

Executive Summary

3rd Technology For Transparency Report

3rd Edition
March 2025







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The Evolution of Transparency and Traceability in Luxury

In an era where consumer expectations are shifting toward greater accountability, the luxury industry stands at the crossroads of tradition and innovation. The once opaque supply chains that supported the mystique of luxury are now being replaced by a demand for verifiable provenance, responsible sourcing, and digital authentication. The modern luxury consumer seeks not only beauty and craftsmanship but also trust, credibility, and a deeper connection to the products they purchase.

At the heart of this transformation is the growing role of transparency and traceability: two critical pillars that are reshaping how brands engage with their customers and build lasting value. No longer are these concepts merely regulatory imperatives; they have become strategic advantages, allowing brands to differentiate themselves in an increasingly competitive market. Whether it is diamonds, precious metals, fine watches, or high-end fashion, the ability to demonstrate a product's journey from origin to ownership has become essential.

The luxury sector has historically thrived on exclusivity, heritage, and craftsmanship. However, the rise of sustainability-conscious consumers, new regulatory frameworks, and digital innovation are forcing a reevaluation of traditional practices. The European Union's Ecodesign for Sustainable Products Regulation (ESPR), set to take effect in 2026, will require luxury brands to implement Digital Product Passports (DPPs), comprehensive records detailing a product's lifecycle, materials, and ethical sourcing. This regulatory shift underscores an industry-wide recognition that transparency is no longer optional, it is the new gold standard.

Technology is playing a pivotal role in facilitating this shift. Blockchain, artificial intelligence, and laser inscription technologies are being deployed to create immutable records of product authenticity, ensuring that every step of a luxury item's journey is documented. From diamonds traced through blockchain-backed platforms to watches embedded with NFT-based authenticity certificates, these innovations are setting new benchmarks for supply chain integrity.



In this report, we explore how leading companies and visionaries across the luxury ecosystem are embracing traceability and transparency. Industry pioneers are leveraging cutting-edge technology to create secure, verifiable, and consumer-friendly solutions. Their work is not just about meeting compliance standards but about reinventing the luxury experience for a new generation of discerning customers.

Beyond compliance and technology, there is a larger narrative unfolding, one that speaks to consumer desirability and brand storytelling. Today's most successful brands are those that can blend transparency with an emotional connection, crafting narratives that elevate a product beyond its material value.

As the industry evolves, one thing is certain: transparency and traceability are the new markers of true luxury. Those who embrace this shift will not only gain a competitive edge but will also redefine what it means to be a luxury brand in the modern world.

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Executive Summary

Why It Matters

In today's world, where consumers seek meaning, authenticity, and accountability, transparency is no longer a compliance requirement; it is a gateway to deeper connections. As luxury competes not just with other products but with experiences that promise fulfillment and memory-making, traceability emerges as a strategic asset. It transforms the static value of an object into a dynamic story that unfolds across time. This report explores how technology, particularly in traceability and transparency, is not merely a cost factor but an enabler, allowing brands to evolve from product providers into experience creators. Grounded in facts rather than perceptions, this new paradigm strengthens trust, enhances engagement, and redefines the essence of luxury in the 21st century.

Introduction

The luxury industry is undergoing a fundamental transformation. Regulatory pressure, shifting consumer values, and digital innovation redefine what it means to create and own luxury. Today, transparency is not a constraint but a catalyst: it allows brands to build trust, enable experiences, and align with a new generation that demands meaning, not just materials.

Regulations such as the European Union's Ecodesign for Sustainable Products Regulation (ESPR) and heightened scrutiny around ethical sourcing are compelling luxury brands to reassess not only their supply chains but also their consumer engagement models. In this new landscape, **traceability is no longer a box-ticking exercise**, it is an opportunity to turn every product into a story.

This edition of the Technology for Transparency report compiles insights from leading technology providers, industry innovators, and luxury stakeholders. It explores how tools such as blockchain, Al-driven automation, Digital Product Passports (DPPs), and laser marking reshape traceability across diamonds, jewelry, and the broader luxury sector. The findings illuminate challenges and the unprecedented opportunities in building a more sustainable, interactive, and consumer-centric future.

Key Findings: The Evolution of Transparency in Luxury

1. Digital Product Passports (DPPs) Are Revolutionizing Consumer Engagement

- DPPs are not merely compliance mechanisms; they are strategic assets that connect brands to consumers.
- As digital twins of physical products, DPPs provide secure, traceable records of a product's entire lifecycle, from raw material to resale.
- Secure traceability features enable instant authentication, sustainability visibility, and valueadded services like warranties, care, and resale, transforming ownership into an experience.

2. Traceability is a Competitive Advantage, Not Just a Regulatory Requirement

 Leading luxury stakeholders and technology providers view traceability as a driver of brand trust and differentiation.



- With growing consumer demand for proof of ethical sourcing, third-party verification, Alpowered transparency, and blockchain integration are becoming essential.
- Brands that lead with traceability not only de-risk compliance, but they also build loyalty and elevate perceived value.

3. Blockchain and AI Are Reshaping the Luxury Supply Chain

- All and laser marking enhance diamond and jewelry traceability, from mine to market.
- Al-powered rough-to-polished tracking ensures efficiency, verifies authenticity, and reduces human error.
- Blockchain solutions secure verifiable, tamper-proof data, safeguarding against fraud and counterfeits in an increasingly complex market.

4. Sustainability is Profitable When Integrated with Smart Business Strategies

- The idea that sustainability comes at the expense of profitability is being challenged.
- Investments in energy efficiency, carbon mitigation, and responsible sourcing are proving to be both regulatory necessities and long-term business enablers.
- Independent certification bodies add credibility, making sustainability claims more meaningful to discerning consumers.

5. Collaborative Storytelling is Key to Reigniting Consumer Excitement in Luxury

- Traceability enables storytelling, not just about provenance, but about people, purpose, and craftsmanship.
- The fragmentation of marketing strategies has distanced consumers from the meaning behind luxury goods.
- A unified effort across the industry is essential to rebuild emotional connection and cultural relevance.

Beyond Compliance: Making Transparency Work for Consumers and Brands

The future of transparency in luxury must evolve from static reporting to dynamic consumer engagement. It must bridge the gap between product and experience, offering not just data, but value.

Digital Product Passports, blockchain verification, and AI-powered traceability should be designed to delight. Features like personalized storytelling, embedded services, resale facilitation, and sustainability incentives can turn traceability into a touchpoint for discovery and emotional engagement.

When transparency becomes experiential, it stops being a cost factor and becomes a loyalty engine. The brands that embrace this shift will not only future-proof their business models but redefine luxury itself.

In this new era, the future of luxury is not just about exclusivity, it is about building a legacy of trust, innovation, and responsibility.



Technology Partners

The Technology for Transparency Report (T4T) showcases the most innovative solutions driving traceability, authentication, and digital transparency in the luxury sector. In this 3rd edition, we present 17 leading technology partners that are shaping the future of diamonds, jewelry, watches, fashion, and art through blockchain, AI, biometrics, and digital product passports.

As consumer demand for sustainability, responsible sourcing, and verifiable authenticity continues to rise, luxury brands must embrace cutting-edge solutions to enhance trust, compliance, and engagement. This report highlights how each technology partner is addressing key industry challenges, from counterfeiting and supply chain integrity to seamless digital-physical interactions.

With solutions spanning invisible security markers, blockchain-powered traceability, Al-driven authentication, and digital twin technology, our tech partners are not only safeguarding the integrity of luxury goods but also unlocking new opportunities for consumer engagement and circular economy initiatives.

By bridging innovation and transparency, this report serves as a roadmap for luxury brands, suppliers, and policymakers to navigate the evolving landscape of trust, traceability, and responsible luxury.



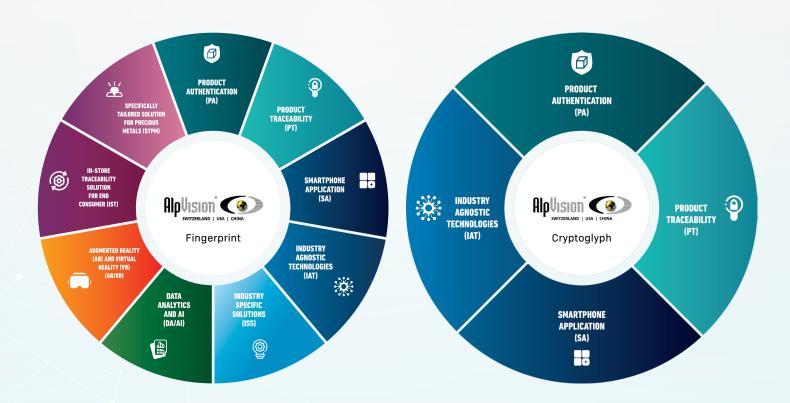


AlpVision: Invisible, Scalable Protection Against Counterfeiting

AlpVision is a global leader in invisible digital security solutions, providing covert anti-counterfeiting and traceability technology for 30 billion products annually. With over 23 years of industry experience, AlpVision ensures seamless authentication with no impact on manufacturing processes.

- **Fingerprint Technology:** An invisible security layer detectable via smartphones, allowing instant product verification without added production costs.
- **Cryptoglyph Technology:** A micro-perforation-based security feature embedded in the varnish layer of packaging, combating grey market diversion and unauthorized resale.
- Scalability & Efficiency: Used worldwide, AlpVision's solutions provide real-time authentication, secure serialization, and seamless integration into existing supply chains without additional production steps.

By combining traceability, security, and accessibility, AlpVision is setting a new standard for counterfeit prevention and brand protection, ensuring trust and transparency in global luxury markets.



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Arianee: Pioneering Digital Product Passports for Circular Luxury

Arianee is at the forefront of Digital Product Passport (DPP) innovation, enabling luxury brands to enhance product transparency, circularity, and post-purchase engagement. By leveraging open-source blockchain technology, Arianee ensures that each product's origin, authenticity, and lifecycle data are securely recorded and accessible to consumers.

- Open and Interoperable Digital Product Passports provide verifiable proof of authenticity, secure ownership records, and comprehensive product histories, enhancing trust in resale markets, repairability, and sustainability initiatives.
- The Arianee Protocol, compliant with Ethereum ERC-721 standards, enables seamless traceability, regulatory compliance (AGEC, ESPR), and integration with service providers, such as resale, repair, and recycling platforms.
- Industry Impact: Over 50 luxury brands and 2.4 million durable products have adopted Arianee's solutions, with notable implementations, including Breitling's blockchain-powered digital ecosystem, providing consumers with secure digital ownership, warranty tracking, and insurance services.

By promoting sustainability, consumer empowerment, and digital sovereignty, Arianee is shaping the future of luxury through traceability, transparency, and responsible consumption.







Aura Blockchain: Uniting Luxury for Secure & Transparent Digital Product Passports

The Aura Blockchain Consortium is a non-profit organization dedicated to making blockchain technology accessible to luxury brands, fostering traceability, authenticity, and sustainability. With over 50 luxury brands and 50 million+ products recorded, Aura provides a secure, industry-wide solution for digital transparency.

- Digital Product Passports (DPPs) offer verifiable proof of origin, ownership, and sustainability, enabling consumers to make informed decisions and brands to enhance product lifecycle management.
- Custom Blockchain Solutions ensure the highest data security, compliance with evolving regulations (such as ESPR), and seamless resale market integration, helping brands engage with next-generation luxury consumers.
- Consumer-Centric Approach: DPPs provide lifetime authentication, maintenance tracking, warranty extensions, and even resale history, creating a seamless and immersive customer experience.

By promoting collaboration over competition, Aura is shaping the future of transparency in luxury, empowering brands and consumers alike to embrace sustainability, digital innovation, and trust.





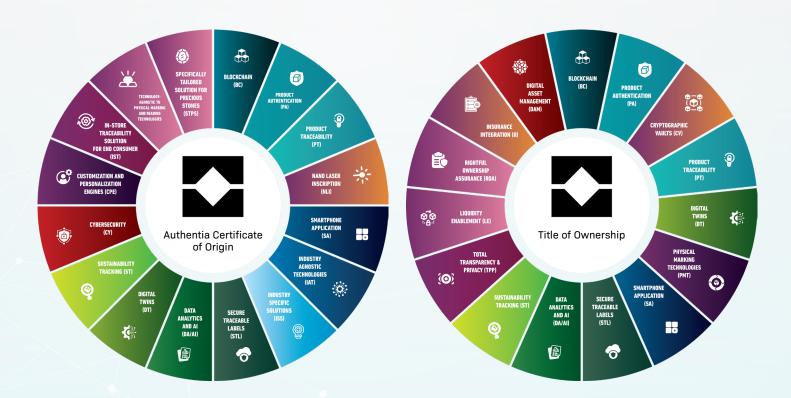


Authentia: Blockchain-Powered Traceability for Ethical Sourcing

Authentia is redefining transparency in the diamond and luxury goods industry with patented blockchain-based solutions that ensure ethical sourcing, verifiable authenticity, and secure ownership. By leveraging public blockchains, decentralized file storage, and cryptography, Authentia provides immutable records that combat counterfeiting and promote trust across the supply chain.

- Authentia Certificate of Origin guarantees the ethical provenance, traceability, and authenticity
 of diamonds, securing their journey from mine to market and enabling industry-wide
 compliance with transparency standards.
- Title of Ownership creates a hierarchical, trustless value chain, ensuring that every transaction, from rough diamonds to finished products, remains verifiable, while also providing liquidity to asset owners.

With global operations spanning Kimberley, Tel Aviv, New York, Hong Kong, Dubai, and Shanghai, and a growing adoption rate among mines, producers, and brands, Authentia is setting a new benchmark for digital transparency and accountability in the luxury sector.





Authentic Vision: Mobile-Enabled Authentication for Secure, Transparent Supply Chains

Authentic Vision is a leader in anti-counterfeiting and product authentication, providing instant mobile verification solutions to safeguard brands, consumers, and supply chains. With patented holographic fingerprint technology, Authentic Vision ensures real-time authentication, fraud prevention, and digital engagement across industries.

- Holographic Fingerprint™ Technology: Secure, unique, and tamper-proof product tagging, allowing instant authentication via smartphone scans, linking physical products to digital trust ecosystems.
- Global Industry Adoption: Used by 50+ brands, including Bacardi, HDMI, and Nexans, Authentic Vision protects luxury goods, electronics, financial services, and consumer products from fraud and unauthorized sales.
- Proven Impact & Transparency: Companies leveraging Authentic Vision have seen increased customer trust, counterfeit reduction, and improved supply chain security, with thousands of scans detecting fraudulent products.

By combining mobile authentication, blockchain integration, and digital engagement, Authentic Vision is redefining trust and security in the digital and physical worlds.





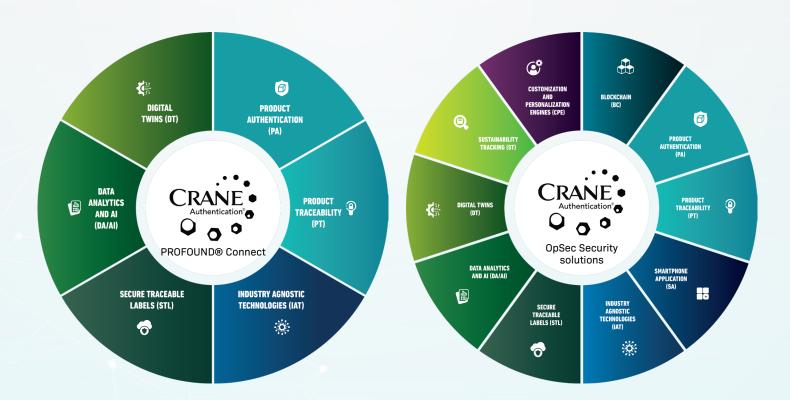


Crane Authentication & OpSec Security: Advanced Protection for Product Integrity & Brand Trust

Crane Authentication and OpSec Security, both part of Crane NXT, bring over 200 years of expertise in brand protection, anti-counterfeiting, and supply chain transparency. Their innovative security solutions safeguard 30 billion products annually, providing cutting-edge authentication and tracking technologies for luxury brands, government agencies, and financial institutions worldwide.

- **PROFOUND™ Connect:** A high-security label with physical-digital serialization, enabling tamper-proof authentication and seamless traceability across the supply chain.
- OpSec Security Solutions: Comprehensive brand protection services that combat counterfeiting, trade diversion, and intellectual property theft, ensuring integrity and trust in the global luxury sector.
- Industry Impact & Global Scale: As a New York Stock Exchange-listed company with operations
 worldwide, Crane provides transparent, auditable, and ethically responsible security solutions.

By combining banknote-grade security, digital authentication, and advanced brand protection, Crane Authentication & OpSec Security are redefining product integrity and consumer trust in an increasingly digital and interconnected world.



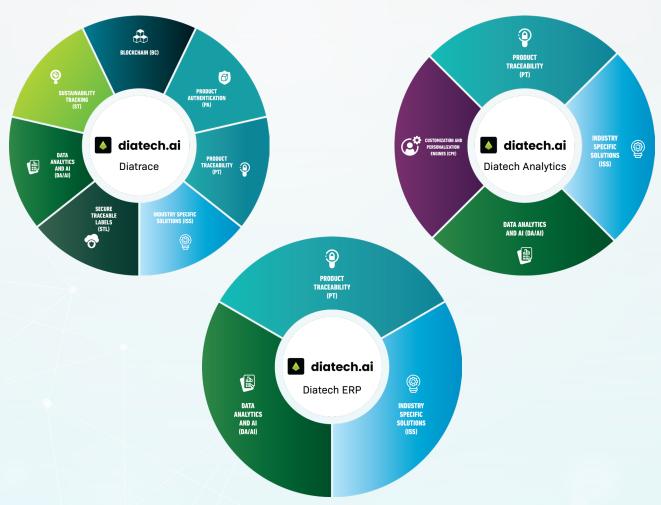


Diatech: AI & Blockchain-Powered Transparency for the Diamond Industry

Diatech is transforming diamond traceability, ESG certification, and market intelligence through cuttingedge AI, blockchain, and ERP solutions. By ensuring end-to-end transparency, Diatech empowers brands, manufacturers, and retailers to enhance trust, sustainability, and efficiency.

- Diatrace: A blockchain-powered traceability platform that provides secure, real-time tracking
 for both natural and lab-grown diamonds, promoting ethical sourcing and sustainability. Over
 50,000 carats have already been traced.
- **Diatech Analytics:** Al-driven market intelligence and pricing insights, improving data visibility by 35-40%, allowing businesses to price goods 4x more frequently and accurately.
- Diatech ERP: Enterprise software solutions that track millions of carats, reducing fraudulent activities and increasing operational efficiency for 50-60 brands worldwide.

With a presence in India, UAE, Belgium, the USA, Botswana, and Hong Kong, Diatech is redefining transparency, security, and innovation in the global diamond industry.





Dynamic Element: AI-Powered Product Authentication & Anti-Counterfeiting

Dynamic Element is revolutionizing product identity and brand protection through biometric surface-based authentication, ensuring trust, transparency, and security across multiple industries. By leveraging AI and computer vision, the company enables real-time verification and ownership authentication for luxury goods, pharmaceuticals, and more.

- **Crypto Stamps:** Counterfeit-proof digital stamps with embedded security features, ensuring product authenticity and engaging consumers with interactive digital experiences.
- Scalability & Security: Dynamic Element's technology is securing over 1 million products, achieving 90%+ reductions in fraudulent activities and significantly enhancing traceability and transparency.
- Global Reach & Adoption: With a growing network of partners across sectors, Dynamic Element is setting a new standard for product verification, ensuring brand integrity and consumer trust.

By combining innovation, Al-driven security, and seamless customer interaction, Dynamic Element is leading the fight against counterfeiting, transforming traceability and digital authentication worldwide.







iTraceiT: Blockchain-Powered Traceability for the Diamond & Luxury Sectors

iTraceiT is revolutionizing product traceability in the diamond, jewelry, and luxury industries through a blockchain and QR code-based solution that enhances transparency, authenticity, and ESG compliance. With 126+ license holders spanning miners, traders, manufacturers, and retailers, iTraceiT is empowering businesses to document and communicate the journey and ethical sourcing of their products.

- **End-to-End Traceability:** The iTraceiT Workflow enables brands to track diamonds and luxury components throughout the supply chain, ensuring verifiable provenance and sustainability.
- Seamless Integration: Designed for scalability and efficiency, iTraceiT's secure, decentralized system helps brands align with regulatory requirements and ESG goals, while enhancing customer trust.
- **Global Expansion:** With operations across Europe, India, and the UAE, iTraceiT is set to expand into the US market, reinforcing its position as a trusted partner for digital traceability.

By leveraging cutting-edge technology, iTraceiT is pioneering a new standard for secure, transparent, and responsible sourcing in the luxury industry.





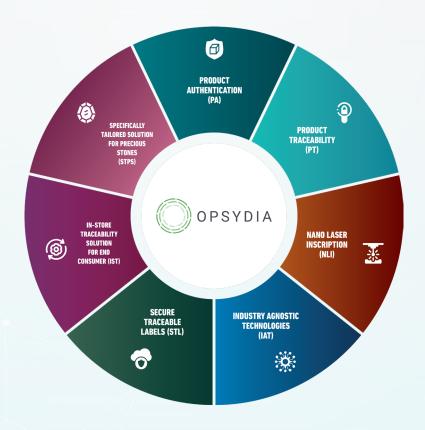


Opsydia: Tamper-Proof Laser Inscriptions for Diamond & Gemstone Authentication

Opsydia is revolutionizing traceability and authentication in the diamond, colored gemstone, jewelry, and watch industries through ultra-precise, tamper-proof laser inscriptions. Originating from the University of Oxford, Opsydia's cutting-edge technology provides a permanent, secure identity for precious stones that enhances transparency, anti-counterfeiting, and provenance verification.

- **Opsydia Systems** (D4000, D5000, D6000) create sub-surface and surface identifiers that cannot be polished away or replicated, ensuring a physical link to grading reports, blockchain records, and brand authentication.
- Opsydia Viewer allows luxury brands to showcase gemstone authenticity in-store, integrating
 with blockchain and traceability platforms to offer a seamless consumer experience.
- Industry Impact: Opsydia's nano-inscription technology is already securing diamonds, melée stones, and high-end luxury timepieces, safeguarding both primary and secondary markets.

By bridging physical and digital authentication, Opsydia is setting a new standard for luxury security, ensuring trust, provenance, and brand integrity across the global jewelry and gemstone industries.







Provenance Proof: Pioneering Traceability in the Gem & Jewelry Industry

Provenance Proof is redefining transparency in the luxury industry through cutting-edge solutions that enable full traceability of gemstones, diamonds, and jewelry. Leveraging DNA-based Physical Tracers and Blockchain technology, the company provides tamper-proof, verifiable records of a product's journey from mine to market.

- **Provenance Proof Physical Tracers** use unique, invisible DNA markers to prevent counterfeiting and ensure an indelible link between a product and its origin. These tracers, resistant to aging and industry cleaning processes, integrate seamlessly into the supply chain.
- Provenance Proof Blockchain offers a secure, immutable ledger, with over 35 million gemstones recorded and 750+ registered stakeholders, setting the standard for digital traceability in the industry.
- Proof of Authenticity combines these two technologies, providing a robust solution against fraud while enhancing consumer trust through digital product passports and authenticity certificates.

With a global reach and a commitment to innovation, Provenance Proof strengthens brand integrity, regulatory compliance, and consumer confidence, ensuring the luxury industry meets modern expectations of responsible sourcing and transparency.





Sarine: AI & Data-Driven Diamond Traceability from Mine to Market

Sarine Technologies is a global leader in diamond traceability and grading, utilizing AI, data analytics, and precision imaging to establish verifiable, tamper-proof transparency throughout the diamond supply chain. With over 30 years of innovation, Sarine's Diamond Journey Traceability™ Solution sets a new standard for objective, data-backed provenance tracking.

- Data-Verifiable Traceability: Sarine's multi-stage measurement system tracks diamonds from rough to polished, ensuring an immutable digital record verified at each transformation stage.
- Seamless Industry Integration: Sarine's technology is embedded across mining, cutting, polishing, and retail, providing brands like Boucheron and Kering Group with co-branded, Alpowered diamond reports.
- Enhancing Consumer Confidence: By combining digital product passports, interactive storytelling, and AI-powered 4C grading, Sarine helps luxury brands meet growing demand for ethical sourcing and sustainability.

With operations in Japan, China, the US, France, India, and beyond, Sarine is pioneering scalable, verifiable traceability, reinforcing consumer trust and strengthening industry compliance.







SCS Global Services: Pioneering Independent Certification for Sustainability & Transparency

With over 40 years of expertise, SCS Global Services is a leading independent third-party certification body, driving sustainability, ethical responsibility, and product transparency across jewelry, mining, agriculture, forestry, and climate sectors.

- Comprehensive Certification & Verification: SCS provides certification, auditing, and independent verification, ensuring brands meet the highest sustainability and ethical standards while fostering continuous improvement.
- Global Impact: With 30,000+ certifications across 125 countries and 15,000+ clients, SCS is a trusted authority for independent sustainability assessment.
- Advancing Sustainable Development: By utilizing scientific analysis, life-cycle assessment, and performance metrics, SCS helps businesses enhance credibility, mitigate risks, and reassure consumers about their responsible practices.

By setting global benchmarks for transparency and accountability, SCS Global Services is shaping a more ethical and sustainable future for the luxury industry.





Sm•art Sta•mp

SmartStamp: AI-Powered Authentication & Provenance for the Art Market

SmartStamp is transforming art authentication and provenance tracking through Al-driven surface recognition and blockchain-secured records, ensuring artworks remain verifiable, protected, and seamlessly transferable. By addressing fragmentation, fraud, and disorganized records, SmartStamp is setting a new standard for trust and transparency in the art world.

- AI-Based Authentication: Non-invasive surface recognition technology creates a unique, immutable identityfor each artwork, preventing counterfeiting and unauthorized alterations.
- Blockchain-Secured Provenance: Ensures tamper-proof documentation, ownership history, and condition records, safeguarding artworks across generations.
- Comprehensive Management Suite: Provides artists, collectors, and institutions with a centralized platform to preserve, manage, and transfer artworks seamlessly.

By combining cutting-edge AI, blockchain, and digital asset management, SmartStamp is reinventing the art industry's approach to authentication, transparency, and trust.







Tracemark: Certified End-to-End Traceability for Responsible Jewelry

Tracemark is the first independently certified jewelry traceability solution, ensuring authenticity, responsible sourcing, and sustainability from raw materials to the final consumer. By offering fully audited, end-to-end traceability, Tracemark is transforming transparency in the jewelry industry.

- Certified Traceability: Every jewelry piece is accompanied by a Digital Product Passport, allowing customers to verify provenance, claim ownership, and engage with their jewelry's journey.
- Industry Impact: Tracemark has provided traceability for over 50,000 jewelry pieces, increasing transparency by 80% and eliminating fraudulent activities across 20+ brands and suppliers.
- Sustainability & Compliance: By ensuring full supply chain accountability, Tracemark helps brands meet global sustainability and ethical sourcing standards, driving consumer trust and industry-wide change.

With operations across Europe and the USA, Tracemark is setting a new standard for transparency, integrity, and sustainability in fine jewelry.





tracr

Tracr: Scalable, Immutable Diamond Traceability from Mine to Market

Tracr™ is a world leading digital traceability platform for natural diamonds, ensuring provenance, authenticity, and transparency at scale. By leveraging blockchain and objective verification, Tracr provides a tamper-proof record of a diamond's journey from mine to client, reinforcing consumer trust and industry compliance.

- Unparalleled Traceability: Tracr traces diamonds at the source, integrating mining, cutting, polishing, and retail into a single immutable digital record.
- Industry Adoption & Scale: With over 2.8 million rough diamonds registered and 30+ manufacturers onboarded, Tracr is setting a global standard for diamond traceability.
- Seamless Integration & Compliance: Tracr partners with major industry players and ensures that every diamond meets RJC, BPP, and Pipeline Integrity standards, providing objective verification rather than self-declaration.

By establishing a secure, industry-wide provenance standard, Tracr is enhancing consumer confidence, preventing fraud, and elevating transparency across the diamond supply chain.





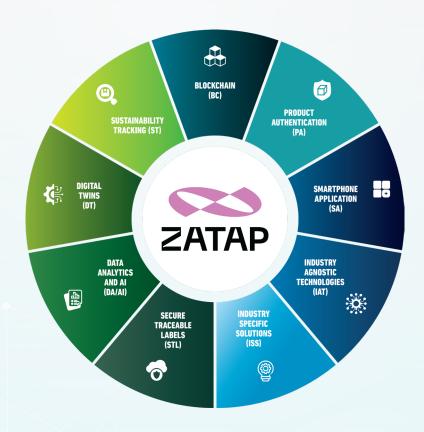


ZATAP: Phygital Experiences for Transparency & Consumer Engagement

ZATAP is redefining consumer engagement, authenticity, and traceability through its phygital technology, seamlessly bridging physical products with digital experiences. By leveraging blockchain and NFC technology, ZATAP enables brands to provide tamper-proof authentication, transparent supply chain data, and immersive customer interactions.

- ZATAP Phygital Studio: Empowers brands to create interactive product experiences, allowing consumers to verify authenticity, access digital product passports, and engage with brand storytelling via a simple smartphone tap.
- Proven Industry Impact: Successfully implemented by Hugo Boss, ELLYHA, and Maison Mollerus, ZATAP enhances customer trust, sustainability initiatives, and resale market integration. Over 500,000 products have been secured with ZATAP technology.
- Seamless Integration & Security: With blockchain-backed authentication, ZATAP helps brands protect against counterfeiting, track provenance, and establish direct customer relationships.

By merging physical and digital worlds, ZATAP is revolutionizing product transparency and consumer interaction, ensuring brands stay ahead in the era of digital transformation.





Driving Transparency & Trust Through Innovation

The 17 technology partners featured in this Technology for Transparency Report are at the forefront of redefining luxury through traceability, authentication, and digital innovation. Their cutting-edge solutions, ranging from blockchain traceability and Al-powered authentication to biometric security and digital product passports, are transforming the way brands engage with consumers, ensure regulatory compliance, and combat counterfeiting.

As transparency, provenance, and sustainability become non-negotiable in the luxury industry, these partners are pioneering a future where trust is embedded in every product's journey, from raw materials to the final customer. Their work not only elevates industry standards but also reinforces consumer confidence and brand integrity in an era where responsible luxury is paramount.

This report serves as a testament to the power of collaboration between technology and luxury, highlighting innovative pathways toward a more transparent, responsible, and resilient industry.



While technology is laying the foundation for traceable, trustworthy supply chains, the real transformation comes from those who implement these tools. The following luxury stakeholders exemplify how transparency and desirability can coexist, and even amplify one another, through courageous leadership and continuous innovation.

Luxury Stakeholders

In an era where values increasingly shape purchasing decisions, transparency, traceability, and ethical responsibility have become cornerstones of modern luxury. From diamonds to design, from sourcing to storytelling, today's discerning consumers expect more than craftsmanship, they demand clarity, purpose, and proof.

This third edition of the Technology for Transparency Report showcases the bold efforts of over 20 luxury stakeholders who are reshaping the industry through technological innovation, verified accountability, and shared responsibility. These contributors, ranging from multigenerational diamond houses to independent artisans, from sustainable fashion innovators to technology-driven consultants, demonstrate that transparency is no longer a competitive advantage but a collective imperative.

Each profile in this executive summary offers a glimpse into how these organizations are using blockchain, AI, digital product passports, circular design models, and ESG-aligned frameworks to drive change across their sectors. Whether through traceable supply chains, carbon footprint tracking, or empowerment of local communities, their commitments reflect a shared vision: to transform luxury into a force for trust, sustainability, and positive impact.

Together, they paint a picture of an industry in transition, not away from excellence, but toward it, defined not just by what is made, but by how and why it is made. This is transparency, elevated.





Bonas Group

With over 140 years of expertise, Bonas Group is a fifth-generation, family-owned diamond brokerage and consultancy firm that has been at the forefront of the diamond and colored gemstone industry. As the world's leading independent tender and auction house, Bonas specializes in diamond and gemstone sales, De Beers relationship management, and value chain consulting, ensuring traceability and provenance for every

stone brought to market.

Bonas has been instrumental in pioneering transparent diamond sourcing, partnering with Tracr, Sarine, GIA, and the Responsible Jewellery Council to enhance supply chain transparency and compliance. The firm integrates cutting-edge technology and verifiable provenance tracking, reinforcing trust and data integrity within the luxury sector.

BRILLIANT **EARTH**®

Brilliant Earth

Since its founding in 2005, Brilliant Earth has been a global leader in ethically sourced fine jewelry, setting new industry standards through supply chain transparency, sustainability, and responsible sourcing. With a mission to cultivate a more ethical, compassionate, and inclusive jewelry industry, the company has been at the forefront of diamond traceability and environmental stewardship.

Brilliant Earth was among the irst jewelers to sell blockchain-verified natural diamonds at scale, expanding its Beyond Conflict Free® selection in 2023. The company collaborates with Tracr, the Alliance for Responsible Mining, and Pure Earth to ensure data integrity, regulatory compliance, and social impact tracking across its supply chain.

Through the Brilliant Earth Foundation, the company has donated \$2 million to community development projects, funding long-term grants for sustainable mining practices, environmental conservation, and social responsibility initiatives.



Breitling

Founded in 1884, Breitling is a pioneer in Swiss luxury watchmaking, now recognized as a global leader in transparency and luxury sustainability. With a commitment to traceability-based business models, Breitling introduced the Super Chronomat 38 Origins, the first watch in its collection to feature traceable artisanal and small-scale gold and labgrown diamonds, supported by enhanced NFTs that track these precious materials from source to product.

Partnering with Arianee, Swiss Better Gold Association, and SCS Global, Breitling has reshaped its supply chain operations to align with EU regulations and consumer demand and global regulations related to transparency. Through its Better Gold Fund and Better Diamond Fund, Breitling supports education, environmental protection, and alternative livelihoods in sourcing communities across Latin America and India.

Notable projects include educational programs near Colombian mines, co-financed projects to reduce environmental impact such as renewable energy installations in the upstream value chain,, and social impact leadership training in Gujarat, India. In FY24 alone, the company contributed CHF 1.7 million to social and environmental initiatives.





Bubble Bee

Bubble Bee OÜ, founded by Merily Aavik, is a luxury children's brand that blends storytelling, craftsmanship, and sustainability to create hand-drawn silk bed linens and immersive learning experiences. More than a product, Bubble Bee is a fairy tale-driven ecosystem, integrating education, entertainment, and ethical production to inspire children and families worldwide.

Beyond design, Bubble Bee actively supports educational institutions and community initiatives, aiming to integrate storytelling into learning curricula and promote meaningful parent-child connections. By leveraging traceable supply chains and sustainable craftsmanship, Bubble Bee embodies a future where luxury, ethics, and childhood wonder intertwine.



Camille Louise Jewellery

Camille Louise Jewellery (CLJ) is redefining luxury by merging cuttingedge technology with traditional craftsmanship, creating phygital (physical + digital) jewelry that enhances traceability, sustainability, and consumer engagement. Founded in 2020 by Aline d'Ambricourt and Camille Louise Merré, this mother-daughter Swiss Maison is committed to transparency, circularity, and responsible sourcing, aligning with

United Nations Sustainable Development Goals (SDGs) 5, 9, 10, 12, 13, and 17.

As a "Friends of Goals House" brand, CLJ is recognized for shifting the dial towards a more sustainable future, integrating Al-driven transparency solutions in partnership with AtriaGem Labs, set to launch in 2025. The company is also pioneering blockchain-enabled traceability through Tracr, ensuring full supply chain transparency and data integrity.



CZI - The Art Of Skin

Founded in 2022 in Switzerland, CZI - The Art of Skin is a visionary Art-to-Wear brand that merges fashion, art, and sustainability to create unique resort and beachwear pieces. Driven by a philosophy of authenticity, innovation, and ethical responsibility, CZI crafts collectible, artistic garments that empower individuals while embracing sustainable and traceable practices.

CZI is committed to responsible sourcing, craftsmanship, and short-haul logistics, prioritizing recycled fibers and ethical partnerships to minimize environmental impact. Through an upcoming transparency initiative launching in Q4 2024 & Q1 2025, the brand will provide detailed sourcing and craftsmanship insights, reinforcing its mission to restore trust and customer loyalty in luxury.



Diambel



Diambel Group, a vertically integrated natural diamond company, is committed to reimagining industry standardsthrough sustainable sourcing, ethical practices, and full supply chain transparency. With operations spanning from rough to polished diamonds and fine jewelry, Diambel collaborates with top global miners to ensure that every diamond meets the highest ethical and quality benchmarks.

The company's "Sealed with Integrity" philosophy reinforces its dedication to traceability, compliance, and sustainability, leveraging advanced traceability solutions like iTraceiT to provide verifiable provenance data for its diamonds. By integrating technology-driven transparency into its supply chain, Diambel enhances consumer trust, operational efficiency, and regulatory compliance.

Dimexon

DIMEXON.

Dimexon, a family-owned diamond manufacturer and De Beers Sightholder since 1976, stands as a global leader in responsible sourcing, ESG excellence, and traceability. With offices in Antwerp, Dubai, Mumbai, and Hong Kong, and over 2,000 employees, Dimexon maintains a fully RJC-certified, audited, and transparent supply chain aligned with OECD due diligence and World Diamond Council protocols.

A pioneer in ESG, Dimexon was the first diamond company to voluntarily adopt IFRS, and one of the first to offer full traceability data back in 2017. Their traceability now spans 100% of both rough and polished diamond supply, with zero waste to landfill and zero liquid discharge certification at their India plant.

Socially, Dimexon is recognized for its commitment to female empowerment, with over 75% of staff being women, and its deep-rooted culture of ethical labor practices and human rights protections. The company also invests in training programs, employee satisfaction, and rigorous human rights due diligence across all levels.

Facet



Founded in 1987, FACET has become a global leader in sustainable jewellery manufacturing, renowned for its commitment to transparency, innovation, and ethical craftsmanship. With operations in Barcelona, Córdoba, New York, and Düsseldorf, FACET is one of the few manufacturers worldwide certified under both RJC CoP and CoC standards, and is a Certified Factory of Tracemark, offering audited

traceability across all product lines.

FACET combines traditional craftsmanship with cutting-edge technology, utilizing recycled CoC gold from RJC-certified suppliers and ensuring full material traceability for over 50,000 items. Their Cordoba facility runs on renewable energy via a 68.61 KWp solar panel installation, and in 2020, they created 80 skilled local jobs, reinforcing their role in economic development and regional innovation.

Looking forward to 2030, FACET is expanding traceability and sustainable practices aligned with the UN SDGs, while investing in low-emission production technologies. Their certified leadership has earned them multiple accolades, including the Leadership Award for Responsible Practices in Spain's jewellery sector.



Fairever



Fairever GmbH, a leading supplier of Fairtrade and Fairmined certified gold and silver, is dedicated to transforming the jewellery industry by ensuring full traceability, ethical sourcing, and sustainable mining practices. Through its commitment to supply chain transparency, Fairever empowers artisanal mining communities, guaranteeing fair wages, social premiums, and environmental protection.

By leveraging Fairmined Connect and FloCert tracking systems, 100% of Fairever's gold and silver are independently certified, ensuring they are responsibly mined and traded. The impact of these initiatives extends beyond traceability, nearly \$1 million in social premiums has been generated for mining organizations in the Global South, funding schools, infrastructure improvements, and environmental restoration projects.

Frederique Constant



Founded in 1988 in Geneva, Frederique Constant has built a legacy of crafting exquisite Swiss timepieces that blend timeless elegance with technical precision. As part of its commitment to responsible luxury, the brand is actively working to integrate traceability and sustainability into its operations, aligning with the 2030 agenda for Corporate Social Responsibility (CSR).

A key focus for Frederique Constant is ensuring traceability for raw materials used in its timepieces. The company is developing supplier accountability frameworks through auditing mechanisms, reinforcing ethical sourcing and sustainable practices across its supply chain. Additionally, its sustainability initiatives target energy efficiency, plastic reduction, and the use of recyclable materials, further embedding responsible practices into its production process.



KP Sanghvi & Sons

Founded in 1965, KP Sanghvi & Sons is a third-generation diamond powerhouse, recognized for precision, transparency, and sustainability in the natural diamond industry. As a De Beers Sightholder and Select Diamantaire of Rio Tinto & Namdia, the company upholds rigorous ethical standards, ensuring a fully traceable, responsibly sourced supply chain backed by Responsible Jewellery Council (RJC) compliance.

With over 7,000 employees worldwide, KP Sanghvi integrates cutting-edge technology to enhance diamond traceability and authenticity, partnering with De Beers ForeverMark, Tracr, GIA Diamond Origin Report, and DiaDna. These advanced verification solutions bolster customer trust, supply chain transparency, and counterfeit reduction, setting new industry benchmarks.





La Luce

La Luce, founded by a mechanical engineer and a chemist, is a handcrafted fine jewelry brand that marries traditional artistry with sustainability. Every piece is individually handmade by founder and goldsmith Joy Harvey, using exclusively Fairmined Gold and Silver, ensuring traceability, responsible sourcing, and a positive impact on mining communities.

As a certified B-Corp, La Luce operates with an unwavering commitment to ethical production, supply chain transparency, and environmental responsibility. Producing only 5-10 unique pieces per year, the brand prioritizes quality over quantity, embracing organic textures, raw imperfections, and natural oxidations to create jewelry that tells a deeper story.

While traceability alone is valuable, the brand emphasizes the need for data linked to social and ecological impact, helping reshape the industry's ethical standards. Through detailed annual impact reports and continuous financial contributions to mining communities, La Luce proves that luxury and responsibility can be inseparable, setting a new benchmark for purpose-driven jewelry.



LUC8K

LUC8K, a Swiss luxury leather goods brand, is on a mission to redefine high-end fashion through transparency, sustainability, and customization. With a bold and uncompromising approach, LUC8K blends traditional craftsmanship with modern e-commerce, ensuring that every product reflects responsible sourcing and mindful consumption.

By adopting a slow fashion model, LUC8K prioritizes made-to-order production, minimizing waste while allowing customers to create one-of-a-kind luxury pieces. The brand's commitment to total transparency extends to its supply chain, LUC8K knows exactly where its leather comes from, ensuring ethical sourcing and fair treatment of farmers and artisans.

Through its brand ambassador, Sophie LUC8K the Giraffe, LUC8K uses storytelling to engage its community, raising awareness about sustainability challenges and inspiring conscious consumerism.



Movo Partners

Movo Partners is a strategic consulting firm dedicated to driving sustainable transformation for businesses by integrating environmental, societal, and economic ambitions into actionable strategies. As a contributor to the Technology for Transparency Report, Movo underscores the critical role of businesses in influencing behavioral change and leveraging sustainability as a driver for long-term success.

Their expertise spans across impact-driven consulting, helping organizations transition to purposeled models with authenticity and transparency. Movo employs science-based methodologies like the Science Based Targets initiative (SBTi) and Greenhouse Gas Protocol to enhance supply chain transparency and sustainability impact.

In alignment with their commitment to responsible business practices, Movo has set ambitious milestones: ensuring that by 2025, 100% of their clients adopt a positive impact strategy, and that 80% of them integrate CO2 emissions tracking (Scope 1, 2, and 3) under SBTi guidelines. Additionally, by 2026, the company aims to dedicate 5% of its time to pro-bono work, supporting non-profits and startups in sustainability awareness.





Onegemme

Founded in 2023, Onegemme is a B2B wholesale and auction marketplace dedicated to bringing single-origin, high-quality cultured and natural pearls to the global market. With over 100 years of collective expertise in pearling, classification, and luxury marketing, Onegemme is transforming the industry by ensuring traceability, ethical sourcing, and sustainability at every stage of the pearl supply chain.

Onegemme leverages Provenance Proof blockchain technology to provide verifiable origin data for its curated pearls, ensuring full transparency across transactions. The company follows a universal classification system, integrating the GIA's 7 Pearl Value Factors and CIBJO's pearl guide to standardize quality assessments and enhance consumer trust.

Committed to environmental and social responsibility, Onegemme carefully selects suppliers based on ESG principles, promoting biodiversity, ecosystem health, and responsible farming. The company has pledged 1% of its revenue to environmental and social impact projects in collaboration with The Nature Conservancy (TNC), further reinforcing its dedication to marine conservation and sustainable pearl farming.



Politains

Politains, a Swiss high-end custom jewelry brand, is dedicated to transparency, ethical sourcing, and community support in the diamonds and precious stones sector. By working exclusively with family-run businesses, Politains ensures that its sourcing practices uplift local communities, reinforcing its commitment to social and economic sustainability.

The brand integrates traceability solutions by providing certificates of provenance for every gemstone, ensuring that customers have full visibility into the origins of their stones. Through commitment to compliance, trust-building, and consumer engagement, Politains enhances customer confidence in ethically sourced luxury jewelry.

PROCOS

PROCOS

PROCOS is a leading partner for sustainable luxury packaging solutions, providing customized, eco-conscious designs and connected logistics services for some of the world's most prestigious brands, including Richemont, Kering, LVMH, and L'Oréal Group. With a mission to align packaging innovation with the "Art of Gifting", PROCOS ensures that luxury and environmental responsibility go hand in hand.

By leveraging sustainable materials, eco-design principles, and global supply chain transparency, PROCOS integrates circular economy strategies into its luxury packaging offerings. The company collaborates with SCS Global and other sustainability partners to maintain rigorous traceability and environmental impact standards across its operations.





Saskia Shutt

As an independent artisanal goldsmith based in Brussels, Saskia Shutt is redefining luxury jewellery through ethical craftsmanship, sustainability, and transparency. Working exclusively with Fairmined eco gold and repurposed materials, Saskia's approach eliminates waste while ensuring a positive social and environmental impact.

Her commitment to responsible sourcing extends beyond material selection, she actively remodels old jewellery, transforming sentimental but unworn pieces into bespoke creations. By prioritizing Fairmined gold, she directly supports mining communities, ensuring fair wages, medical care, and education opportunities, while also eliminating toxic chemicals like mercury and cyanide from the extraction process.

Saskia's workshop operates on sustainable principles, replacing harmful chemicals with eco-friendly alternatives, recycling metal waste, and implementing circular economy practices to minimize environmental impact. Her partnerships with organizations like Alliance for Responsible Mining and Diamond for Peace reinforce her dedication to ethical jewellery practices.



Shamas

Shamas BV, a boutique diamond company based in Antwerp, is setting high standards for traceability, ethical sourcing, and sustainability in the diamond industry. With a vision to make diamonds a symbol of both beauty and responsibility, Shamas leverages iTraceiT's QR code technology and robust supplier verification protocols to ensure nearly 100% traceability, even for the smallest stones (from 0.0002 carats).

A committed member of the Responsible Jewellery Council (RJC), Shamas goes beyond compliance, requiring detailed sourcing documentation and sustainability proof from every supplier. Customers can scan a QR code to view the full journey of their diamond, from mine to final cut, backed by environmental and ethical assurances.

Shamas complements its traceability strategy with impactful community engagement, supporting initiatives like Diamonds for Peace, World Land Trust, and coral reef protection. These programs empower local communities through education, job creation, and conservation efforts.



Swiss Better Gold Association

Founded in 2013, the Swiss Better Gold Association (SBG) is a non-profit organization dedicated to creating responsible gold value chains from mine to market. Bringing together Swiss refiners, watchmakers, jewelers, and financial institutions, SBG works to uplift artisanal and small-scale gold miners (ASGM) by addressing child labor, mercury pollution, and informality while promoting ethical sourcing and fair trade practices.

Through its impact premium model, SBG channels USD 1.35 per gram of accredited gold into social and environmental projects, reinvesting over USD 6.7 million since its inception. These funds support technical assistance, ESG initiatives, mine compliance programs, and infrastructure projects such as clean drinking water systems, CO2 reduction efforts, and improved hazardous material storage.

Partnering with luxury houses like Audemars Piguet, Cartier, Breitling, and Chopard, as well as leading refiners and financial institutions, SBG ensures that luxury supply chains not only trace gold back to responsible sources but also contribute to sustainable community development.





Vanhu Vamwe

Vanhu Vamwe (VV), meaning "One People" in Shona, is a luxury artisan brand dedicated to preserving cultural heritage, empowering marginalized communities, and redefining ethical fashion. Rooted in traditional craftsmanship and modern innovation, VV collaborates with artisans in Zimbabwe and Ecuador to create handcrafted heirlooms that tell stories of cultural identity, history, and sustainability.

Recognized as a philanthropic enterprise, VV's impact extends beyond fashion, its initiatives empower ex-prisoners, women, and young artisans through skill development, financial independence, and sustainable livelihoods. The brand has secured global retail partnerships and won the CANEX Angels Investment Pitch 2024, validating its role as a leader in conscious luxury.

Through blockchain-integrated traceability, supplier audits, and digital product passports, Vanhu Vamwe is pioneering a future where transparency, sustainability, and craftsmanship define the luxury sector.



Vekariya Gems

Vekariya Gems, a leading diamond manufacturer based in Mumbai, has made significant contributions to ethical sourcing, sustainability, and transparency in the luxury sector. With a legacy dating back to 2004, the company has built a reputation for producing high-quality, responsibly sourced diamonds while fostering long-term sustainability in the industry. The company leverages partnerships with technology

providers like iTraceiT to enhance supply chain transparency and customer trust scores, demonstrating its leadership in responsible diamond sourcing.

Beyond traceability, Vekariya Gems actively promotes worker well-being and research initiatives. The company contributed to the study "Prevalence of Work-Related Musculoskeletal Disorders among Diamond Industrial Workers," underscoring the importance of ergonomic improvements and workforce health in diamond cutting and polishing.

Each contributor to this report is navigating an imperfect yet intentional journey toward greater transparency, responsibility, and impact. While challenges persist, what unites these diverse stakeholders is a shared commitment to clarity, continuous improvement, and the adoption of best practices across their value chains.

In the luxury world, desirability remains paramount. But today, desirability is not just about beauty or rarity, it is also about values, trust, and traceable truth. The technologies showcased in this report are not simply tools for compliance, they are drivers of growth, relevance, and long-term sustainability.

As this movement gains momentum, it is clear: luxury that aspires to lead must also commit to being transparent. By embracing innovation and placing purpose at the heart of product storytelling, the industry can elevate not only its standards, but also its meaning, market, and future.





Strategic Transparency: The Business Case for Digital **Product Passports in Luxury**

By Professor Jean-Philippe Bonardi, Professor of Strategy, University of Lausanne and Managing Director of E4S

The luxury industry is no stranger to reinvention. It has evolved over centuries by navigating societal shifts, redefining aspiration, and delivering excellence through craftsmanship, scarcity, and storytelling. Today, however, it faces a unique convergence of challenges: rising consumer expectations, regulatory mandates, and environmental

imperatives are demanding a profound rethinking of what luxury stands for, and how it operates.

At the center of this transformation lies an opportunity that is both technological and strategic: the rise of Digital Product Passports (DPPs). These tools are far more than a compliance response to the European Union's upcoming sustainability regulations, they are a blueprint for circularity, value creation, and strategic differentiation.

Circular Economy Meets Luxury Strategy

The traditional economic model of luxury has been linear: create, sell, and move on. But this model no longer aligns with a world increasingly focused on longevity, responsibility, and transparency. The circular economy, in contrast, aims to keep materials and products in use for as long as possible, reducing waste while increasing value over time.

DPPs are a key enabler of this shift. By embedding traceable, verifiable information into every product, from its origin to its afterlife, they empower luxury brands to:

- Extend the product lifecycle through resale, refurbishment, repair, and recycling
- Unlock new business models, such as circular marketplaces and service-driven offerings
- Enhance consumer trust through provable authenticity and ethical sourcing
- Gain data-driven insights that inform everything from product development to marketing

This is not just about compliance; it is a strategic pivot that allows luxury brands to move from linear to circular economies without compromising their core values of quality, exclusivity, and emotional connection.

A New Layer of Value Creation

Luxury is, at its heart, about value, and value is evolving. In the past, that value was tied primarily to material rarity and craftsmanship. Today, it increasingly depends on narrative, transparency, and purpose.



DPPs offer a new way to monetize that narrative. They allow brands to build digital ecosystems around their products - ecosystems that can evolve long after the point of sale. When a luxury good is linked to a DPP, it gains a digital identity that carries its provenance, care history, ownership changes, and even its environmental footprint.

In this way, products become "alive" in the digital world. They are no longer static possessions but dynamic assets: capable of gaining cultural and financial value over time, particularly in secondary markets where trust is paramount.

This is a profound shift. It transforms the luxury product from a finished good into a **platform for** ongoing engagement, storytelling, and transaction. And it does so in a way that aligns with both strategic growth and sustainability goals.

The Economic Imperative

The integration of DPPs is not just philosophically aligned with luxury, it makes strong economic sense. Here is why:

1. New Revenue Streams

A DPP-enabled resale marketplace, exclusive to authenticated goods, can generate recurring revenue and bring back customers into the brand ecosystem. Every trade, service, or upgrade becomes a branded touchpoint.

2. Operational Efficiency & Risk Reduction

By embedding traceability and data at the product level, brands can significantly reduce losses from counterfeiting, grey market diversion, and reputational risk. This translates directly into cost savings and legal risk mitigation.

3. Data as Strategic Asset

DPPs provide brands with first-party data about how products are used, where they travel, and what services consumers value most. This intelligence can drive innovation, personalization, and supply chain optimization.

4. Enhanced Brand Equity

Brands that position transparency and circularity at the core of their value proposition will be best placed to appeal to the rising generations of luxury consumers, those who see values and visibility as essential components of modern prestige.

The Strategic Call to Action

For luxury executives, the question is no longer whether to invest in traceability, but how to turn that investment into strategic advantage. This requires aligning traceability efforts with brand strategy, customer experience, and digital transformation.



It also requires collaboration. Technology providers, regulators, and brands must work together to ensure that DPPs are interoperable, secure, and user-centric. The goal should be to create not only trustworthy data, but experiences that inspire trust.

Most of all, it requires vision. Transparency is not a trend, it is the foundation of the next era of luxury. Brands that understand this will not only comply with regulation, they will lead the industry into a future where authenticity, responsibility, and beauty coexist.

From Transaction to Relationship

Luxury has always been about more than just products. It is about emotion, aspiration, and legacy. In that sense, DPPs are not simply digital tools. They are strategic enablers of relationships, between brands and consumers, between products and purpose, between heritage and innovation.

The most successful luxury brands of tomorrow will be those that recognize this shift today, and use it to build a business model where circularity, transparency, and desirability are not in competition, but in perfect harmony.



THOUGHT LEADERSHIP ARTICLES

The luxury industry is undergoing a fundamental transformation driven by increasing regulatory requirements, evolving consumer expectations, and technological advancements. Traceability, transparency, and sustainability have become critical pillars for businesses operating in the diamond, jewelry, and broader luxury sectors. With mounting pressure from regulations such as the European Union's Ecodesign for Sustainable Products Regulation (ESPR) and growing consumer demand for verified ethical sourcing, companies must rethink their supply chains and business models.

This section dedicated to Thought Leadership articles compiles insights from industry leaders and technology providers who are pioneering traceability solutions, blockchain integration, Al-driven automation, and ethical sourcing initiatives. Their collective findings highlight not only the challenges facing the industry but also the opportunities that transparency creates for brand differentiation, consumer trust, and longterm business resilience.

The key takeaways from these thought leadership articles outline the strategic and technological advancements shaping the future of luxury.



AURA BLOCKCHAIN CONSORTIUM



Digital Product Passports: A Strategic Advantage for Luxury Brands

Romain Carrere, CEO of Aura Blockchain Consortium, explores how Digital Product Passports (DPPs) are transforming the luxury industry, turning regulatory compliance into a strategic advantage. With increasing consumer demand for transparency and new sustainability regulations such as the European Union's Ecodesign for Sustainable Products

Regulation (ESPR) set to take effect by 2027, luxury brands must adapt to maintain their competitive edge.

DPPs function as digital twins of physical products, providing a secure, traceable record of a product's lifecycle, from raw material sourcing to ownership history. Through QR codes or NFC chips, consumers can instantly verify product authenticity, sustainability credentials, and service history, enhancing both trust and engagement. Beyond compliance, luxury brands can leverage DPPs to offer post-purchase services such as repairs, warranties, and resale options, reinforcing product value and customer loyalty.

The article highlights how blockchain technology is the ideal infrastructure for luxury DPPs, ensuring immutability, security, and transparency while combating counterfeiting. Blockchain-powered DPPs also enable seamless integration with Web3 technologies, opening new avenues for interactive customer experiences and digital ownership.

Carrere argues that DPPs are more than a compliance tool, they are a transformative opportunity for luxury brands to strengthen brand equity, customer relationships, and long-term sustainability. By embracing this innovation, luxury companies can redefine their industry's future, aligning exclusivity with modern transparency expectations.

Transparency Means Traceability: The Role of Digital Product Passports in the Diamond Industry

Aura Blockchain Consortium, explores the growing importance of transparency and traceability in the luxury sector, with a focus on the diamond industry. As consumers demand more information about the authenticity, origin, and sustainability of the products they purchase, digital solutions like Digital Product Passports (DPPs) have emerged as critical tools for addressing these needs.

The article highlights how DPPs offer a comprehensive record of a product's lifecycle, providing insights into its provenance, certification, ethical sourcing, and environmental impact. This is especially relevant in light of new regulations such as the Ecodesign for Sustainable Products Regulation (ESPR), which will make DPPs a requirement for luxury goods sold in the EU by 2026.

Aura's blockchain-based DPP solutions are designed to create tamper-proof, immutable records that can integrate all aspects of a product's journey, from mining to retail. The flexibility of Aura's solutions allows them to operate across different blockchain platforms, making them accessible to a wide range of luxury brands. The article also showcases how leading brands like Louis Vuitton, Bylgari, and Prada have successfully implemented Aura's DPPs to enhance customer trust, brand reputation, and regulatory compliance.

By adopting these traceability solutions, the diamond industry can lead the way in transparency, providing consumers with verifiable, easily accessible information, while fostering long-term loyalty and trust.



DIATECH



The Cost of Sustainable Luxury by Diatrace (by Vinit Jogani, Director, Diatech)

This article addresses the growing demand for sustainability and traceability within the Gems & Jewelry industry, driven by both consumer expectations and strict international regulations. Contrary to the belief that sustainability is a costly pursuit requiring premium pricing, Diatrace

argues that many sustainability measures result in long-term cost savings and compliance with legal standards. The article breaks down the cost of implementing sustainability through Environmental, Social, and Governance (ESG) frameworks, emphasizing that much of what is labeled a "sustainability cost" is either a legal requirement or leads to cost reductions, such as energy efficiency and responsible resource use. Additionally, the article details how carbon emission offsets (Scope 1, 2, and 3) can be achieved at minimal expense, and how investments in renewable energy like solar power offer high returns over time. By adopting a holistic approach to sustainability, businesses in the luxury sector can find that the cost is manageable, if not profitable, when properly implemented.

·**\$\$** iTraceiT

ITRACEIT

The Future of Luxury: Transparency, Sustainability, and Collaborative Storytelling

iTraceiT explores the critical role of transparency, sustainability, and collaborative storytelling in revitalizing the diamond and jewelry industry. Frederik Degryse reflects on the industry's shift from the "golden" years" of effortless demand to today's market, where luxury consumers

increasingly prioritize accountability, ethical sourcing, and sustainability.

Degryse argues that fragmented marketing strategies and siloed supply chain efforts have failed to reignite consumer engagement. Instead of competing for a shrinking market share, the industry must unite to expand the overall appeal of diamonds by focusing on traceability and authentic storytelling. He highlights how mining operations contribute to local communities through education and environmental initiatives, stories that are often lost before reaching consumers.

Citing studies from McKinsey and PwC, Degryse underscores that a majority of luxury buyers factor sustainability into their purchasing decisions, with many willing to pay a premium for verified ethical sourcing. By integrating transparency into the entire supply chain, luxury brands can strengthen consumer trust, drive loyalty, and differentiate themselves in an evolving market.

The article also calls for collaboration among technology providers to create interoperable traceability solutions that ensure a seamless, verifiable, and engaging consumer experience. By embracing transparency, sustainability, and unified storytelling, the diamond and luxury industries can rebuild emotional connections with consumers and ensure long-term relevance.



OPSYDIA



Revolutionizing Diamond Security: Opsydia's Role in Traceability and **Ethical Sourcing**

Opsydia focuses on the transformative role of advanced laser technology in ensuring traceability, security, and ethical sourcing in the diamond industry. Opsydia's sub-surface laser marking technology offers an innovative solution to marking diamonds with permanent, tamper-proof

identifiers, which remain invisible to the naked eye. These markings are essential for verifying the origin of diamonds and ensuring that they meet ethical and sustainability standards.

The article emphasizes that traceability in the diamond supply chain is critical to gaining consumer trust, as buyers increasingly demand transparency around the sourcing and ethical production of luxury products. Opsydia's technology can be integrated into existing traceability platforms, such as blockchain systems, further enhancing the reliability of provenance data and preventing the infiltration of conflict diamonds into the supply chain.

The article advocates for industry-wide adoption of such advanced technological solutions to create a more transparent and secure supply chain, which not only benefits consumers but also strengthens the industry's reputation for integrity and ethical practices.



SARINE

Embracing Transparency and Cooperation: The Significance of Verifiable Third-Party Traceability in the Diamond Industry (by David Block, CEO, Sarine)

Sarine emphasizes the growing demand for transparency, authenticity, and sustainability in the diamond industry, driven by consumer expectations and social media trends. David Block highlights the

necessity of harnessing advanced technology to meet these demands and improve operational efficiency. Sarine has been at the forefront of diamond technology, offering Al-driven verifiable traceability reports with interactive 3D and 360-degree diamond views to provide unparalleled transparency for consumers and retailers alike.

Block underscores that traceability is not an isolated effort but a collective mission requiring collaboration among all stakeholders, including miners, manufacturers, retailers, and technology providers. He points to Sarine's partnerships with platforms like De Beers' Tracr and the Aura Blockchain Consortium as examples of industry-wide cooperation. Ensuring that traceability systems are based on verifiable third-party data rather than self-declared claims is critical for maintaining the integrity of the supply chain.

Looking forward, Block predicts that the demand for verifiable traceability will continue to grow, and urges the industry to adopt scalable solutions and collaborate to meet international standards, build consumer trust, and champion sustainable practices.



SCS GLOBAL



The Future of Traceability and Transparency in the Luxury Jewelry Industry

Embracing Innovation for an Ethical, Sustainable Tomorrow (by Kat Weymouth, SCS GLOBAL)

This article discusses the critical role of third-party verification and certification in enhancing transparency and sustainability in the luxury

sector, particularly in the diamond industry. It emphasizes the need for comprehensive traceability mechanisms that can independently verify claims related to product provenance, ethical sourcing, and environmental impact. The use of standards like the SCS-007 Sustainability Rated Diamond Standard is highlighted as a way to ensure diamonds are responsibly sourced and produced with minimal environmental impact.

SCS Global also addresses the growing consumer demand for transparency, with modern customers seeking assurance that the products they purchase align with their values of sustainability and social responsibility. To meet these expectations, the industry must adopt rigorous traceability standards and collaborate with independent certification bodies to verify supply chain claims.

Furthermore, the article highlights the financial and reputational benefits of implementing such systems, as they foster consumer trust, reduce the risk of reputational damage, and support long-term business sustainability. By adopting third-party verification, the luxury industry can lead by example and set a new standard for responsible business practices.

STPL



From Mine to Market: STPL's Cutting-Edge Traceability and Automation in Diamond Processing

STPL highlights the company's pioneering role in transforming the diamond processing industry through advanced automation, Al-driven precision, and innovative traceability solutions. Headquartered in Surat, India, STPL has been at the forefront of technological advancements

in diamond manufacturing since 1993, offering a fully integrated suite of solutions covering diamond analysis, planning, cutting, polishing, and safe trading.

STPL has revolutionized the industry with Al-based robotic automation, significantly enhancing precision, efficiency, and cost-effectiveness. By reducing reliance on skilled labor and increasing production accuracy, STPL's laser-based diamond cutting and shaping technologies maximize yield while minimizing errors. The company's expertise in automation has led to groundbreaking innovations such as the first-ever robotic diamond processing system.

Beyond manufacturing, STPL has developed a state-of-the-art diamond traceability system, ensuring transparency and accountability across the supply chain. The TraceDiamond system captures a diamond's journey from rough to polished form, integrating data from the Kimberley Process certificate to its final certification. STPL's Smart-i15 technology verifies each diamond's unique fingerprint, allowing consumers and retailers to access a complete digital history through QR codes and blockchain-based authentication.

By partnering with blockchain platforms, STPL ensures that its traceability system aligns with industry standards for responsible sourcing and ethical practices. This seamless integration enhances consumer trust, providing verifiable provenance and reinforcing sustainability in the diamond sector. With a global footprint spanning over 30 countries and more than 17,000 systems installed worldwide, STPL continues to set the benchmark for innovation in diamond processing and traceability.

Luxury Stakeholder

BREITLING



Traceability as a Foundation for Sustainability: Breitling's Commitment to Transparency

This thought leadership article by Breitling outlines the brand's transition to a traceability-based business model, highlighting how transparency and traceability are key drivers of sustainability, consumer trust, and regulatory compliance. Breitling's commitment to supply chain

transparency began in 2020 with its first double materiality assessment, recognizing that consumers increasingly demand verifiable information about the origins and ethical impact of their purchases.

The article emphasizes how Breitling integrates traceability across its sustainability pillars: progress, prosperity, planet, people, and governance. The brand has pioneered traceable artisanal and smallscale gold and lab-grown diamonds, first introduced in its 2022 Super Chronomat 38 Origins watch. Breitling has also implemented digital product passports and non-fungible tokens (NFTs) to provide consumers with verifiable insights into the provenance of materials. Independent third-party verification further strengthens its traceability initiatives.

Beyond compliance, Breitling sees traceability as a competitive advantage, driving brand loyalty, supporting pre-owned product certification, and facilitating adaptation to new regulations such as the Corporate Sustainability Reporting Directive (CSRD). The company's efforts also extend to community engagement, supporting education initiatives in gold-mining regions and funding leadership programs for social impact leaders in the lab-grown diamond sector.

Looking ahead, Breitling aims to achieve full traceability of gold and diamonds across its collection by March 2026, reinforcing its role as an industry leader in responsible sourcing. The article concludes that transparency and traceability are transformative forces, not only shaping sustainability efforts but also enhancing brand credibility, consumer engagement, and long-term resilience.



LA LUCE

B-Corp and Beyond: Navigating Ethics in a Flawed Supply Chain

The article reflects the journey of a small jewelry company, co-founded by Joy Harvey, which achieved B-Corp certification after a two-year process of documentation and legal challenges. The company prioritized sustainability from the start, not as a marketing strategy, but as a moral commitment. Although the B-Corp certification process helped formalize

the company's Corporate Social Responsibility (CSR) practices, it also exposed limitations in the jewelry supply chain, particularly around third-party audits and legal bindings for suppliers. While the certification is a significant step, Harvey expresses concerns about the need for deeper transparency and digital technologies to provide real insights into working conditions, wages, and environmental impacts. She emphasizes the importance of creating a truthful landscape in the supply chain, even if it reveals imperfections, and highlights the limitations of current traceability in some materials used in her products.



Key Findings from the Thought Leadership Articles

1. Digital Product Passports (DPPs) Are Redefining Transparency and Consumer Engagement

Digital Product Passports (DPPs) as a transformative tool for traceability, regulatory compliance, and brand storytelling. DPPs serve as digital twins of luxury products, offering consumers access to detailed product history, sustainability credentials, and authentication records via blockchain technology.

Multiple Luxury Maisons have successfully implemented DPPs, demonstrating their ability to build consumer trust, enhance resale value, and comply with upcoming regulations such as ESPR.

2. Traceability is No Longer an Option: It's a Competitive Advantage

Companies are embedding traceability across their supply chain, ensuring transparency in sourcing artisanal gold and lab-grown diamonds. By leveraging digital product passports and independent verification, the companies can position themselves ahead of regulatory mandates and strengthened consumer loyalty.

Verifiable third-party traceability is essential for maintaining the integrity of the diamond supply chain. Al-powered traceability reports and collaborations with blockchain platforms ensure that luxury retailers and consumers have access to reliable provenance data.

3. Blockchain and AI Are Transforming Diamond and Jewelry Supply Chains

Integrating AI-driven automation and blockchain-powered traceability into the diamond manufacturing process, by tracking rough-to-polished transformations and linking data to blockchain systems, enhances efficiency, accuracy, and ethical accountability.

Pioneering sub-surface laser marking technology, by creating invisible, tamper-proof identifiers on diamonds ensures permanent traceability, preventing fraud and reinforcing ethical sourcing practices.

4. Ethical Sourcing and Sustainability Are Business Imperatives

The need for third-party verification standards ensures environmentally responsible and ethically sourced materials.

Challenging the notion that sustainability is an added cost by demonstrating that investments in energy efficiency, carbon offsets, and responsible sourcing often result in long-term cost savings and regulatory compliance.

5. Collaborative Industry Storytelling Is Needed to Reignite Consumer Engagement

Fragmented marketing strategies and siloed supply chain efforts have led to a disconnect with modern consumers. The future of luxury relies on collaborative, industry-wide storytelling, ensuring that the social, environmental, and craftsmanship narratives behind products reach the consumer.

At the same time, the limitations of current traceability mechanisms highlight the need for stronger digital verification systems and deeper supply chain accountability.



A Call for Industry-Wide Action

The luxury industry stands at a critical inflection point, where technology, transparency, and consumer trust must converge to create a more responsible, accountable, and resilient sector. From Digital Product Passports to Al-driven traceability solutions, the tools for transformation are available. However, the industry must move beyond compliance and proactively adopt these innovations as strategic enablers for long-term success.

By embracing collaborative storytelling, responsible sourcing, and blockchain-powered verification, luxury brands can redefine consumer expectations and set new benchmarks for integrity and authenticity. The future of luxury is not just about exclusivity, it's about building a legacy of trust, innovation, and responsibility.

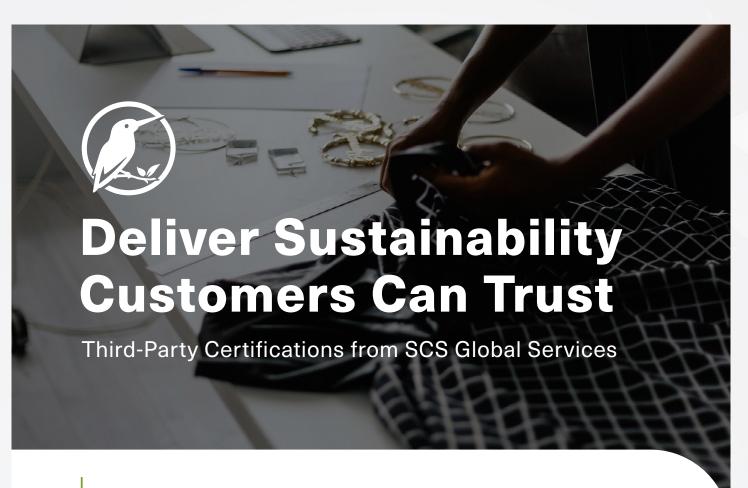
Each contributor to this report acknowledges a simple truth: transparency is a journey, not a destination. No brand, supplier, or artisan claims perfection, but each is taking bold, intentional steps toward clarity, accountability, and continuous improvement.

In the world of luxury, desirability is essential, but its definition is evolving. Today's luxury must reflect not just beauty and rarity, but also integrity, traceability, and values that resonate with conscious consumers.

Technology, when used with purpose, becomes more than a compliance tool, it becomes a driver of desirability, a storytelling enabler, and a foundation for sustainable growth.

As we look ahead, one truth becomes clear: growth and sustainability are not opposing forces, they are interdependent. Only through transparency can the luxury sector remain relevant, resilient, and truly remarkable.





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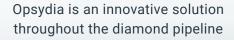


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SECURING THE IDENTITY AND INTEGRITY OF DIAMONDS









Sophisticated branding and authentication for the primary and secondary markets



Enhancing the in-store







From Compliance to Desire: The Future of Transparency is Keeping Products Alive

By Hans J. Schwab, Co-founder of ORIGINALLUXURY and OriginAll

In the rapidly evolving landscape of luxury, technology has proven essential in verifying origin, proving authenticity, and meeting compliance obligations. But this is only the beginning. If we are to unlock the full potential of traceability and digital product passports (DPPs), we must shift our focus beyond compliance to value creation, brand desirability, and the ongoing life of products.

Today's consumers are not simply looking to confirm whether a product is real. They are looking for a deeper relationship with the objects they invest in: relationships built on meaning, transparency, and continuous engagement. This opens a vast, mostly untapped opportunity for tech providers to think creatively, beyond verification, and deliver experiences that inspire, captivate, and connect.

Desirability is the New Differentiator

In a saturated market where every brand is working toward more sustainable sourcing and responsible production, the true differentiator will be how well they can translate transparency into desirability. This requires a change in mindset: from technology as a backend tool to technology as a storytelling and value-enhancing platform.

Imagine a world where a luxury product doesn't become silent once it is purchased. Instead, its digital passport continues to evolve, recording its care, resale, ownership transfers, customizations, exhibitions, and even future enhancements. Each product becomes a living entity, a legacy in motion.

For this vision to materialize, tech partners must begin designing for the full lifecycle of the product, not just the origin story. This means building solutions that:

- Enable real-time consumer engagement through apps or platforms connected to the product's
- Allow for dynamic updates to the product passport, such as service records, resale, provenance changes, or sustainability upgrades
- Provide immersive storytelling features (e.g., augmented reality, behind-the-scenes maker stories, geo-tagged journeys)
- Create emotional and economic incentives for consumers to remain connected to the product

A Marketplace for DPP-Enabled Products

To fully capitalize on this potential, we must go one step further: establish a dedicated marketplace exclusively for products with Digital Product Passports.



Such a marketplace would not only offer consumers the assurance of authenticity, ethical sourcing, and traceable provenance, but also provide brands with an additional revenue channel that supports resale, upcycling, and ongoing engagement.

More importantly, it enables products to live on, not just in wardrobes or display cases, but in digital ecosystems where every transaction, transformation, or story adds to their value. This makes the product:

- More desirable at resale
- More secure against fraud or counterfeiting
- More valuable to collectors, curators, and future consumers

In this model, luxury becomes circular and interactive, and technology becomes the engine that sustains it.

The Role of Tech Partners: Innovate Beyond the Brief

For this ecosystem to thrive, technology providers must expand their role. It is no longer enough to create tools that help brands tick compliance boxes. We need creative technologists who see DPPs not as endpoints, but as gateways to living experiences.

We must encourage and expect our tech partners to:

- Design for desire, not just security
- Co-create with brands and users, exploring ways to make traceability more emotional and engaging
- Prototype new digital services that enhance resale, gifting, personalization, and storytelling
- Build platforms that are interoperable and consumer-facing, not locked away in supply chain silos

In short, we need design-led innovation with emotional intelligence, that elevates both the product and the brand in the eyes of the consumer.

The Next Chapter of Luxury Lives in Its Continuity

Traceability is not just about where a product comes from. It is about where it is going. A watch passed down across generations. A necklace reborn through resale. A handbag repaired and restored. These stories matter. They are part of what makes luxury worth preserving.

By keeping products "alive" through digital technologies, we are not only reinforcing their physical value but also enriching their emotional and historical significance. This is the future of transparency: not as a bureaucratic duty, but as a catalyst for connection, continuity, and consumer delight.

The time has come to think outside the compliance box. Let's create the tools, platforms, and marketplaces that make luxury live longer, grow stronger, and matter more.



ABOUT

ORIGINALLUXURY is a public-private partnership dedicated to advancing digital innovation in the luxury industry, with a current focus on transparency and traceability.

As an inclusive, impartial, technology-neutral initiative, we bring together brands, suppliers, organizations, and technology providers to foster knowledge-sharing, best practices, and innovation. Our mission is to empower the luxury sector with insights that enhance consumer trust, lead to responsible sourcing, support longterm industry resilience and can drive consumer desirability.

We operate as an independent hub, facilitating open dialogue between stakeholders by bridging expertise from academia, industry leaders, and cutting-edge technology providers. ORIGINALLUXURY serves as a collaborative force shaping the future of transparency in luxury, ensuring that data-driven decision-making benefits both businesses and consumers alike.

Established in 2022, ORIGINALLUXURY was founded as a collaborative venture between E4S (Enterprise for Society Center) and OriginAll, with the Swiss Center for Luxury Research as a founding partner. This strong foundation ensures that ORIGINALLUXURY operates at the intersection of academia, industry, and technology, providing a knowledge-driven, solution-oriented approach to shaping the future of luxury with integrity, responsibility, and innovation.

Currently, ORIGINALLUXURY is primarily funded by OriginAll, with additional support from academia and contributions from our technology partners through their yearly membership. To maintain our independence and continue delivering value to the industry, we also generate revenue through tailored workshops, consulting services, and specialized offerings that help businesses navigate transparency and traceability challenges effectively.

ORIGINALLUXURY operates as a not-for-profit initiative, where all funds are continuously reinvested into the initiative's growth. Our ambition is to become financially self-sufficient, ensuring the long-term sustainability of our work. However, achieving this goal requires the active participation of our stakeholders, by engaging with our services, leveraging our expertise, and contributing to our mission. By actively supporting our initiative, industry players can help drive meaningful change while securing the future of transparency in the luxury sector.

^{*} E4S is a research and action center created by three leading academic institutions: the University of Lausanne (UNIL-HEC), the Institute for Management Development (IMD), and the École Polytechnique Fédérale de Lausanne (EPFL), under the stewardship of its College of Management of Technology.





Executive Summary
3rd Edition
March 2025