GS1 case study

Reusable packaging, real results: How Swapp! used GS1 standards to prove reusability

Polish start-up Swapp! is showing how GS1 standards can power traceability and enable large-scale reuse in foodservice and food delivery. A pilot project with a diet catering provider cut emissions, reduced waste and proved that circular packaging can work.

Challenge

Single-use food packaging is a major source of waste and emissions. But despite growing awareness and new regulations, switching to reusables is often still seen as too complex or costly. Swapp! wanted to show that a digital, data-driven reuse model could overcome those barriers and work at scale.

Solution

Swapp! printed QR Codes powered by GS1 on packaging, with each code linked to a digital system for lending, tracking and returning reusable food packaging. Each QR Code contained a GS1 Digital Link, enabling full traceability of individual packaging items. A pilot with a diet catering provider proved the concept.

Benefits

The pilot showed that GS1 standards enable scalable reuse systems that are trackable, trustworthy and ready for upcoming EU regulations. Swapp! saved 2,100 containers, cut emissions by over 128 kg and gave both consumers and caterers a seamless way to avoid single-use waste.

What does it take to make reuse work at scale? For Swapp!, the answer starts with traceability.

The plastic problem

Plastic packaging accounts for more than one-third[1] of global plastic use, and most of it is discarded after a single use. In the European Union, each person generates over 36 kilos[2] of plastic packaging waste per year. In the United Kingdom, food and drink containers make up more than 80%[3] of plastic packaging thrown away by households.

In Poland, the 2024 rollout of the EU Single-Use Plastics Directive has already banned or raised the cost of using some types of plastic packaging and increased pressure on foodservice providers to find better alternatives.

Reuse could make a difference, but only if it is simple, trusted and traceable.

From principle to practice

That's where **Swapp!** came in. A Warsaw-based start-up focused on Reusability as a Service, Swapp! helps foodservice businesses implement digital, circular packaging systems.

At the heart of the model is traceability, and for that, Swapp! chose GS1 standards. In autumn 2024, Swapp! launched a GS1-powered pilot project with a leading diet catering provider.

> **2100** **disposable containers replaced by reusable containers**

Digitally enabled reuse, powered by GS1

Twenty selected customers received their daily meals in Swapp! reusable bowls, lunchboxes and cups, each marked with a QR Code powered by GS1. The same courier that delivered the meals also collected the used containers the next day.

Each QR Code carried a GS1 Global Trade Item Number (GTIN) and a unique serial number structured in the GS1 Digital Link standard. Scanning the code linked users and staff to key metadata: container type, batch, weight, carbon footprint, supplier and usage count. The codes were printed directly onto the packaging, with no need for RFID or expensive tech. The GS1 Digital Link standard ensured that every scan pointed to trustworthy, structured online data.

> "Our mission is reusability at scale. GS1 gives us the tools to make it real."

Sargheve Sukumaran,
Chief Technical Officer, Swapp!

1 - https://www.circularise.com/blogs/global-plastic-consumption-production-and-sustainability-efforts

2 - https://www.europarl.europa.eu/topics/en/article/20181212STO21610/plastic-waste-and-recycling-in-the-eu-facts-and-figures

3 - https://www.businesswaste.co.uk/your-waste/packaging-waste-recycling/packaging-waste-facts-and-statistics/

Results that made reuse real

By using the codes at the moment of delivery and return, Swapp! created full product-level traceability without adding friction for the user. The pilot replaced 2,100 disposable containers and 420 paper bags over a period of just three weeks. In total, the pilot cut CO_2 emissions by more than 128 kilos.

The company's app-based model supported both consumers and partners. Customers could scan packaging, manage returns and avoid deposits. Restaurants, caterers and foodservice partners could monitor usage, manage inventory and keep items in circulation. Each packaging item was designed for at least 500 reuses.

For Swapp!, traceability isn't just a technical feature. It is what enables reusability, transparency and compliance. Without it, the circular model breaks down.

GS1 standards turned out to be the missing link: a globally recognised way to identify items, connect data and future-proof the system. They've helped Swapp! build a system that's ready to grow.

"With GS1 Digital Link, every item becomes part of a smart, transparent system."

Sargheve Sukumaran,
Chief Technical Officer, Swapp!

Next steps: Making reuse mainstream

Swapp! is preparing for larger-scale pilots in new cities and is working to optimise its digital system for sectors like diet catering, where automation and airtight packaging formats are common.

The goal is to expand its reusable packaging network while keeping the system seamless for both consumers and partners.

GS1 standards will continue to play a central role, enabling accurate identification, real-time data sharing and readiness for future regulation.

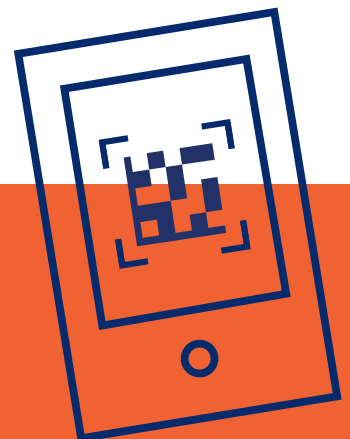**+120** kilos of CO2 emissions cut in 3 weeks

About Swapp!

Swapp! is a Poland-based start-up focused on circular packaging and environmental protection. Founded in 2019, the company provides reusable containers and refill systems for food, cosmetics and home care. It works with restaurants, diet caterers and retailers to replace single-use packaging with scalable, data-driven solutions. https://swapp.zone

About GS1

GS1 is a neutral not-for-profit organisation that develops and maintains the most widely used global standards for efficient business communication. We are best known for the barcode, named by the BBC as one of "the 50 things that made the world economy." GS1 standards improve the efficiency, safety and visibility of supply chains across physical and digital channels in 25 sectors. Our scale and reach—local Member Organisations in more than 110 countries, 2 million user companies and 10 billion transactions every day—help ensure that GS1 standards create a common language that supports systems and processes across the globe. www.gs1.org

Get started with next generation barcodes!

Contact your GS1 Member Organisation to see how GS1 can help you begin your journey towards next generation barcodes!

www.gs1.org/contact