



The Global Language of Business

Digital revolution in packaging

Mondelēz Italia pilots the QR Code powered by GS1 on its products



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Mondelēz Italia and Ambition 2027

Mondelēz Italia has signed a commitment to support Ambition 2027, becoming a protagonist within the Mondelēz International group in the development of a pilot project dedicated to the adoption of next generation barcodes.

The objective of the project was to analyse the application process of the QR Code powered by GS1 on selected products from the Oro Saiwa line and to define best practices to be shared at a Group level to support wider adoption of this new standard part of the suite of GS1-approved 2D barcodes suitable for point-of-sale scanning.

The “QR Code powered by GS1” Implementation Pilot

Developed in collaboration with **GS1 Italy**, the pilot project involved various functions of Mondelēz Italia (Marketing, Manufacturing, Supply Chain, and Sustainability) and was developed along two main tracks:

1. Application of the QR Code powered by GS1 on Oro Saiwa packaging. Oro Saiwa, produced in the historic Capriata d’Orba (AL) manufac-

turing plant, is an iconic Italian breakfast biscuit, born in 1956, distinguished by its simple, aromatic, heart-shaped design that brought pastry-quality biscuits to supermarket shelves. Oro Saiwa offers a diversified portfolio to its consumers: on top to the Oro Classic product range, the brand is present into the wellness world also with product like Granofondente, Cioccoro, 5 cereali and Fibrattiva.

2. Development of a dedicated landing page focused on consumer experience.

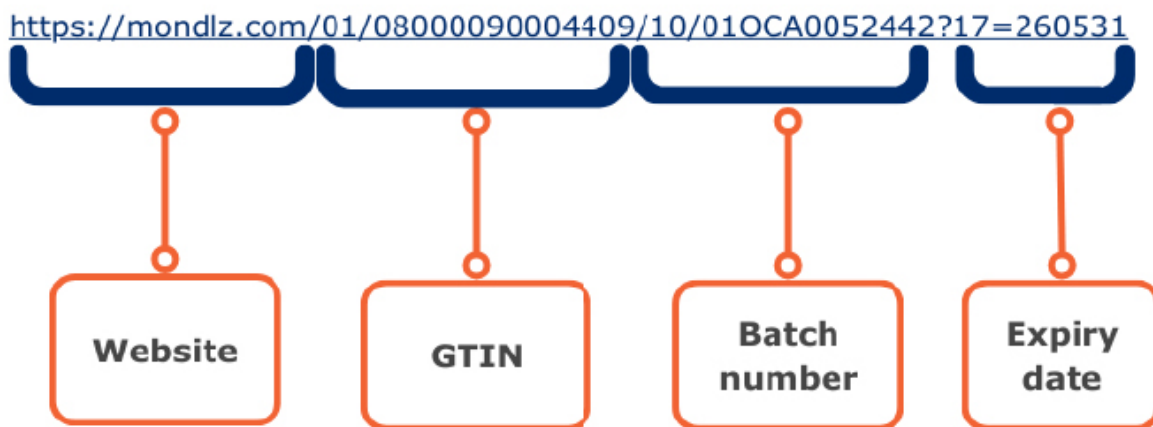
Application of the QR code powered by GS1

Creation of the QR Code powered by GS1

The first step was to define the structure of the GS1 Digital Link URI with a focus on syntax and data organisation. Specifically, the goal was to create a GS1 Digital Link URI that included:

- The product's GTIN (Global Trade Item Number).
- The production batch number.
- The expiry date.

Various elements influencing the QR code size (content length, error correction algorithm, and module size) were also analysed. This phase required initial training on the standards and an accurate evaluation of possible operational solutions, proving fundamental for developing a correct and optimised solution in terms of structure and dimensions.



GS1 Digital Link encoded in the QR Code Powered by GS1

Technical Solution Development

For the implementation of the pilot project, technologies already present on the Oro Saiwa packaging line at the Capriata d'Orba plant were used, specifically the thermal transfer printer already employed for batch and expiry date marking.

Videojet Technologies, the printer supplier, was involved from the early stages to adapt the software necessary for inserting the new barcode symbol. The use of already installed technologies allowed for a faster production process of the new symbol, avoiding the introduction of new equipment and additional operations. Furthermore, placing the QR code in the same area of the packaging already intended for the batch number and expiry date allowed for the use of existing graphics without requiring significant modifications.

Full production shifts were dedicated to the pilot project, which allowed for the generation of numerous samples and intervention in the management of various operational complexities:

- Size and positioning of the symbol.
- Choice of inks.
- Packaging treatment.



Thermal transfer printer, in Capriata d'Orba plant



Some samples produced during the pilot



Verification of the QR Codes powered by GS1 produced during the pilot

Scanning tests and barcode verification

Of particular importance was the need to ensure efficient barcode scanning, meaning scanning tests and verification of the QR Code powered by GS1 was required.

The scanning tests were initially performed in the production plant with the support of a scanner supplier, and subsequently at the retailer Conad

Nord Ovest for checkout reading. The goal was to evaluate the ease and speed of reading the QR Code powered by GS1 by checkout scanners. The results obtained were positive. The barcode verification analysis of the print quality of the QR Code powered by GS1 provided useful indications for corrective interventions during the printing phase (QR code size, colours, ink type, packaging treatments) to achieve the desired result.



Oro Biscotti Colazione 250 g
 Contenuto netto 250g
 EAN 8000090004409

Informazioni Nutrizionali | Ingredienti | Scopri di più | Raccolta differenziata

6 biscotti (31,2 g) = 1 porzione. Contiene 3 porzioni.

Dichiarazione Nutrizionale	100g	Per Porzione	% /Per Porzione
Energia	1760 kJ 417 kcal	549 kJ 130 kcal	7%
Grassi	8,3 g	2,5 g	4%
di cui acidi grassi saturi	0,2 g	0,3 g	1%
Carboidrati	76 g	24 g	9%
di cui zuccheri	20 g	6,1 g	7%
Fibre	3,4 g	1,1 g	
Proteine	8,3 g	2,6 g	5%
Sale	0,62 g	0,19 g	3%

22 marzo



The landing page and examples of the currently available content

Landing Page Development

The QR Code applied to the packaging is designed not only for point-of-sale scanning but also for direct interaction with the consumer via smartphone. The pilot also focused on developing the landing page in collaboration with Scanbuy-A Kezzler Company who set up the redirect from the GS1 Digital Link URI to the landing page itself. Scanning the QR Code allows the end consumer to access various types of content, including:

- Nutritional information.
- Instructions for correct packaging disposal.
- Marketing and promotional content.
- Sustainability-related information.

Among this content, Harmony—Mondelēz International's European wheat sustainability program dedicated to mitigating climate change and reversing biodiversity loss—holds particular importance.

The result

The 2D barcodes produced during the pilot project demonstrated high quality and good readability, both by retail scanners and smartphones.

Thanks to the collaboration with GS1 Italy, Mondelēz experimented with various solutions on Oro Saiwa, first analyzing the impacts on production processes and internal technologies, leveraging equipment already present at the Capriata d'Orba plant, thus minimizing the impact on the production line. Regarding production line speed, it was observed that the marking operation of the new barcode does not represent a slowdown, as it is effectively simultaneous with the already planned activity of applying the expiration date and batch.

Finally, the direct involvement of the retailer Conad Nord Ovest proved to be a key element of the project. Thanks to the use of scanning equipment present in the store, it was possible to identify further improvements for the new barcode to optimise its readability. The retailer itself was able to plan updates and the installation of the optimal configuration for the scanners, particularly to manage the presence of two symbols—the traditional barcode and the QR Code powered by GS1—on the same package.

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 118 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.

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