



Using RAIN to Deliver a Sustainable Future

In today's fast-evolving landscape of technological innovation, RAIN technology stands out as a transformative force, unlocking new opportunities for companies to streamline their operations with rich data insights and underpin sustainability strategies.

Having proven its worth as a data carrier that drives operational efficiencies, users are now increasingly recognising the versatility of RAIN. It is being used in an ever-increasing number of use cases, with companies increasingly harnessing existing RAIN deployments to align their core business and sustainability objectives and even comply with growing 'green' regulations.

For example, there is growing recognition for RAIN technology as a preferred data carrier for Digital Product Passports (DPP) across numerous industries, enabling innovative circular business models that have a positive impact on both our planet and companies' bottom line.



Under Pressure

Across all industries, the pressure to increase operational sustainability is growing. National and international organisations are championing robust sustainability regulations, with the goal of accelerating the transition to greener practices. The European Union's incoming [Digital Product Passport \(DPP\)](#) - part of the [European Clean Industrial Deal \(formerly Green Deal\)](#) and [Circular Economy Action Plan](#) – and the [United Nations Transparency Protocol \(UNTP\)](#) are both prime examples.

However, it's not just regulatory pressure that companies face. Consumers are increasingly aware of their own environmental impact, and many are now making purchasing decisions based on companies' actions, values and sustainability profiles. In fact, 54% of consumers have stated that they'd be willing to pay a premium for sustainable products.¹

Consumers are also vigilant against exaggerated or misleading claims about sustainability. 57% of consumers believe brands they use are guilty of "greenwashing", and 70% conduct their own research before trusting a brand's sustainability claims.² Companies must therefore make sure they can substantiate their claims of sustainability and ethical sourcing or risk losing out on customers and taking severe reputational damage.

¹ [Sustainability's New Normal: What 2024 Consumers Expect. Simon Kucher](#)

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Good for the Planet and for Business

RAIN technology gives companies a key advantage as we progress to a world where sustainability leadership becomes a key indicator of market competitiveness.



Meeting Customer Expectations

A survey of 10,000 Gen Z customers showed almost **80%** intend to only buy sustainable products.³



Guiding Investment

85% of Chief Investment Officers state that ESG is an important factor in their investment decisions.⁴



Sustainability as a priority

When asked about sustainability priorities, businesses rank improving supply chain transparency and circularity as the top two⁵.



Mounting regulatory pressure

When asked which regulations are most relevant to their business, **47%** of companies identified traceability regulations.

³ [The Young Consumer and the Path to Sustainability, Credit Suisse](#)

⁴ [Investors Want to Hear from Companies About the Value of Sustainability, McKinsey](#)

⁵ [Bridging the Gap, RAIN Alliance](#)

Three Ways RAIN is Improving Sustainability



Reduce Waste

RAIN allows users to track and improve their inventory forecasting. In doing so, this helps mitigate overproduction and wastage in industries such as food production. This reduces the overall cost of waste – both in terms of financial losses from overproduction and overordering, and its environmental impact.

It can also support increased asset tracking, allowing for efficient maintenance schedules that help keep products in use for longer.



Enable New Circular Business Models

RAIN tags provide access to an accurate understanding of a product's footprint throughout its entire lifecycle. This helps verify compliance with environmental legislation, and provide verifiable, traceable proof of sustainable sourcing.

In doing so, this helps both businesses and customers make more informed purchasing decisions.



Improve Recycling

Verifiable data on the constituent materials of each product facilitates optimised end-of-life sorting and large-scale recycling efforts.

This long-term approach to recycling is already helping industries such as textiles and tyre manufacturing in recycling assets that have reached the end of their life into new products, helping reduce the volume of raw materials consumed.



"We are excited about the possibilities for RAIN to help companies attain their sustainability objectives. The RAIN Alliance wants to play a key role as we move forward to harness the power of RAIN RFID to create solutions to the challenges of climate change. We encourage stakeholders from all connected ecosystems to join us in championing verifiable sustainability."

Aileen Ryan – President and CEO of RAIN Alliance



Spotlight: The Digital Product Passport

The European Union is implementing a number of new regulations requiring nearly all products sold in the EU to feature a Digital Product Passport (DPP). This initiative aims to improve supply chain transparency and product traceability by providing comprehensive information about each product's origin, materials, environmental impact, and disposal recommendations. The DPP is designed to close the gap between consumer demands for transparency and the current lack of reliable product data.

To access this DPP information, consumers, businesses and other stakeholders will need to engage with a data carrier. These carriers will link physical products to their digital DPP information, with the company that puts the product on the market responsible for ensuring that this data is available throughout its entire lifecycle. This information can then be used to improve traceability, optimise sorting and recycling, inform decisions about refurbishment, reuse and renting, and help make informed decisions on how to sustainably manage the product's 'end-of-life'.

Work is already well underway. The RAIN Alliance has been accepted as a liaison to the [CEN/CENELEC Joint Technical Committee 24 \(JTC24\)](#). This committee is responsible for setting standards for the DPP Framework and System, a vital component of the European Union's efforts to build a sustainable economy. The RAIN Alliance's acceptance by CEN/CENELEC JTC24 reflects its recognition as an important representative for a number of industries, helping their members align with the objectives of the Digital Product Passport and the broader Ecodesign for Sustainable Product Regulation (ESPR).

RAIN technology as a DPP data carrier

RAIN is emerging as one of the cornerstone technologies for the DPP and is already accelerating the transition to a more transparent, efficient, and circular economy across the European Union and beyond.

RAIN has a long wireless read range of several metres and mass tag reading capabilities, allowing for faster and more efficient data capture without line-of-sight requirements. This near-simultaneous reading increases efficiency in high-volume applications like inventory management, supply chain tracking, and waste management recycling processes. In this way, RAIN technology enables more



efficient identification, authentication, and verification of items, which is essential for automated and labour-efficient identification in dynamic environments.

RAIN is also a durable data carrier, designed and manufactured to survive the stress and wear throughout a product's lifecycle. Made from robust materials, RAIN tags can withstand extreme temperatures, moisture, and physical impacts. These tags also have no internal battery, instead drawing energy from RAIN readers, which further contributes to their long lifespan and ability to remain with the product throughout its lifetime.

These qualities position RAIN as a valid candidate to be accepted as a data carrier under the ESPR.

Driving Sustainability Through Collaboration

The RAIN Alliance drives awareness and fosters market adoption of RAIN technology, aiming to create a smarter and more sustainable world by interconnecting trillions of objects simply and inexpensively. Its dedicated Sustainability and Digital Product Passport Work Groups identifies, develops, and publishes materials that relate to the issues surrounding sustainability and the use of RAIN technology.

The Alliance supports the EU in its goal to proliferate circular economies at scale, and champion the use of RAIN technology as the carrier of choice to connect items throughout their lifecycle, simply and inexpensively. Forward-looking companies will harness the needed expertise and knowledge to implement robust RAIN strategies for business and sustainability objectives through collaboration across their industries. Others will be left behind.

[Contact us](#) to find out how you can get involved.