The Global Language of Business



More sustainable value chains: GS1 engages to support industry's plans

Sustainability and circularity initiatives build on GS1's proven suite of global standards and services



Sustainability and circularity offer significant opportunities to companies across all sectors when they adapt to new business processes and requirements. At GS1, we believe that a standardised language for data, data portability and interoperable data exchange networks are essential to industry's successful adaptation.

Under the Paris Agreement, more and more countries, regions, cities and companies are establishing—among other activities—carbon neutrality targets and net zero emissions plans to be reached by 2050¹. GS1 is actively engaging in sustainability and circularity and fully supports compliance with regulation and development of the right frameworks for companies and all stakeholders to reach the scale and the speed needed to tackle climate change.

To meet the sustainability demands of governments, consumers and stakeholders and to manage their environmental impact and reach decarbonisation goals, companies are transforming towards circular and more sustainable value chains by driving needed efficiencies across their supply networks.

This transformation requires a common language of how products, locations and entities are identified, and of how product data is going to be tracked, measured, adapted and shared². This is where global standards for product data, product data portability and interoperable data exchange networks come in. Sustainability and circularity initiatives can only scale if stakeholders embrace business processes that are built with a standardised data language on top of a foundationally interoperable data exchange network



 $^{^{1}\,}https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement$

² https://circulareconomy.europa.eu/platform/en/knowledge/gs1-position-paper-circular-data-circular-economy

New regulatory requirements around the world are likely to require a combination of product master data, event and transactional data, and traceability information to illustrate a full picture of a particular product's lifecycle through new data structures like digital product passports. Additionally, data requirements linked to the number of times the products have been used, due diligence requirements (like the absence of child labour) and CO_2 emissions per product will be increasingly important.

Sustainability and circularity initiatives can only scale if stakeholders embrace business processes that are built with a standardised data language on top of a foundationally interoperable data exchange network. Identifying economic operators, entities, locations, raw materials, chemical substances and products across entire value chains requires transformation and data expressed in a common language. This common language enables interoperability and efficiency for use cases such as recycling, reuse, refurbishment, revalorisation, or disclosing product carbon footprint. After all, leveraging this data is the key to unlocking industry's ability to track, measure and adapt to substantiate their sustainability investments.

GS1 global standards are the most widely used supply chain standards in the world, implemented by industry across 25 different sectors globally. Industry solutions built on a foundation of GS1 standards and services will help industry accelerate their transition to a more sustainable and circular model, because they enable the creation of highfidelity digital twins for products and promote global interoperability of data across supply networks. GS1 is engaging in sustainability, having already established global and sector-oriented data models and registries where product, location and entity data can be checked. We also see the potential value in developing a cross-sector data semantics for circularity and sustainability³, in partnership with industry.

Industry solutions built on top of GS1 standards and services will help industry accelerate their transition to a more sustainable and circular model, because they enable the creation of high-fidelity digital twins for products and promote global interoperability of data across supply networks

GS1 standards are well-established for globally unambiguous product and location identification and standards-based data models. GS1 has an established language for the exchange of data about the transformation steps that products go through, from raw materials all the way to the consumer. Measuring progress is an important pillar of a company's circularity investments and GS1 standards enable companies to more efficiently establish a baseline of sustainability capabilities and to measure progress.

 $^3\,https://www.gs1.eu/news/a-standards-based-knowledge-system-for-the-circular-economy$



These basic building blocks are already well-suited to the sustainability and circularity challenges of today. They enable persistent identification for products across their first (and second or third) life, or the ability to identify each product component and chemical substance and to reconcile those with the finished product's identity. Additionally, they enable the connection of a single barcode/data carrier on a product to deeper data about the product, such as data attributes like the CO_2 emissions calculated per product, or the absence of child labour. Leveraging GS1 standards can help industry to avoid the proliferation of multiple confusing data carriers on the same packaging.

As an example, under the Green Deal⁴ and Circular Economy Plan⁵ in the European Union (EU), new legislation has been approved on greener, more resilient and sustainable supply chains and GS1 in Europe is engaging with the EU, industry and various stakeholders on the new digital product passport vision. GS1 standards are being piloted to meet industrial circularity needs starting from the sectors prioritised by the regulators like electrical vehicles and industrial batteries, as evidenced by the MoU with the Global Battery Alliance⁶, with the aim of strengthening collaboration to meet circularity goals. Transformation requires a common language of how products, locations and entities are identified, and of how product data is going to be tracked, measured, adapted and shared



GS1 is committed to working with industry to improve and enhance the existing global standards to ensure they continue to enable companies to track, measure and adapt to comply with new sustainability and circularity requirements. The GS1 GSMP process enables standards adaptability to support industry investments towards circularity. Topics like persistent product identification and a decentralised data sharing system are of fundamental importance in the circular transformation and GS1 is ready to adapt and strengthen the standards needed for success.

GS1 serves industry through 116 global country-level organisations. GS1 standards are "made by industry, for industry" through our global standards management process (GSMP). To support industry transformation, we work directly with companies to ensure our suite of identifiers and our data language can meet the evolving needs for capturing and sharing sustainability related data with trading partners, regulators and consumers. The majority of GS1 standards are ISO standards⁷.

For additional information, please contact your GS1 Member Organisation or email us at sustainability@gs1.org.

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⁴ https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

⁵ https://ec.europa.eu/environment/strategy/circular-economy-action-plan_en

⁶ https://www.gs1.eu/news/global-battery-alliance-and-gs1-in-europe-signed-an-mou-on-circularity

⁷ https://www.gs1.org/docs/GS1-and-ISO-06BD.pdf