Becoming Your Companies Color Champion

Presenter: David Hunter

EChromaChecker

Agenda

- Important Statistics for Print Service Providers
- ROI for Color Control
- Cement role as indispensable within company
- How to learn where your shop is today
- Delegate responsibilities
- Configure actionable data, in real time for savings



Changing Industry

Facts Remain the Same

- Customers hold printer responsible for all results
- Production staff don't want to be accountable
- Printer's vendors don't want to be accountable
 - For their printing device
 - For their raw materials: ink, paper, toner, solutions
- Finger Pointing- easy out...

Printer Profitability Facts

PIA Industry Flash Report 2020

- ◆ Top 25% Printers make >5% margin on sales
- Next 50% Printers make <2% margin on sales
- ◆ Last 25% Printers make 0% margin on sales

\$400 Waste= 1 Customer Rejected Job due to color Requires \$8,000 Sales to overcome for top 25% printers \$20,000 Sales to overcome for next 50% printers

Can't manage what you don't measure



One Person Responsible for Color Control

Too Many Variables, Even in small company

- Check Instruments
- Check Lighting
- Check Proofer performance
- Check Digital Printer performance, update ICC Profiles, Spots
- Check Press performance, update G7 Curves
- Check Plate performance
- Check Customer jobs

All real time- and overcome politics and reporting order

Color Champion Directs Color Strategy

Gain Buy-in from Management

- 1. Define Waste- what is **not** salable color
- 2. Educate company on Quantifying Color
- 3. Make entire company responsible for waste reduction
- 4. Configure weekly reporting showing results

All real time- and overcome politics and reporting order



1. How to Determine What is Waste?

Print that isn't Salable...

- How different is too different for customer to buy?
 - ◆ 1= Proof
 - 2= Acceptable?
 - ◆ 3= Not...



1. Define Waste- What is/is not Salable

Base on existing levels of color matching

- Gather key quality personnel that determine color resolutions
- Use E-Factor Exercise to quantify color expectations



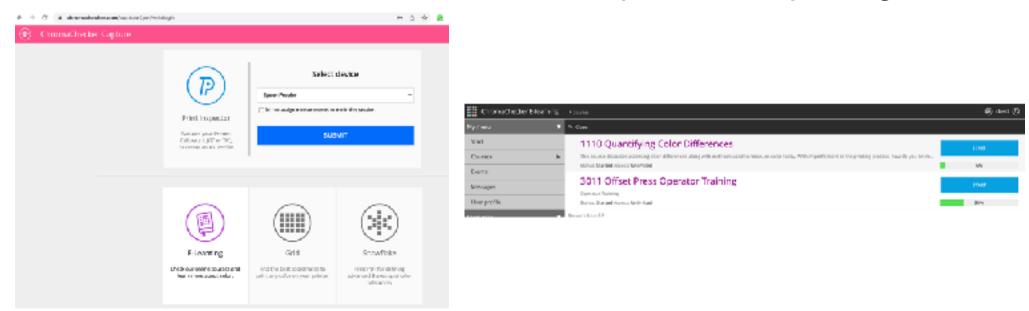


Different processes will have different levels of E-Factor

2. Educate Company on Quantifying Color

E-Learning training in ChromaChecker

Takes 15 minutes to review course, quiz, and reporting



Color Champion Drives Change using ChromaChecker



3. Make Company Responsible for Salability

Distribute Responsibilities to Production Staff

- Operator needs to be responsible for quality
- Provide the Operator with the 3 T's
 - ◆ Training- provide training to understand color
 - ◆ Tools- provide with tools that report salability
 - ◆ Time- to measure production to know that's salable
- Management to ensure Operators are checking salability

3. Management Ensures Operators Check

Determine Mean time between checks- DISPLAY

- Different timing for different print technologies
- Green=Checked/Pass; Red=Checker/Failed, Yellow= no check



Last measurement passed conformance Last measurement failed conformance No manadatory conformance criteria defined Device in makeready mode Device offline

How many hours until device is labeled as offline?





3. Operator Checks Print Production

Salability to inform Operator press is printing \$\$

- Measurement from Printer, Digital or Conventional
 - Capture or Operator Interface to report salability



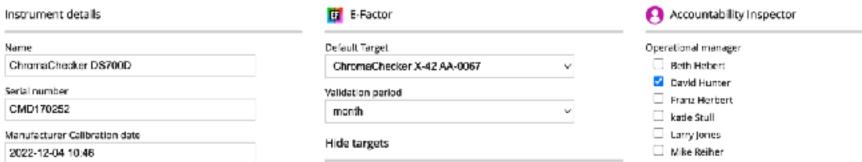


Assign Instruments/Light Booths to Maintenance

ISO Requires Annual Recertifications

- Sending instruments back to factory, consultant to check light
- Use Instrument and Light Inspector tools to check monthly
 - Set email notifications when they are due to be checked

Instrument preferences



Color Champion Drives Change using ChromaChecker

Configure Weekly Reports for Organization

Six Week Trend line- Salability

Top Manager report shows all printers, Graphic is in email!

ABC Digital

Week 38 / 2022 (19 Sep to 25 Sep)

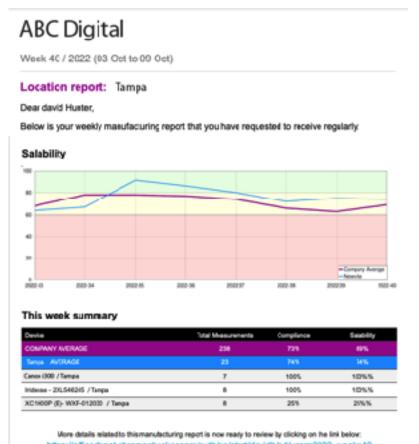
Location	Measurements/Fress	Total Measurements	Compliance
GOMPANY AVERAGE	11	200	75%
Seattle	,	37	49%
Chicago	15	61	57%
■ LA	10	19	100%



Configure Weekly Reports for Organization

Six Week Trend line- Salability

Manager report shows printers they are responsible for



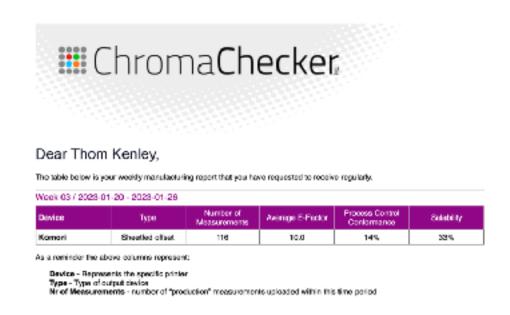
Comparison against company average



Configure Weekly Reports for Organization

Six Week Trend line- Salability

- Operator report shows printers they run
- Continuous Improvement feedback





Color Control Tools are Siloed Solutions

Multiple Vendors and Metrics, don't overlap

- Measurement device vendors, software, M condition
- Lighting vendors, and references
- Substrate vendors
- ICC Profile creation software
- Printer vendors color capabilities

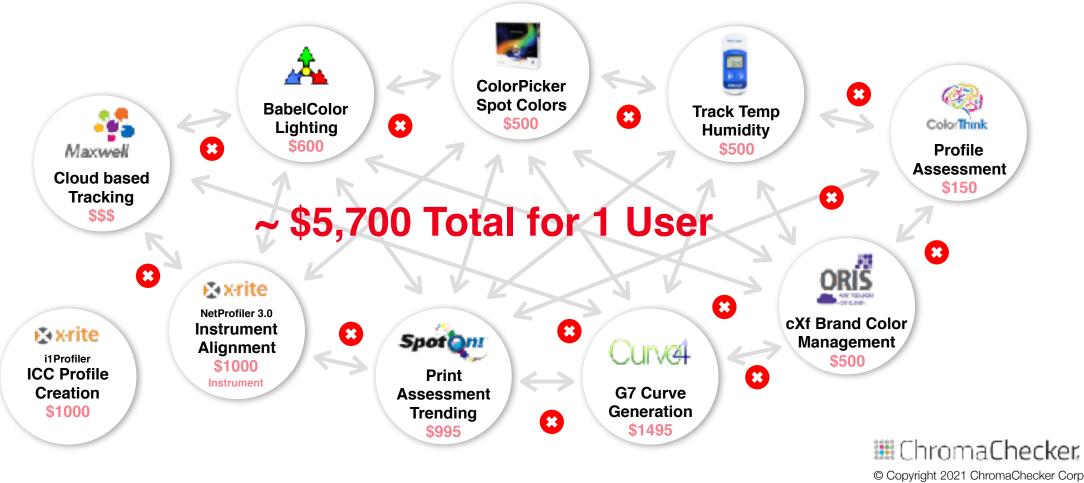
How to relate above variables to color expectations?



ChromaChecker Color Conformance Platform

Replace Individual Software Components

That don't integrate with one another



Color Control needs to be Holistic Solution

Metrics need to relate each other... Expectations

- Starts at the Measurement device- Precision & Accuracy
- Lighting- Precision and Accuracy
- Substrate vendors- Precision and Accuracy
- G7 curve creation vendors- Accuracy
- ICC Profile software- Accuracy
- Printer vendors- Precision and Accuracy

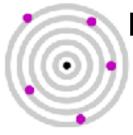
Relate above variables using same metric?



E-Factor Quantifies Precision and Accuracy

Refresh Precision vs Accuracy

Precision- consistency within page, between page, between job



Precision



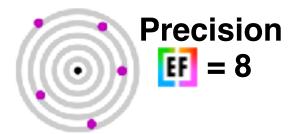
Precision

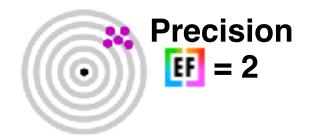


E-Factor Quantifies Precision and Accuracy

Refresh Precision vs Accuracy

Precision- consistency within page, between page, between job





E-Factor Quantifies Precision and Accuracy

Refresh Precision vs Accuracy

Precision- consistency within page, between page, between job





Accuracy- How close to reference and one another

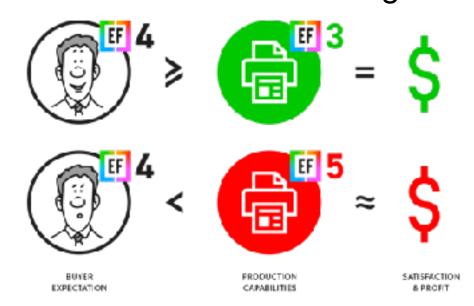




ChromaChecker: Salability Platform!

Color Conformance Platform

- Defines Production Capability of all Devices
- Defines if devices are within Customer Expectations
 - Operator- Real time judgement reduces waste
 - Sales/Customer Service/Management/Customer



Color Control needs to be Holistic Solution

Metrics need to relate each other... Expectations

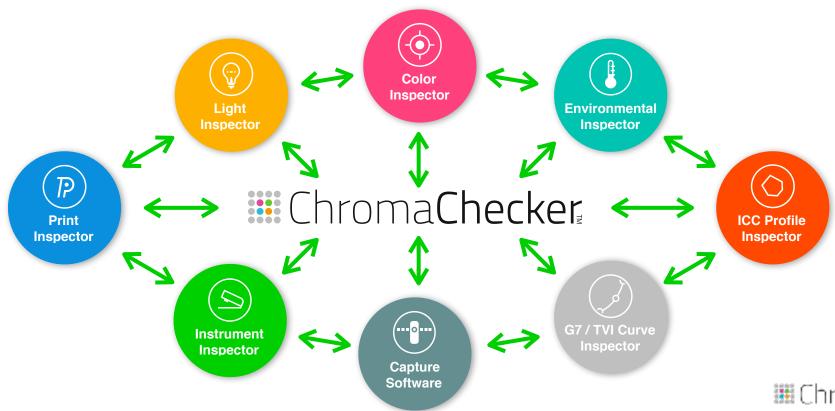
- ◆ Starts at the Measurement device- if affects which to use
- Lighting- III Understand problems due to inconsistency
- Substrate vendors- Eff Supply chain issues
- ◆ ICC Profile software- IF Determine who's tool to use
- Printer vendors- Eff Understand capabilities, per customer req
 - Relates all variables using same metric!!



ChromaChecker Color Conformance Platform

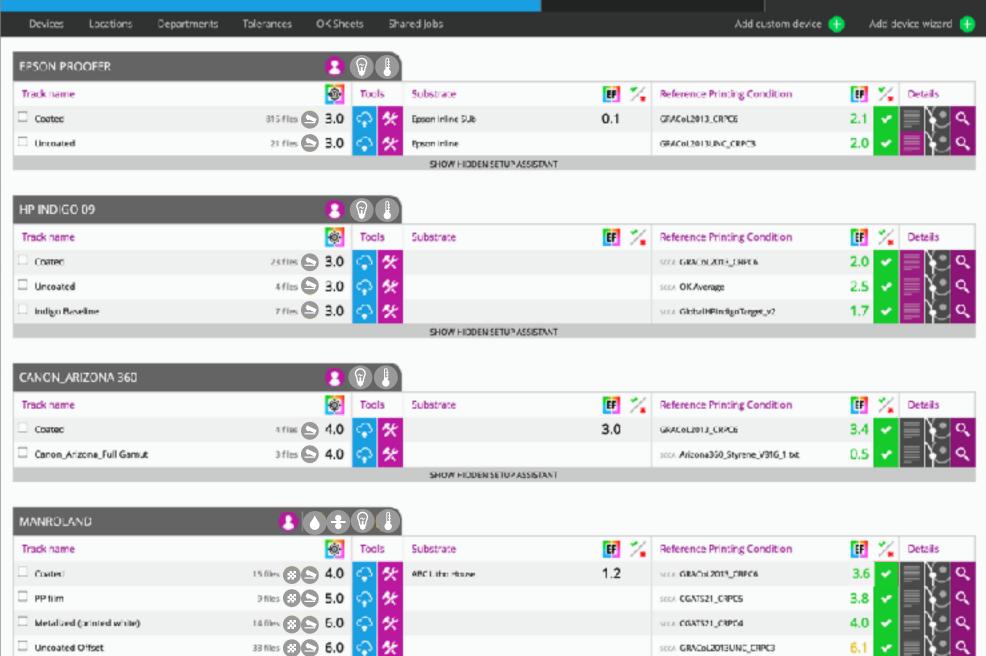
Print Ecosystem with ChromaChecker!

- Manages complex relationships, between devices and environment, enabling all elements to function as a cohesive unit
- One Dashboard shows status of all conditions

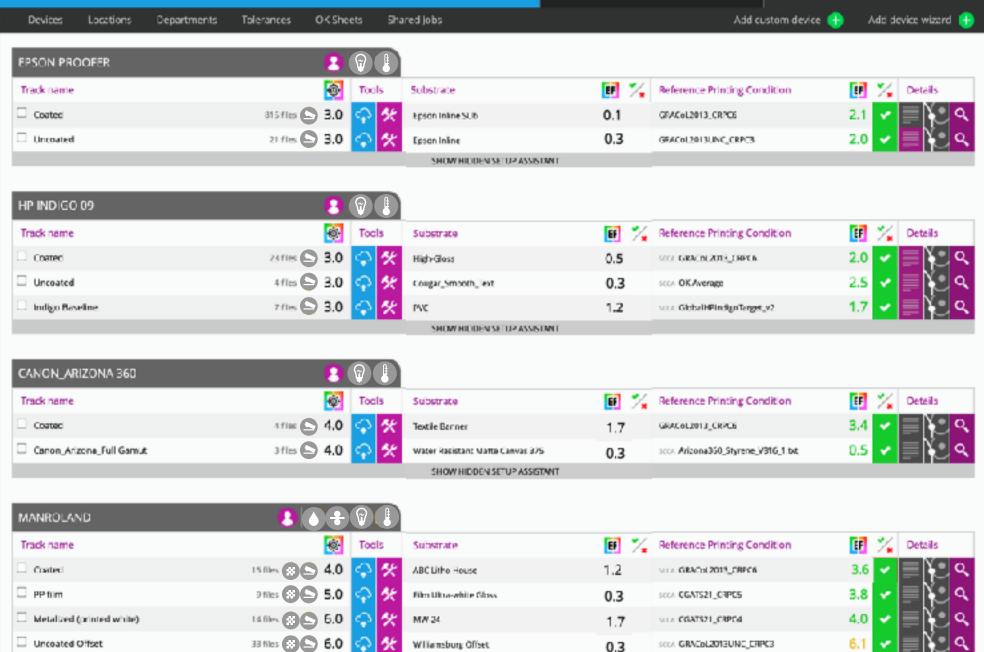


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Assets

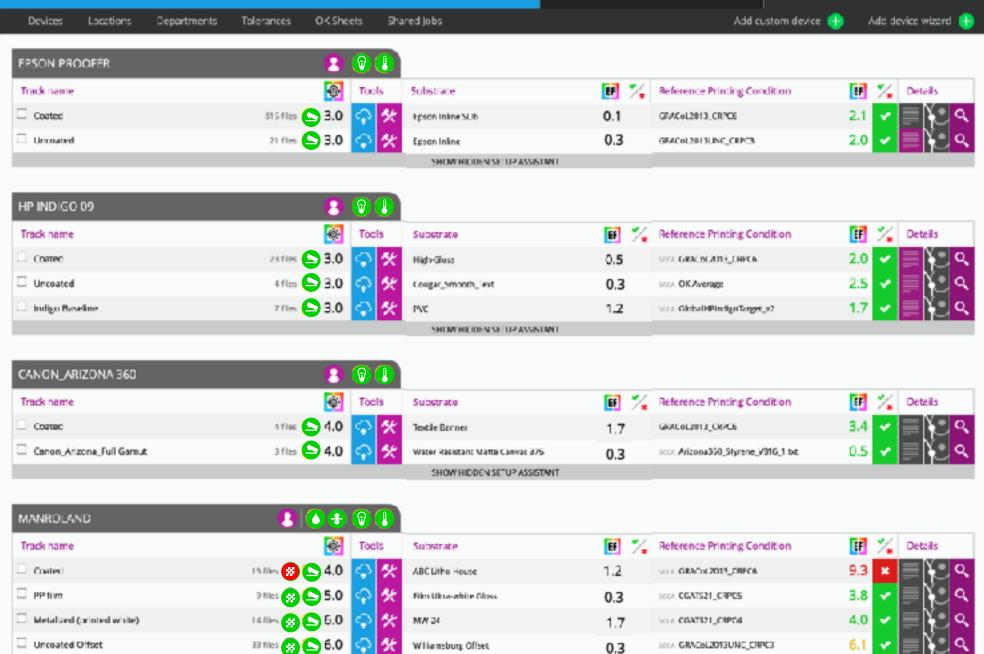






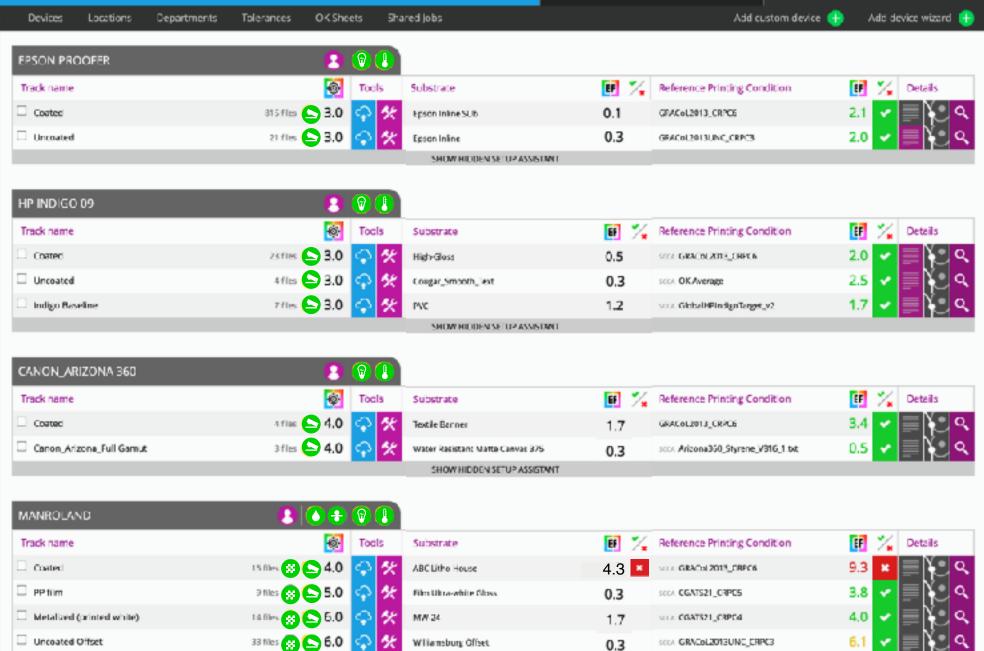






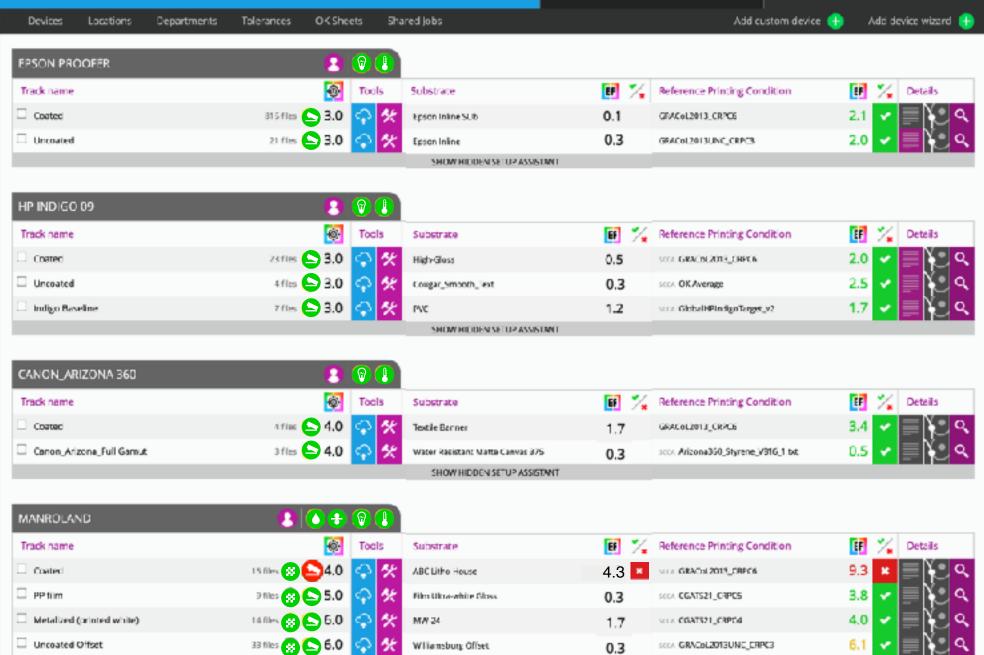














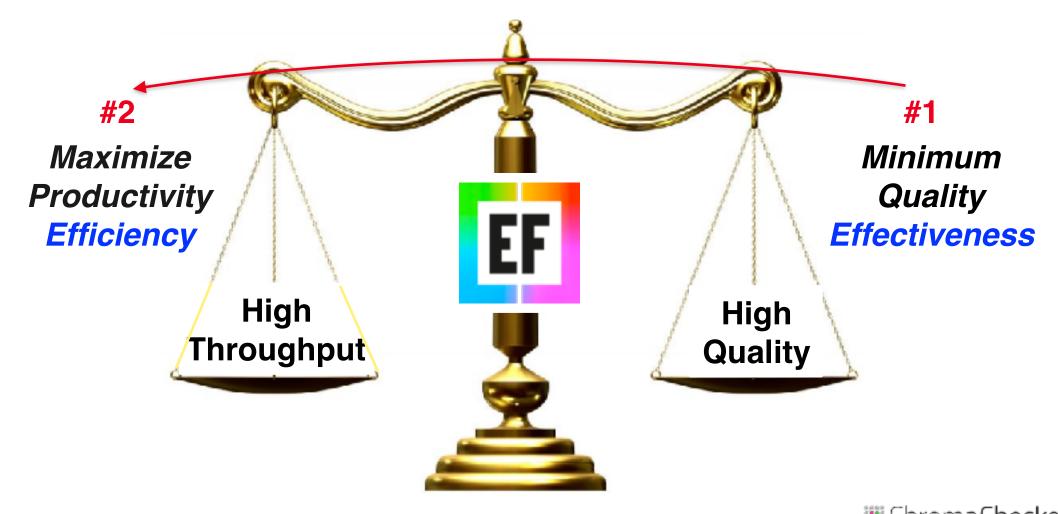
Establish Minimum Quality Requirements

James Maxwell: It is a matter of balancing economy against quality



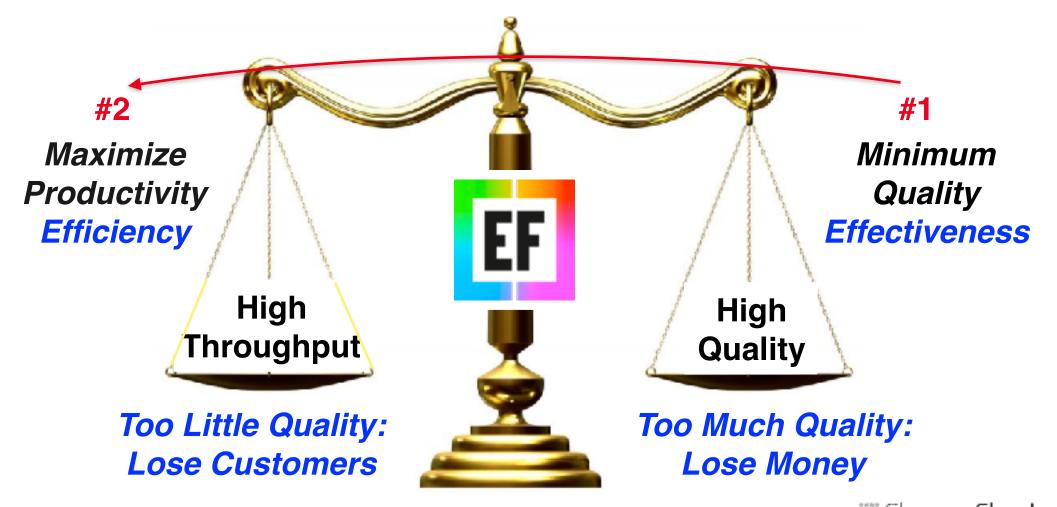
Establish Minimum Quality Requirements

James Maxwell: It is a matter of balancing economy against quality



Establish Minimum Quality Requirements

James Maxwell: It is a matter of balancing economy against quality





Post Dashboard on Large Screen in Plant

Accountability for All







Become Your Companies Color Champion

Top Level Management Support

- Prove solid ROI numbers when waste is reduced
- Get Corporate buy-in on company responsibility
- Train company on quantifying color
- Delegate responsibilities to managers, operators
- Configure weekly reports to managers, operators

Color Champion Drives Change using ChromaChecker



E-Factor Quantifies Number of Curves/Profiles

Multiple Print Conditions (substrates)

Print Condition Qualifier- 24 Substrates how many profiles?

Print Condition Qualifier

3		
Mode		

Files:

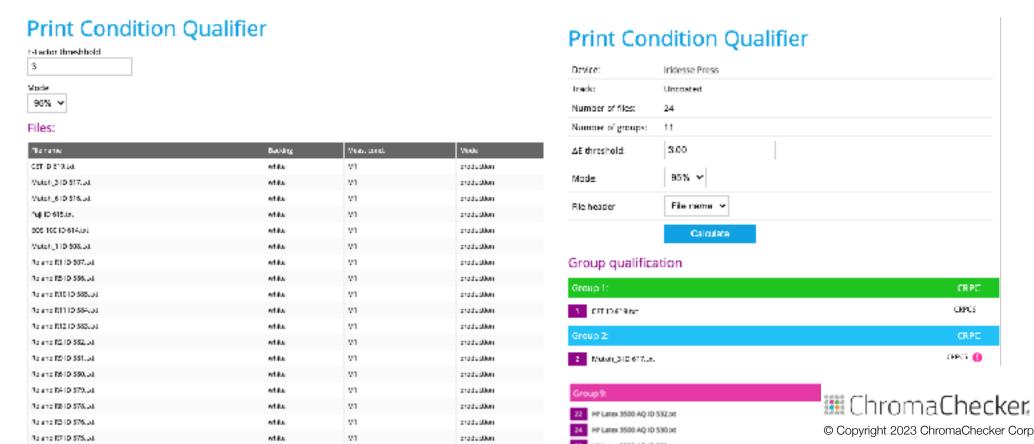
Berein	Backing	Veis, cond.	Viode
CET ID 610.144	etës	MI	production
Mulah_310 617.54	etës	MI	production
Vulcit_610 516.54	etës	MI	production
Puji 10-615.6-;	etës	MI	production
505 100 (0.614,64	nt és	MI	production
Vutof_110 908.54	ntës	MI	production
Ro and R1 ID 907.54.	nt és	MI	production
Ro and R5 ID 586, 54	nt és	MI	production
Ro and R1010 588,04	nt és	MI	production
Ro and R11 ID 58A-bit	ntës	MI	production
Ro and R12 ID \$83,04	ntës	MI	production
Roland R2.10 552.54	ntës	MI	production
To and R5 ID 581, bit	ntës	MI	production
No and R6 ID 580, 54	ntës	MI	production
Roland R41D 579.54	etës	MI	production
Ro and RS ID 576.54.	etës	MI	production
Roland R3 ID 576, bit	etës	MI	production
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E-Factor Quantifies Number of Curves/Profiles

Multiple Print Conditions (substrates)

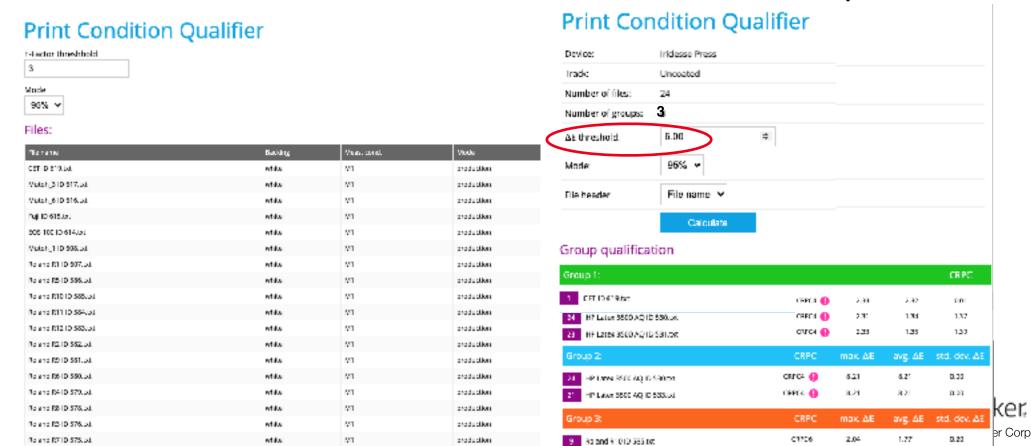
Print Condition Qualifier- 24 Substrates how many profiles?



E-Factor Quantifies Number of Curves/Profiles

Multiple Print Conditions (substrates)

Print Condition Qualifier- 24 Substrates how many profiles?



Personal and Professional Skills

Color Champion

- Strictness, Charisma modifying process
- Experience managing projects, detailed knowledge, organized
- Subcontract to external person to be Color Champion
- ChromaChecker Manual for Color Champion
- References to all appropriate ISO standard
 - Lighting, Plating, Proofing, Press, Paper, Instrument, more

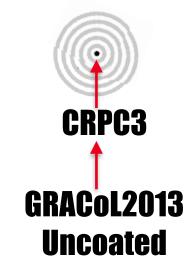
Color Champion Drives Change using ChromaChecker



What Target are you aiming for?

What substrate are you printing on...

Uncoated References





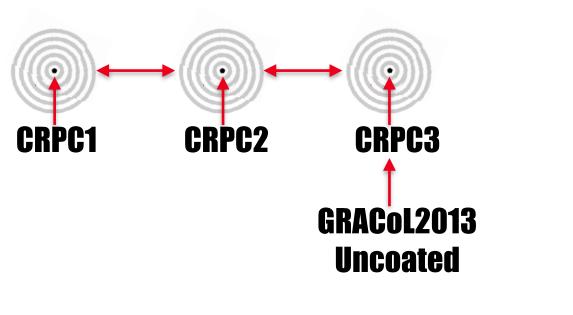


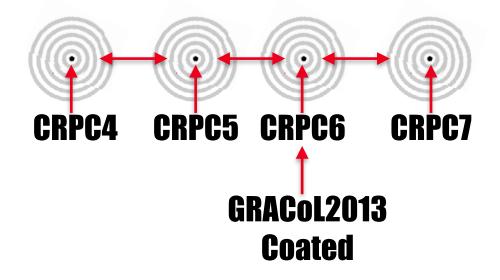


What Target are you aiming for? ISO 15339

What substrate are you printing on...

Uncoated References





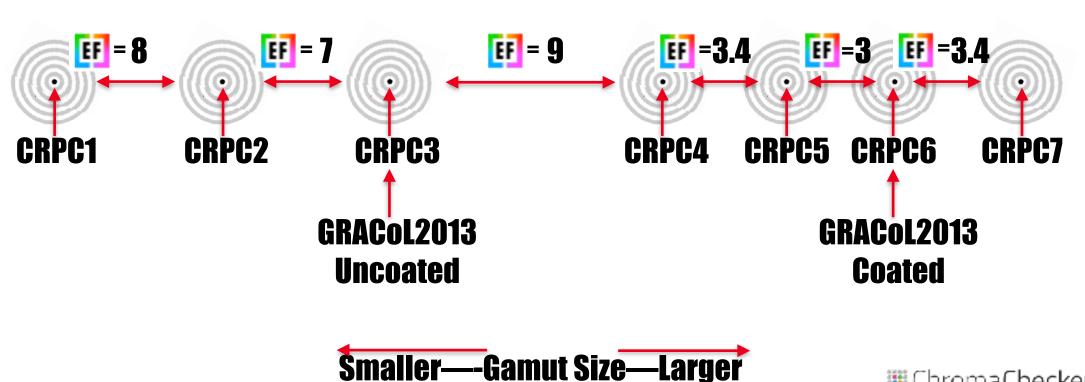




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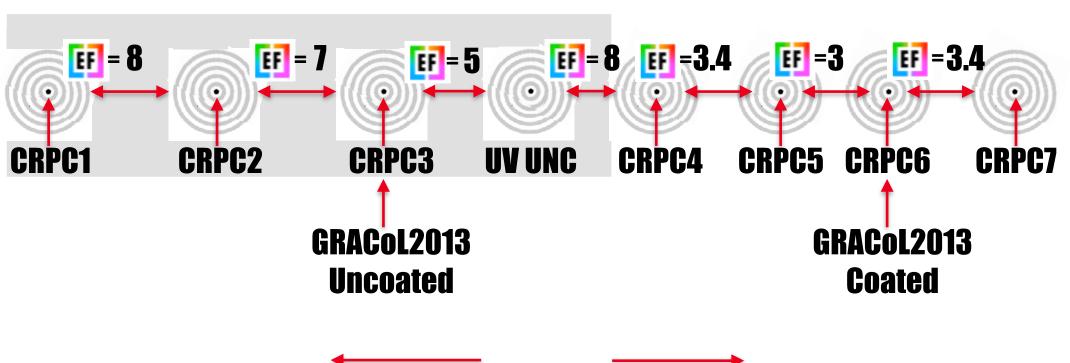




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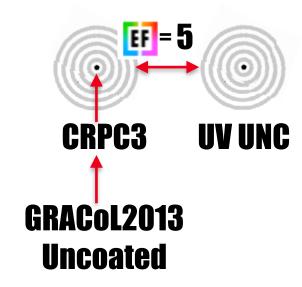




What Target are you aiming for?

What substrate are you printing on...

Uncoated References



41%+ Larger Gamut
per ISO Gamut Calc



