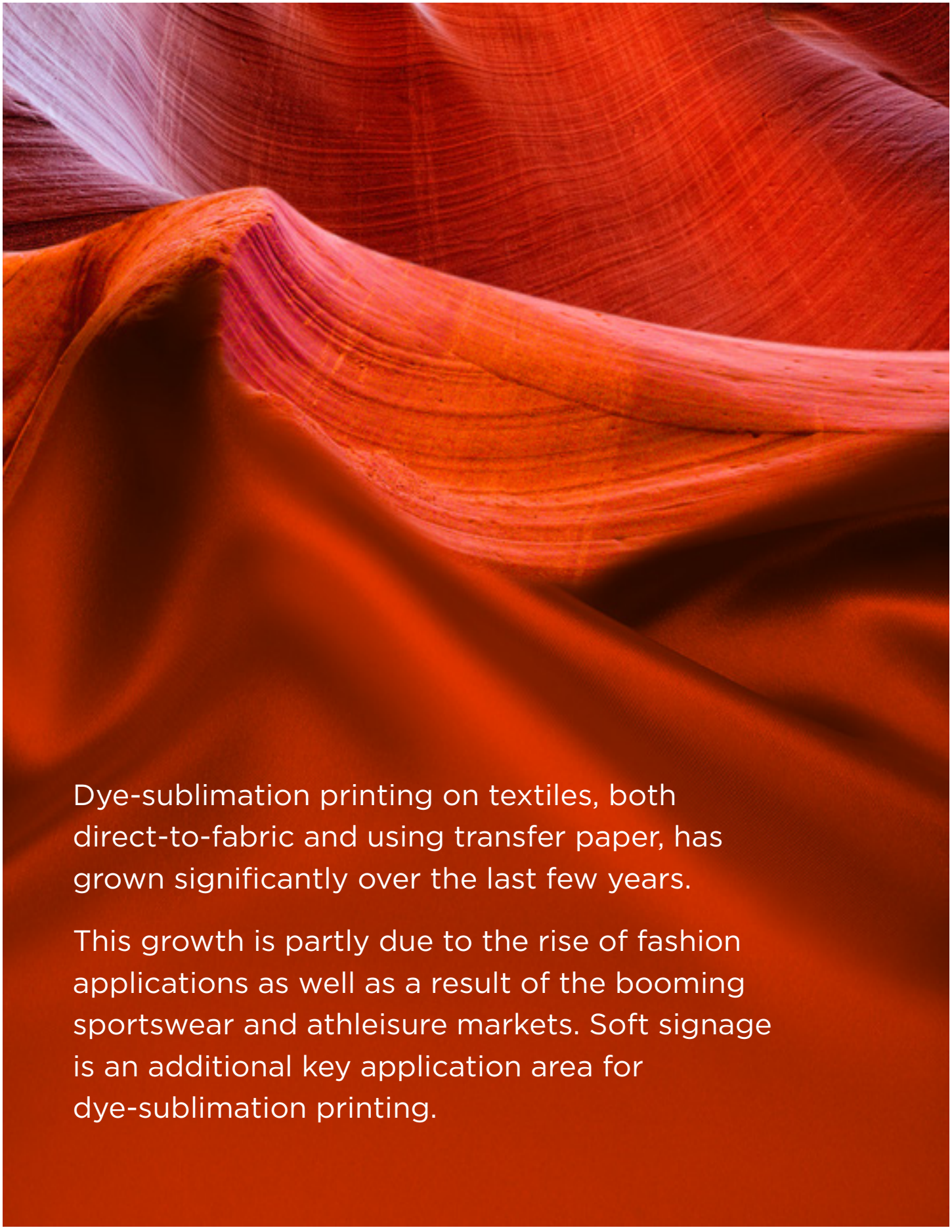

3
INNOVATIONS
FOR EFFECTIVE COLOR MANAGEMENT IN
DYE-SUBLIMATION PRINTING

Color can only be communicated effectively between printers and facilities through an efficient color workflow.

PANTONE®
228 CP

Source: World Textile Information Network (WTIN)



Dye-sublimation printing on textiles, both direct-to-fabric and using transfer paper, has grown significantly over the last few years.

This growth is partly due to the rise of fashion applications as well as a result of the booming sportswear and athleisure markets. Soft signage is an additional key application area for dye-sublimation printing.

All these markets require vibrant and reliable colors. However, dye-sublimation has some of its own challenges that need to be overcome if the technology is to continue to increase its market share.

Currently, color accuracy, consistency and repeatability across printers and facilities, as well as over time, is paramount. Printers need to be able to communicate with one another across geographical borders. They require the memory to print, from any chosen machine, the exact colors that were printed months if not years earlier.

This level of color management is only possible courtesy of the digitalization of the textile industry. Color can only be communicated effectively between printers and facilities through an efficient color workflow.

In today's market lead times are getting shorter and as a result, color consistency, reliability and repeatability are a must for those in the soft signage, fashion, sportswear and home décor markets.

When it comes to color in the dye-sublimation market, there are four key challenges:

Color matching

It is important that colors of the final printed textile match those of the design on a monitor. Communicating this exact color and ensuring the reliability of this match can be difficult.

Color profiling

Textile designers have a habit of using many different approaches to specify colors. However, roughly 50% of Pantone colors are not currently available to dye-sublimation printers and this is a huge barrier for print houses.

Color consistency

Ensuring color consistency across printers and printing sites is particularly challenging, with so many variables impacting print outcome. Different substrates achieve various color consistencies and many print houses have difficulty controlling this.

In-house color knowledge

This in-house knowledge can be costly and leaves a company dependent on that employee.

However, there are a number of innovative technologies that enable companies to neutralize these issues.

1 | Datacolor: The Datacolor ColorReaderPRO

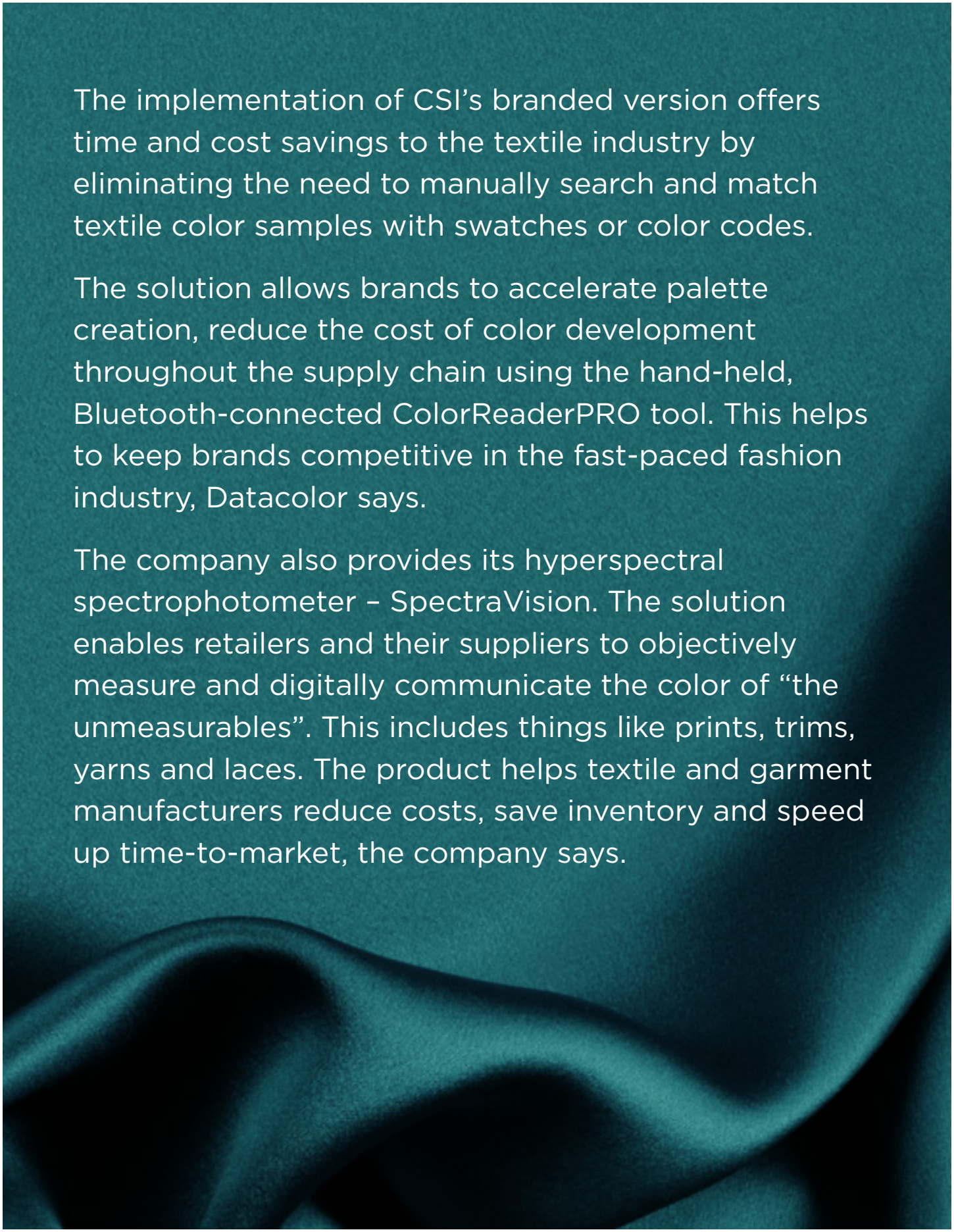
One technology that could help combat color inconsistencies is the Datacolor ColorReaderPRO. Datacolor is a specialist in color-management technology. It has recently partnered with a provider of color standards and color communication tools for the textile industry, Color Solutions International (CSI).

Using Datacolor's portable color-measurement device, ColorReaderPRO, fashion and apparel brands can now precisely select and identify color from multiple color libraries.

The implementation of CSI's branded version offers time and cost savings to the textile industry by eliminating the need to manually search and match textile color samples with swatches or color codes.

The solution allows brands to accelerate palette creation, reduce the cost of color development throughout the supply chain using the hand-held, Bluetooth-connected ColorReaderPRO tool. This helps to keep brands competitive in the fast-paced fashion industry, Datacolor says.

The company also provides its hyperspectral spectrophotometer – SpectraVision. The solution enables retailers and their suppliers to objectively measure and digitally communicate the color of "the unmeasurables". This includes things like prints, trims, yarns and laces. The product helps textile and garment manufacturers reduce costs, save inventory and speed up time-to-market, the company says.



2 | X-Rite Pantone

X-Rite Incorporated, a specialist in color science and technology, and its subsidiary Pantone have a number of innovations that ensure accurate color development for textile print manufacturers.

Instruments for managing color, such as a spectrophotometer, are therefore critical when it comes to communicating an effective color management workflow.

On this note, the company's Color iMatch reduces color formulation steps with its formulation software that accelerates color development for textile, paint, coatings, and plastics industries through better initial matches and fewer corrections.

With Color iMatch, lab managers and formulation professionals can streamline complicated workflows and deliver better color matches in fewer steps for faster formulation times, cost savings and reduced waste, says X-Rite.

X-Rite Pantone has also launched the new i1Pro 3 Plus. This is a spectral color measurement solution specifically designed for imaging, print, and textile professionals who need advanced calibration and color profiling capabilities to support today's wide-format and industrial printing applications.

The i1Pro 3 Plus has been optimized for digital printing on a range of materials and surfaces, including textiles. Commercial, wide-format, grand-format, packaging, and industrial printers can now create ICC profiles for almost any substrate and calibrate print production devices for the highest level of color accuracy, says X-Rite.

3 | HP STITCH S Printer Series

The third technology encompasses a mixture of the above, with added innovation. HP's new STITCH S Printer Series and its HP SmartColor technology aims to provide speed, ease and reliability to color management. Using HP's thermal inkjet drop-on-demand print heads that are user-replaceable, the technology ensures consistent colors over time.

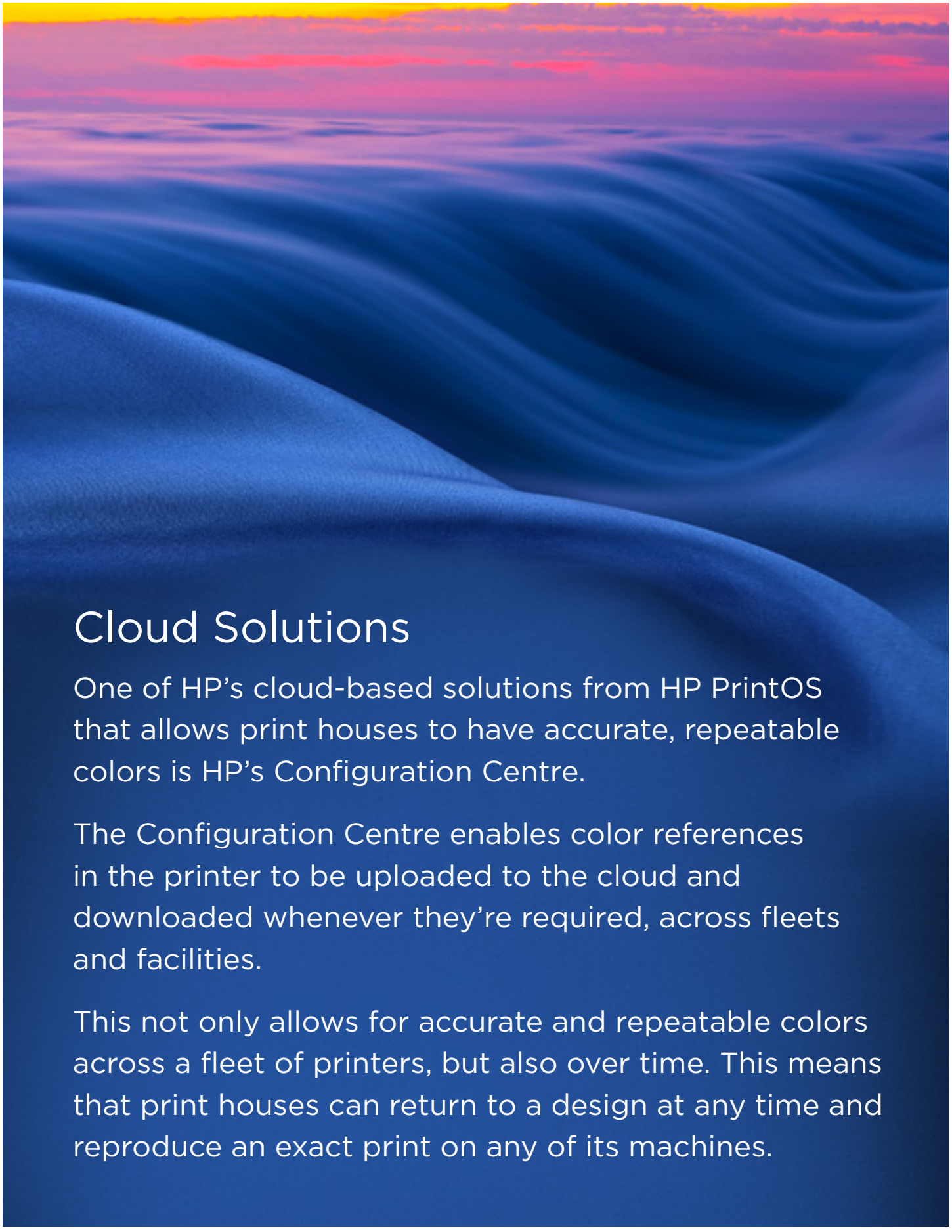
The HP SmartColor technology provides three pillars of support to the dye-sublimation market:

Hardware

When it comes to hardware, the HP STITCH S Printer Series has the industry's first-ever built-in spectrophotometer. The color measurement device ensures that the same color quality and accuracy is being achieved over time and across fleets. It also removes a step in the digital printing process as color measurement and initial quality assurance can be done inside the printer.

HP Color Tools

Printer operators can now download or create their own color profiles twice as fast as the other printers in this category. Also, they can automatically get the closest visual color match when a Pantone color is out of their gamut via HP's Professional Pantone Emulation technology. HP is also working with RIP software providers Inédit, Onyx, ErgoSoft and Caldera to ensure efficient and consistent color printing.

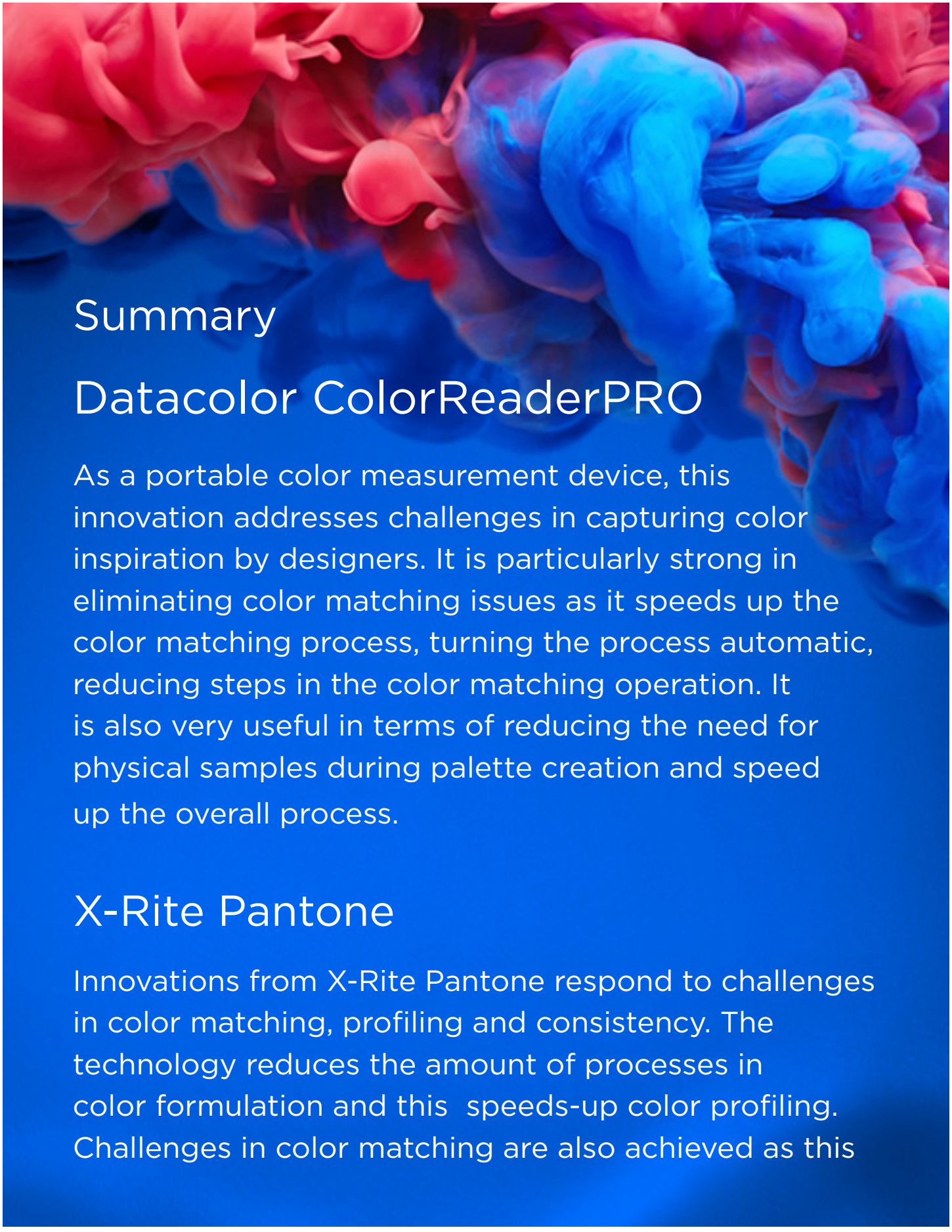


Cloud Solutions

One of HP's cloud-based solutions from HP PrintOS that allows print houses to have accurate, repeatable colors is HP's Configuration Centre.

The Configuration Centre enables color references in the printer to be uploaded to the cloud and downloaded whenever they're required, across fleets and facilities.

This not only allows for accurate and repeatable colors across a fleet of printers, but also over time. This means that print houses can return to a design at any time and reproduce an exact print on any of its machines.



Summary

Datacolor ColorReaderPRO

As a portable color measurement device, this innovation addresses challenges in capturing color inspiration by designers. It is particularly strong in eliminating color matching issues as it speeds up the color matching process, turning the process automatic, reducing steps in the color matching operation. It is also very useful in terms of reducing the need for physical samples during palette creation and speed up the overall process.

X-Rite Pantone

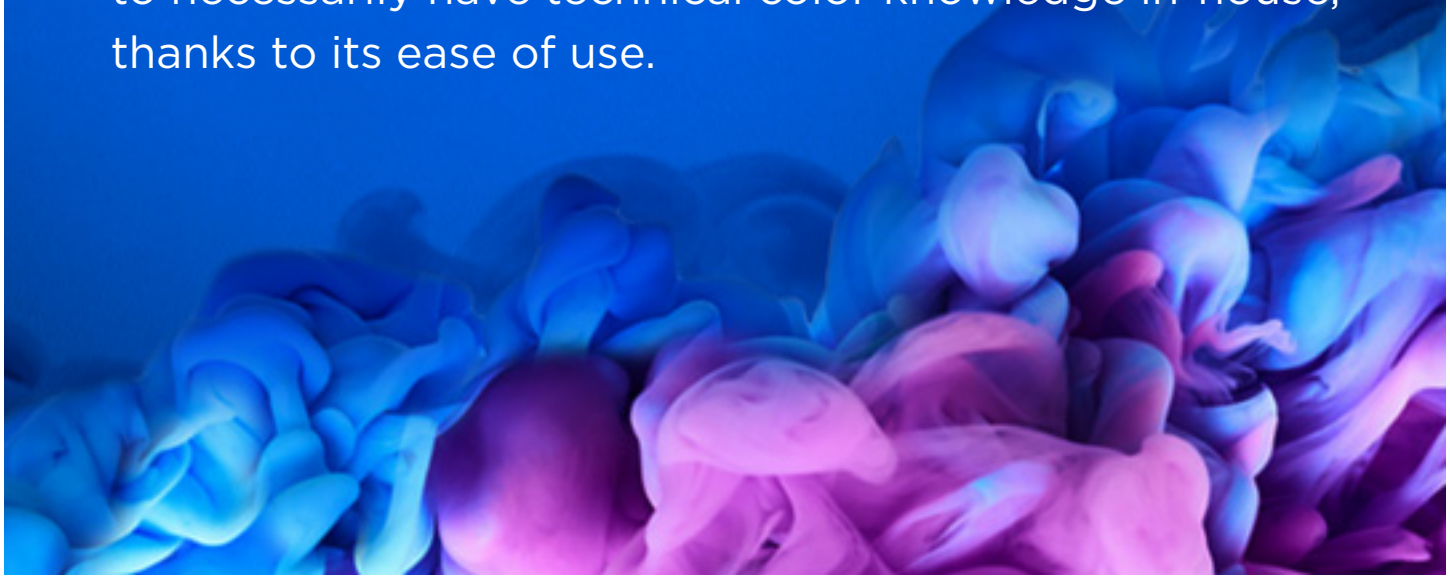
Innovations from X-Rite Pantone respond to challenges in color matching, profiling and consistency. The technology reduces the amount of processes in color formulation and this speeds-up color profiling. Challenges in color matching are also achieved as this

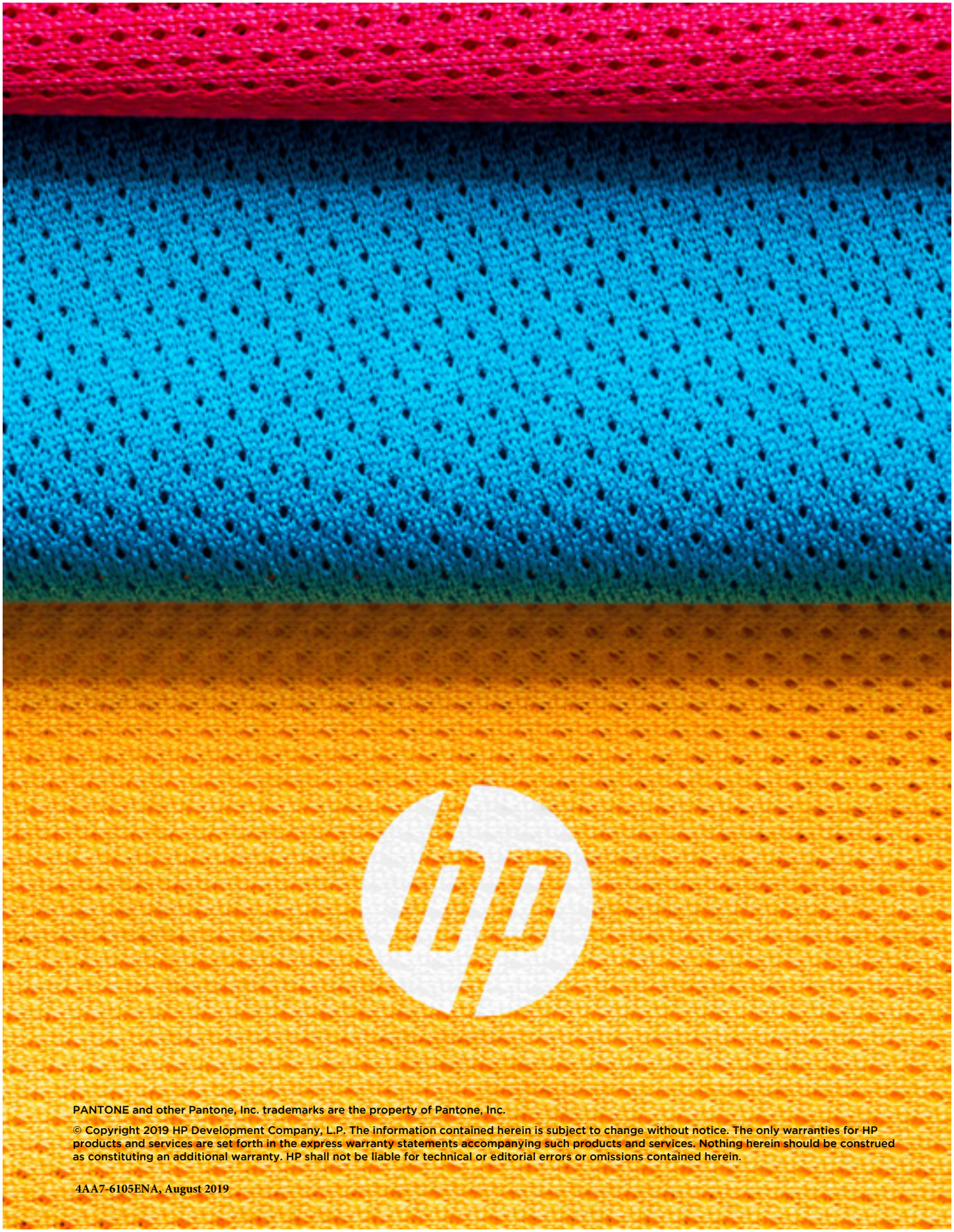
technology also makes this quicker by simplifying color matching. When it comes to color consistency and accuracy, the i1Pro 3 Plus technology is effective at making this precise and efficient.

HP STITCH S Printer series

This technology addresses all four mentioned challenges in dye-sublimation printing. The technology speeds up the color matching process, ensuring accuracy and consistency across fleets with its inbuilt spectrophotometer, saving time and improving lead times of quality assured prints.

Additionally, when it comes to color profiling the HP technology makes this an easy and quick process. The automation in the tool means that print houses don't need to worry about color profiling and can rely on the technology's consistency. It also means they don't need to necessarily have technical color knowledge in-house, thanks to its ease of use.





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