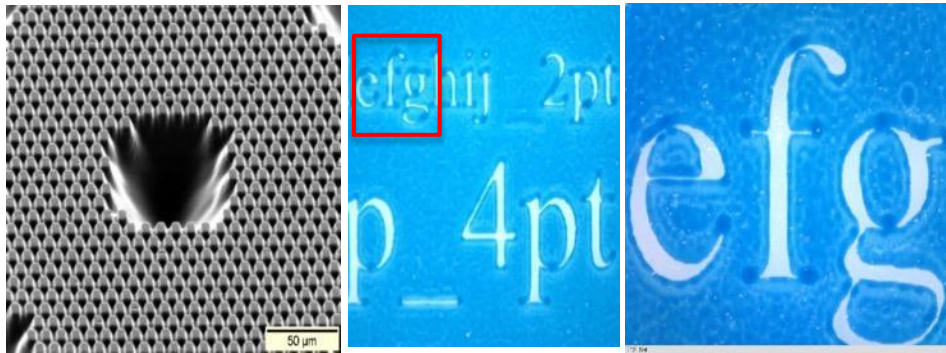
**CONTRAST  
CONTRAST  
CONTRAST  
CONTRAST  
CONTRAST**



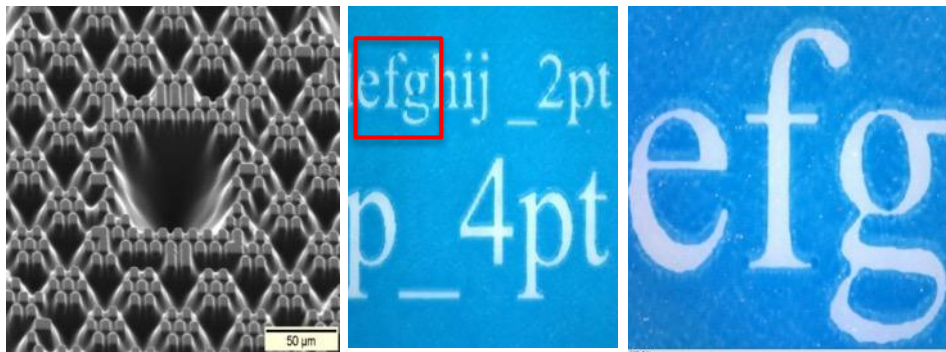
# Cleanest and smallest reverses

Enables reduced font size spec, improved legibility...

opens door for reduced nutritional box size / increase selling space



<b>Selling space</b> Branding, graphics, messaging	<b>Nutritional Box</b> Government required information, limited sales value
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<b>Selling space</b> Branding, graphics, messaging	<b>Nutritional Box</b> Government required information, limited sales value
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**CLEANER REVERSE TEXT**



**MORE SELLING SPACE**



# Cleanest, brightest printed colors

- Reduces the graying effect for metalized laminates used in flexible packaging
- Improves shelf impact on Kraft liners for shelf-ready packaging
- Brighter colors for off-white papers



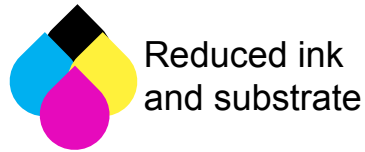
Simulated



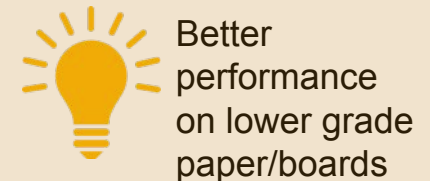
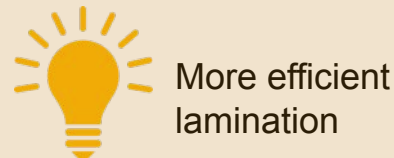
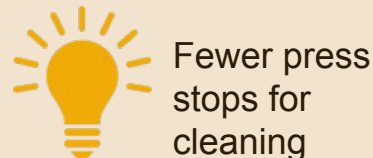


# Gold standard print quality with compelling production efficiency

## FLEXCEL NX proven to deliver:



## FLEXCEL NX System '16 delivers even more:



Across the full range of flexo applications and print conditions



# FLEXCEL NX System '16 for wide web flexibles

Gold Standard Print Quality and Compelling Production Efficiency

Be at the leading-edge with:

- Cleaner print, fewer press stops, increased efficiency
- Gravure quality achievable in daily production
- Major image contrast improvements
- Smaller, more readable text
- Outstanding performance with solvent and water-based inks
- Improved lamination performance



# FLEXCEL NX System '16 for corrugated post-print

## Gold Standard Print Quality and Compelling Production Efficiency

Be at the leading edge with:

- Improved solid ink laydown – higher densities with lower ink volumes
- Brighter, cleaner brand colors
- Improved results on lower grade liners – cost saving opportunities
- Lower highlight dot gain dramatically improves image reproduction
- Cleaner reverses and open shadows for greater contrast
- Higher line screens possible



# FLEXCEL NX System '16 for narrow web labels

## Gold Standard Print Quality and Compelling Production Efficiency

Be at the leading edge with

- Best flexo match to digital printing
- Offset quality process printing
- Improved solid ink laydown for spot colors, metallics and varnishes
- Cleaner reverses and open shadows for spot colors
- Excellent performance with lower grade substrates
- Excellent swell resistance



# FLEXCEL NX System '16 for paperboard

## Gold Standard Print Quality and Compelling Production Efficiency

Be at the leading edge with:

- High-speed, stable printing
- Fewer press stops for cleaning
- Brighter, cleaner colors
- The cost benefits of web flexo with the quality of sheet fed offset
- Excellent performance with lower grade substrates



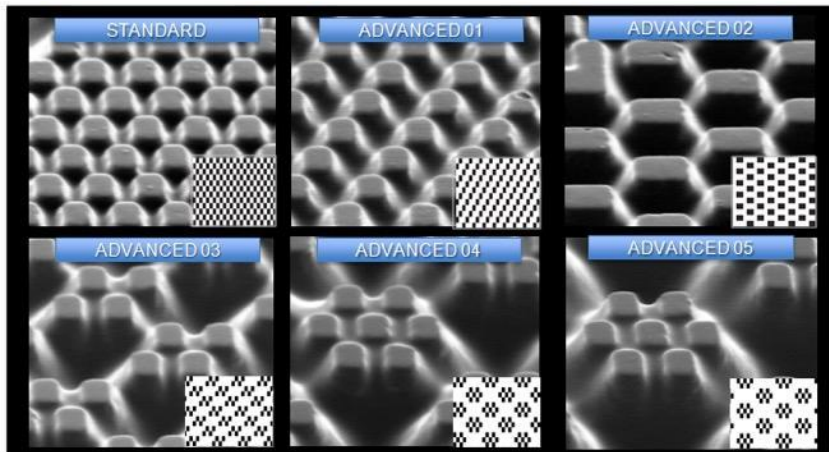
# **FLEXCEL NX System '16**

## Technology

# FLEXCEL NX System '16: Built upon two powerful innovations

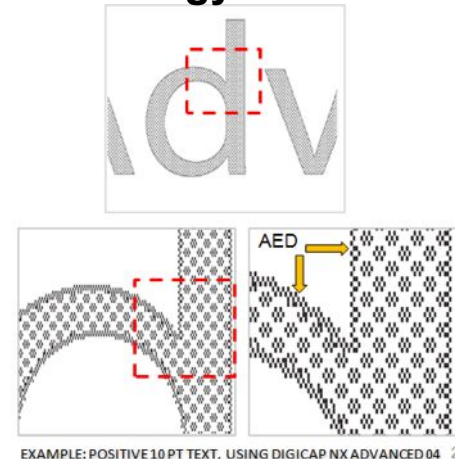


## Expertly-engineered Advanced DIGICAP NX Patterning



Expands the range of applications by enabling a single plate to be optimized across a wide range of print conditions, all ink types and anilox volumes.

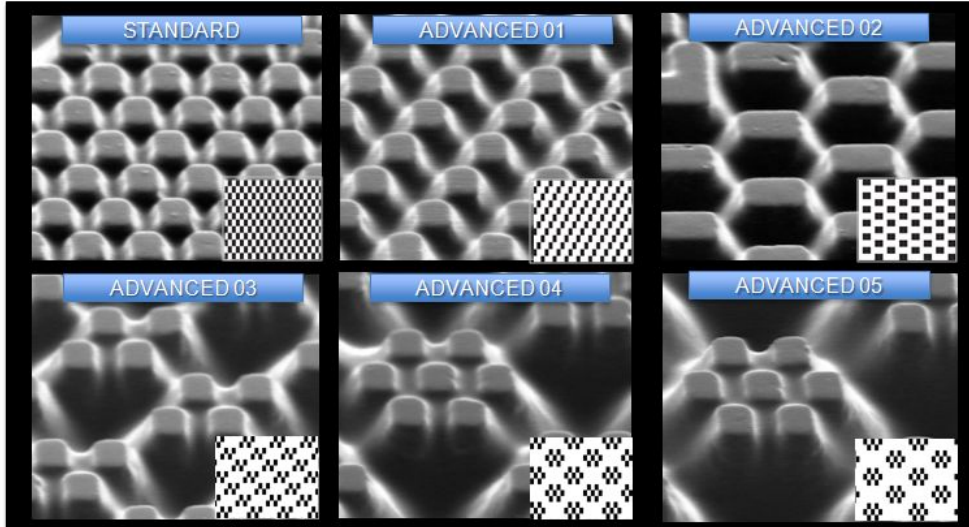
## Advanced Edge Definition Technology



A Kodak patented technology that controls ink flow at the edge of objects resulting in greater visual edge definition, especially in fine reverses, and cleaner print, dramatically improving tonal range and contrast for shadow detail.



# Expertly-engineered Advanced DIGICAP NX Patterning

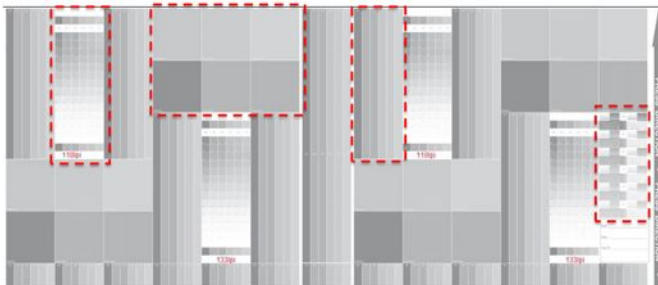


## Enables exceptional print performance

- Outstanding ink transfer
- Higher density with lower ink weights
- Range of patterns for range of ink volumes

## Reduces inventory costs

- Only Kodak enables a single plate to be optimized across a wide range of print conditions, all ink types and anilox volumes.



## Easy to select patterns –

Simple print test tool provides data on selection for anilox/tape/ink/DIGICAP NX combination

## Easy to apply patterns –

Applied in TAP. NX tags are used to enable single plate to be optimized across a wide range of print conditions, all ink types and anilox volumes.

## A MAJOR INNOVATION

**One pattern is not sufficient to cover all flexo needs.**

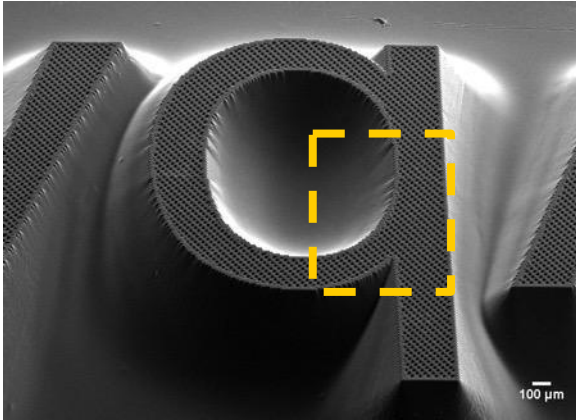
**Only the FLEXCEL NX System has the imaging and plate reproduction capability to consistently reproduce this unique range of patterns.**

**A 'built-in' textured plate can never do this.**

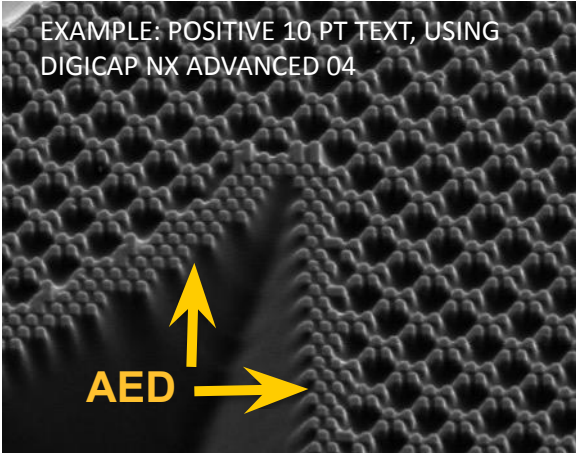




# Advanced Edge Definition – Exclusive Patented Technology



EXAMPLE: POSITIVE 10 PT TEXT, USING  
DIGICAP NX ADVANCED 04



## A MAJOR INNOVATION

Only the FLEXCEL NX System has the imaging and plate reproduction capability to consistently reproduce and apply this unique range of patterns at the object level.

A 'built-in' textured plate will never be able to do this.

## Benefits

- Better positive text and bar codes
- **Smaller reverse text** use
- Expanded **tonal range**
- Increased **contrast**
- Ensures **clean printing**
- Maximizes productivity

## How it works

- Automatically applied when using Advanced DIGICAP NX Patterns
- Controls ink flow to keep the print clean



# Additional tools for specific needs

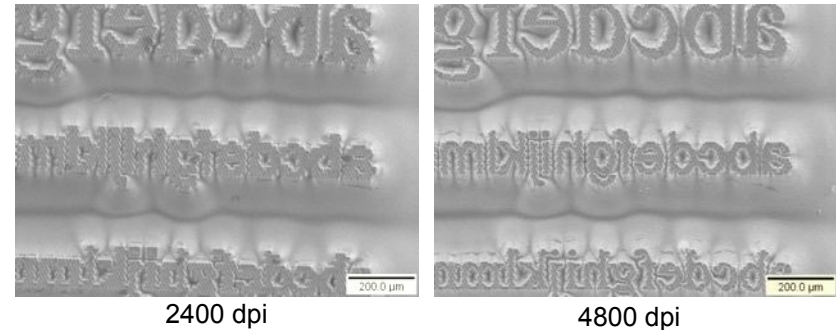
## NEW HYPERFLEX NX OPTIONS



Optimizes floor height for best highlight dot print stability, plate making latitude and widening the achieve range and contrast for highlights.

## NEW

## 4800 x 9600dpi imaging



Enhances the printing of micro-text and security features unique high resolution applications

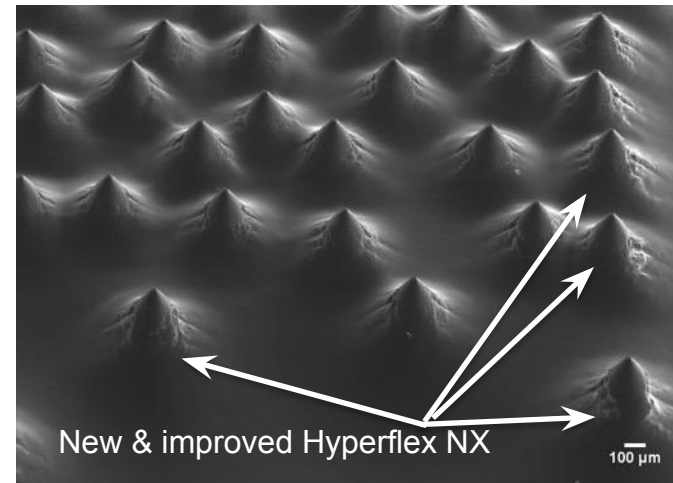
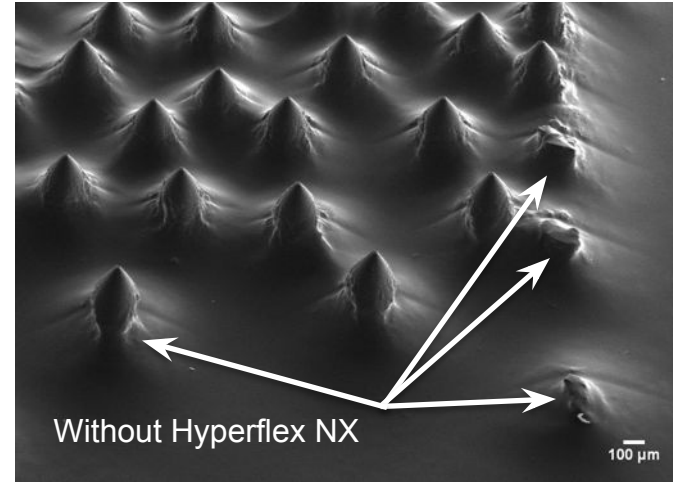
# New HYPERFLEX NX Options

## Benefits

- Improved highlight dot stability, consistency and holding of isolated highlight dots
  - Holds 20 micron isolated dots
- Improved latitude for back exposure/relief, main exposure and impression

## How it works

- New HYPERFLEX NX options produce a smooth slope around dots without a shelf
- New settings change the number of light valves and their spacing influencing how much the localized floor is raised
- Consistent exposure and relief allows jobs with and without HYPERFLEX NX to be on the same plate



# High Resolution 9600x4800 dpi

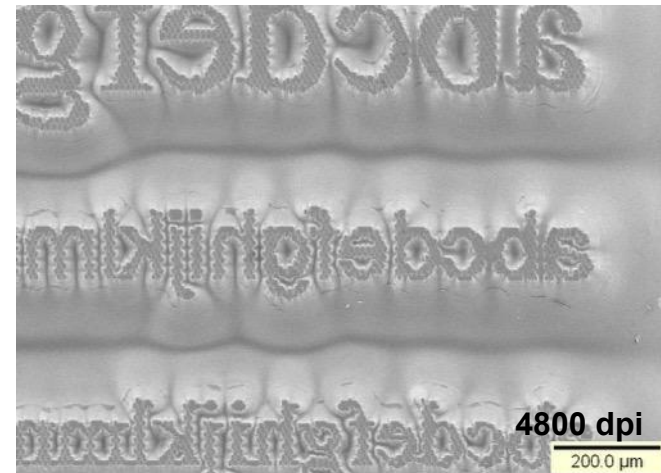
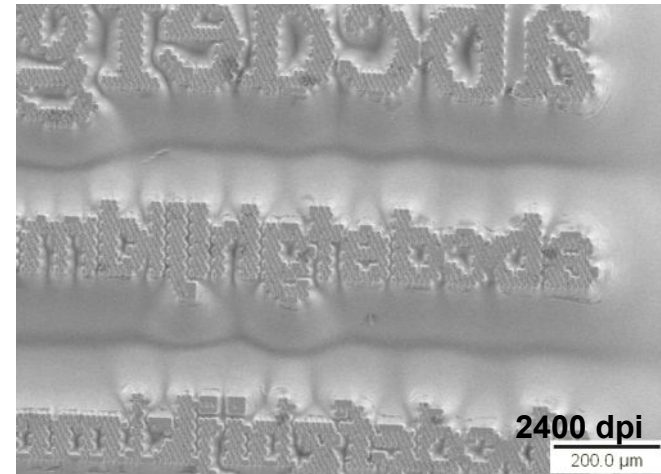
(license sold separately)

## Benefits

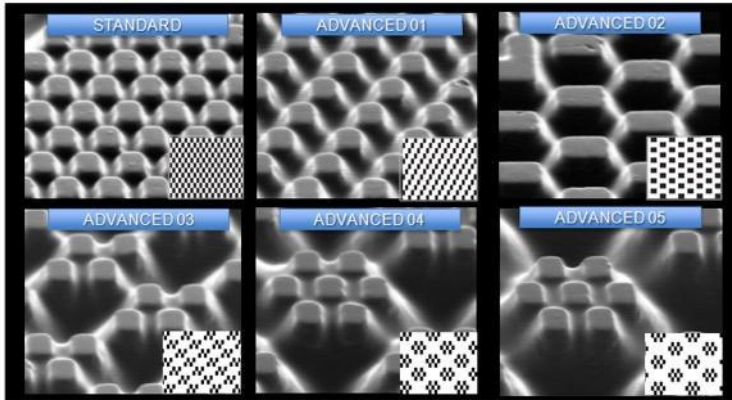
- Enhances performance for micro text (<1pt) and security applications
  - Supports 4800x4800 dpi and 9600x4800dpi imaging modes
  - Available for FLEXCEL NX Mid/Narrow, WIDE 3547 and Wide-C Imagers
- Most packaging applications are not enhanced by high resolution
  - KODAK SQUARESPOT imaging technology enables excellent quality at 2400x2400

## How it works

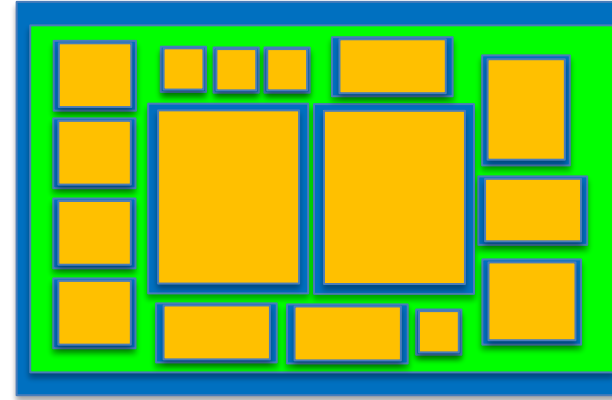
- License sold separately
- Higher resolution results in larger file sizes
- Higher resolution requires longer imaging times, approximately double
- Easily switch between standard imaging and high resolution imaging from job to job



# Powerful plate-making productivity tools



**NX Tags** – a powerful feature that enables multiple surface patterns to be applied by prepress operators to a single plate layout – enabling, with the use of a single plate type, the efficient imaging of plates customized by print condition for maximum on-press cost savings.



**Solvent Saving Invert Waste Feature** – software features that help drive efficiencies with 20-40% reduction in washout solution usage. TAP user can selectively invert trim waste on a layout preset basis and specify a border around the TIFF file that is not inverted.

## Cutting Table Support – COMING SOON

Integrated support for Zünd and Kongsberg cutting tables further improving plate-making productivity.

# NX Tags

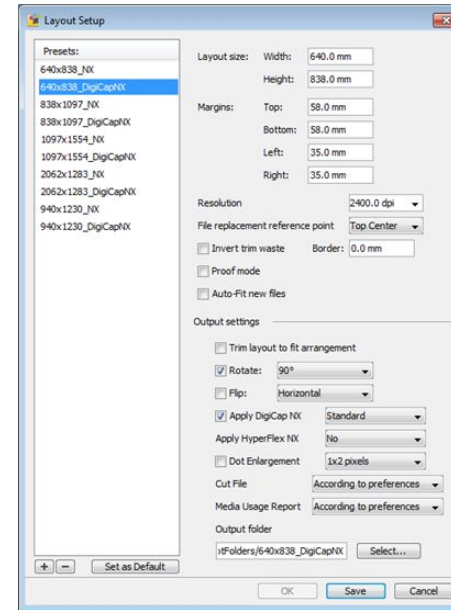
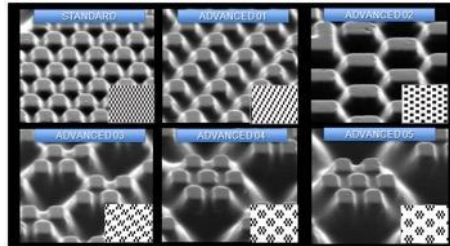
## Benefits

- Pre-press remains in control of usage
  - NX tag instructions are automatically executed when layout is output

## How it works

- Individual screened 1 bit TIFF files can be tagged with instructions for
  - DIGICAP NX patterns
  - HYPERFLEX NX for light valve pixels in highlights
  - Dot Enlargement to enable highlight cleanup feature and threshold for dot size

- NX tags allow different files in a layout to have different DIGICAP NX patterns, HYPERFLEX NX and Dot Enlargement settings



**Easy Controls –**  
TAP Software includes easy controls for defining and using NX tags

Original File Name	DigiCap NX tag	HyperFlex NX tag	Dot Enlargement tag	Saved file name
test.file.C.tif	Standard	No	1x2	test.file.0SN12.C.tif
test.page.K.tif	Advanced01	Yes	2x3	test.page.01Y23.K.tif
flood.page.W.tif	Advanced04	No	No	flood.page.04N00.W.tif
demo.file.M.tif	None	No	No	demo.file.00N00.M.tif

**Preferences –** job settings can be saved as preferences in TAP software to improve productivity



# Invert trim waste

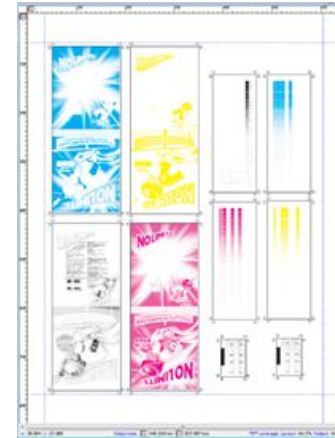
## Benefits

- Reduces solvent usage by 20-40%
- Environmental benefit
- Cost savings

## How it works

- The area of the layout not occupied by TIFF files is inverted when the layout is output.
- This results in the unused area being exposed on the Thermal Imaging Layer and the plate material being crosslinked.
- Therefore, the unused area won't be washed out when the plate is processed.

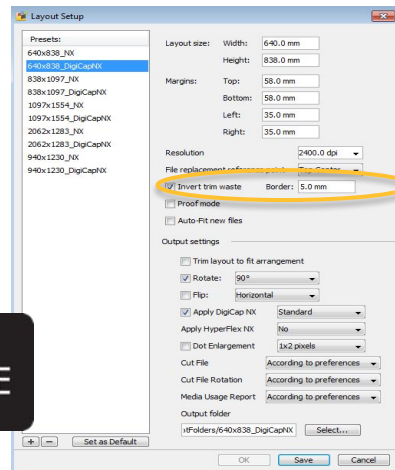
Original Layout



Invert Waste OFF



Invert Waste ON



# **FLEXCEL NX System '16**

## Support



# Kodak is here to help

## Service and support to maximize your business

### A full range of Implementation Services

- Program is implemented by our team of flexo experts
- Includes optimization of your NX system and training on FLEXCEL NX best practices – prepress, plate making and printing.
  - We help you take advantage of the latest NX upgrades and features and optimize them for your environment and your needs
  - Designed to increase your productivity and efficiency
  - Proactively monitor your system and practices to identify process drift and get you back on track

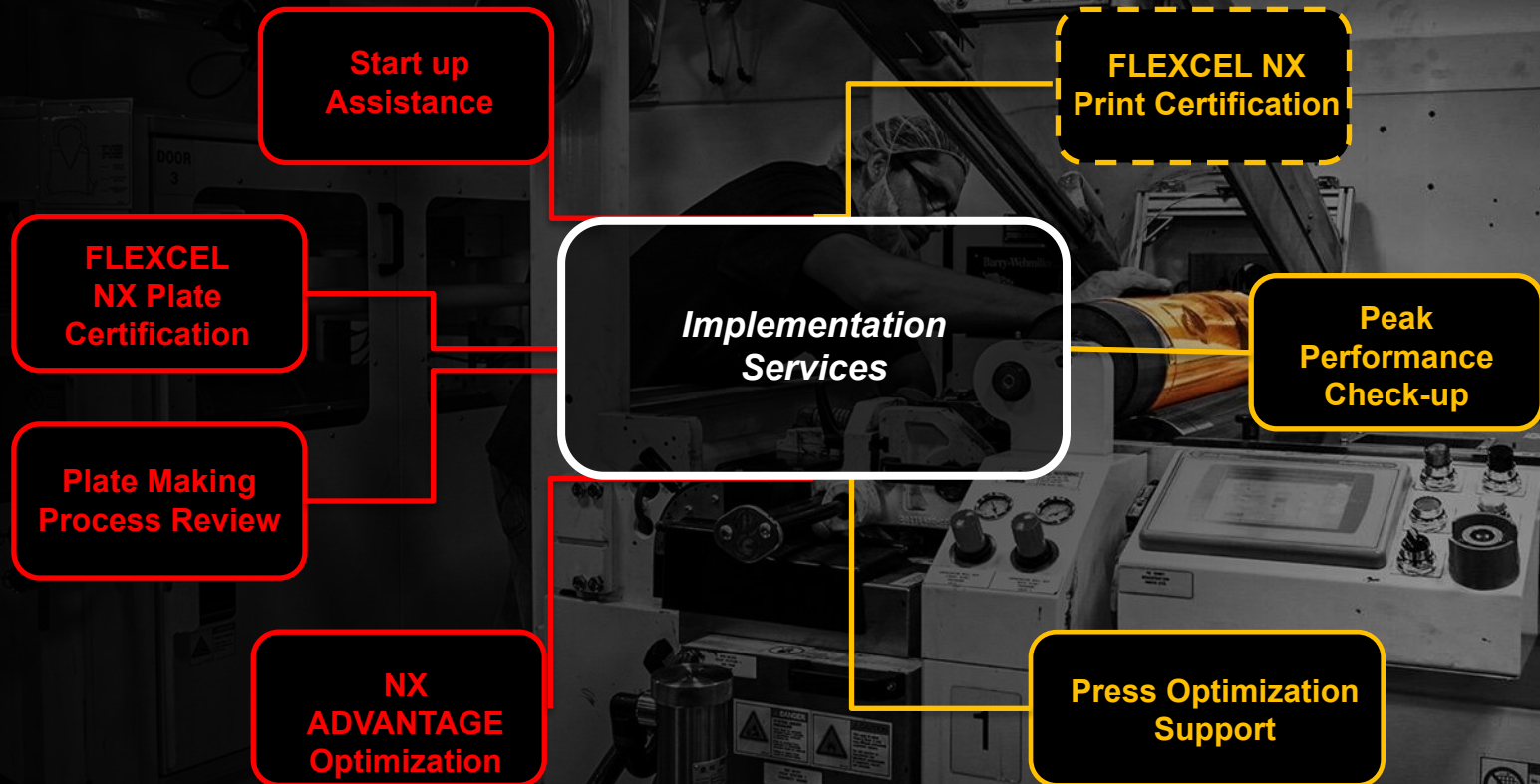
### Certification Programs

- Plate making
  - Ensure the customer process is within specification and operating correctly
  - Train the operators on the latest procedures and troubleshooting techniques
- Press
  - Help the customer to gain full benefit of NX Advantage



# A full range of services

Helping customers make the most of FLEXCEL NX System '16

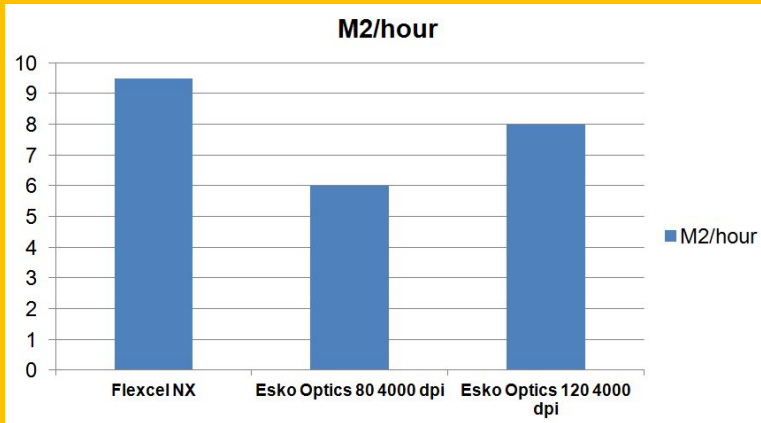


In platemaking  
At the press

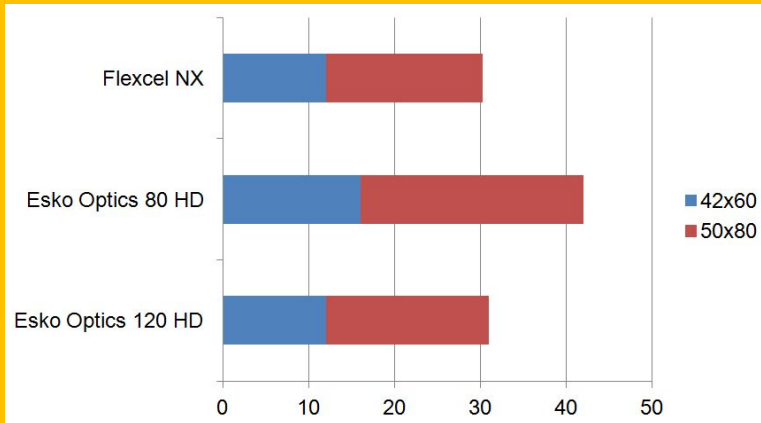


# **The competition**

# FLEXCEL NX – Fastest High Definition Imaging



FLEXCEL NX is the fastest imaging time in the industry and always high definition



Even with lamination time, NX is still the fastest system

No expensive hardware upgrades and no extra plate types

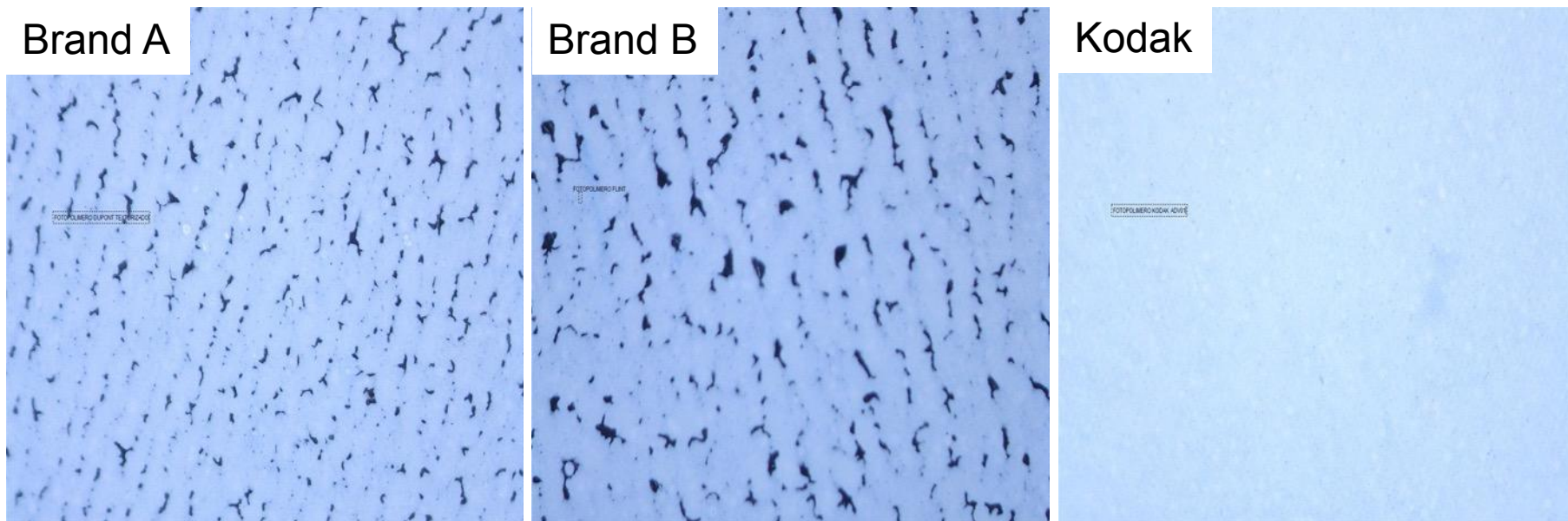


# Kodak Micro Engineered Surface Patterns better ink laydown, lower ink weight

**Wide Web Flexible Customer  
White Ink Print Test @ 200X**

**Competitive “built-in” Flat Top Dot Plates versus Flexcel NX System ‘16**

Test: April 2016



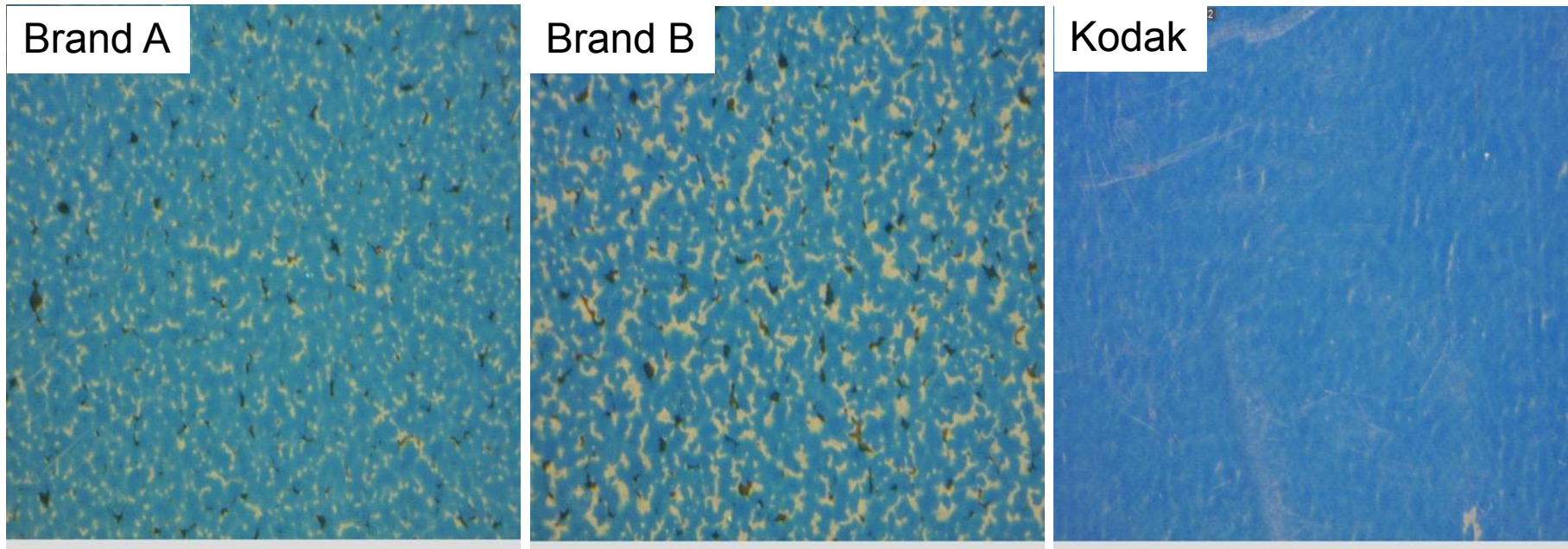
**Customer printed plates simultaneously side-by-side**

Brand A	Brand B	Kodak
0.83 Gm <sup>2</sup>	0.79 Gm <sup>2</sup>	0.67 Gm <sup>2</sup>
		20% less

# Kodak Micro Engineered Surface Patterns better ink laydown, brighter colors

Wide Web Flexible Customer  
Cyan and White Ink Print Test @ 50X

Competitive “built-in” Flat Top Dot Plates versus Flexcel NX System ‘16



Customer printed plates simultaneously side-by-side

When you see **BLACK** it is holes in the **WHITE**  
When you see **WHITE** it is holes in the **CYAN**  
When you overprint another color it will be a dirty color



Questions?

# Appendix





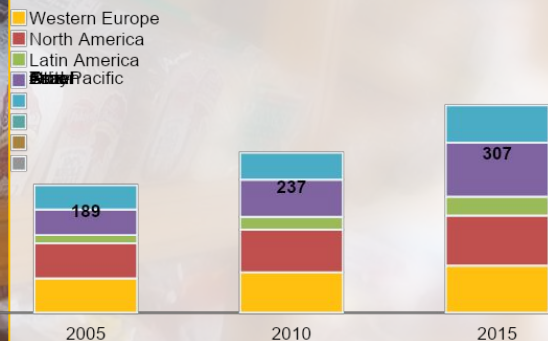
# Packaging growth: opportunity for flexo

## Packaging Industry - \$250b

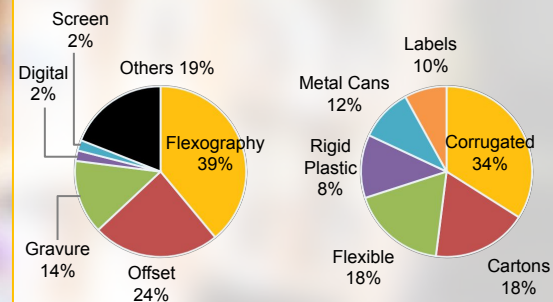
- Fastest growing and sustainable print market
- Highly fragmented value chain
- Ripe for technology substitution
- Kodak well positioned to lead digitization and drive integration

## Packaging Market Growth (\$bn)

Primary Addressed Market: \$1.1B

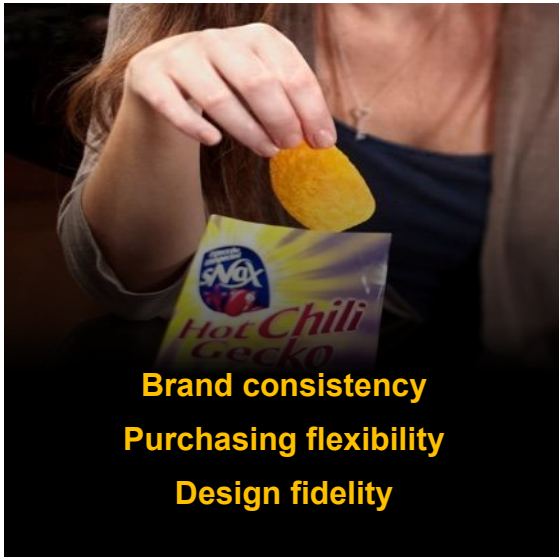


## Packaging Market Breakdown

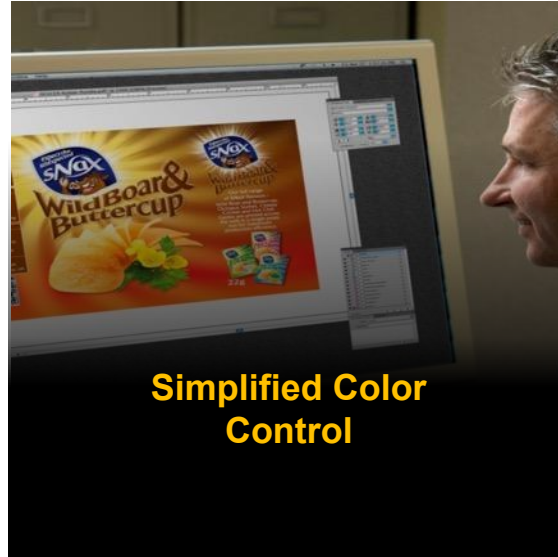


# Industry needs

Brand owners



Prepress service providers



Printer/Converters



# Kodak's Flexo Packaging Portfolio

Differentiated technology and solutions



**FLEXCEL NX**  
System



**FLEXCEL Direct**  
System



**Media**  
Digital and Analog Flexo  
plates, films and sleeves



**APPROVAL**  
Media



**Miraclon**  
Letterpress  
Plates



**Production**  
Workflow

**Backed by World Class Service and Support**

Packaging Printing - Corrugated, Folding carton, Flexible,  
Labels

*JIT production, shelf-appealing decoration*



# Flexcel NX System

## Addressing needs of core value chain

**Efficiency**

**Productivity**

**Consistency**

**Fidelity**

**Flexibility**

**Complexity**

- Increased yields for printers; reduced waste, greater efficiency
- Consistent plate making and printing; predictable on-press performance
- Print with fewer colors
- Image reproduction to rival offset and gravure
- Maximize on-shelf impact for consumers
- Simplify prepress



## FLEXCEL NX SYSTEM

# Value in the pressroom

Average cost model for a \$10M flexo printer

Category	Current costs as % of gross sales	Annual cost based on \$10M sales revenue
Administration	9.0%	\$900,000
Sales	4.0%	\$400,000
CSR, ESTIM	4.0%	\$400,000
Prepress Labor	2.0%	\$200,000
Prepress Materials	1.5%	\$150,000
Outside Prep Costs	0.1%	\$10,000
Press Make-ready	13.0%	\$1,300,000
Press Run Time	29.0%	\$2,900,000
Press Run Substrate / Ink	29.0%	\$2,900,000
Other Outside	1.0%	\$100,000
Finishing	2.5%	\$250,000
Interest Expense	2.0%	\$200,000
Profit	2.9%	\$290,000

70%

Press room savings are so substantial that they mitigate plate spend.

Up to 20% savings in make-ready waste  
Up to 10% increase in press utilization  
Up to 10% savings in ink usage

*Actual cost savings depend on application, substrate and production operation*

Jim Aust – Industry Consultant



# Flexcel NX System: Simple integrated solution

## Choice of five output sizes



**Flexcel NX Wide 5080 System**



**Flexcel NX Wide System (4260)**



**Flexcel NX Wide 3547 System**



**Flexcel NX Mid System**



**Flexcel NX Narrow System**

## Versatile media portfolio



**Flexcel NXH Plate**

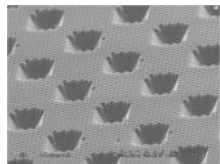


**Flexcel NX Thermal Imaging Layer**



**Flexcel NXC Plate**

## Added-value print application software



Advanced **DigiCap NX Patterning** with Advanced Edge Definition  
**Hyperflex NX**

**4800 x 9600** High-Resolution Imaging capability (when required)

**Spotless** Printing Solution

**Maxtone SX** Screening



# Flexcel NX System

## Differentiated technology delivers customer value

### Disruptive technology platform



High resolution materials



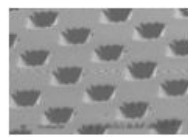
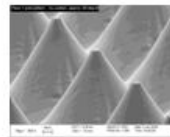
Unique lamination process



Differentiated software solutions

- ✓ High resolution thermal imaging
- ✓ Specialized coating
- ✓ 20+ years and \$300m investment
- ✓ Highest resolution flexographic plate making process

### Customer value



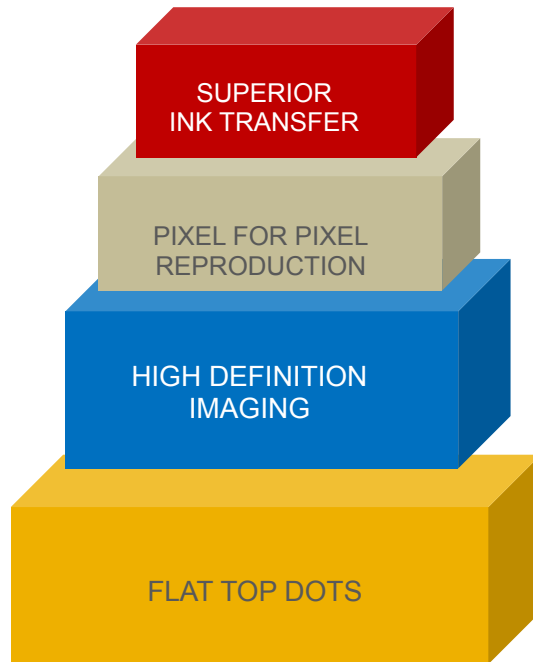
- ✓ Stability
- ✓ Consistency
- ✓ Image reproduction
- ✓ Ink transfer

Reduced total cost of ownership



# Industry-changing technology

## Kodak Flexcel NX System



## Results:

- ✓ Up to 10% reduction in ink usage
- ✓ Image reproduction that rivals offset and gravure
- ✓ Consistency and predictability never experienced before in flexo
- ✓ Up to 20% reduction in press setup time and waste
- ✓ Up to 10% increase in press utilization



# A full Portfolio for Corrugated Printing

Differentiated solutions for pre-print and post-print applications

## DIGITAL IMAGING SYSTEMS

FLEXCEL NX Wide and  
FLEXCEL NX Wide 5080 Systems



## DIGITAL SHEET PHOTOPOLYMER

FLEXCEL NXH Plates  
FLEXCEL NXC Plates



## ANALOG SHEET PHOTOPOLYMER

FLEXCEL SRH, SRM, SRC / SRC-K Plates  
DITR Film



## LIQUID PHOTOPOLYMER

DITR Film

