

Digital Color Specification & Approval

For Apparel, Footwear, and Soft Good Brands



Color Specificity: The Key to Brand Success

The textile industry is one of the most complex, challenging, and competitive markets today. As brands strive to keep up with consumer trends and colors, they must also navigate limited resources, increasing expectations for quality, and stringent governmental requirements to protect our environment.

The traditional textile workflow is burdened with subjectivity, waste, and delays. Simply approving color can take anywhere from a few days to many weeks, plus shipping, which slows time to market and increases the carbon footprint of the textile industry.

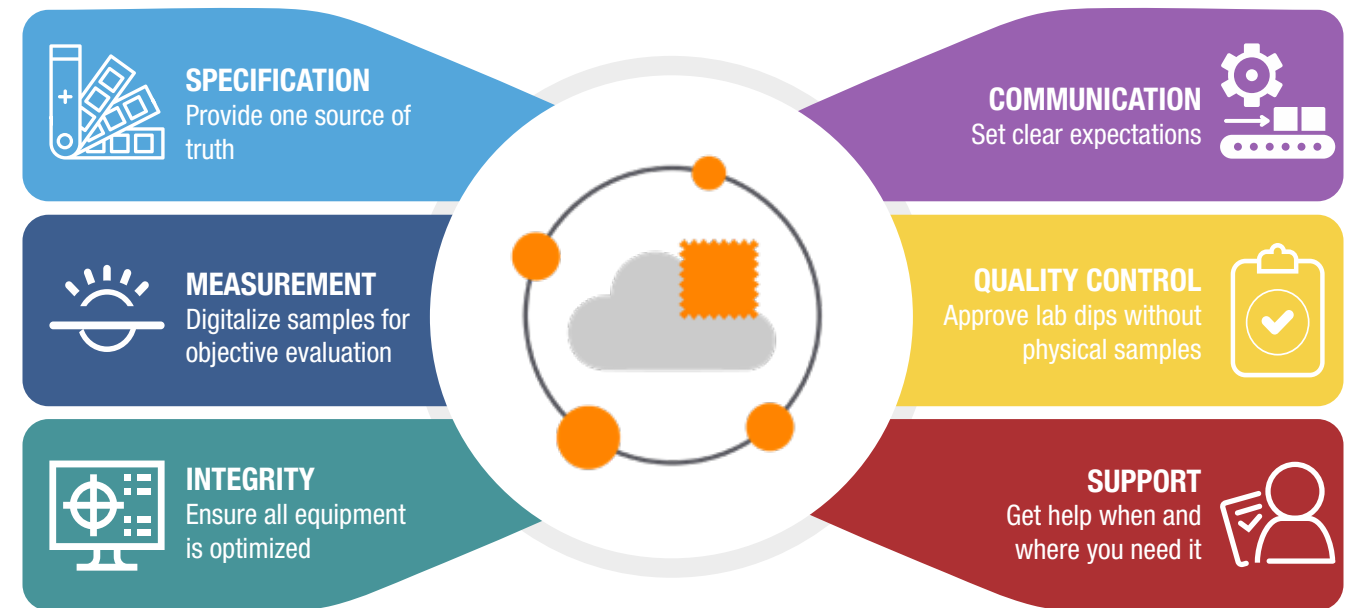
To stay competitive in the global market while advancing sustainability initiatives, textile brands need digital solutions that set clear expectations and empower their suppliers to work quickly, more confidently, and with less waste.

That's where X-Rite Pantone can help.



Set Clear Expectations Using Digital Color

X-Rite Pantone offers an end-to-end digital color solution for apparel, footwear, and soft good brands to specify, communicate, and approve color across a global supply chain.





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COLOR SPECIFICATION: Provide One Source of Truth

Many factors affect how we perceive color, including viewing angle, surrounding objects, and lighting, as well as the material's texture, color, and ability to absorb dye. Using a digital color standard, brands can communicate precise color requirements on the target material, designers can use reproducible color in designs, and suppliers can fulfill color requirements in an objective way.

Since color specification is the foundation of a successful production cycle, brands need an objective way to specify color expectations to avoid miscommunication and rework.

Digital Tools for Color Specification

The PantoneLIVE ecosystem enables brands to digitally specify, store, and share color standards with designers and suppliers to enhance consistency and reduce the subjectivity and waste of physical standards.

PantoneLIVE Production for Plastic, Coatings and Textile provides instant access to the most up-to-date Pantone TCX colors to represent how color will reproduce across different textile materials.

PantoneLIVE Private Library Manager extends the functionality of PantoneLIVE to private colors, offering brands a secure place to digitize, upload, and store custom colors for use in designs.

PantoneLIVE Design offers access to the latest digital color standards for use in design applications so designers can preview colors on the target material before sending designs for approval.

With PantoneLIVE, brand owners can specify with confidence and suppliers can achieve color expectations with less rework.

COLOR COMMUNICATION: Set Clear Expectations

In a traditional textile color workflow, brands send a physical sample for suppliers to match. After creating multiple lab dips, the supplier ships the closest matches back to the brand for approval. The brand owner visually evaluates the samples, and if the color match is unsatisfactory, the process starts again. This lengthy process wastes materials, slows time to market, and increases the carbon footprint of the textile industry.

To communicate color expectations objectively and enable suppliers to match the design intent, brands need digital tools to share color specifications and production expectations.

Digital Tools for Color Communication

Textile Color Hub
Textile Color Hub is a cloud-based communication platform that helps brands combine traditional and isolated components into a complete digital color solution.

Using Textile Color Hub, brands create a secure Color Specification Document, which includes the spectral data for the specified color, the required tolerances for the suppliers to match, and the illuminants to measure against.

Suppliers create lab dips and send the digital color data for the closest match back to the brand through Textile Color Hub. Brands can analyze the submission, digitally approve the sample based on objective spectral data, and give suppliers the green light to start production.

Benefits:

- Increase color compliance
- Reduce time spent in the lab dip phase
- Approve color without physical samples
- Identify areas of improvement

Textile Color Hub contributes to a sustainable workflow and empowers brands to promote responsible practices.



COLOR MEASUREMENT: Digitalize Samples for Objective Evaluation

Spectrophotometers digitalize physical samples into spectral data for use in a digital color workflow. Brands use them to digitalize color specifications for use in a digital workflow, and suppliers use them to measure production samples to compare against the digital standard and evaluate if color is in tolerance.

Spectrophotometers come in different shapes and sizes. However, the most common type used for apparel, footwear and soft good applications is the D/8

sphere spectrophotometer, which can measure in reflectance mode for opaque materials and transmission mode for translucent and transparent samples.

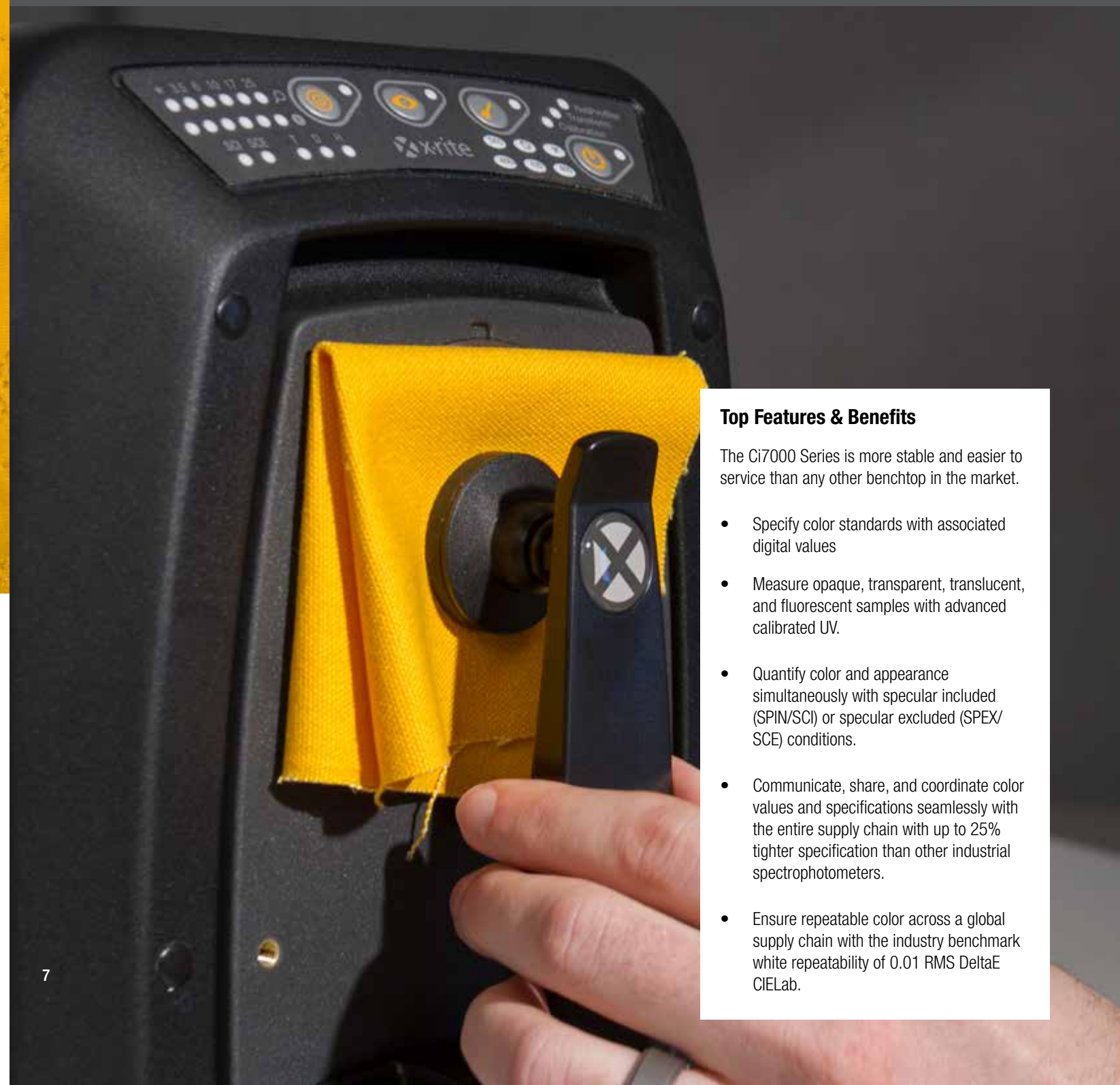
Since different types of spectrophotometers measure color differently, it is important to use the same geometry throughout the workflow. Mixing and matching measurement device geometries creates unreliable data and reduces repeatability and inter-instrument agreement.

Measuring a physical sample with a spectrophotometer creates a "fingerprint" of the color, enabling objective communication and precise evaluation in a standardized way that is not possible with human vision.

Digital Tools for Color Measurement

Ci7000 Series

The Ci7000 Series of benchtop spectrophotometers deliver industry-leading repeatability of ≤ 0.01 DeltaE and inter-instrument agreement as tight as ≤ 0.06 DeltaE to establish and achieve the strictest color standards for each stage of the product development process, from formulation to final production to quality control.



Top Features & Benefits

The Ci7000 Series is more stable and easier to service than any other benchtop in the market.

- Specify color standards with associated digital values
- Measure opaque, transparent, translucent, and fluorescent samples with advanced calibrated UV.
- Quantify color and appearance simultaneously with specular included (SPIN/SCI) or specular excluded (SPEX/SCE) conditions.
- Communicate, share, and coordinate color values and specifications seamlessly with the entire supply chain with up to 25% tighter specification than other industrial spectrophotometers.
- Ensure repeatable color across a global supply chain with the industry benchmark white repeatability of 0.01 RMS DeltaE CIE Lab.

QUALITY CONTROL: Approve Lab Dips Without Physical Samples

Apparel, footwear, and soft good brands manage complex color workflows that require multiple steps, including design, dyeing, manufacturing, finishing, and quality control. Each step requires accurate color specification, communication, and evaluation, which can be even more challenging if brands and global suppliers use different instruments and software.

Brands need a holistic and repeatable way to evaluate color, ensure compliance, and rank suppliers.

COLOR INTEGRITY: Ensure Equipment is Optimized

Even the best color measurement instruments experience a variance in performance often caused by age, wear, or environmental conditions. This can lead to inaccurate color data and variations in final products. When dealing with global suppliers, color can quickly get out of control without oversight.

Brands need to ensure color quality standards are met between different devices and across locations.



Digital Tools for Quality Control

Color iQC software sets the standard for communicating and evaluating color to ensure design intent is carried through to the final product. It quickly identifies whether a sample is within tolerance, and if not, offers feedback to bring it back. It can also analyze color variation between suppliers and production batches and identify leading indicators to adjust the process.

Color iQC also works in combination with competitive spectrophotometers, which is unique in the textile industry. This creates an easy-to-adopt, open eco-hardware system that benefits both brands and suppliers.

When used with **Ci7000** benchtops, **Color iQC** provides a video preview and unprecedented audit trail for transparency into device measurement details. If problems occur, the digital signature can identify the color standard, which instrument was used and whether it was profiled, and other critical device information like internal humidity and temperature.

When used with **Textile Color Hub**, **Color iQC** provides templates to create Color Specification Documents that include preset standards, tolerances, and settings for consistent communication between brands and suppliers.

Color iQC helps brands support zero physical sampling policies and ensure suppliers are compliant with the color program.

Digital Tools for Color Integrity

NetProfiler empowers brands and suppliers to remotely verify and optimize a fleet of spectrophotometers to achieve inter-instrument agreement and consistent color results throughout the supply chain with both X-Rite and competitive spectrophotometers.

If an issue is identified, **NetProfiler** validates the difference and corrects back to the central point (unlike competitor solutions which only measure, not correct, the drift) to improve spectrophotometer performance and ensure color consistency between devices. If the issue cannot be corrected, **NetProfiler** alerts the operator to send the device for service.

Textile Color Hub traces NetProfiler status so brands can trust the measurements from suppliers. It also integrates with **Color iQC** to keep an audit trail to help identify continuous improvement opportunities.

X-Rite Link is a device dashboard that allows brands to gain visibility into the status and health of their X-Rite color measurement devices, with access to update firmware, manage device settings, NetProfile, and sync data with other applications. **X-Rite Link** helps brands verify devices are optimized and able to produce consistent color across the supply chain.

Together, NetProfiler and X-Rite Link offer a convenient and cost-effective way to monitor and enhance color measurement reliability.

COLOR SUPPORT:

Help When and Where You Need It

Great color portrays great quality, and your brand's success hinges on the consistent and accurate production of color. With so many places for color to go wrong, it can be hard to know how to get it right. By blending the art and science of color, we help you achieve the highest level of color integrity so your product comes out ahead.

World Class Service

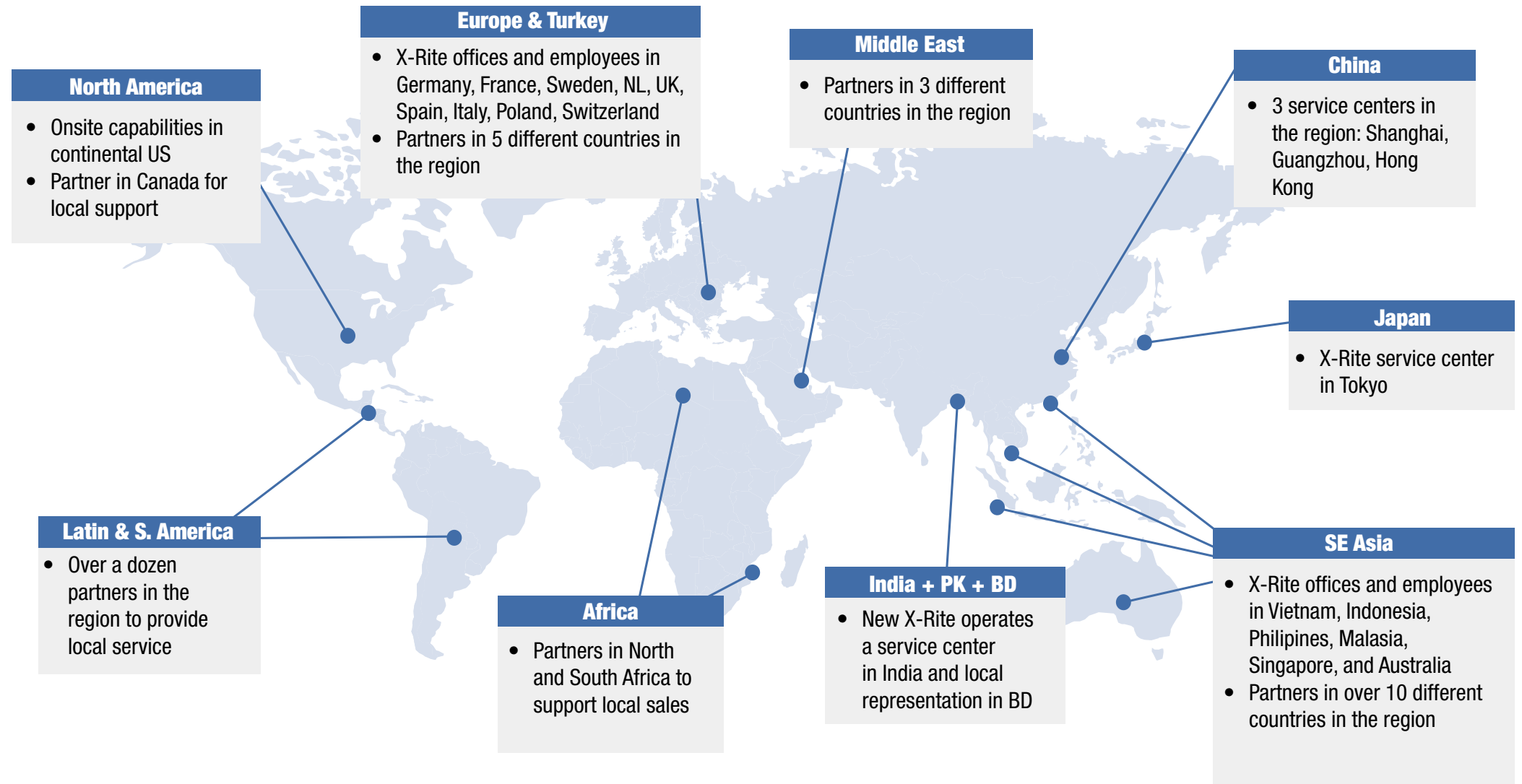
We pair world-class support with all our products and solutions to help you stay in compliance and prevent problems before they begin. Our ISO:17025 A2LA certification ensures we meet quality and regulatory requirements so every device we manufacture and service will offer consistent and repeatable production yields, optimized results, and compatibility with other products.

One Team for All Your Color Needs



X-Rite Pantone is uniquely positioned to support your textile color needs with a dedicated Global Brand Team. When you work with us, you will have a project manager, a solution architect, and an account manager to help you develop, implement, and maintain your digital color program, as well as a program dashboard to show progress and track success.

- Proven best practice processes and procedures
- 40+ digital color programs developed, implemented, and sustained
- Global reach with local management and support



Pantone: The Art of Color

More than 10 million designers and producers around the world rely on Pantone products and services to help define, communicate, and control color from inspiration to realization – leveraging advanced X-Rite technology to achieve color consistency across various materials and finishes for graphics, fashion and product design.

X-Rite: The Science of Color

With over 60 years of innovation and proven expertise in color management and color measurement, X-Rite has solutions to support everyone in the textile industry to ensure color accuracy and color quality are upheld from concept to store, accurately and efficiently.

Together, we help apparel, footwear, and soft good brands and suppliers achieve accurate color in less time, improve overall product quality, and reduce the global footprint of the textile industry.

Get in touch to start, or continue – your digital color journey.

