Beyond Paper and Packaging:
Managing the Color Ecosystem in Digital Textile Printing

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Company Profile:
Advanced Digital Textiles
Provider of on-demand textile printing

- **Founded:** 2003
- **Location:** Monroe, North Carolina, USA
- **Facility:** 3000 m2
- **Employees:** 24
- **Chief sectors:** Hospitality, Home Decor

Print Processes:
Advanced Digital Textiles

- o Dye Sublimation
- o Fibre Reactive
- o Pigment
- o Direct Disperse
- o Latex

Color Process: **Status Quo**

Customer Submission

RGB file (tagged, untagged), indexed color

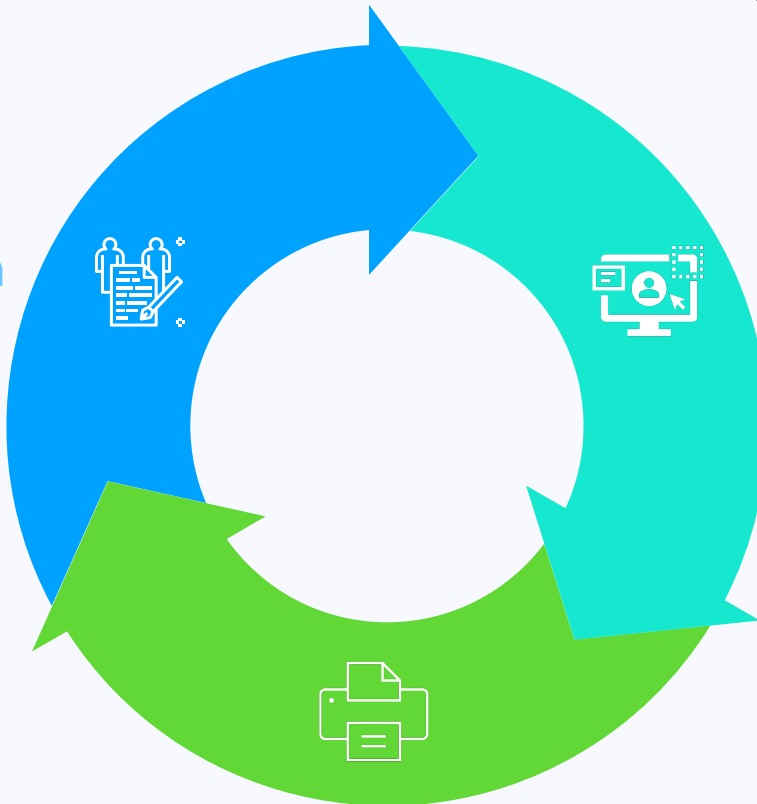**Design sample:** fabric, paper

Color Editing/Correction

Photoshop

Proofer

Production Printers

The Challenge

○ **Compress color matching stage and time to market!**

○ Determine best approach based on provided digital artwork

○ Adjust color to specified color standard

○ Maintain color consistency across all processes and substrates and over time

The Proof Production Cycle

Example: Direct Disperse Process / **20-25 minutes**

Example: Fibre Reactive / **1-4 Hours**

Steam

REVIEW

RIP/PRINT AGAIN

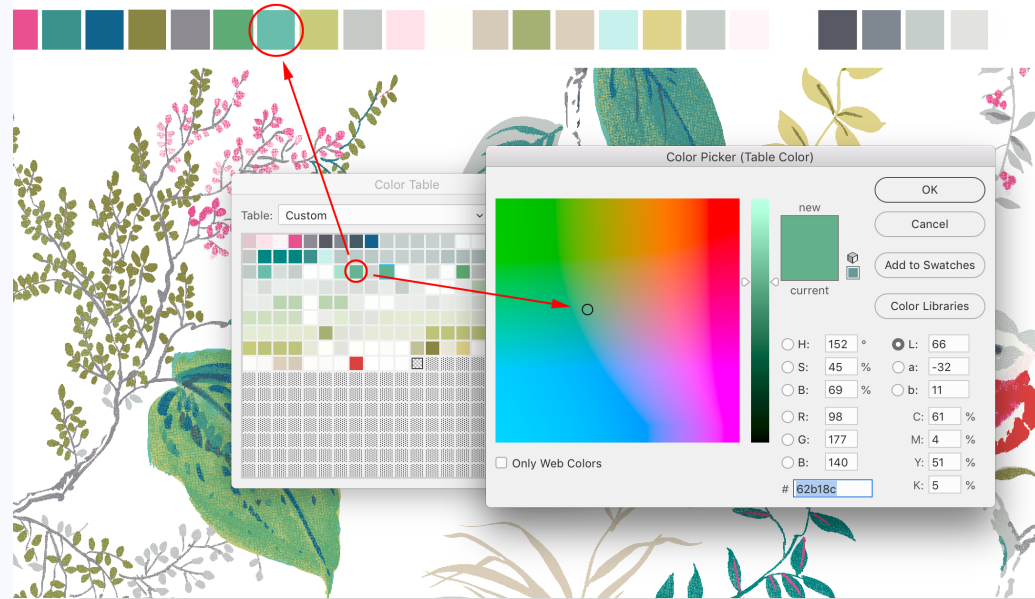RIP/PRINT

WASH/DRY

EDIT/CORRECT
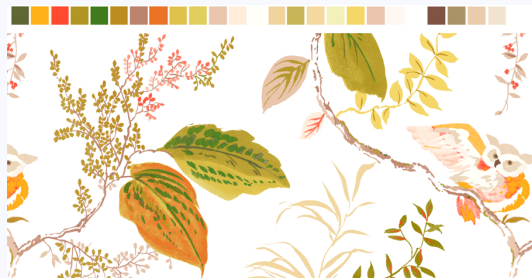
Customer

File Submission:

Indexed Color

Correction Process:
Color-by-Color

Variations multiply the task

One design, many "colorways"

Difficulties

- o **Multiple corrections of individual colors**

- o **Lack of accurate soft proof to guide corrections**

- o **No preview of multicolor output**

- o **Lack of background in color correcting images/global color correction**
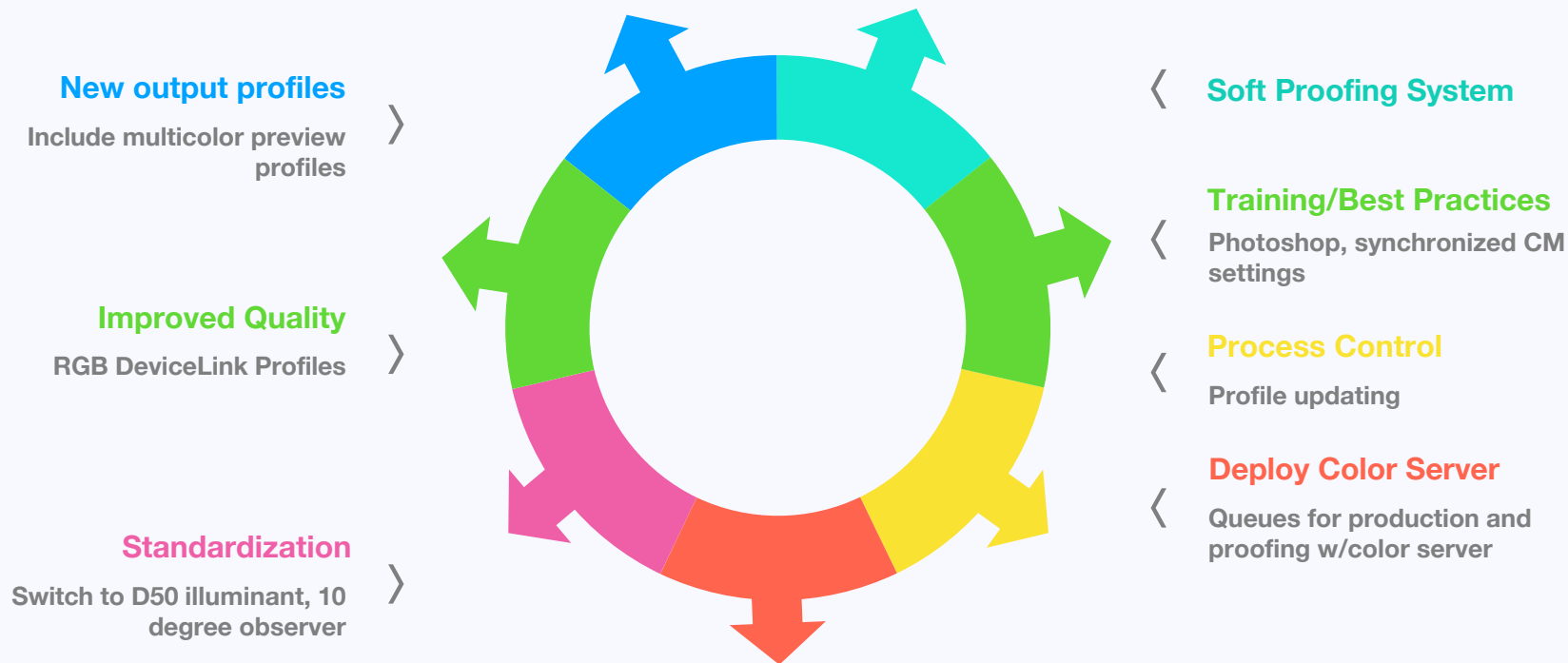
- o **Instability of certain printing processes**
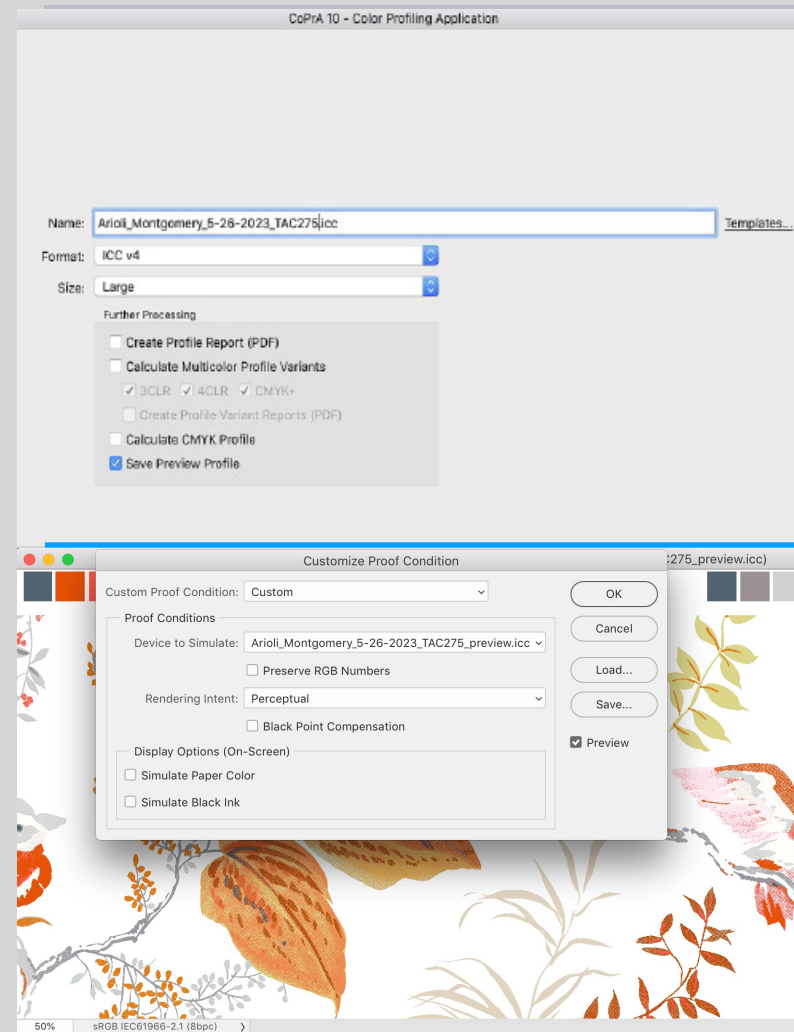
Improvements

7 Step Improvement Plan

Some of the advantages to utilizing modern color management

New output profiles

Include multicolor preview profiles

Improved Quality

RGB DeviceLink Profiles

Standardization

Switch to D50 illuminant, 10 degree observer

Soft Proofing System

Training/Best Practices

Photoshop, synchronized CM settings

Process Control

Profile updating

Deploy Color Server
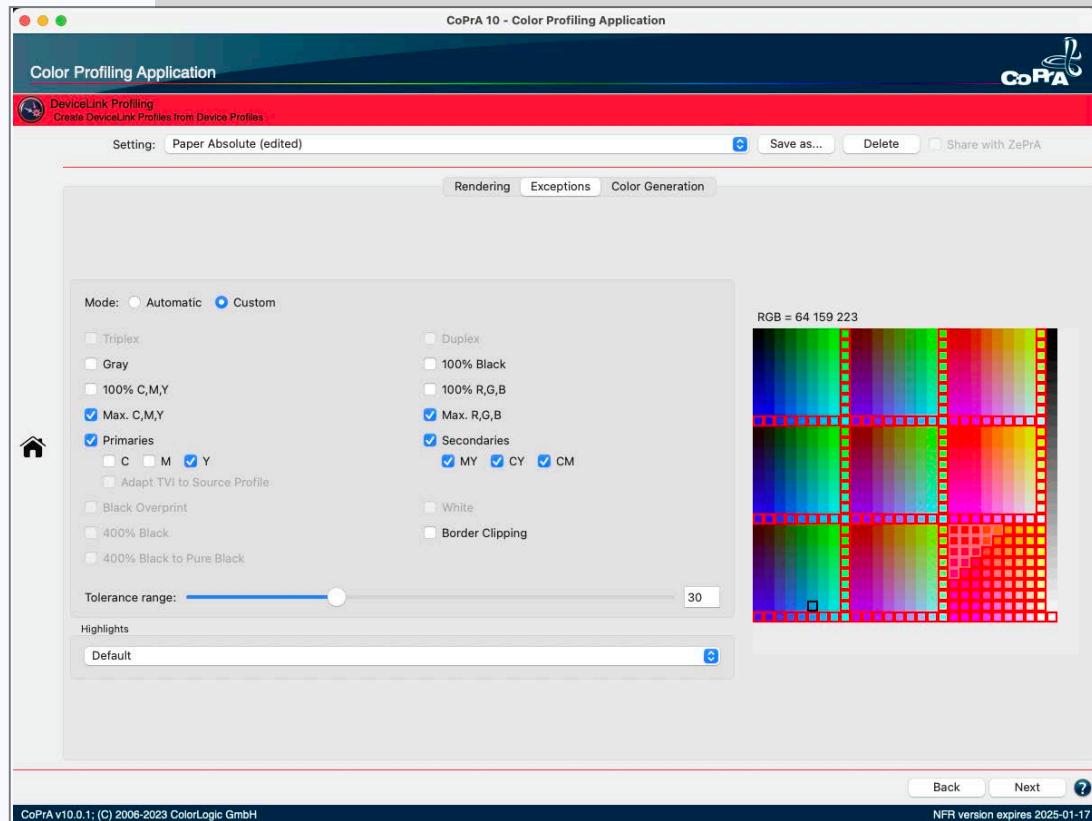
Queues for production and proofing w/color server

01

New output profiles include multicolor preview profiles

02

Improved Color Quality

RGB DeviceLinks with auto-exceptions using ColorLogic CoPrA
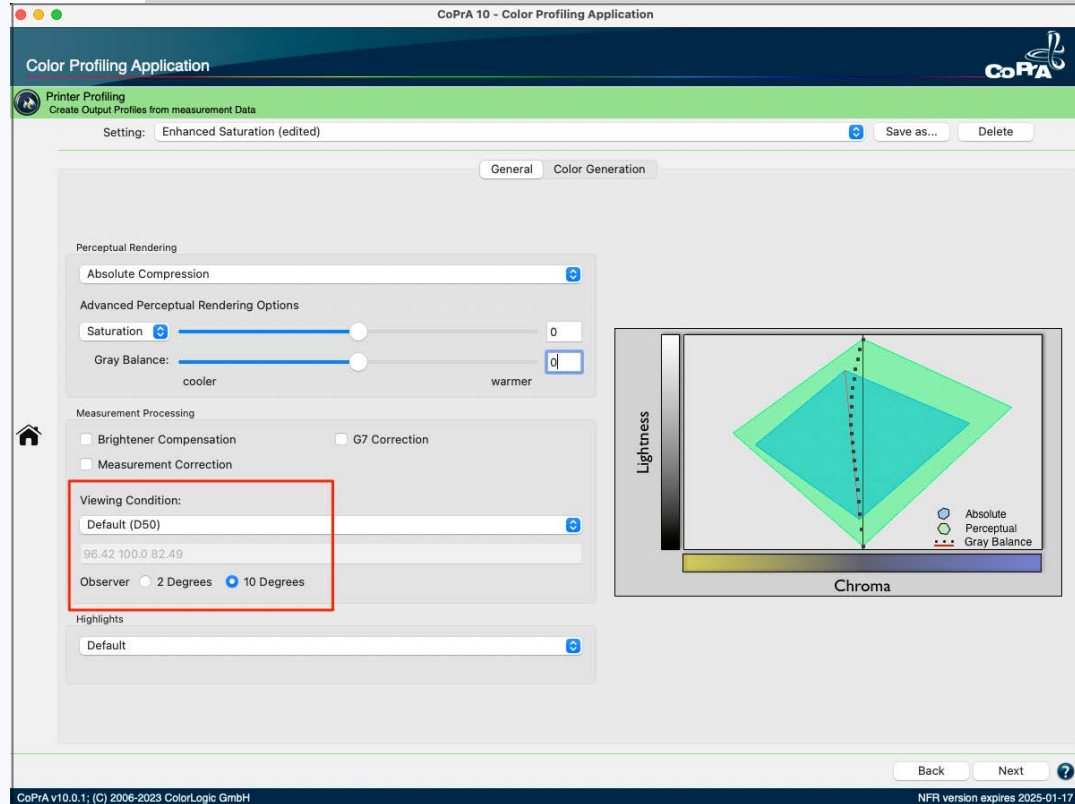
"Cleaner," deeper RGB Primaries and Secondaries

03

Standardize

On *D50* illuminant, 10 Degree Observer

"Where a light source having a different spectral distribution is used, it shall be agreed by the interested parties." - ISO 3668 (5.2)

04

Soft Proofing

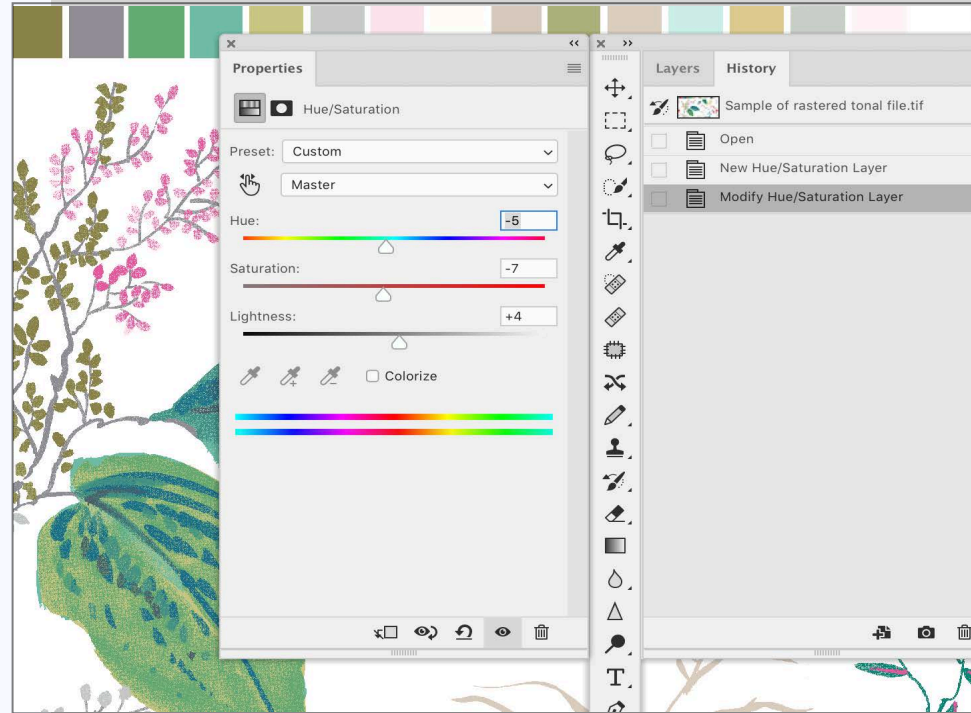Include RGB *multicolor* preview profiles for accurate desktop proofing

05

Training:

Photoshop skills:

o Default CM settings; synchronize in Bridge

o Proof Setup

o Image/global color corrections Curves,hue-saturation (color range, tolerance)

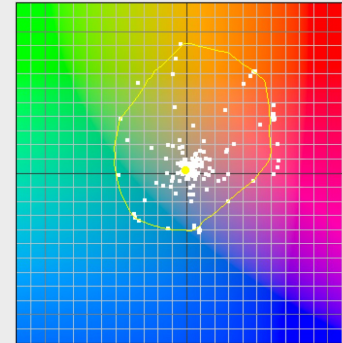o Selections, eyedropper tool, color picker

o Adjustment layers

06

Process Control:

Profile Updating

o   Small charts-fast

o   Feedback

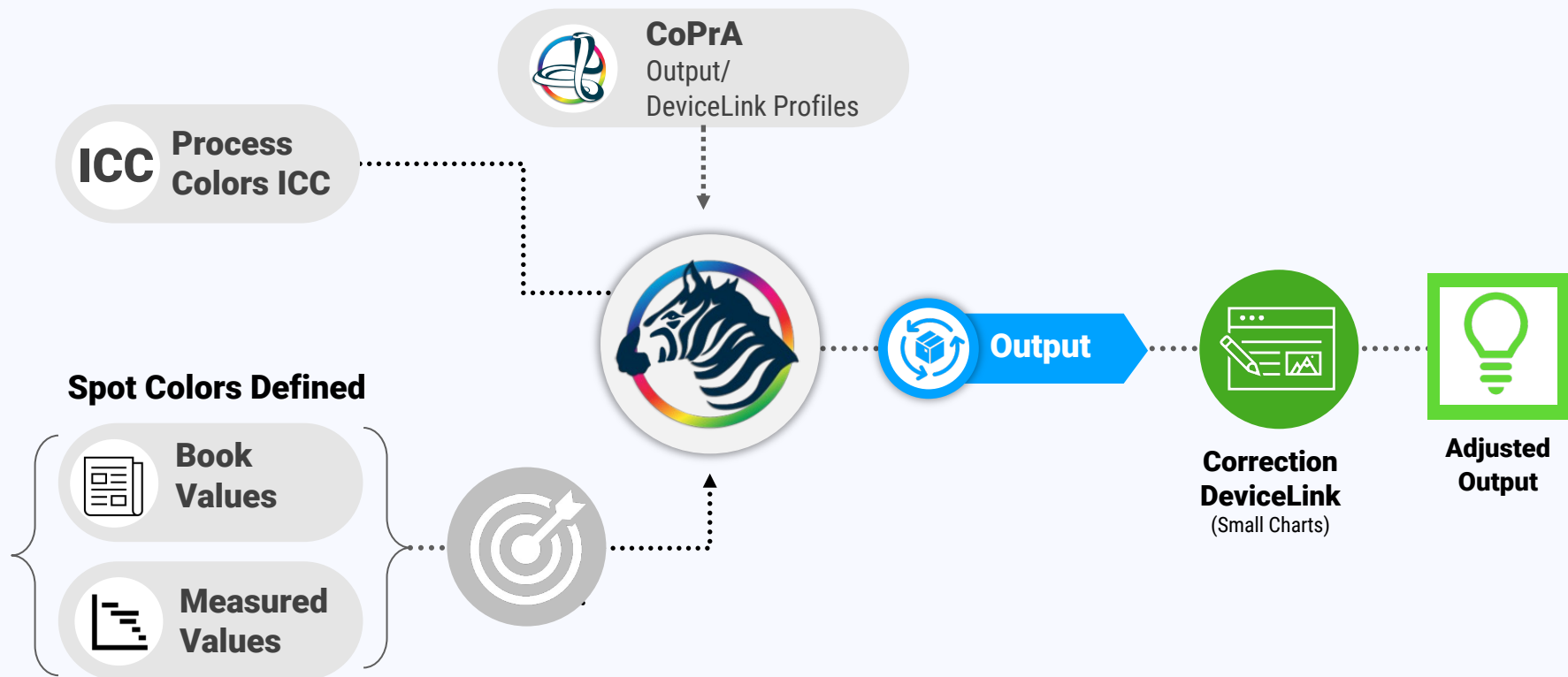o   Save as correction devicelink

Match: 82%

Setting: Default – Multicolor

TAC: 400   Black TAC: 400   Max.Black: 98
28.9 0.1 0.0 Lab / ~275% TAC

07 Color Server with Queues for Production and Proofing

ZePrA Color Server & neoStampa RIP

Input File
TIFF, PSD, PDF

Proofing Device

Fibre Reactive

Dye Sublimation

Pigment

Latex

Direct Disperse

Overall Color Conversion Process

Color Process: **Improved**

Customer Submission

RGB file (tagged,untagged), indexed color

Design sample: fabric, paper

Color Editing/Correction

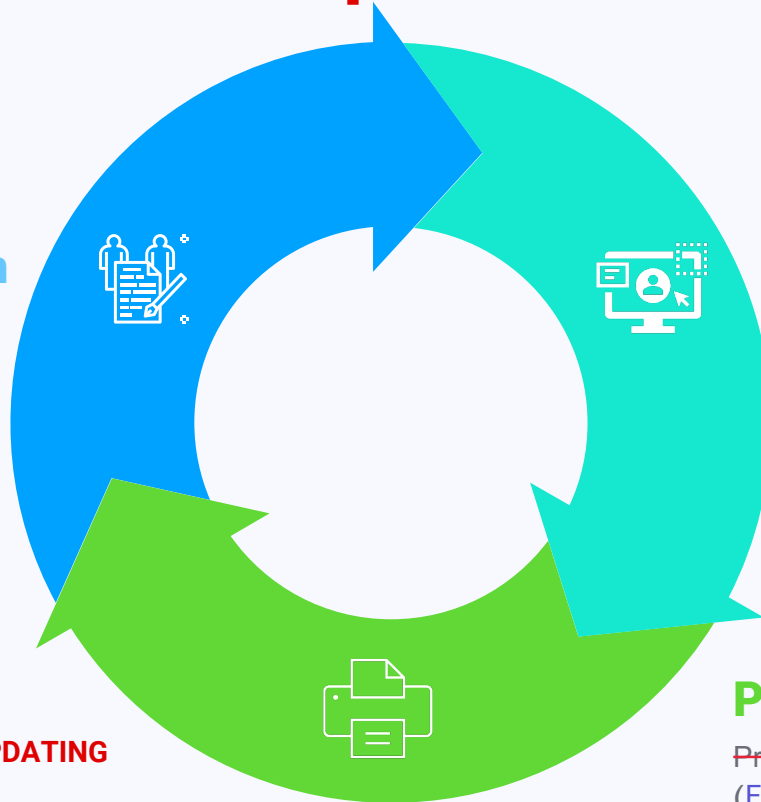Photoshop **+ PHOTOSHOP SKILLS**
+ SOFT PROOFING

Proofer

~~Production Printers~~
(EPSON PROOFER)

+ PROILE UPDATING

Results &
Moving Forward

Initial Results

1. Some colorists showed some hesitation as they feared that the change would cause a loss of time and effort.

2. It did not take very long for staff to realize it was worth the training to implement this new process.

3. The downtime spent was quickly recovered based on the instant reduction in the amount of total print trials.

4. Colorists claim that the calibration of the monitor to the actual print profile has been a great help. It allows for a great start!

Maintenance Agenda

o Ongoing monitoring and documentation of print process variables to maintain a consistent output.

o Continued updating of output profiles (correction devicelinks)

Moving Forward

o Continued assessment of results and need to update output profiles (correction device links)

o Push training out to additional employees

o Add additional workstations

o Implement soft proofing of Illustrator files and PDFs

o Improve communication with customers re color management/file prep

Thank You

Questions? Please let us know.

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