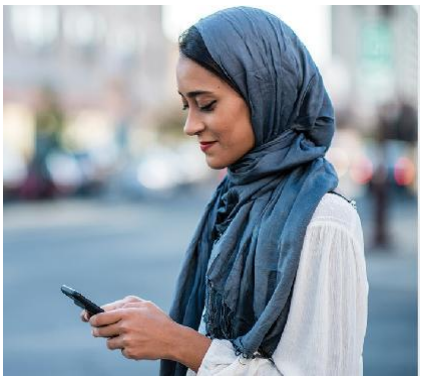
GS1 Canada

GS1 Digital Link

Connect your customers to the product information they want and need



Today's consumers are scanning product barcodes with smartphones to learn more about what they are buying—or considering buying.

If the scan leads to a single Facebook page, a broken website link or a web page with incomplete or non-existent information, chances are the consumer will move on. If information about the product is distributed and duplicated in different places online, the consumer may find it difficult—even impossible—to get relevant and up-to-date information.

In healthcare, there is a growing need to access information online about medications and medical devices—by scanning a single barcode. This includes product information leaflets (PIL) that provide important information to patients and care providers. Regulators now want PILs to be available electronically, instead of on paper, via a QR code on the packaging. In healthcare, it is impractical—and sometimes impossible—to accommodate a URL in a regulated barcode.

GS1 Digital Link promises to enhance the shopping experience for consumers while helping to strengthen brand loyalty, increase revenue and improve supply chain traceability and efficiencies for brand owners and retailers.

Simply stated, today there is no seamless, non-proprietary way for brands, retailers and healthcare suppliers to communicate with consumers through a barcode scan. Moreover, having multiple barcodes on a product (some of which do not contain standardized identifiers like GS1 Global Trade Item Numbers) causes scanning issues at the point-of-sale (POS) and/or point-of-dispense (POD).

For consumers, these experiences lead to lost time, frustration and possible risk. For brands and retailers, they translate to missed opportunities, lost sales and the potential erosion of brand loyalty.

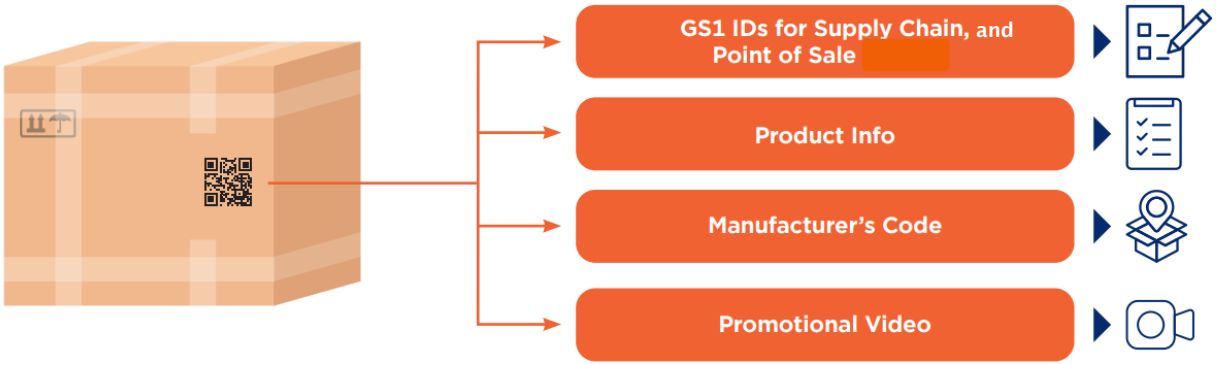
GS1 Digital Link offers a solution

GS1 Digital Link "web-enables" barcodes by providing a simple, standards-based structure for the data that is encoded in 2D barcodes powered by GS1 and by providing simple rules that apps, websites and POS scanners can use to translate barcodes into connections, shopping experiences and interesting product content. Brand owners and retailers can now connect consumers and business partners to all types of information about their products—from dimensions and images to expiration dates, nutritional, warranty registration, troubleshooting instructions, even social media links.

The GS1 Digital Link standard was developed based on a number for industry needs such as:

- the desire among industry to move to 2D barcodes that can carry more information than just the GTIN.
- the problems of multiple barcodes causing scanning errors and delays at the checkout and within supply chain, which suggested a need for a single but multipurpose barcode.
- the growing consumer expectation to access more information online about the products they're considering buying.
- the needs of brand owners to transform product packaging into a dynamic media channel linking consumers to rich multimedia experiences, and digital content.

The GS1 Digital Link standard enables the use of GS1 identification keys and additional information consistently within barcodes containing web addresses, such that a single identification approach can support both product identification for **supply chain** applications and a link to **online information** for consumer and business partner interactions.



The GS1 Digital Link standard enables this dual functionality and enormous flexibility that is currently not possible when, for example, brand owners embed a web page address in a QR Code barcode that is not encoded with GS1 standards. This QR Code only enables access to online information and does not have the required information to enable Point of Sale process.

GS1 Digital Link Structure

In its simplest form a GS1 Digital Link that encodes only the GTIN could look like:

When a smart phone scans the above structure, it uses the URL address to take the consumer to a specific page. While a Point of Sale (POS) scanner will ignore the UR and will extract the GTIN and will go beep at the checkout. The smart phone is connected to the internet, but the POS scanner does not

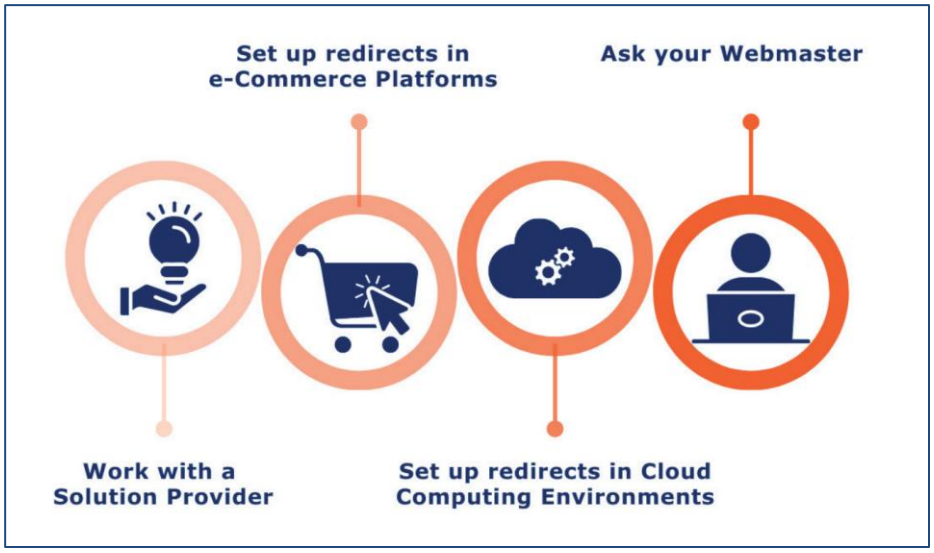
need to be connected to the internet to read the barcode. To learn more about GS1 Digital Link structure review GS1 Digital Link Syntax.

Redirection

When someone scans a QR Code powered by GS1 (a QR Code that has been encoded with GS1 Digital Link) on a product, they expect it to lead them straight to online information about that specific product. You may wonder how your phone knows where to go.

The answer lies in redirection. Redirection is very common online, even though most people don't realize it. There are lots of ways to set it up ranging from simple non-technical options to more advanced methods that call for specialist know-how.

Figure 1- Redirection Setup Options



The redirect is not just a technical process; it's also an organizational one. Think of the QR Code powered by GS1 as a barcode in the traditional sense. It contains the product identifier and so should be managed by whoever is responsible for barcoding today. The redirect is how that function is handed over to whoever is responsible for delivering information to consumers and business partners. This will require coordination and communication between departments and colleagues.

The term 'dynamic QR Code' is sometimes used to refer to the fact that the final destination can be changed dynamically depending on factors such as when and where the barcode was scanned. However, in the GS1 context the term is not used as it can be confusing. QR Codes powered by GS1 can include 'dynamic data' such as batch/lot numbers that is, dynamic data that is printed during the manufacturing process. In fact, everything that is printed on a product, including QR Codes is, static!

Redirects on the web can be either permanent or temporary. A permanent redirect says, "This document has moved to this new URL, so you can forget the old one." A temporary redirect says, "The page you asked for is currently at this other URL, but that could change later."

You might update a redirect from time to time, for example, when running promotions or after a website refresh. For additional information on redirection review: Redirection: from scan to content.

An important note on healthcare

In healthcare, it is impractical—and sometimes impossible—to include a URL in a regulated barcode. For many clinical and non-clinical processes in healthcare the automatic identification of a product (pharmaceutical or medical devices) is critically important. Global healthcare stakeholders chose the GS1 DataMatrix many years ago as their 2D barcode. The GS1 DataMatrix fulfils pharmaceuticals traceability regulations in more than seventy-five countries – including Argentina, Australia, Brazil, Egypt, Ethiopia, Europe, India, Russia, Saudi Arabia, Turkey, USA. In addition, the GS1 DataMatrix is commonly used to meet Unique Device Identification (UDI) requirements in many countries.

The GS1 Healthcare community strongly recommends the industry to use GS1 DataMatrix as the ONLY globally endorsed 2D barcode powered by GS1 for product identification in healthcare. For additional information on how to access the digital content in healthcare review: GS1 Healthcare recommendations on how to access digital content.

Resources

- Connecting barcodes to related information
- Redirection: from scan to content
- Best practices for creating your QR Code powered by GS1
- 2D Barcode Technical Details (GS1 Canada Web Page)
- GS1 Digital Link Standard
- GS1 Digital Link Standard: URI Syntax
- GS1 Healthcare recommendations on how to access digital content
- The key role of GS1 DataMatrix barcodes for product identification in healthcare