

LABEL & PACKAGING INNOVATION

OPEN HOUSE, FLORENCE, 1-4 APRIL 2019

TRACK 2 – COLOR MATCHING



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IoD

Matteo Cardinotti – BOBST
Jérôme Brangé – X-rite Pantone



DigiColor

Matteo Cardinotti – BOBST



Packaging Connected

Jérôme Brangé – X-rite Pantone



Color Validation (SpectraLab and ColorCert)

David Naisby – AVT
Jérôme Brangé – X-rite Pantone



Color Matching

Jérôme Brangé – X-rite Pantone



GTT

Jeanine Graat - Apex



IOD

Matteo Cardinotti

Managing Director – BOBST Narrow and Mid-web Narrow & mid-web multi-process printing & converting

Jérôme Brangé

Solution Architect Packaging – X-rite Pantone

April 2019

IoD [Ink On Demand]

What it is

- It's a REVOLUTIONARY New inking system (Ink on Demand – IoD)
- 30 grams of ink in the print unit
- No ink trays, no chambered-doctorblades, no ink reservoirs
- Automatic washing of the print unit

[IoD Video](#)

IoD – Ink On Demand Levels

It's a REVOLUTIONARY New inking system

New inking system



Level 0

IoD

The solution for
CMYK + PMS

New inking system

Ink Kitchen



Level 1

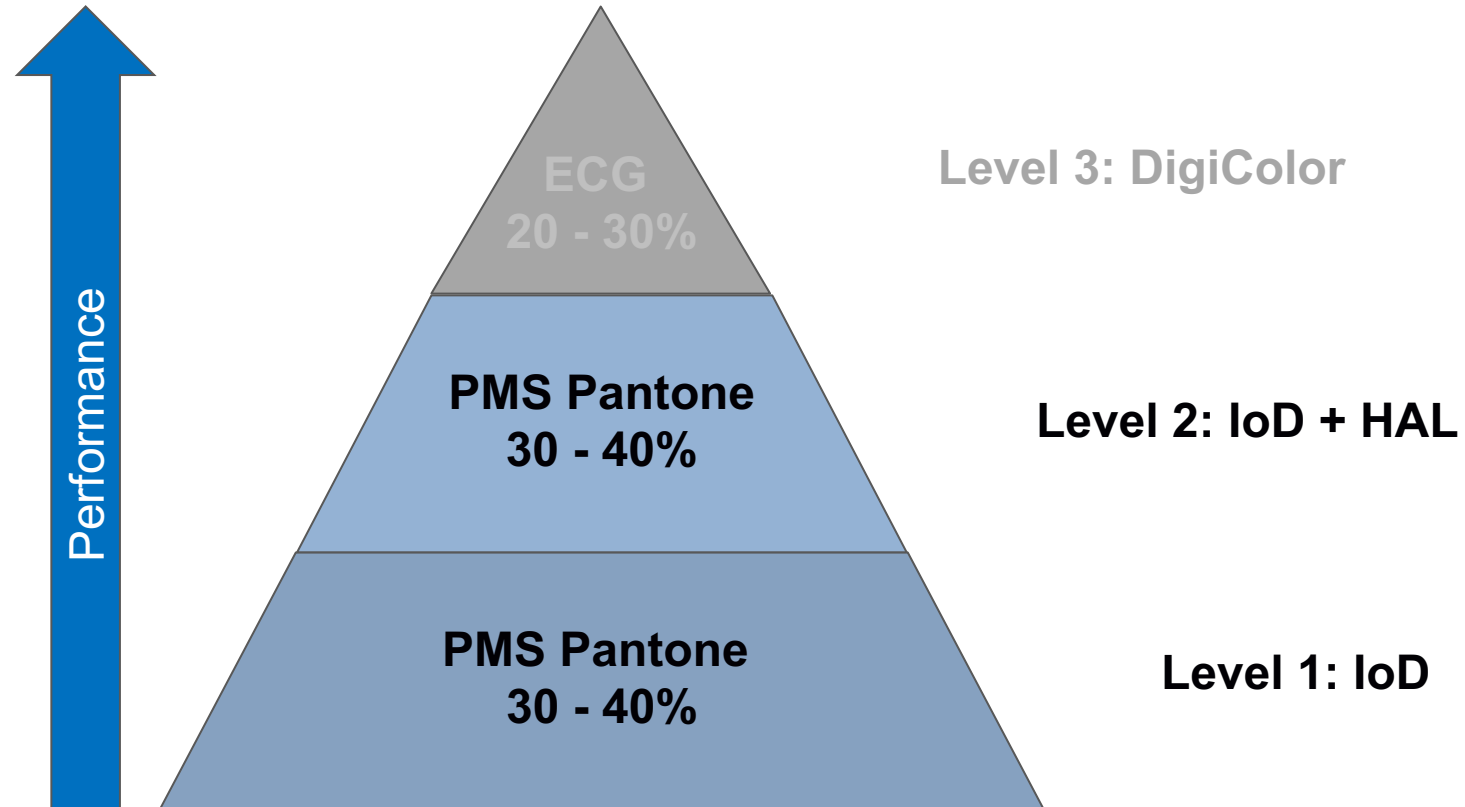
IoD + HAL

The digitized solution for
CMYK + PMS

HAL Video

IoD – Ink On Demand

For PMS Pantone technologies two levels of solutions are implemented.



Summing up...

IoD main advantages:

- 1 Lowest setup time
- 2 Lowest ink and substrate waste
- 3 Simple, clean and easy for the new generation of printers

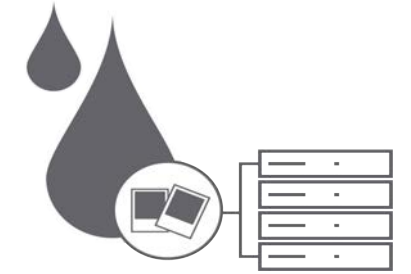


 x-rite
InkFormulation6

**Deliver high quality prints
Ink formulation in HAL**

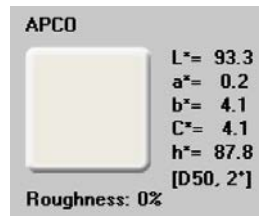
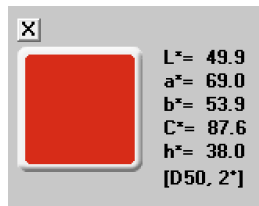
 x-rite PANTONE®

Color Matching



Ink Formulation Software

- Ink Formulation will allow the electronic prediction and correction of any measured colour on any substrate



	70-380180-3 PROCESS YELLOW - 5 + + +	->	59.07 g
	70-880134-5 PROCESS MAGENTA - 5 + + +/-	->	38.38 g
	71-000291-6 TRANSP.WHITE - 0 + + +	->	2.55 g

	Total:		100.00 g



I want this
color

On this
Substrate

=> Deliver precise recipe

- Hit customer specification at the first time
- Reduce lead time, run lengths and make-ready time
- Maintain color consistency between reprint



DIGICOLOR

Matteo Cardinotti

Managing Director – BOBST Narrow and Mid-web Narrow & mid-web multi-process printing & converting

April 2019

REVO Team

At a glance

Bobst Firenze is part of the REVO Team



Digital Flexo Revolution is a Project Team of **leading companies in the Flexo industry**, promoting a new manufacturing method to “digitize” the flexographic process.

ECG Benefits

Color consistency

From manual to digital color matching

Minimum waste of time, ink, substrate

REVO Privileges

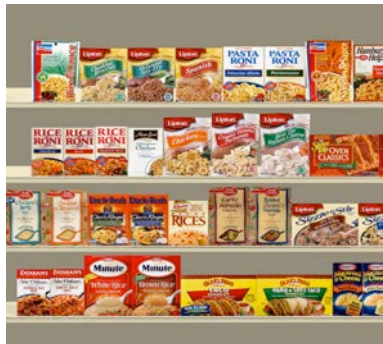
Ready “turn-key” ECG solutions

REVO Team non-stop innovation

Access to REVO Academy

REVO added values

Summary



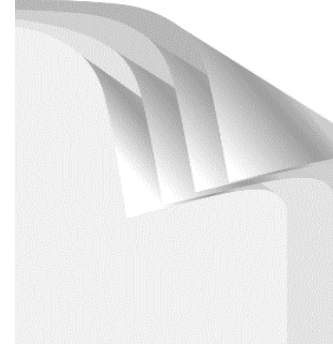
Color consistency and repeatability



Vibrant & realistic photo images



Digitized color matching



No limitation on substrates



One setup for multiple jobs



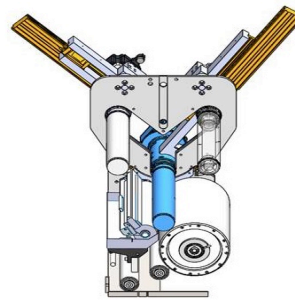
Up to 95% PMS
Pantone Color Gamut



Never change ink and anilox roller



60 Minutes from order to print



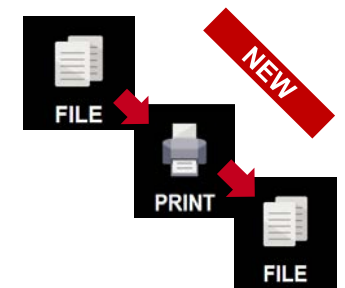
1 min set-up time



Non-stop production



Limited waste for job change-over

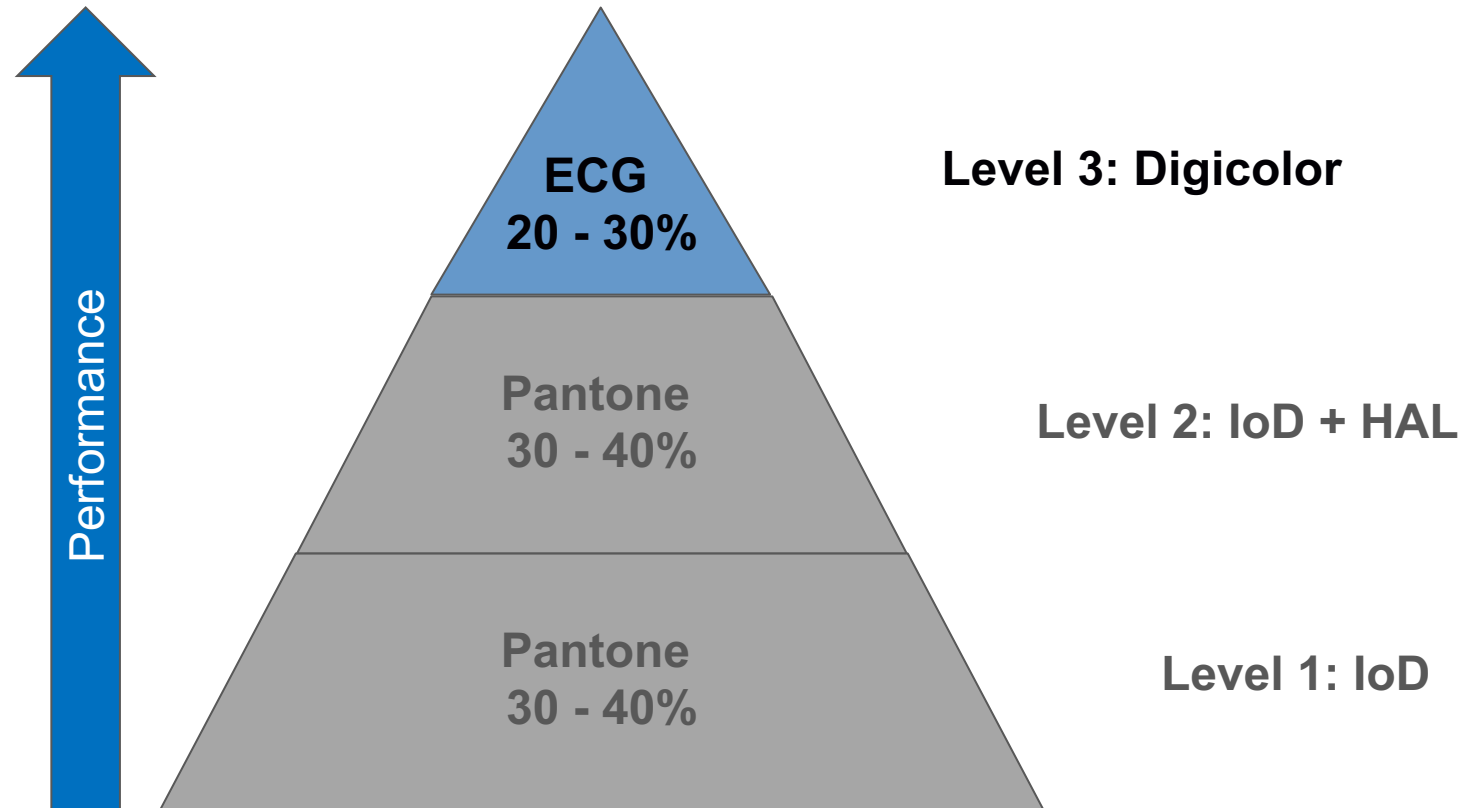


Digital World of printing

DigiColor Video

IoD + DigiColor

For PMS Pantone and ECG technologies three levels of solutions are implemented.



Summing up...

DigiColor main advantage:

- 1 It is the only system that can guarantee, monitor, track Delta E consistency, worldwide, on any substrate.



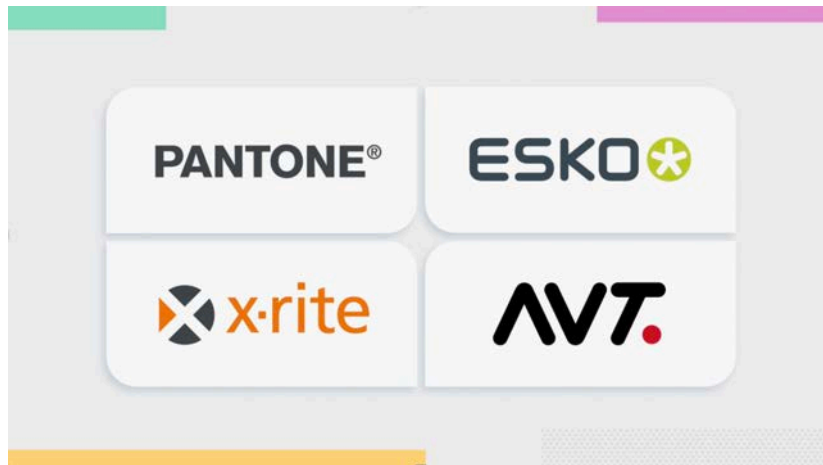
PACKAGING CONNECTED

Esko – Pantone – X-rite - AVT
April 2019

What is Packaging Connected

Connecting **Digital Color Specifications, Prepress, Inline Inspection & Color** systems to the **brand owner & customer**

1. Connecting AVT inspection systems to Esko Automation Engine
2. Connecting Esko WebCenter – X-rite ColorCert - AVT inline SpectraLab



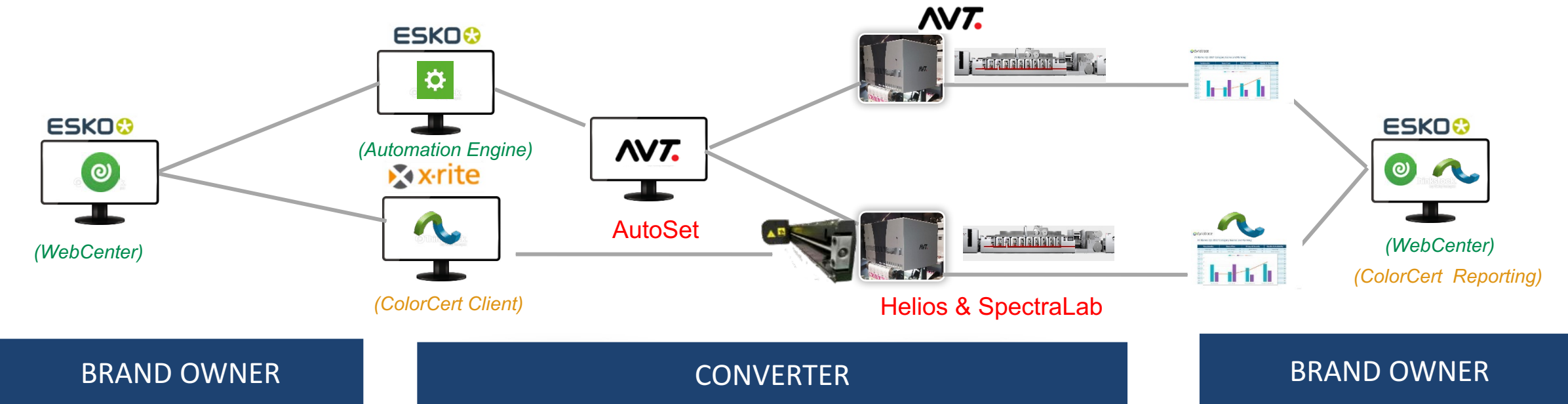
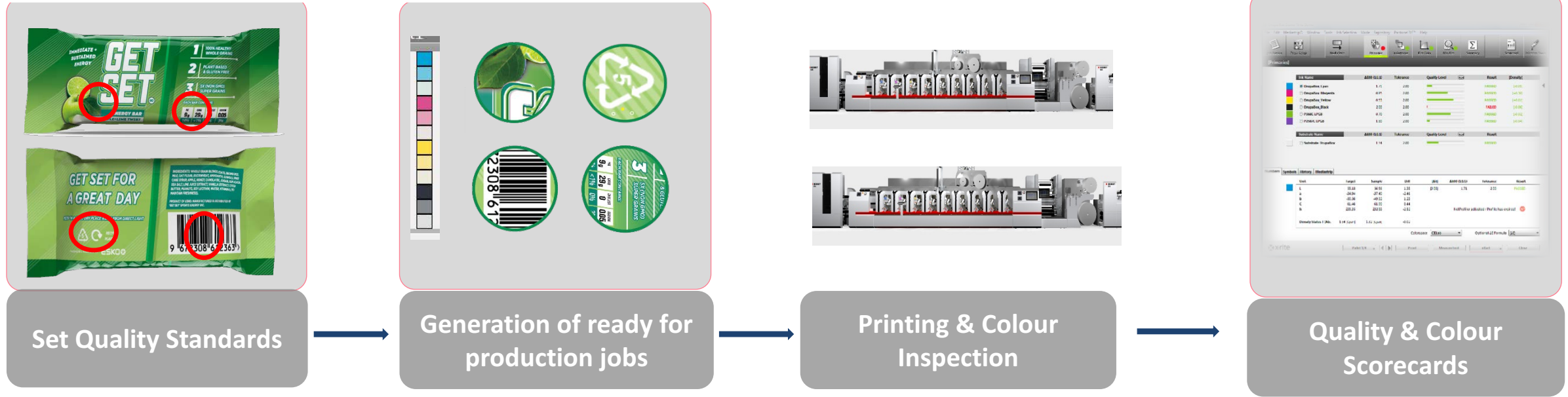
AVT.

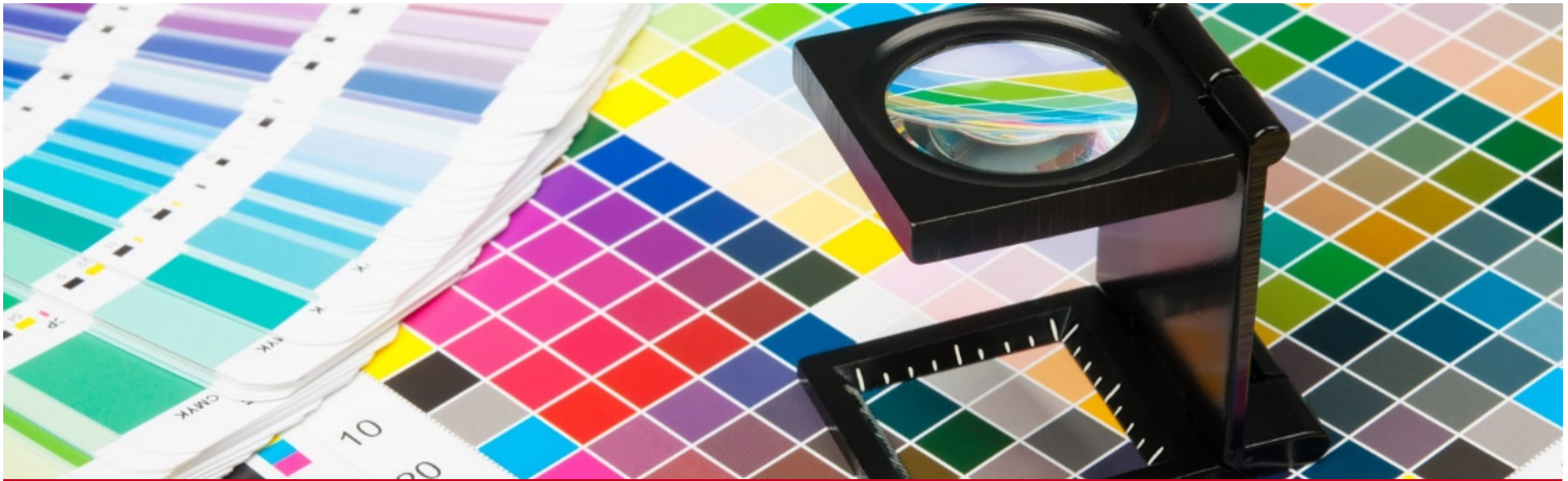
ESKO*

x-rite
PANTONE®

■ BOBST

Packaging Connected WorkFlow Overview - Bobst Firenze

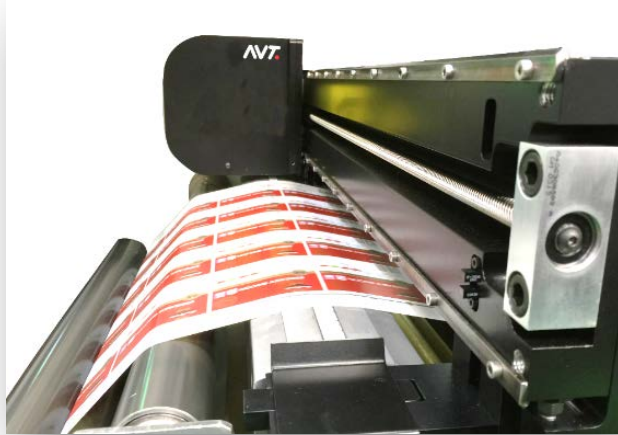




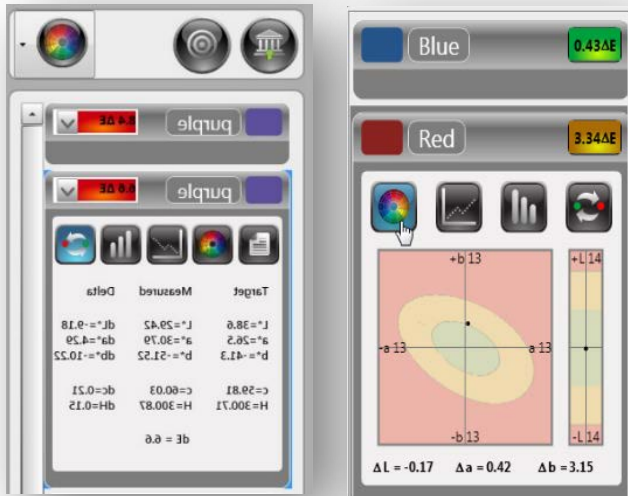
COLOR VALIDATION

David Naisby
Jerome Brangé
April 2019

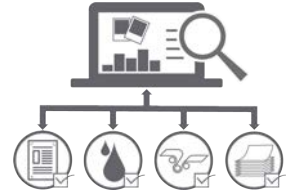
AVT SpectraLab with ColorCert



- All color targets set up automatically from X-Rite
- Continuous measurement during run
- Live guidance on color issues throughout the run
- No need to stop and check color during the run
- ColorCert reporting is automatic at the end of the reel
- Image based and media strip measurements supported



Process Control

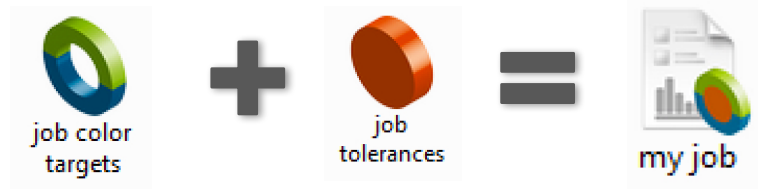


ColorCert Suite

Real-time quality control and reporting

ColorCert is a modular job-based color workflow solution that enables the creation of color specifications and provides a reporting scorecard by applying a score to a job, based on tolerances.

- Create specifications, color profiles
- Create rules, tolerances
- Create templates
- Create job
- Measure production
- Get a job approval



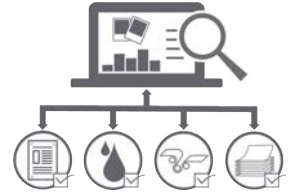
Score [Roll 6] 86  ACCEPTABLE



ColorCert® Mediastrip • 2019_OH • [Single Row]

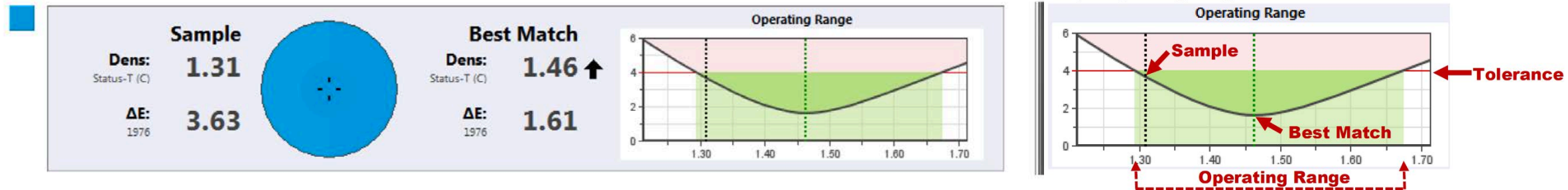


Process Control

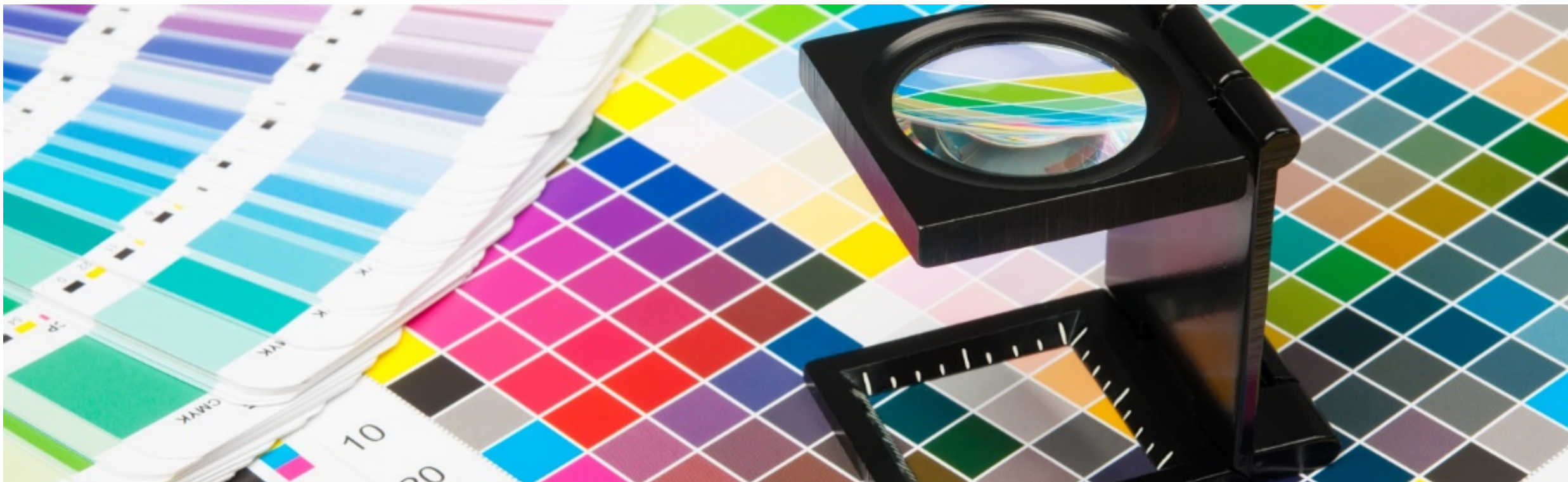


BestMatch gives pressman the actionable data they need for more accurate color

Primary Cyan → Within tolerance but can still be improved



- Make-ready reduction
 - Come up to color faster with BestMatch by knowing numerically. (Avg. 10% time savings)



COLOR MATCHING

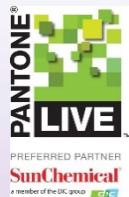
Jérôme Brangé

Solution Architect Packaging – X-rite Pantone

April 2019



Pantone LIVE - Color As You Imagined It ! From Design to Print & Packaging



Pantone Live



34 dependents library today

Pantone 3425 C

Digital Master Standard
Two Dependent Standards

Neither Dependent Standard
perfectly Achieves the Master Standard



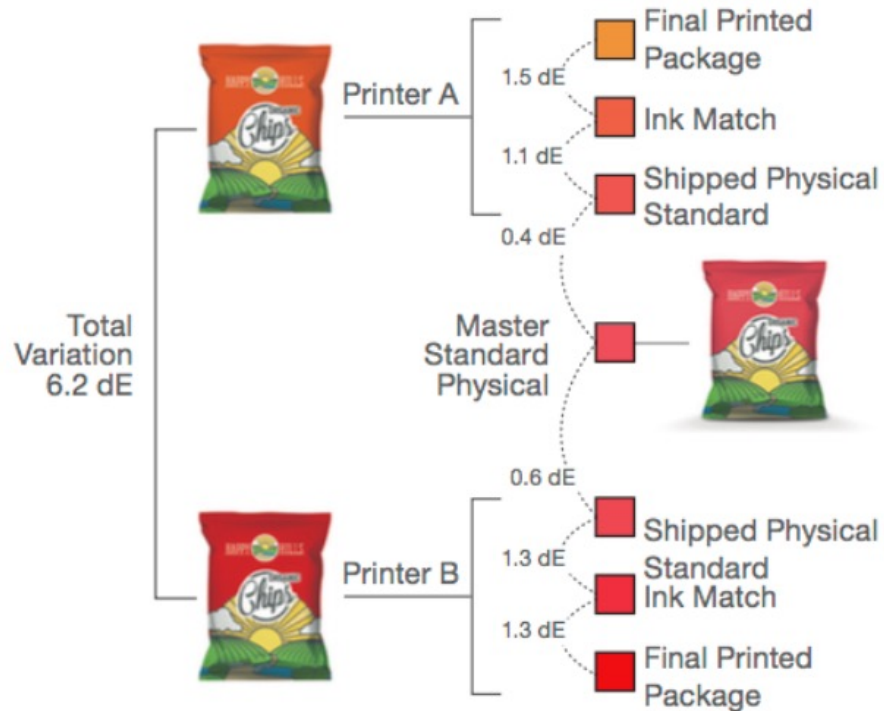
FSCC Clear Label - Flexo	FSCT Clear Label on White - Flexo	FSCW Opaque Film Label - Flexo	FSRC Clear Plastic Pack - Flexo	FSGB Thick Premium Box - Flexo	FSWF White Film Wrapper - Flexo
FUCV Coated Paper Label - Flexo	FUWF UV Coated White Film Label - Flexo	FWWF White Film Label - Flexo	FWCP Coated Paper Display - Flexo	FYBK Brown Paper Carton - Flexo	FYWK White Paper Bag - Flexo
FYWT Recycled White Paper Carton - Flexo	GVCC Clear Film Label - Gravure	GVCW White Film Wrapper - Gravure	GVWF White Film Bag - Gravure	LPCV Coated Paper Label - Offset	LPFB Recycled Paper Carton - Offset
LPGB White Paper Box - Offset	LUCV Coated Paper Label - Offset	LUEB Recycled Paper Box - Offset	LUGB Cardstock Tag - Offset	GVAH Silver Wrapper with White Ink Base - Gravure	GVCH Clear Wrap with White Ink Base - Gravure
GVCV Coated Paper Label - Gravure	GVCT Clear Wrapper with White Ink Base - Gravure	GVCA Clear Label - Gravure	GVAE Silver Film Pack with White Ink Base - Gravure	FUAH Metalized Paper Label with White Ink - Flexo	FJRC Clear Film on Clear Plasto Bag - Flexo
FUCA Clear Film with Varnish - Flexo	FUCT Clear Film on White Base - Flexo	FUCH Clear Film with Base White Print - Flexo	FUEB Recycled Carton Board - Flexo		

Pantone Live

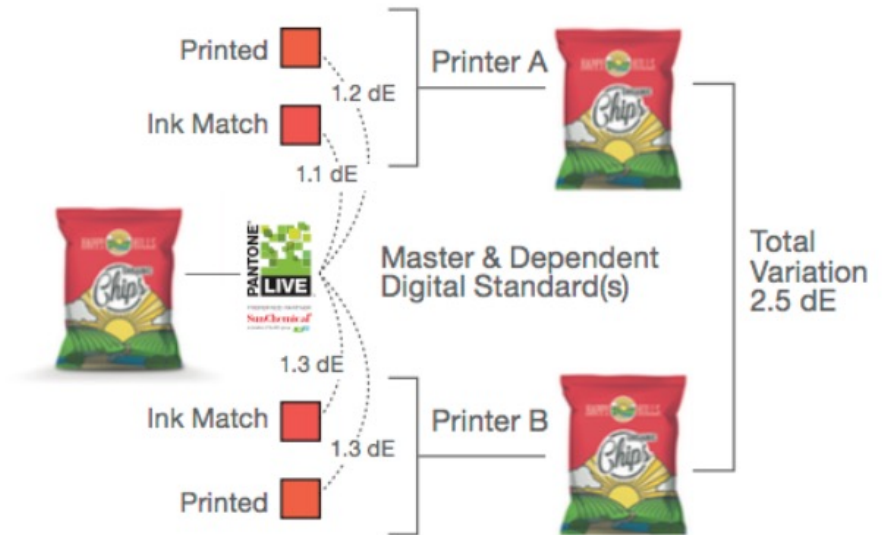


Reducing colour differences

The Error Stack Comparison



Reducing The Error Stack





GTT

Jeanine Graat – Kris Sentek
Marketing – APEX
April 2019

Apex GTT 2.0[®] Anilox Technology in REVO



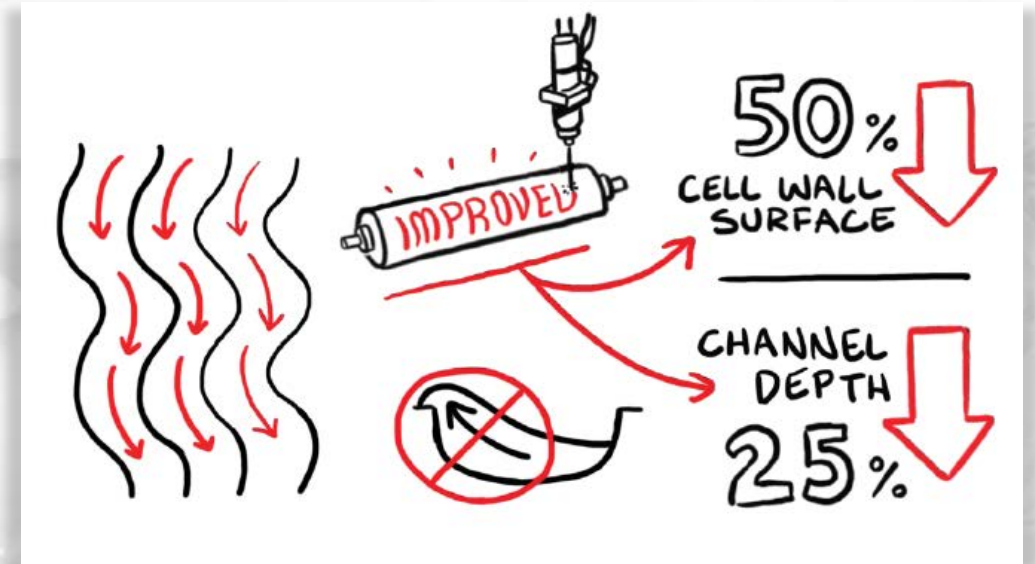
The Secret to Unparalleled Consistency in REVO Begins with GTT2.0[®]

- Patented GTT 2.0[®] Anilox Rollers have been specifically designed to achieve consistent ink delivery in the tolerance of +/- 1% between rollers.
- The *same set of rolls* is capable of *printing all jobs* and *only two specs* are used to print the entire gamma (GTT 2.0[®] S and GTT 2.0[®] C5)
- A calibration roll is available for total process-loop control



Features of GTT 2.0[®] Anilox Technology

- **Open Slalom Ink Channel Geometry**
Ink flows uniformly and calmly onto plate;
- **Superhard Hybrid Ceramic**
High-density, low-porosity Cr2O3-TiO2 ceramic;
- **Constant Beam Laser Engraving**
Delivers smooth, hard and precise channel walls



=> The level of **consistency** achieved with GTT is not possible with any other type of closed-cell technology

Benefits of GTT 2.0[®] Anilox Technology



- **Improved Printability**

Print stronger solids with less mottling & pinholing; sharper and finer type; tighter reverses; finer cleaner plate screens, less dot gain;
Ink spitting is eliminated



- **Enhanced Repeatability**

Job after job, year after year, GTT 2.0[®] delivers **predictable** and **repeatable** print results;



- **Greater Profitability**

Let GTT 2.0[®] boost your bottom line with savings in time and better print quality.

Team Member



GTT 2.0[®] Anilox Technology in REVO



GTT Label REVO Pack

4 x GTT 2.0[®] REVO S
3 x GTT 2.0[®] REVO C5
1 x GTT 2.0[®] Calibration Roll

GTT Flexible REVO Pack

4 x GTT 2.0[®] REVO S
4 x GTT 2.0[®] REVO C5
1 x GTT 2.0[®] REVO M
1 x GTT 2.0[®] Calibration Roll

Suggested extras

1 x GTT 2.0[®] REVO XS
1 x GTT 2.0[®] REVO M
2 x GTT 2.0[®] REVO L
2 x GTT 2.0[®] REVO XL



GTT 2.0[®] Profile Type

Carrying Capacity

GTT 2.0[®] LABEL XS

3 $\mu\text{m}/\text{m}^2$

Print Application GTT 2.0[®] LABEL XS: VERY HIGH QUALITY FADE TO ZERO WORK

GTT 2.0[®] LABEL S

4 $\mu\text{m}/\text{m}^2$

Print Application GTT 2.0[®] LABEL S: LINE, COMBO, VIGNETTE

GTT 2.0[®] LABEL C5

5 $\mu\text{m}/\text{m}^2$

Print Application GTT 2.0[®] LABEL C5: LINE, COMBO, VIGNETTE

GTT 2.0[®] LABEL M

6 $\mu\text{m}/\text{m}^2$

Print Application GTT 2.0[®] LABEL M: LINE, COMBO, VIGNETTE

GTT 2.0[®] LABEL L

8 $\mu\text{m}/\text{m}^2$

Print Application GTT 2.0[®] LABEL L: SOLID, TEXT, COMBOS

GTT 2.0[®] LABEL XL

11 $\mu\text{m}/\text{m}^2$

Print Application GTT 2.0[®] LABEL XL: FLOOD COAT AND SOLIDS

GTT 2.0[®] LABEL C15

15 $\mu\text{m}/\text{m}^2$

Print Application GTT 2.0[®] LABEL C15: HIGH GLOSS UV VARNISH

GTT LABEL 2.0[®] C18 or C21

18 or 21 $\mu\text{m}/\text{m}^2$

Print Application GTT 2.0[®] LABEL C21: HIGH OPACITY WHITE

Team Member



Digital, DigiFlexo and Flexo Same Pantone, same Delta E

REVO
DIGITAL HEAD REVOLUTION

opex3

BOBST

ESKOO

SAGAFLEX

AVZ

FiletGroup

PANTONE

Artitec

LABELS & PACKAGING INNOVATIONS

SUSTAINABLE
Low ink and substrate consumption with the minimum waste

CONNECTED
Connected value chain supporting your productivity with facts and figures

CONSISTENCY

BOBST

M1X

REVO
DIGITAL HEAD REVOLUTION

opex3

BOBST

ESKOO

SAGAFLEX

AVZ

FiletGroup

PANTONE

Artitec

LABELS & PACKAGING INNOVATIONS

SUSTAINABLE
The lowest ink and substrate waste with digitized color control

PRODUCTIVE
The fastest time to market for ultrashort, medium and long runs

CONSISTENCY

BOBST

M5C

REVO
DIGITAL HEAD REVOLUTION

opex3

BOBST

ESKOO

SAGAFLEX

AVZ

FiletGroup

PANTONE

Artitec

LABELS & PACKAGING INNOVATIONS

FLEXIBLE
Suitable for printing and converting substrates for flexible packaging, filling cartons, labels, audit

CONNECTED
Connected value chain supporting uptime, productivity, quality with facts and figures

CONSISTENCY

BOBST

M6

LABELS & PACKAGING INNOVATIONS

PANTONE 638 C

POWERFUL COLORS
Enrich your production with more than 85% of Pantones at $\Delta E < 2$

EXCITING IMAGES
Print at an optical resolution of 2000 dpi for finest details and smooth gradations

CONSISTENCY

Software: Mouvent™ DFE
Inks: Mouvent™ UV Inks (0 CMYK)
Press: LB702-18 | Speeds to 100 mpm
Print media: 90 White TC 69 | **UPM RAFLAAT**

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A Bobst Group company

Mouvent

BOBST