



Redirection: from scan to content



This document assumes that a product is carrying a QR Code with GS1 Digital Link URI syntax (“QR Code powered by GS1”). The advice contained below also applies when a Data Matrix is being used with GS1 Digital Link URI syntax or when an app generates a GS1 Digital Link URI after scanning any GS1 1D or 2D barcode.

Advice about applying a QR Code powered by GS1 to a product emphasises that the barcode contains information that identifies the product, just like any other GS1 barcode (see further reading below for why this is crucial).

You should always redirect from the GS1 Digital Link URI that identifies the product to the location of one or more pieces of relevant information.

The identity of the product is distinct from the location of any information about the product.

PRODUCT GTIN IN QR CODE
GS1 DIGITAL LINK URI

<https://id.example.com/01/09506000164908>

REDIRECT



PRODUCT INFORMATION
PAGE TARGET URL

<https://www.example.com/my-product>

How do you do that?

Redirection is very common online, but users may be unaware of this process.

There are lots of ways to set up redirection ranging from the simple to the sophisticated.

The methods below start from “no technical knowledge needed ” through to “specialist knowledge required”.

Set up redirects in e-Commerce Platforms

Ask your Webmaster



Work with a Solution Provider

Set up redirects in Cloud Computing Environments



The redirect is not just a technical process, it's also an organisational 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, etc. 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 or production dates – that is, dynamic data that is printed during the manufacturing process. Furthermore, everything that is printed on a product, including QR Codes is, in fact, static!



Work with a Solution Provider

Outside of the GS1 context: the majority of QR Codes on products today are primarily for marketing purposes. The URL will typically be generated by an algorithm, often by a digital agency or other solution provider, something like <https://kwz.me/hAJ>. This won't point directly to the content itself, but to a service that captures useful marketing information about the QR Code¹ scan. When and where was it scanned? What device was used? What language(s) does the user speak? Which of our codes have they scanned before?

This information is automatically sent from the device used to scan the QR Code to the server and will be available to the brand as marketing analytics data and to tailor the online content. That's one example of redirection.

Within the GS1 system: the content of the QR Code will be a GS1 Digital Link URI. This contains the GS1 identifiers that can be scanned and used without any online lookup, for example, at point-of-sale. The barcode is also the entry point for the digital content associated with the entity (e.g., product, location, asset, etc.)

One method to set up redirection would be to work with a solution provider who already offers a marketing analytics platform (they'll probably offer it as their "dynamic QR solution", "digital identity solution" or similar). Encourage them to follow our best practice guidance of establishing the GS1 Digital Link URIs on your own domain name rather than theirs.



Set up redirects in e-Commerce Platforms

Redirection is such a basic function on the Web that e-commerce platforms all support it one way or another. This is standard practice when information is moved around a website to avoid broken links and the all-too familiar "404 Not Found" error message. However, be aware that the documentation about how to do it will be written to satisfy the use case of moving a product page from one URL to another rather than an explanation of how to set up redirects when using QR Codes powered by GS1 or GS1 Digital Link.

The best advice is simply to search for "*{your e-commerce platform}* set up URL redirect" and follow the instructions. Depending on the platform you're using this might be something you can do through your administrator's interface or you may need to install a plug-in. Either way, the tooling exists to make this as simple as possible.

N.B. e-Commerce platforms will only allow you to set up redirects within that platform. You won't be able to redirect to a different internet domain.



Set up redirects in Cloud Computing Environments

If your website and, perhaps, wider IT infrastructure is hosted on a cloud service then it will be easy for your IT manager to set up redirects. Indeed, it should be easy to follow our best practice advice to establish a subdomain of your own internet domain name and to redirect from there so as not to interfere in any way with your primary website. This can almost certainly be done using pattern-based rules that cover any number of identifiers.

For example, you might redirect

`id.example.com/01/{d{14}}` to `example.com/product?gtin=$1`

Where "\$1" is whatever the GTIN was in the original URL.



Ask your Webmaster

If you have your own website, the person who runs that website will be able to set up redirects easily.

The key thing to bear in mind is that, because of redirection, the QR Code powered by GS1 is logically separated from the structure of your website. No one should rearrange their website to match the GS1 Digital Link structure.

If you include a batch/lot identifier and/or a serial number in your QR Code, that does not mean you have to create extra pages on your website. Instead, you set up redirects based on patterns so that one rule can be used for all batches and all serial numbers of a given GTIN, one rule for all GLNs for a given prefix and so on.



Redirects on the Web can be permanent, that is, "this document has moved to this new URL so you can forget the old one" or they can be temporary, that is, "the thing you asked for is currently at this other URL which may change in future". At a technical level, these are distinguished by using different HTTP response codes. It may be expected that the redirect will change over time, for things like promotions, website refreshes etc., when redirecting a GS1 Digital Link URI, we recommend using the temporary redirect code 303.

1 - The kwz.me URL shortener is unusual in that it does not gather any data about its users. It is run by a private individual specifically as a privacy-preserving URL shortener and is used purely as an example in this document. It is not suitable for use in production-grade systems



Tech notes for webmasters

If you're using an Apache or NGINX server, you can set rules in a .htaccess file as follows. These examples all assume the .htaccess file is in the server root but you can adapt them and put the .htaccess file anywhere in the path.

```
# A simple redirect from GTIN 09506000134369 to a page on dalgiardino.com
redirect 303 /01/09506000134369
https://dalgiardino.com/extra-virgin-olive-oil/
```

```
# the same redirect for the same GTIN but this time with or without extra information
such as a batch/lot number, any query string etc
RewriteEngine on
RewriteRule ^01\09506000134369
https://dalgiardino.com/extra-virgin-olive-oil/[L,R=303]
```

```
# A redirect for any GTIN to example.com with the GTIN and batch passed to the target
URL's query string
RewriteEngine on
RewriteRule ^01\(\d{14})\10\(.*) https://example.com/
catalogue?gtin=$1&batch=$2 [L,R=303]
```

Further reading

This document is complemented by the following:

https://ref.gs1.org/docs/2023/QR-Code_powered-by-GS1-best-practices (essential high-level advice on how to create a QR Code powered by GS1).

<https://ref.gs1.org/docs/2024/digital-link-quick-start-guide> (aimed more at technical staff integrating GS1 Digital Link and their websites; a direct complement to this document).

<https://ref.gs1.org/docs/2024/connecting-barcodes-to-related-information> (advice on how a single barcode can be linked to multiple sources of information thus reducing or eliminating the need for multiple barcodes on a single item).

<https://ref.gs1.org/guidelines/2d-in-retail> (detailed advice for retailers, brands and solution providers on the use of GS1 2D barcodes in retail).

GS1 AISBL

Blue Tower, Avenue Louise 326, BE 1050 Brussels, Belgium
T +32 (0)2 788 78 00 | F +32 (0)2 788 78 99 | E contactus@gs1.org
www.gs1.org

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