▲ Hugues Poiget, CEO, Scortex.

This enables manufacturers to justify quality decisions, support operator acceptance, and feed non-conformity analysis. The system is therefore shifting from a sorting tool to a true decision-support system.

Formalizing Subjectivity in Inspection

Visual inspection remains inherently subjective. One of the main challenges of automation is to formalize that subjectivity. *"In inspection decisions, a key player comes into play: the human. They specify exactly what they expect from the machine in order to resolve the subjectivity of inspection"*, explains Hugues Poiget. This balance is reflected in the system's overall logic: *"AI sorts the parts well, and humans define quality standards, inspection severity, and production and quality expectations."* Adjusting detection sensitivity thus becomes a key lever for aligning machine decisions with quality requirements.

Gradual Integration Into Industrial Organizations

Beyond the technology itself, automation represents a deep organizational shift. *"It is extremely intimidating. It implies changes at every level: strategic, production management, and operational"*, warns Hugues Poiget. Scortex therefore advocates a step-by-step approach: identifying relevant use cases, validating value through pilot projects, and then scaling up with support. *"Typically, we set a six-month horizon"*, he indicates. The objective is to secure adoption while quickly demonstrating performance.

Standardization vs. Customization: Finding the Right Balance

Managing product diversity remains a key challenge. The optical setup remains partly bespoke, while the software architecture is designed to be largely generic and adaptable to product variations. *"We are able to build generic systems so that product variants can be handled autonomously"*, emphasizes Hugues Poiget. Striking this balance is essential to control operating costs and enable large-scale deployment.

From Quality Control to Process Control

The most significant shift lies in how data is used. *"All the data enables root cause analysis and the identification of Pareto drivers"*, the company explains. Inspection is no longer just a control step—it becomes a process sensor, feeding SPC strategies, continuous improvement initiatives, and process stabilization. Ultimately, the loop could be closed directly on the production line. *"We can envision quality being directly controlled by the machine on the production line"*, projects Hugues Poiget. This would reposition inspection as an active component of process control rather than a simple sorting stage.

A Technology Reaching Operational Maturity

After a decade of development and tens of millions of inspected parts, these systems are now reaching industrial maturity. *"Scortex has been pushing these solutions in industry for ten years now. We've reached a maturity phase that brings real added value to the market"*, says Hugues Poiget.

In a sector where perceived quality directly drives product value, AI-powered visual inspection is becoming a standard. The competitive edge now lies less in detection itself than in the ability to integrate these systems into a broader process control strategy. ●

Nicolas Gosse

VIDEO To watch the Spark system in action, scan the QR codes. Spark at Paris Packaging Week | Interview with Hugues Poiget.

#Inspection

Visual Inspection in Cosmetics
From Defect Detection to AI-Driven Process Control

At Paris Packaging Week, Scortex is showcasing Spark, an automated visual inspection solution designed to meet the extreme constraints of cosmetic packaging. Beyond defect detection, the challenge now lies in structuring a complete chain combining optics, artificial intelligence, and data exploitation.

"Today, we offer the Spark solution that can do this at your production line speeds", explains Hugues Poiget, CEO of Scortex.

An Intrinsic Complexity Driven by Products and Processes

In cosmetics, visual inspection is tightly linked to brand perception. *"Brand image is often carried by the product itself and its packaging"*, notes Hugues Poiget.

Yet the parts to be inspected concentrate multiple challenges: glossy and matte finishes, complex material effects, decorations, logos, reflections. *"It is quite difficult to inspect all these glossy and matte surfaces, with decorations, logos, and reflections"*, he points out.

To this optical and geometrical complexity comes significant process variability: material blends, extreme visual effects, and natural production drift. *"There is variability in production"*, he adds. As a result, manual inspection remains widely used, even though ensuring consistent repeatability over time can be challenging.

Making Defects Visible: First an Optical Issue

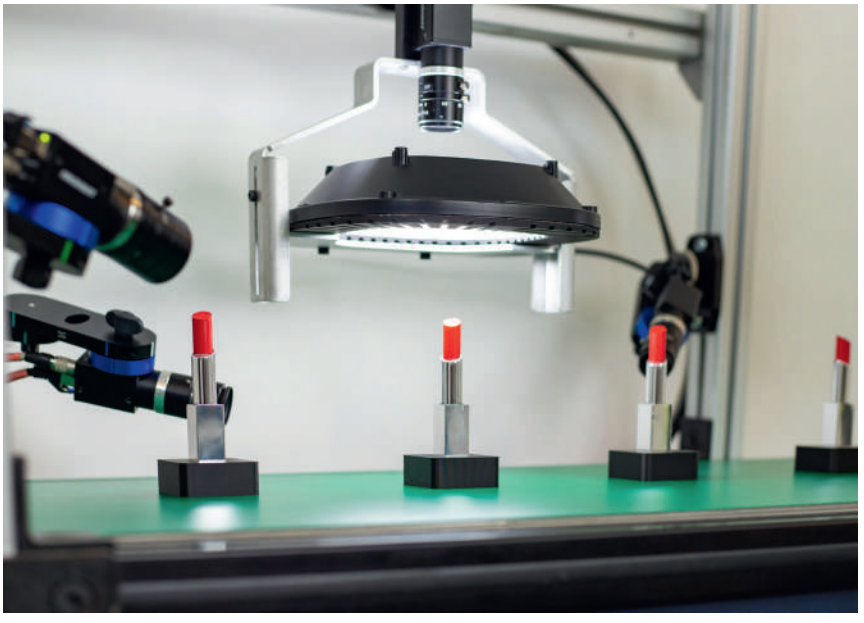
Before AI even enters the equation, the first hurdle is physical: making the defect visible. *"There is no magic in what we do. The defect must be visible in the data"*, stresses Hugues Poiget. The system therefore relies on a carefully engineered combination of sensors, lenses, and lighting. The challenge is twofold: ensuring defects can be detected regardless of their position, and maintaining robustness against environmental variations. *"Lighting is paramount"*, the company emphasizes. This approach aligns with Scortex's multi-angle architectures, designed to reveal defects on complex surfaces.

Learning the "Good" Rather Than Cataloguing the "Bad"

Once visible, defects still need to be interpreted. This is where AI comes into play. Unlike traditional approaches based on defect libraries, Spark relies on a conformity-driven model. *"We analyze your production, you tell us what is good, and we identify everything that deviates from it."* This directly addresses a key industrial constraint: the rarity of certain defects. *"Finding several dozen examples of different defects is a real challenge in production"*, the company notes. The approach also makes it possible to integrate natural product variability without excessive parameter setting. Notably, the model is evolving towards a hybrid approach, combining learning from conforming parts with knowledge of known defects.

From Binary Sorting to Explainable Decisions

One of the key challenges in scaling AI is explainability. Spark goes beyond simple sorting by ensuring full traceability. *"We have access to the image of the part at the moment the defect was detected, as well as the exact location of the defect within the image."*



▲ Spark by Scortex.

#And over on LinkedIn

LinkedIn Nicolas Gosse, editor-in-chief of *Industries Cosmétiques*, shares his encounters with key players in the fragrance and cosmetics industries—on the tradeshow floor, in the field, or during interviews. Discover all these insights on your media's LinkedIn page.

Aluminium Injection Meets Anodization

TNT Group **(Damon Kennish)** presented a prototype combining aluminium injection with full anodization. The approach enables the production of complex parts with a premium finish while preserving mechanical properties. It opens new perspectives for primary packaging applications. ●

Scan this QR code to watch the video pitch

#Packaging

Makeup Brushes Inspired by Contemporary Art

Act Beauty France **(Cyril Dauvers)** presented a collection of makeup brushes inspired by the work of Hugo Rondinone. The project combines artistic design with functional cosmetic use, reflecting the company's positioning across packaging, accessories, and formulation, with a focus on sustainability and traceability.●

Scan this QR code to watch the video pitch

#Design

Oud Wood Applied to Hair Care

Lessonia **(Sébastien Guillotin)** introduced Alter-Thickhair, a solution using Oud wood fibers to mask hair loss. The product relies on electrostatic binding, resists moisture, and can be easily removed with shampoo. Several shades are in development. ●

Scan this QR code to watch the video pitch

#Haircare

A Ready-to-Use Foam Mask Format

Agrimer **(Romain Noblet)** introduced a ready-to-use version of its stabilized foam mask, now available in a tube. The formula includes Algafiller and is designed for targeted application, while maintaining the product's original texture.●

Scan this QR code to watch the video pitch

#Formulation

Targeting Senescent Cells in Skincare

Mibelle Biochemistry **(Vincent Debacker Briffaut)** presented SenoCellTec, a senolytic active designed to target senescent cells, reactivate skin stem cells, support tissue revitalization, and deliver broad-spectrum anti-aging effects. ●

Scan this QR code to watch the video pitch

#Ingredients

To read more about this, go to our pages Inside Innovation...

Featured Videos

Video Inspection

Automating Cosmetic Part Inspection

Scortex **(Hugues Poiget)** presented Spark, an AI-powered visual inspection system designed to automate quality control on cosmetic production lines. It detects surface defects, sorts parts automatically, and allows manufacturers to adjust inspection criteria to match their standards. The company supports deployment from system design to on-site maintenance. ●

Scan this QR code to watch the video interview

#QualityControl

AI Inspection for High-End Components

Scortex (Hugues Poiget) showcased Spark, an automated inspection system designed for components with complex decorative finishes. The solution inspects all surfaces at production speed and adjusts sensitivity to align with defined quality standards. It is suited to plastic, metal, and zamak parts, including surface-treated components. ●

Scan this QR code to watch the video pitch

#Packaging