



# 2D Barcode Publishing A Guide to Best Practices



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# i Introduction

Marketers, retailers, and media publishers are finding mobile (2D) barcodes a highly effective way to capture the attention of consumers and provide them on-the-spot information about products, promotions, and much more. When embedded in a magazine advertisement, store display, billboard, or product package, a mobile barcode can create an immediate, personalized connection which can engage, educate, and convert consumers.

Today, over a billion people carry camera phones capable of reading mobile barcodes. In some countries, including the United States, 50% of Smartphone users already have mobile barcode applications on their devices. In fact, the ScanLife system alone now handles more than one scan per second, originating from over 125 countries around the globe.

If you are currently utilizing mobile barcodes to support your marketing activities, or considering doing so, this document can help maximize the performance of your barcode campaign by providing you a list of basic best practices. For simplicity, this document will focus on the open standard QR Code format commonly used around the world, and will cover the four basic parts of the code publishing process.

The four  
basic steps  
of code  
publishing

- 1 Strategy & Planning
- 2 Code Generation/Publishing
- 3 Call to Action
- 4 Performance Tracking

More Info

QR CODES



Invented in 1994, the QR code is one of the most popular types of two-dimensional (2D) barcodes for marketers. It can be encoded to display or launch a variety of information including text, a URL, a phone call, and more. QR code specifications are defined and published as an ISO standard.

# ii Barcode Basics

A barcode is an optical machine-readable graphic that contains digital information about the object to which it is attached. The most common barcode is the linear UPC (Universal Product Code) which can be found on virtually every item sold at retail.

Two classes of barcodes exist.

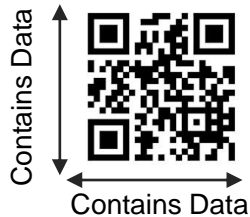
## 1D Barcode



### Linear Barcodes (1 dimensional)

Contains information in only the *horizontal* dimension. Capable of storing a maximum of approximately 20 digits.

## 2D Barcode



### Matrix Barcodes (2 dimensional)

Contains information in both the *horizontal* and *vertical* dimensions. Capable of storing thousands of alphanumeric characters.

To read a barcode, a camera phone typically requires a software application called a mobile barcode reader which allows a user to capture the barcode image with the device's camera (ScanLife also offers a service which sends the image of a code by SMS or email to be decoded on a remote server, without the need of a phone-based application). Either way, the image can be decoded to instruct the phone's browser to connect to a URL, or to activate one of the phone's capabilities, such as sending an email or playing a video.

## DIRECT VS. MANAGED DIRECT ENCODING

### DIRECT

#### Data is embedded in the 2D barcode.

*Example:* A URL or other data has been directly embedded into a code. The data in this code cannot be edited once generated. When scanned, the device will automatically launch the action, such as opening the encoded URL.

### MANAGED DIRECT

#### Data is managed on a server, but can be read by many applications.

With Managed Encoding, the device's scanning application decodes the image, but instead of connecting directly to a URL it connects to a barcode management platform. The server instructs the phone what action to take, such as connecting to a URL, playing a video, etc. By utilizing this method, the publisher can maintain control over the user experience, easily change the purpose of its code, and track its performance.

# iii Strategy & Planning

Like any other marketing tool, it is important to think strategically about how to employ mobile barcodes. A good approach is to ask yourself the following questions:

## What role do I want mobile barcodes to play in my marketing campaign?

Will mobile barcodes be the main feature or serve as a support element?

## What value will consumers get from scanning my code?

While scanning a mobile barcode only takes seconds, consumers want to be rewarded for their effort with something they find valuable (e.g., more information, a discount). Don't disappoint them.

## Is my marketing campaign designed to support mobile barcodes?

Not every marketing initiative is conducive to mobile barcodes. For example, a mobile code embedded in a highway billboard or located somewhere without cellular coverage (e.g., underground subway stations) can be difficult for someone to engage with.

## Will the user experience be a positive one?

When a consumer scans your code make sure the website they connect to is optimized for mobile phones. If the scan initiates a video, ensure it will play across different devices. In short, make sure the user experience is a positive one.

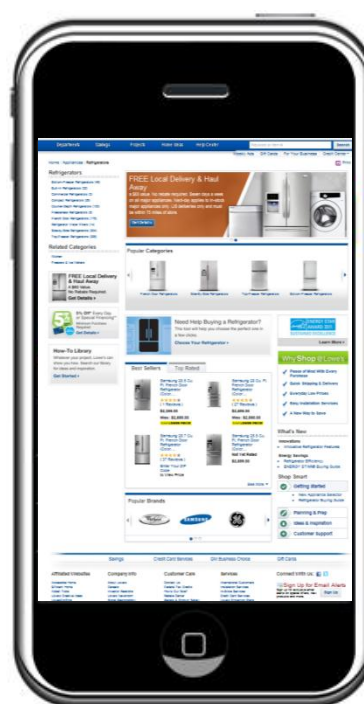
### DO THIS

- Mobile screen optimized
- Offer multiple options
- Add "on the go" value



### NOT THIS

- PC formatted layouts
- Flash
- Complex opt-ins



# iv Code Generation

**Remember, not all mobile phones are created equal.**

Some models have excellent cameras and are very good at reading mobile barcodes. Others, well, not so good. To get the most out of a mobile barcode campaign it is very important to ensure your code can actually be read by as many phone models as possible. Keep in mind several critical factors before you publish your codes.

## Code Density

The more data you place into a code, the more dense it will become — and the more dense the code, the harder it is for a camera phone to correctly interpret the data. If your codes looks dense (many modules, or black dots), you have three options: 1) increase the size of the codes; 2) decrease the amount of data contained in the codes; or 3) use codes from a managed platform like ScanLife which essentially eliminates the density restriction.

Below is an example of a 187-character URL creating a dense code.



**Large format**  
(will function)



**Same code, smaller format**  
(will not function)

## Code Size

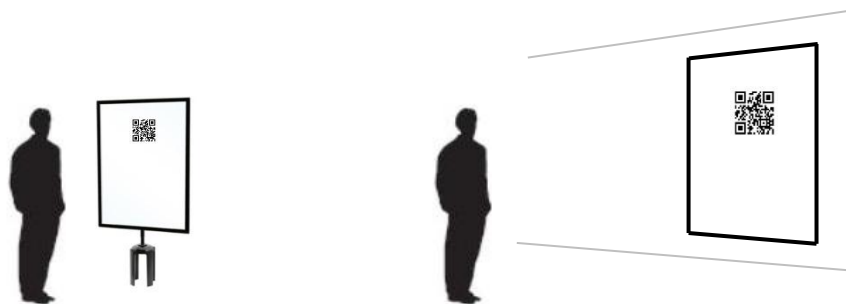
Directly related to density is size. The larger the code, the further away it can be scanned. As a basic rule of thumb, avoid publishing a QR Code smaller than 1" across to ensure it can be read by older devices with less sophisticated cameras.

Always keep in mind that every inch of code diameter provides seven inches of distance for readability. This is called the 1:7 size-to-distance ratio. For example, to scan a code from a distance of 28 inches, the diameter of the code should be at least 4 inches.

### Remember!

- ✓ 1" minimum diameter
- ✓ 1:7 size/distance ratio

**Large Formats:** For signage, or outdoor media, remember that a code must fit into the viewfinder of the camera. So, if the code is too large, and the user is too close, the code will not scan.



### In-store display

- Code size: 3" – 6" diameter
- Maximum distance range: 21" – 42"

### Transit poster display

- Code size: 10" – 18" diameter
- Maximum distance range: 72" – 80"

Always test your codes and keep in mind that every device will perform differently. If your code works well with a single device there is no guarantee that it will work with others.

## Code Regularity

Publishers often customize the appearance of a QR code to make it more visually appealing or to make it consistent with the publisher's brand identity. However, modifying a QR code must be done very carefully. Too many changes and the code will no longer work.

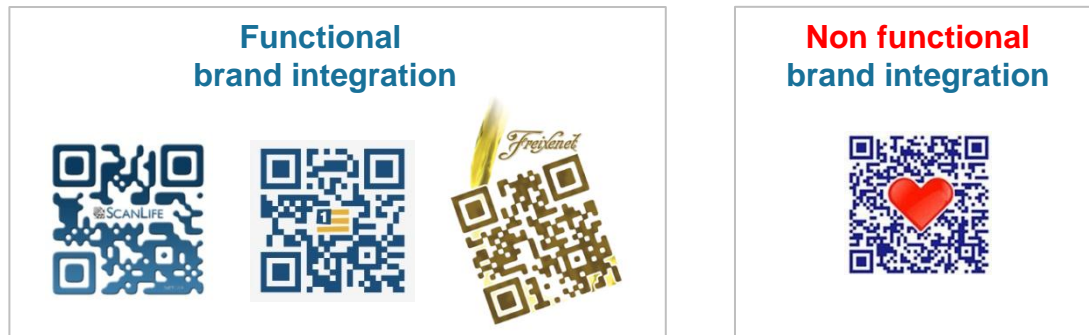
When modifying the appearance of a code it is important to keep several critical items in mind.

**Color/Contrast:** Maintaining high contrast in a code is critical. It is why the default colors of a code are always black modules on a white background. You can change the color of the modules or the background as long as you maintain a high contrast between the two layers.



*TIP: The only way to guarantee results across all devices is to use the default black on white combination.*

**Code Customization & Error Correction:** With a standard 29 x 29 QR code (as generated on ScanLife), roughly 4% of the code can be covered while keeping the code operational. This is often done by publishers who want to overlay their product or company name on the code. Keep in mind, that while error correction is built into most QR Codes, it is very easy to render a code useless by overlaying text and it is strongly recommended that you work with an expert who can do this effectively.



## v Call to Action

Once you have your mobile barcode designed, setup, and *tested*, it is time to think about how to get people to actually scan your code. In other words, you must be able to quickly communicate to your audience (in as few words as possible) the benefits of scanning your code.

**Motivate the audience to scan your code:** How often a code gets scanned is largely a function of the effectiveness of the advertisement or document to which it is attached. This is true whether the code is contained in a magazine ad, a store window sign, or on a billboard. If the ad is ineffective, the scan rate will be low. However, if the ad is effective, it doesn't necessarily mean the scan rate will be high — it only means that there is an *opportunity* for high scan rates. To actually achieve high scan rates means engaging the audience. Here are some important tips:

1. Make it very clear why someone should scan your code. Is it more information? A special discount?
2. Keep the language short and to the point.
3. Use the code to extend your primary message.
4. Make it mysterious and fun.



Below are two examples of effectively integrating a mobile barcode into an advertisement.



**SCAN THIS CODE.  
IF YOU DARE!**

HAUNTED HOUSE PARK    OCTOBER 20 - 31    7 - 11PM  
1234 MAIN STREET, SOUTH SALEM, NY    914-222-2222

Need a free mobile barcode reader? Go to [www.getscanlife.com](http://www.getscanlife.com)



Scan this code to get our  
**TV Buying Guide.**  
Or visit us at [tworld.com/tv](http://tworld.com/tv)

Need a free barcode reader? Go to [getscanlife.com](http://getscanlife.com)

### Make sure your customers know how to load a free scanner application

**on their phone:** Although tens of million of people have a scanner application already loaded on their mobile phone, some do not. To reach the largest possible audience, it is highly recommended that you include instructions on how to get a scanner application in the advertisement.

#### SCAN the 2D barcode below for your **FREE GIFT** from Runner's World!

If you don't already have a free barcode reader app on your mobile phone follow these easy steps:

1. Go to [www.getscanlife.com](http://www.getscanlife.com) on your mobile phone or text "SCAN" to 43588.
2. Download Scanlife for free.
3. Launch and scan the 2D barcode for your **FREE GIFT.**

Detailed instructions

Watch a demo and get more info by scanning this code. Text 'scan' to 43588 and download the free app.



\*Standard data rates may apply. Carrier charges may apply.  
App works only on smart phones.

Basic instructions

# vi Performance Tracking

One of the most valuable benefits to mobile barcode technology is the ability to track how people are interacting with physical media as if they were interacting with digital media.

Managed systems, such as ScanLife, can collect data from every scan and quickly report the number of scans, unique users, time/date, location, and even representative demographics. Marketers can use this data, along with content tracking, to analyze how the media is performing and what content their audience is most interested in.

## ScanLife Performance Tracking Screens



**Important tip:** Create unique codes for different media to track each placement individually. For example, if you are placing codes in print ads, use a unique code for each insertion.

# Contact Us & Get Started

Now that you understand the basics, contact us to learn more about the exciting world of mobile barcodes.



Register now at [www.scanlife.com](http://www.scanlife.com) or scan this code to watch a video on how the ScanLife system can help your business.

For a free barcode reader, download ScanLife from [www.getscanlife.com](http://www.getscanlife.com) on your mobile browser.